Alcoa

HUNTLY AND WILLOWDALE MINES

Water Resources Management Plan

7 February 2025

This management plan reflects current operational practices and will be revised to align with the mitigations and outcomes detailed in the Assessment 2253 Environmental Review Document (which is considered to take precedence).

Document Control

Version	Description of Changes	Date
Rev 0	Initial WRMP Prepared	28 May 2023
Rev 1	WRMP MP Revision	28 June 2023
Rev 1	Updated from MP Revision	7 February 2025

Table of Contents

1 Executive Summary 1
2 Context, Scope and Rationale 4
3 WRMP Components.....39
4 Adaptive Management and Review of the EMP.....69
5 Stakeholder Consultation 75
6 Glossary 78
7 Changes to an EMP 83
8 References 84
Appendix A Qualitative Risk Assessment 89
Appendix B Risk Assessment Methodology 99
Appendix C Analytes and Applicable Screening Criteria/ Guidelines ...105
Appendix D Historical Water Quality Data 120
Appendix E Monitoring Framework.....276
Appendix F Control Self-Assessment.....299

List of Figures

Figure 2-1 Location of the Proposal
Figure 2-2 Exploration Areas
Figure 2-3 Conceptual Footprint (Huntly)
Figure 2-4 Conceptual Footprint (Willowdale)
Figure 2-5 Source, Pathway and Receptor Examples Relating to Mining Areas (GHD, 2023)
Figure 2-6 Source Pathway Receptor (Huntly)
Figure 2-7 Source Pathway Receptor (Willowdale)
Figure 3-1 In-stream Monitoring (Huntly)
Figure 3-2 In-stream Monitoring (Willowdale)
Figure 3-3 First Round Surface Water Monitoring Locations Implemented as Part of WRMP (Huntly)
Figure 3-4 First Round Surface Water Monitoring Locations Implemented as Part of WRMP (Willowdale)
Figure 3-5 Proposed Subcatchment Discharge Zone Groundwater Monitoring Locations (Huntly)
Figure 3-6 Proposed Subcatchment Discharge Zone Groundwater Monitoring Locations (Willowdale)
Figure 3-7 Background/Ambient and Significant Surface Watercourses Groundwater Monitoring Locations (Huntly)
Figure 3-8 Background/Ambient and Significant Surface Watercourses Groundwater Monitoring Locations (Willowdale)
Figure 3-9 Active and/or Historical Groundwater Monitoring Locations (Huntly)
Figure 3-10 Active and/or Historical Groundwater Monitoring Locations (Willowdale)
Figure 3-11 Wastewater Discharge Monitoring Locations (Huntly)

Figure 3-12 Wastewater Discharge Monitoring Locations (Willowdale)
Figure 3-13 Hydrocarbon Groundwater Wells (Huntly)
Figure 3-14 Hydrocarbon Groundwater Wells (Willowdale)
Figure 3-15 Groundwater Monitoring Downstream of Biomax Locations (Huntly)
Figure 3-16 Groundwater Monitoring Downstream of Biomax Locations (Willowdale)

List of Tables

Table 2-1 Environmental Values Identified for this WRMP
Table 2-2 Ministerial Approval Conditions
Table 2-3 State of Knowledge, Assumptions, and Uncertainties – Drinking Water Supplies
Table 2-4 State of Knowledge, Assumptions, and Uncertainties – Significant Ecosystems
Table 2-5 State of Knowledge, Assumptions, and Uncertainties – Ecosystems Reliant on Groundwater or Surface Water Inputs – Riparian Vegetation – Groundwater Dependent Ecosystems (GDEs) – Subterranean Fauna
Table 2-6 State of Knowledge, Assumptions, and Uncertainties – Water Supplies (Non-potable Use and Commercial Activities)
Table 2-7 State of Knowledge, Assumptions, and Uncertainties – Ecosystems supporting significant amenity, recreation and cultural values
Table 3-1 Management Plan Provisions – Objective-based
Table 3-2 Monitoring Plan Provisions – Outcome-based
Table 4-1 Ongoing and Proposed Future Investigations and Studies
Table 5-1 Key Stakeholders
Table 7-1 Changes to the Water Resources Management Plan

List of Appendices

Appendix A Qualitative Risk Assessment
Appendix B Risk Assessment Process
Appendix C Analytes and Applicable Screening Criteria/ Guidelines
Appendix D Historical Water Quality Data
Appendix E Monitoring Program
Appendix F Control Self-Assessment

1 Executive Summary

This Water Resources Management Plan (WRMP) was prepared by Alcoa of Australia Limited (Alcoa) for the Huntly and Willowdale bauxite mines in Alcoa's Mining Lease 1SA (ML1SA). The plan has been reviewed and updated as required by 2023-2027 Mining and Management Program (MMP) condition 14(b), 17(c), 18 and 19. The Proposal scope includes existing bauxite exploration, mining, and rehabilitation activities, and expanding Alcoa's Huntly and Willowdale bauxite mines. Key activities include the operation development and maintenance of pits, haul roads, topsoil stockpiles, conveyors, water storage ponds, and ancillary and support infrastructure in ML1SA.

The Huntly mine area intercepts the public drinking water supply catchments of Serpentine, North Dandalup, South Dandalup and Conjurunup. The Willowdale mine area intercepts the Stirling and Sampson Brook public drinking water supply catchments. Exploration activities are planned for the Canning, Mundaring, Wungong, and Harris Dam catchments.

The mines are located near the towns of Dwellingup and Waroona, in areas with mixed land use, including State forests, drinking water catchments, agriculture, and residential zones.

This WRMP specifically addresses management of the risks and potential impact of bauxite mining activities on key Environmental Values associated with the Inland Waters Environmental Factor (EPA, 2018) consisting of:

- Ecosystem health:
  - Wetlands, wild rivers, spring and pools;
  - Ecosystems supporting significant flora, vegetation and fauna species/ communities; and
  - Ecosystems supporting significant amenity, recreation and cultural values.
- Beneficial uses:
  - Drinking water supplies;
  - Significant current or potential water supplies;
  - Inland Waters with high levels of recreation; and
  - Inland Waters with significant cultural and aesthetic values.

This WRMP aims to comply with the *Public Health Act 2010* for Drinking Water Quality Management in the Australian Drinking Water Guidelines (ADWG) (NHMRC, NRMMC, 2011) to safeguard drinking water quality.

In support of this WRMP, Alcoa has developed a robust framework comprising:

- A suite of management plans and guidelines tailored to address potential risks;
- Implementation of management actions to minimise impacts to water quality and flow regimes;
- A comprehensive monitoring program to track environmental performance and measure progress against management targets; and
- An adaptive management approach through the application of learning from monitoring outcomes and management actions.

Table ES1 outlines the environmental objectives for the WRMP, the associated management targets, and the specific actions to ensure achievement of these objectives.

The monitoring program will be implemented in a staged approach to align with project milestones and risk-based priorities. Rather than deploying the full program immediately, the installation of monitoring bores and in-stream monitors will occur progressively. This phased implementation ensures resources are allocated efficiently and monitoring efforts are focused on addressing the most critical risks first, allowing for adaptive management as new data becomes available.

Alcoa considers the proposed management objectives and outcomes including monitoring programs with specified trigger and threshold criteria (**Section 3**), sufficient to address identified risks. By combining proactive measures, continuous monitoring, and stakeholder engagement, Alcoa aims to ensure mining operations in ML1SA uphold environmental integrity, particularly in protecting drinking water values and other significant Inland Waters values.

Table ES1 Environmental Criteria to Measure Achievement of Environmental Objectives

Proposal Name	Western Australian Mining Operations Water Resources Management Plan
Proponent Name	Alcoa of Australia Limited
Ministerial Statement Number	Willowdale Mine (Wagerup Refinery): • Ministerial Statement 1157 (preceding statements: 728, 897, 1069) • Ministerial Statement 646 Huntly Mine (Kwinana and Pinjarra Refinery)
State Agreements	• Alumina Refinery (Kwinana) Agreement Act 1961 • Alumina Refinery (Wagerup) Agreement Act 1978 and Acts Amendment Act 1978 • Alumina Refinery (Pinjarra) Agreement Act 1969 • Alumina Refinery (Alcoa) Amendment Act 1987
Purpose of this Environmental Management Plan (EMP)	This WRMP is for management of ecosystem health and beneficial use values related to Inland Waters for the Huntly and Willowdale bauxite mines owned and operated by Alcoa of Australia Limited Western Australia. The plan was developed to meet 2023-2027 MMP condition 14(b).
Key Environmental Factor/s, Outcome/s and/or Objectives	**Inland Waters** Environmental Protection Authority (EPA) objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected. The Environmental Objectives and Outcomes for Inland Waters are: • To maintain and protect the quality and hydrological regimes of Inland Waters by implementing measures to prevent and minimise contamination risks, control erosion and turbidity, and prevent salinity increases. • Ensure the quality and supply of water resources is maintained, avoiding adverse changes that compromise water values or uses. Water quality parameters shall not exceed the thresholds specified in the criteria or other relevant standards.

Proposed Construction Date	Not applicable
EMP Required Pre-construction	Not applicable

2 Context, Scope and Rationale

2.1 Proposal

Alcoa of Australia Limited (Alcoa) operates the Huntly and Willowdale bauxite mines located approximately 100 km southeast of Perth (the Proposal) and in Mining Lease 1SA (ML1SA) (**Figure 2-1**). The mines are located near the Dwellingup and Waroona townsites, in areas with mixed land use, including state forests, drinking water catchments, agriculture, and residential zones.

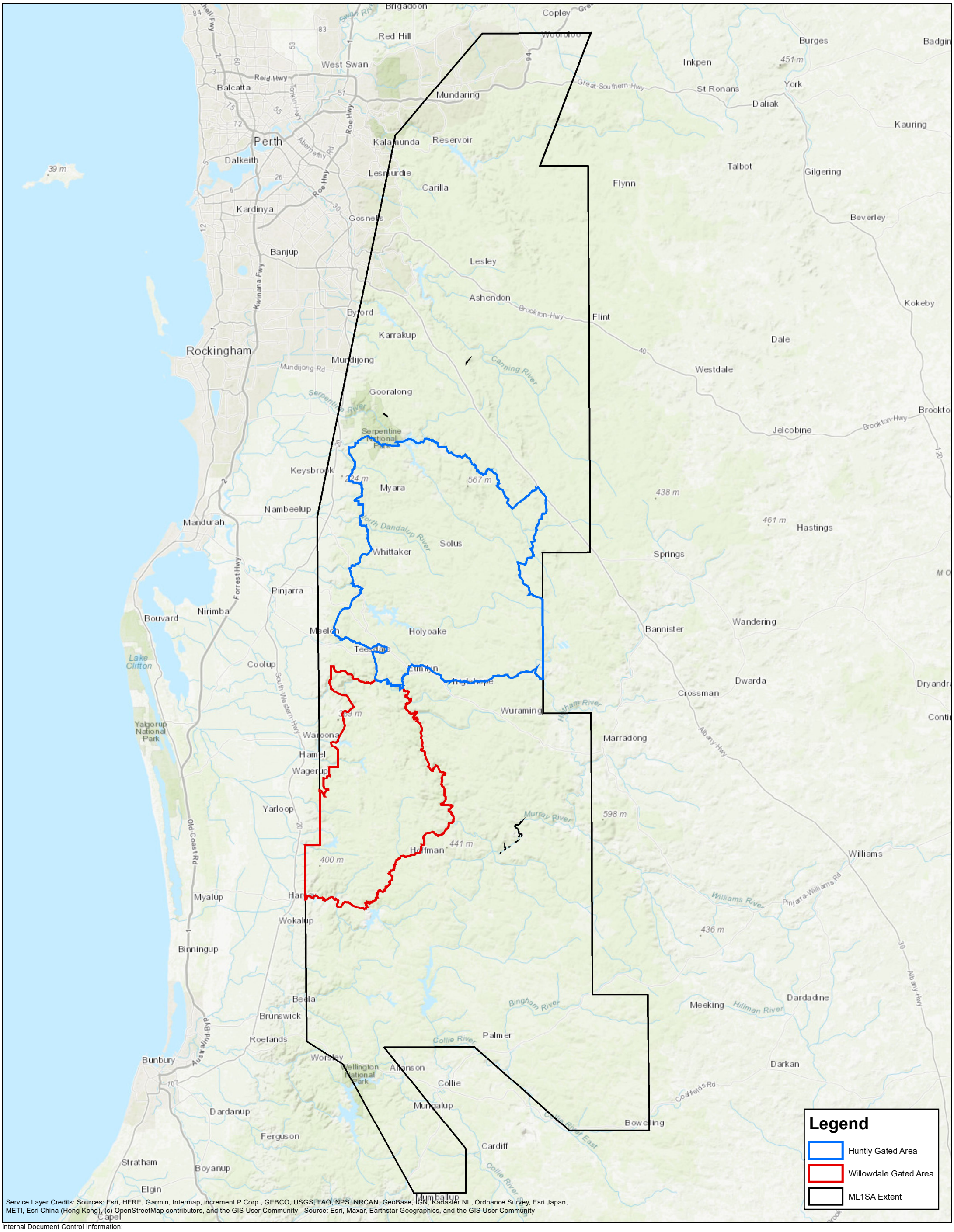
This Water Resources Management Plan has been prepared by Alcoa for the Huntly and Willowdale bauxite mine regions located within Alcoa's ML1SA and covers all phases of active and planned, operational mining cycles (including exploration, construction and operational mining and rehabilitation), This WRMP has been developed to address the management of ecosystem health and beneficial use values related to Inland Waters for Alcoa's Huntly and Willowdale bauxite mines. The plan has been developed to meet 2023-2027 MMP conditions 14(b), 17(c), 18 and 19 **Table 2-2.**

The Huntly mine area intercepts the water supply catchments of Serpentine, North Dandalup, South Dandalup and Conjurunup. The Willowdale mine area intercepts the Stirling and Sampson Brook water supply catchments. Exploration is planned to be extended into the Canning, Mundaring, Wungong, and Harris Dam catchments, involving up to 105,000 drill holes annually across a 233,488-ha area. The approved exploration areas are shown in **Figure 2-2**.

Alcoa is required to submit an annual rolling 10 year Mining and Management Plan (MMP) under clause 5 of *Alumina Refinery (Wagerup) Agreement and Acts Amendment Act 1978* to support their mining operations. The MMP outlines plans for ongoing bauxite mining and alumina refining operations in Western Australia (WA), particularly at the Alcoa Huntly mine (**Figure 2-3**) and Willowdale mine (**Figure 2-4**). The MMP proposes to continue mining with an emphasis on stricter environmental protections, including greater distance from drinking water reservoirs, biodiversity safeguards, and a commitment to accelerate forest rehabilitation.

This WRMP is for management of ecosystem health and beneficial use values related to Inland Waters for the Huntly and Willowdale bauxite mines owned and operated by Alcoa. The plan has been developed to meet 2023-2027 MMP conditions 14(b), 17(c), 18 and 19 **Table 2-2.**

The WRMP forms part of the water management framework for Alcoa's WA Mines. A diagram showing the relationship between the WRMP and other Water Management documents, and the Mine planning process is included in **Figure 2-5**. Alcoa continues to collaborate with the Independent Technical Advisory Group (ITAG) to develop the Catchment Risk Assessment (CRA) methodology and the Drainage Design Manual (DDM). Both the CRA and DDM are fundamental to the water management framework to ensure risks are well understood and drainage design principles are consistently applied. The WRMP will continue to be updated as the development of the CRA and DDM progress in accordance with the adaptive management approach.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Location of the Proposal

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

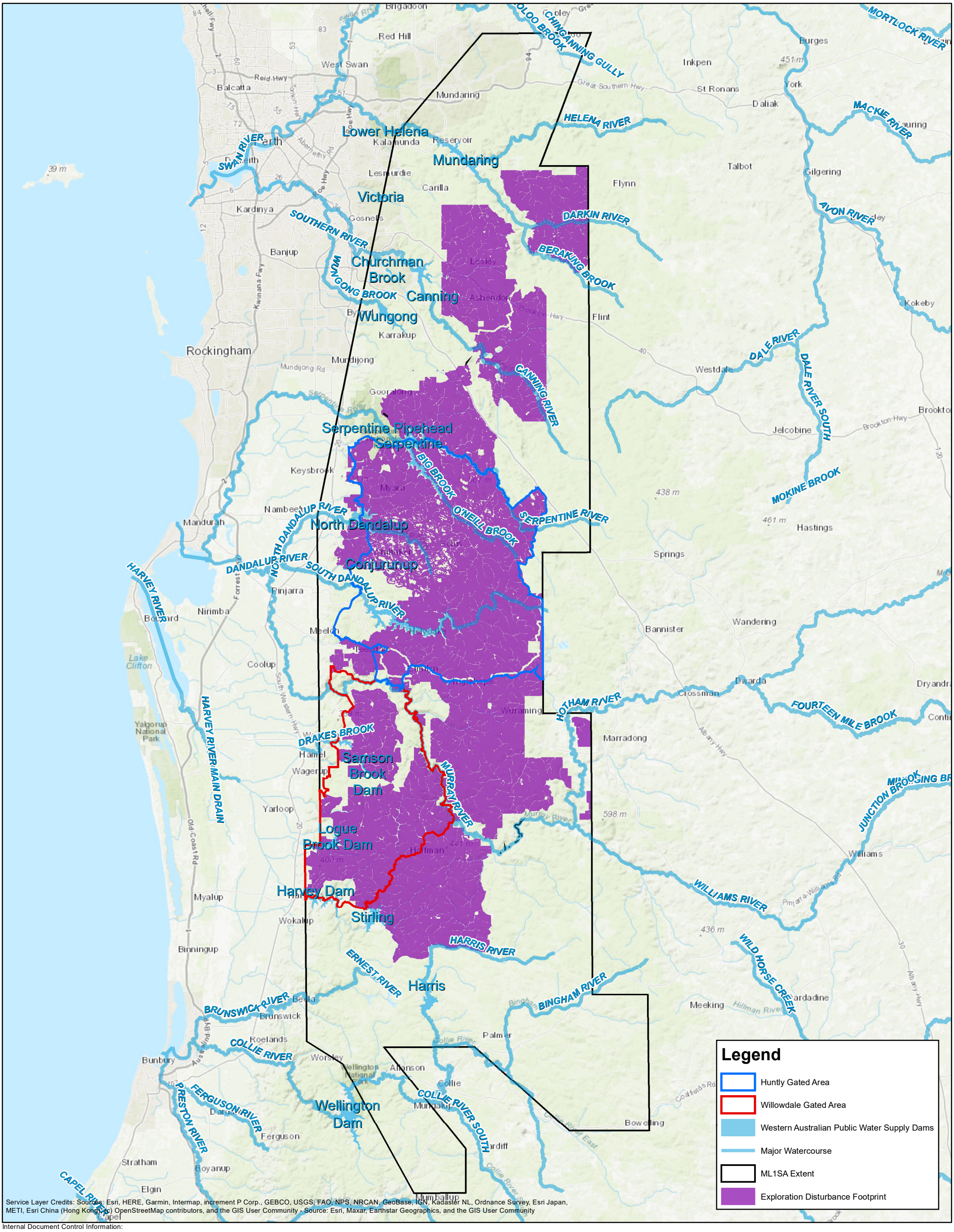
EHS Support

FIGURE 2-1

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:540,850
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 24/01/25 11:34:47 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Exploration Areas

0 5 10 20 30 40 Kilometers

1 cm = 5 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

FIGURE 2-2

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:540,850
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

Towns
Monadnocks East
Myara North
Darling Scarp
Monadnocks
Myara
Beryl
Oneil
Duncan
Willard
Mccoy
Oneil East
Darling Scarp
White
Darling Scarp
Huntly
Del Park
Holyoake
Towns
Teesdale
Amphion
Orion
Amphion

Legend

- Huntly Gated Area
- Alcoa Mining Regions
- Clearing Schedule
- Rehabilitation
- Area Open
- Endorsed Clearing

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 11:38:09 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Conceptual Footprint (Huntly)

0 1.75 3.5 7 10.5 14 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

Perth

FIGURE 2-3

N

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:124,000
AERIAL IMAGE SOURCE:	ESRI Basemap

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

Teesdale
Holyoake
Darling Scarp
Amphion
Orion
East Murray
Arundel
Larego
Cornwall

Legend

- Willowdale Gated Area
- Alcoa Mining Regions
- Clearing Schedule
- Rehabilitation
- Area Open
- Endorsed Clearing

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 11:38:09 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Conceptual Footprint (Willowdale)

0 1.5 3 6 9 12 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

Perth

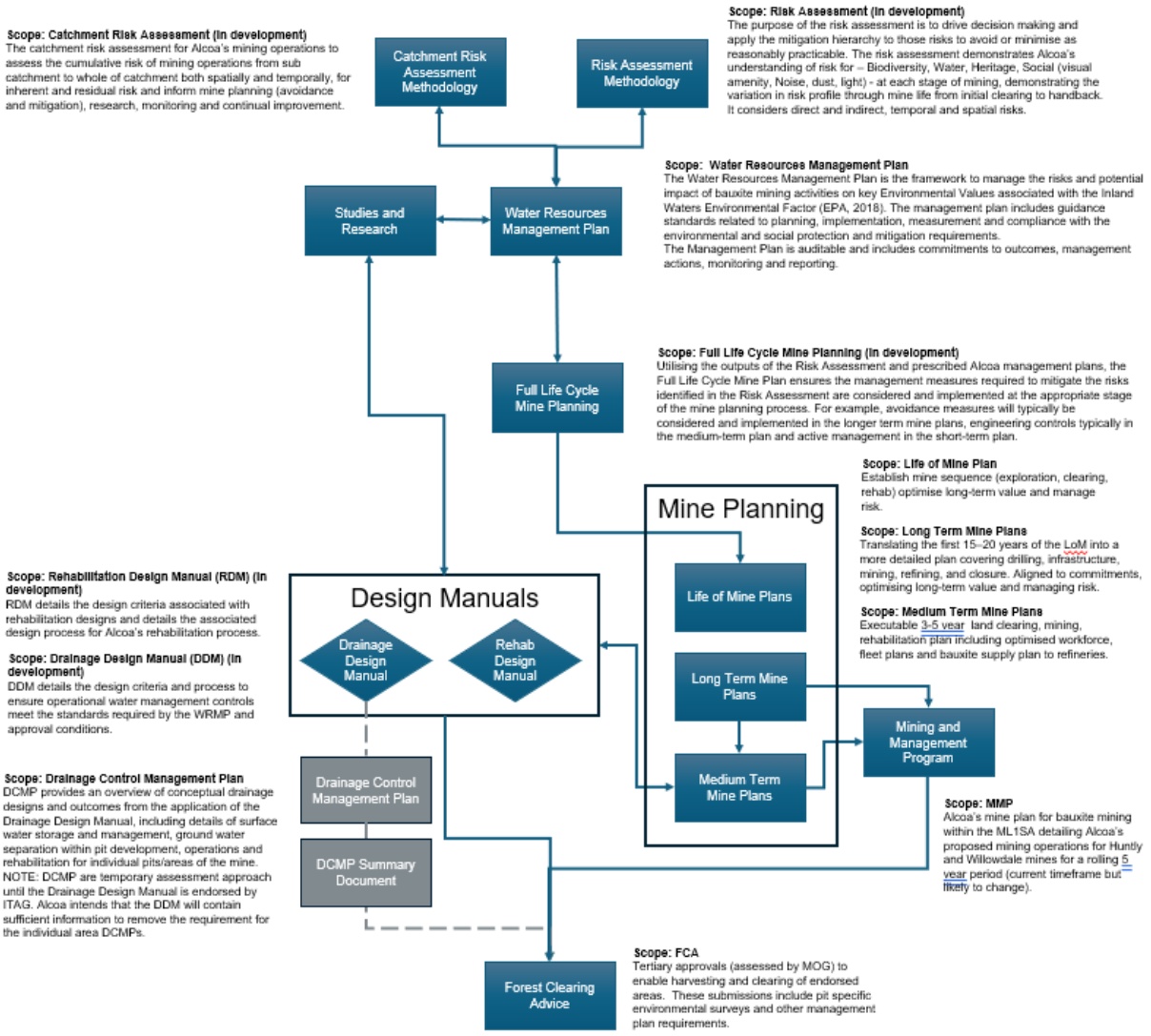
FIGURE 2-4

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:113,200
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

Figure 2-5 Water Management Document Map



2.2 Structure of the Water Resources Management Plan

This WRMP was developed in accordance with *Instructions: How to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (EPA, 2024). It addresses the requirements outlined in the guidance and draws on over 240 technical documents developed by Alcoa (**Section 2.5**). The document focuses on managing potential risks to Environmental Values and functions for the Proposal. It aims to guide effective risk management responses through a risk-based monitoring program to help confirm the preventative and mitigation measures are effective in controlling risk. The WRMP is not intended to be a detailed discussion of the area's Environmental Values and resources. The WRMP serves as a summary, with technical appendices providing more detailed information on the risk assessment and management processes. Alcoa is committed to development and implementation of the WRMP with a risk-based approach to prioritise actions, while ensuring risk exposure is minimised.

2.3 Key Environmental Factors and Values

The EPA uses Environmental Factors as an organising principle for Environmental Impact Assessment (EIA), comprising several Environmental Values (EPA, 2021). They provide a systematic approach to organising environmental information for the purpose of EIA. Further, the EPA has identified an Environmental Objective for each Environmental Factor, which aims to ensure the objectives and principles of the State *Environmental Protection Act 1986* (EP Act) are achieved (EPA 2023). The key Environmental Factor relevant to this WRMP is Inland Waters, for which the EPA's objective is "*to maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected*". The Environmental Values identified, and the potential impacts to these values, are detailed in **Table 2-1**.

Environmental Value is defined under the EP Act as an ecosystem health condition or a beneficial use.

Table 2-1 Environmental Values Identified for this WRMP

Environmental Value (EPA 2018)	Further Description	Potential Impacts
Ecosystem health	Wetlands Rivers Springs and Pools	• Contamination of surface water. • Overland flow of contaminants during rainfall and/or wet ground conditions discharging into streams. • Erosion and increased turbidity of surface water. • Change in flow regime. • Increase in salinity of surface water from rising of groundwater mobilising salts in soils because of vegetation clearing. • Increase in salinity of groundwater.
	Ecosystems supporting significant flora, vegetation and fauna species / communities.	• Impacts to aquatic and terrestrial ecosystems from localised contamination of groundwater and/or surface water, erosion, and increased surface water turbidity.

Environmental Value (EPA 2018)	Further Description	Potential Impacts
	Ecosystems reliant on groundwater or surface water inputs Ecosystems supporting significant amenity, recreation and cultural values	• Changes to groundwater level and availability. • Increase in salinity of surface water from rising of groundwater mobilising salts in soils because of vegetation clearing. • Degraded water quality, such as increased turbidity or pollution, reducing the visual appeal of streams and surrounding landscapes. • Changes to water quality or flow making streams unsuitable for recreational activities like swimming, affecting their accessibility and safety. • Disturbance or alteration of water bodies significant to local or Indigenous communities disrupting cultural practices and heritage connections.
Beneficial uses	Drinking water supplies	Disruption to supply and degradation of quality of public drinking water sources from: • Bacterial and chemical contamination in proximity to drinking water off-take. • Cumulative contamination of surface water. • Erosion and increased turbidity of Public Drinking Water Source Area (PDWSA) in proximity to drinking water off-take. • Increase in salinity of surface water from rising of groundwater mobilising salts in soils because of vegetation clearing.
	Significant current or potential water supplies (i.e., regional scale aquifers and fresh, high order surface water systems)	• Contamination of groundwater. • Overland flow of contaminants during rainfall and/or wet ground conditions discharging directly into reservoirs. • Impacts to downgradient of storage dams from reduced stream flow in sub catchments. • Increase in salinity of groundwater from rising of groundwater mobilising salts in soils from removal of vegetation.
	Water supplies (non-potable use and commercial activities)	• Impacts to quality and quantity of water of other licence holders and or users.
	Inland Waters with high levels of recreation	• Impacts to recreational waters from turbidity, chemical contamination, and cumulative contamination of surface and/or groundwater.

Environmental Value (EPA 2018)	Further Description	Potential Impacts
	Inland Waters with significant cultural and aesthetic values	• Impacts to Aboriginal cultural heritage sites/ places from contamination or salinity. • Impacts to aesthetics from clearing and/or removal of caprock. • Impacts to aesthetics from erosion, increased surface water turbidity, increased salinity, and contamination (chemical and bacterial) of groundwater and/or surface water.

Other associated Environmental Values are managed in accordance with the following management plans:

- Recreational Trails and Facilities Management Plan Willowdale Mine – Larego mine region (GHD, 2024).
- Flora and Vegetation Management Plan Huntly and Willowdale Mine (Alcoa of Australia Ltd, 2024).
- Fauna Management Plan Huntly and Willowdale Mines (Alcoa of Australia Ltd, 2024).
- Environmentally Hazardous Materials Management Plan – Huntly & Willowdale Mine (Alcoa of Australia Ltd, 2024).
- Rehabilitation Management Plan and Schedule – Huntly and Willowdale Mine (Alcoa of Australia, 2024).

2.4 Condition Requirements

Alcoa's 2023-2027 MMP for Huntly and Willowdale mines (Alcoa of Australia Ltd, 2023c) was approved by the Minister for State Development on 20 December 2023, supporting mining at current Myara and Larego regions. The approved 2023-2027 MMP is accompanied by Ministerial approval conditions applicable from the date this MMP was approved. **Table 2-2** outlines the relevant approval conditions for this WRMP.

Table 2-2 Ministerial Approval Conditions

Condition No.	Condition	Section in this Plan
14(b)	Alcoa will review and update the plans referred to below and submit them to the State Development Minister for approval within the timeframes outlined in condition 17, and in accordance with the *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (EPA, 2024); (b) the Water Resources Management Plan (Version 1) so that it: i. satisfies the requirements of conditions 18 and 19; ii. satisfactorily addresses comments received by the MMPLG; and iii. includes data and analysis that demonstrates the effectiveness of implementation of drainage controls, stabilisation and rehabilitation at avoiding, minimising and mitigating potential impacts to drinking water quality within water reservoirs, as proposed in each Drainage Control Management Plan (DCMP) submitted in accordance with conditions 11 and 16.	This WRMP addresses Condition 14(b). Conditions 18 and 19 have been addressed (see Condition 18 and 19 below). Comments from stakeholders have been considered and addressed throughout the document. Data and analysis used to assess the effectiveness of controls is used to develop this WRMP and are provided as **Appendix D**.
17(c)	Alcoa must submit the management plans to the State Development Minister within the following time periods, or such other time period should the State Development Minister determine, following a request from Alcoa: (c) revised Water Resources Management Plan, within 6 months of receiving feedback from the MMPLG;	This WRMP is submitted by 9 February 2025, within six months of receiving feedback from ITAG.
18	The management plans required under condition 17 must contain evidence to demonstrate compliance with relevant 'Operational restrictions' and 'Clearing restrictions' conditions, and must also include: (a) threshold criteria and trigger criteria that are relevant to the environmental impacts that the plans are mitigating and managing; (b) monitoring parameters, sites, control/reference sites, methodology, timing and frequencies, which will be used to measure threshold criteria and trigger criteria; (c) methodology for determining alternate monitoring sites as a contingency if proposed sites are not suitable in the future; (d) data collection and analysis methodologies; (e) adaptive management methodology; (f) contingency measures which will be implemented if threshold criteria or trigger criteria are not met; and (g) reporting requirements.	This WRMP contains evidence to demonstrate compliance with relevant conditions in accordance with *Instructions: How to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (EPA, 2024). Condition 18(a) is addressed in **Table 3-2**. Condition 18(b) is addressed in in **Table 3-2**. Condition 18(c) is addressed in **Section 2.5.5.** Condition 18(d) is addressed in **Table 3-2**. Condition 18(e) is addressed in **Section 4**. Condition 18(f) is addressed in **Table 3-2**. Condition 18(g) is addressed in **Table 3-2**.

Condition No.	Condition	Section in this Plan
19	The management plans required under condition 17 must also contain provisions which demonstrate whether conditions 4 (a) and (b) and relevant 'Operational restrictions' and 'Clearing restrictions' conditions are reasonably likely to be met, and must also include: (a) management actions; (b) management targets; (c) contingency measures if management targets are not met; and (d) reporting requirements.	This WRMP contains evidence to demonstrate compliance with relevant conditions in accordance with *Instructions: How to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (EPA, 2024). Conditions 19 (a) and 19 (b) have been addressed in **Table 3-1** and **Table 3-2**. Condition 19 (c) is addressed in **Table 3-2** and **Appendix A** (Mitigation measures). Condition 19 (d) is addressed in **Table 3-1** and **Table 3-2**.
28	28. Alcoa must submit as part of the Compliance Assessment Report required by condition 32, a compliance monitoring report that: (a) outlines what monitoring was undertaken of any activities carried out in accordance with condition 18 (b) and (c); (b) identifies why the monitoring was capable of substantiating whether the limitations in conditions 5 and 9 are exceeded; (c) identifies why the monitoring was scientifically robust and capable of determining whether all conditions have been met; (d) outlines the results of the monitoring and provides the data; and (e) reports whether the conditions have been met, based on analysis of the results of the monitoring.	Conditions 28 (a) to (e) have been addressed by the Compliance Assessment Report commitment statement in **Table 3-1** and **Table 3-2.**
31	Alcoa will ensure surface water and groundwater monitoring data collected in accordance with the relevant monitoring requirements detailed in condition 28, will be provided to the Department of Water and Environmental Regulation and Water Corporation as per a monitoring schedule agreed by those agencies.	Condition 31 has been addressed by the Compliance Assessment Report commitment statement in **Table 3-1** and **Table 3-2**.

2.5 Rationale and Approach

Alcoa has completed investigations and assessments in the Proposal area to gather background information and data on relevant Environmental Values. Investigations and assessments relevant to current knowledge and impacts to Inland Waters have been included in **Section 2**. These works have included assessments on the Environmental Values and development of management plans and procedures designed to avoid, mitigate and manage impacts and support effective rehabilitation. The data, findings and recommendations from these studies are used to inform the identification and assessment of risks, and the management strategies contained within this WRMP. Where applicable, specific references/citations are included in the tables throughout this WRMP, and the risk assessment provided as **Appendix A**.

2.5.1 Objective and Outcome Based Provisions

This WRMP adopts an objective and outcome-based management approach to avoid, prevent and mitigate potential impacts of Alcoa's operational activities on Environmental Values associated with Inland Waters. Outcomes-based provisions are applied where quantifiable limits exist, enabling clear measurement and accountability of environmental performance. For impacts where site-wide quantifiable limits are unavailable, objectives-based provisions ensure a focus on achieving desired environmental outcomes. The inclusion of objectives related to drinking water contamination and turbidity reflects the Moderate/High risk classification.

The WRMP has been developed in accordance with *Instructions: How to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (EPA, 2024). The values, outlined in **Table 2-3**, form the basis for defining the necessary management measures. Survey and study findings, including historical water quality data, contaminants, and qualitative risk assessments, form the foundation of the WRMP, providing site-specific context. These inputs, combined with the risk assessment process, support a holistic approach to prioritising management objectives and outcomes. Monitoring indicators (triggers and thresholds) and management measures focus on early impact detection and expected environmental changes, ensuring outcome-based objectives are achieved through adaptive management.

2.5.2 Qualitative Risk Assessment

Alcoa conducted a qualitative risk assessment to understand the risks to Environmental Values posed by mining activities (**Appendix A**).

The risk assessment was informed by the framework outlined in the Australian Drinking Water Guidelines (ADWG) (NHMRC, NRMMC, 2011), incorporating risk management objectives from drinking water source protection plans and Water Quality Protection Notes (including 11 and 77) published by the Department of Water and Environment Regulation (DWER). Risks to ecosystem health values were evaluated using Department of Energy, Mining, Industry Regulation and Safety (DEMIRS) Mine Closure and Development Proposal (MDCP) risk assessment framework (DEMIRS, 2024).

The key risks identified across all mining phases include:

- Contamination risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality, particular within reservoir protection zones (RPZ's).

- Erosion and turbidity: Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of land erosion and elevated turbidity in nearby water sources, subsequently impacting drinking water supply sources.
- Increased salinity: Clearing deep-rooted vegetation reduces water interception and uptake, leading to rising groundwater levels which increase the risk of rising salinity levels in stream water and subsequent reservoirs.

The risk assessment demonstrates the multi-barrier approach employed by Alcoa to reduce the impact to Inland Waters. Management actions include those to avoid, prevent, and mitigate impacts; monitoring to gain visibility on water quality and deploy required action as necessary; and reporting to ensure robust evaluation of data and realisation of lessons that can feedback into monitoring programs.

In the first instance, risks are avoided where possible. Avoidance control actions primarily aim to separate sources and receptors (including cultural heritage areas) through adherence to prohibitions of mining in specific areas and buffer zones (e.g., no clearing, exploration or, mining within 1 km of the top water level of water reservoirs), and these are determined with reference to regulation and guidance in the specific mining area context.

Considering the serious health effects that may occur if pathogen infected water is ingested, primary management actions for wastewater treatment systems aim to avoid raw sewage entering the environment and ensuring effective treatment. Such controls include process controls (e.g. overfill protection) and maintenance of plant and equipment.

For hydrocarbon and chemicals, avoidance control actions are primarily containment (e.g. bunded tanks); process controls (e.g. overfill protection) and maintenance of plant and equipment.

For PFAS, key avoidance control actions are prohibition on PFAS containing firefighting foams and other known ancillary products where practical, and use of construction and operations water from sources with a high confidence that the water does not contain PFAS (e.g., public water sources).

In the second instance, management control actions aim to prevent a risk event by reducing the likelihood of the event occurring. These control actions aim to limit the magnitude (e.g., clearing and ground disturbance) and number (e.g., stream crossings) of activities that could otherwise increase the likelihood of an impact.

Such controls include multi-barrier drainage features such as drainage protection slots and in-pit sumps with sufficient storage capacity ((Alcoa, 2022a), (Alcoa, 2024b), (Alcoa, 2024c)); capturing onsite stormwater or from onsite water treatment facilities; double contained fuel storage tanks ((Alcoa, a), (Alcoa, b) and facility bunding. The implementation of plans, processes and protocols such as the Environmental Hazardous Materials Management Plan (EHMMP), (Alcoa of Australia Ltd, 2024) which requires compliance with PC88 for pesticides (e.g., using only those pesticides listed in PC88 and deploying the application guidance) and compliance with the permitting system including the Ground Disturbance Permit further reduce the likelihood of impacts.

Management control actions specific to cultural heritage focus on consultation with the Traditional Owners and awareness and detailed evaluation of, and training on, the presence and significance of sites.

Lastly, mitigation control actions aim to reduce any further and/or limit the nature and extent of impact if a risk occurs. Such actions include implementation of mitigation actions described in plans (e.g. the EHMMP), the PFAS Management Strategy, and spill response protocols

and procedures. Specific items include maintaining spill kits at hydrocarbon storage sites to allow rapid response to any spills, and remediating gully erosion as it occurs. Responses actions are typically proportionate to the nature and extent of exceedance.

Monitoring and reporting management actions aim to inform the need to review and revise management actions; determine changes (e.g., in surface water quality) from pre-mining; provide early warning of a potential impact (e.g., turbidity early response trigger, recognition of increase in surface water abstraction rates, recognition that groundwater level has materially changed); evaluate the performance of treatment systems (Alcoa, c), (Alcoa, d); and identify when the environmental value is no longer protected. For process plant monitoring and reporting management actions, aim to evaluate the performance of treatment systems and prevent discharge of water not treated to meet the discharge standards.

2.5.3 Risk Assessment Process

The qualitative risk assessment process followed by Alcoa in developing the WRMP is described in **Appendix B**. It includes the following steps:

1. Identify the potential sources, pathways and receptors.
2. Identify the potential impacts to receptors and defining the risk pathways.
3. Analyse and consolidate the key impacts to beneficial use and ecosystem health values for all phases of activity.
4. Estimate the level of inherent risk for the impacts and pathways using the above frameworks with consideration of the different receptors.
5. Document the relevant preventative and mitigative operational controls that have been implemented.
6. Re-evaluate the risk and assigning a residual value.

To assess the potential risk to Environmental Values from site contamination or mining activities, the contaminants of potential concern (COPC) were identified and considered along with the source, pathway, and receptor linkages that may be realised during mining activities. **Figure 2-5** shows the general sources, pathways and receptors examples relating to mining areas. Source, pathways and receptors for the Huntly and Willowdale mine areas are presented in **Figure 2-6** and **Figure 2-7**, respectively.

2.5.4 Historical Water Quality Data

A detailed water quality dataset from 2019 to 2024 has supported the historical water quality data review. Over the past five years, various assessment programs have been conducted at the Huntly and Willowdale mine sites. The surface water and groundwater quality data collected during this period is comprehensive and reliable for informing the WRMP. This historical water quality data (**Appendix D**) from surface water and groundwater monitoring across the Huntly and Willowdale mine sites was reviewed, validated, and assessed against the ADWG and per- and polyfluoroalkyl substances (PFAS) National Environmental Management Plan (NEMP) criteria for potable water use (**Appendix C**). The goal of this data analysis is to establish baseline water quality conditions to inform the risk assessment and guide the placement of proposed monitoring programs, identifying high-risk areas.

2.5.5 Monitoring Framework and Justification for Selection of Parameters

Alcoa has developed a monitoring program (**Appendix E**) informed by extensive studies, baseline assessments, and monitoring programs implemented by Alcoa. This section discusses the rationale for specific elements of the program including selection of constituents and analytes and monitoring locations and frequency.

2.5.5.1 Contaminants of Potential Concern Selection

For a risk to sensitive receptors from site contamination to exist there needs to be:

- a source of contamination;
- a receptor that can be impacted by the contamination; and
- a pathway of exposure.

If one of these elements is absent or can be removed, there is no risk. **Appendix C** describes the COPC and their source pathway receptor linkage.

Alcoa identified COPC using the Health-Based Targets Manual (WSAA, 2015) and DWER's Water Quality Protection Notes and by detailed interrogation of its operational inventories and activities. Activities that could lead to contamination of soil, groundwater and surface water are evaluated to inform COPC that may be present from those mining activities. The identified COPC then form the basis of monitoring programs.

This process begins with a review of the sites' land use history and current conditions to locate potential contamination areas. Surface water and groundwater sampling is then conducted across the sites to assess potential contaminants, such as heavy metals and hydrocarbons, linked to past activities.

Different monitoring programs and investigations target specific contaminant sources and receptors, with varying sampling densities, frequencies, and analytical suites. The analysis serves as the foundation for developing the proposed surface water and groundwater monitoring program included in the WRMP.

The following sections discuss further the rationale for selection of specific indicators for the WRMP monitoring program.

Turbidity and Suspended Solids

While clearing is minimised as far as practical and rehabilitation occurs as soon as practical, as clearing and mining activities may increase the risk of erosion which leads to mobilisation of soil particles (sediment runoff and deposition of airborne particles), turbidity and suspended solids are key parameters to monitor. While turbidity is an aesthetic issue for drinking water, it can also reduce the effectiveness of the disinfection process in removing E. coli and pathogens (Water Corporation, 2007).

Salinity

As clearing can lead to rising groundwater levels due to less/absent uptake (by deep rooted native vegetation) and interception (by leaves and native litter then evaporation), salts may be mobilised and base flow may increase the salinity of streams contributing to drinking water stores. High salinity levels will taint drinking water. Salinity is evaluated via measuring / analysing for electrical conductivity, total dissolved solids, cations (e.g. sodium), and anions (e.g. chloride).

Microbiological

The generation and discharge of microbes may increase with the increase in human presence associated with mining activities. Pathogens can adsorb onto soil particles and may be shielded from the effects of disinfection. Microbial elements are evaluated via analysis for E-coli and faecal coliforms.

Metals

Mining processes such as crushing, conveying, trucking of ores have the potential to increases the concentration of metals in the environment if management actions fail. Increased metal concentrations in aquatic environments may lead to toxicity issues. Metals such as manganese may indicate poor water flow and erosion which may lead to turbidity issues.

Nutrients, Pesticides, and Herbicides

Pesticides and herbicides are used as part of Alcoa's rehabilitation activites. These are toxic and some are potentially carcinogenic. Nutrients from fertiliser (also used as part of rehabilitation activities) are toxic to humans at high levels, with infants less than three months old being most susceptible and can cause algal blooms and impacts to aquatic ecology.

Petroleum Hydrocarbons and Chemicals

Spills and leaks associated with the storage, handling, and use of hazardous materials, including fuels (e.g., for transport) and chemicals (e.g., for water treatment), have the potential to cause contamination. Hydrocarbons and other chemicals are potentially toxic and carcinogenic, and harmful by products may form when they combine with chlorine (i.e., during chlorine disinfection).

Per- and Polyfluoroalkyl Substances

PFAS are persistent and bio-accumulative with risk to human health and the environment. These are present due to the historical use of PFAS-containing firefighting foams at Alcoa sites.

2.5.5.2 Criteria Selection

To evaluate potential risks to drinking water supplies, constituent concentrations are compared to the:

- ADWG (National Health and Medical Research Council, 2022) which are designed to ensure the quality of potable water; and
- PFAS NEMP which defines guideline values to minimise the risk to human health. The guidelines were developed after consideration of the best available scientific evidence and provide a framework for good management of drinking water supplies. They address both the health and aesthetic quality aspects of supplying good quality drinking water.

To evaluate potential risks to aquatic ecology, constituent concentrations are compared to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018). The ANZG focus on water quality in the context of broader ecosystem health management and contain water/sediment quality guideline values to ensure certain physical and chemical stressors in waterways do not exceed harmful levels.

The South West Index of River Condition (SWIRC) administered by the DWER compares

water quality data (nitrogen, phosphorous, turbidity, temperature, dissolved oxygen, and salinity) against guidelines based on the tolerances of south-west aquatic biota. Data for other contaminants (not included in the standard SWIRC condition assessment) is collected as required based on site-specific risk assessment and compared with established guidelines.

In addition to screening criteria in the PFAS NEMP, Proposal specific criteria have been developed and the rationale is provided in *Application of Site-Specific Human Health and Ecological Criteria for PFAS – Alcoa Mines, Western Australia* (EHS Support, 2024). Levels of protection are assigned based on the status of land, with the highest conservatism applied to undisturbed land, then rehabilitated land, and the least conservative to operational areas.

Further detail on criteria selection is included in **Appendix C**.

2.5.5.3 Monitoring Locations Rationale

Surface water and shallow groundwater flows (i.e., those at highest risk of impact by mining) follow catchment and drainage pathways from sources to potential receptors (GHD, 2023). Consequently, the monitoring network is designed to cover the key catchments and pathways.

Monitoring locations are selected to monitor habitat health; inform of drainage system failures (at the source, such as haul road sumps, drainage protection slots, in-pit sump); inform of issues associated with hydrocarbon sources (at the source, such as workshops and refuelling stations), and pathogen source (e.g., sewage plants); and identify detrimental water quality in streams entering the reservoirs.

Specific surface water installations are proposed to include (GHD, 2024):

- A compliance monitoring network of stream gauges and water quality sensors in the major waterways entering the Serpentine and North Dandalup reservoirs or in streams discharging into the reservoir and close to the offtake.
- Additional stream gauges and water quality sensors upstream of the compliance monitoring network specifically to inform of any drainage system failures.
- Additional turbidity monitors in each catchment with a reasonable portion of clearing or other risk factors, for use in drainage failure forensics.
- Scientific monitoring of catchments using a combination of the above gauges and monitoring equipment installed in select areas, corresponding to a range of catchment properties and risk factors.

The compliance and early warning stream gauges and water quality sensors include telemetry to provide real time continuous monitoring.

The groundwater monitoring locations for the Huntly and Willowdale mines are based on sub-catchment risk within Alcoa's mapped mining lease. These locations aim to address key areas by:

- Baseline Monitoring to establish the pre-mining water quality in areas planned for mining.
- Background Monitoring to determine the water quality in catchments not currently or likely to be mined. Background monitoring informs the setting of the baseline condition.
- Operational Area Monitoring: Focusing on existing mining areas to manage drainage risks and detect contaminants like hydrocarbons.

Locations are selected to provide information on groundwater conditions (GHD, 2024):

- At sub-catchment discharge zones in area affected by the MMP.
- Near significant water courses where these might be affected by mining.
- Near hydrocarbon storage / dispensing sites.
- In sub-catchments that have not been mined and are unlikely to be mined.

The proposed network intends to enhance the current monitoring framework by leveraging the existing infrastructure where possible and adding new stations to refine groundwater condition insights, particularly at:

- Discharge zones within 2024-2027 mining areas (excluding Myara North and Holyoake).
- Areas near significant water courses potentially impacted by mining.
- Around hydrocarbon storage and dispensing sites.
- Undisturbed sub-catchments unlikely to be mined

The adaptive monitoring strategy accounts for operational changes (e.g., transition from mining to rehabilitation, re-location of infrastructure) and climate change that may necessitate changes in monitoring locations and/or density.

2.5.5.4 Frequency and Timing Rationale

The frequency and timing of monitoring depends on the phase of mining, segment of the environment being monitored, monitoring method available for the specific analyte, and rapidity of potential impact. Turbidity and salinity are continuously monitored in key streams (receptors) to detect changes that may occur rapidly in the event of a runoff management structure failure or overflow (turbidity) or high rainfall/flood event (salinity) and practical monitoring methods are readily available and easily implemented. At source locations, continuous monitoring is less practical due to the intermittent nature of flows, and grab samples are collected.

The frequency of pathogen monitoring is informed by the low likelihood of impact due to the pathways (containment, operational integrity, sampling at source) from mining activities and the low consequence of any incremental impact when compared to the impacts from animals. More frequent monitoring would be required if there was a reasonable likelihood of a large volume of untreated water entering the environment. Such an event is highly unlikely considering the maintenance and monitoring undertaken on facilities that process high volumes.

Several streams are ephemeral, and the monitoring program is designed to capture first flush from rainfall.

2.5.5.5 Triggers and Thresholds Rationale

Trigger and threshold levels are referenced from the guidelines. Early Response Criteria are informed by the ADWG, NEMP, industry experience on monitoring programs (e.g., material statistical change observed in hydrocarbon data), and/or determined in consultation with the Water Corporation.

Table 2-3 State of Knowledge, Assumptions, and Uncertainties – Drinking Water Supplies

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental value:** Beneficial uses – **Drinking water supplies** (including significant current or potential water supplies). **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
The Proposal area intersects the Integrated Water Supply Scheme (IWSS), a major source of drinking water to the Perth, Goldfields and Agricultural regions and parts of the southwest. The IWSS includes 12 major drinking water reservoirs that are in the Public Drinking Water Source Area (PDWSA). Public drinking water source areas are established under the *Metropolitan Water Supply, Sewerage, and Drainage Act 1909* and the *Country Areas Water Supply Act 1947* to protect surface water sources in Western Australia. While the Western Australian Government administers controls to protect drinking water assets (e.g., Reservoir Protection Zones (RPZ)) and increasing desalination inputs to the IWSS are reducing the reliance on the Inland Water resources, clearing and mining in the catchments has the potential to impact drinking water supplies. **Water Bodies and Catchments** Permanent water bodies in the Proposal area are dominated by impounded rivers and creeks which form lakes and reservoirs used for drinking water. The lakes and reservoirs are also used for irrigation and recreation (see **Table 2-6** and **Table 2-7**). Permanent lentic water bodies are recharged seasonally by adjacent wetlands and ephemeral lotic features. The entire Huntly mine area intercepts the water supply catchments of Serpentine, North Dandalup, South Dandalup and Conjurunup and includes the following reservoirs/dams: Canning Reservoir, Churchman Brook, Serpentine Dam, Serpentine Pipehead Dam, Wungong Brook Dam, South Dandalup Dam (Lake Banksiadale), South Dandalup Pipehead, and North Dandalup Dam. Serpentine, Serpentine Pipehead, Wungong and South Dandalup are key reservoirs in the IWSS. The major tributaries in the Huntly mine areas are the Serpentine River and Big Brook. In the Serpentine Dam catchment, tributaries generally flow from the southeast, continuing northwest to join the Serpentine River and Big Brook River before reaching the Serpentine Dam. The South Dandalup River is the major tributary of the South Dandalup Dam catchment and flows east to west before reaching the South Dandalup Dam. The North Dandalup Dam is supplied by the North Dandalup River. Conjurunup Creek (Little Dandalup Creek) flows to the Conjurunup Pipehead Dam. The Willowdale mine area intercepts the Stirling and Sampson Brook water supply catchments, and the Stirling Dam and Sampson Brook Dam (Lake Kabbamup) are key reservoirs in the IWSS. The Harvey River is a key feature of the IWSS in the Willowdale area and feeds the two reservoirs. While the undammed Murray River splits the Huntly and Willowdale zones it is not a viable drinking water source due to elevated salinity levels. **Background Water Quality** Temporary Water Corporation and Alcoa-installed turbidity meters in unmined sub catchments in 2022 provide control data to compare turbidity traces from mine sub catchments (refer to **Appendix D** for turbidity analysis). **Stream Flows and Water Quality** <u>Contributors to Stream Flow</u> The main contributors to stream flow are overland flows, throughflow (shallow soil flow), and groundwater flows. Natural runoff and sediment load in the Proposal area is low due to high permeability soils, native litter/understorey, and low relief (Department of Environment, 2003). Most stream flows in the region are ephemeral and flow is limited to the winter months. Pressure transducer and discharge data indicate that discharge and stream flows begin in June or July and taper off in October or November (GHD, 2021). Discharge data shows that stream flows generally cease within a few weeks or months following a precipitation event (GHD, 2021). <u>Mechanisms of Impact to Stream Flow and Water Quality</u> Clearing and subsequent mining can lead to localised increase in surface water runoff and erosion increasing sediment load (and consequently turbidity) to surface water. Clearing and subsequent mining can also cause groundwater levels to rise (and potentially daylight) as the deep-rooted vegetation accessing groundwater is removed, the forest cover previously intercepting rainfall is removed, and shallow soil porosity is reduced. Increasing groundwater levels may mobilise salts and increase runoff to streams increasing stream flows which may lead to bank erosion and increase in stream turbidity and salinity. The magnitude of the changes depends on rainfall, the extent of clearing, and local topography. Further detail on the changes in groundwater levels resulting from clearing and mining is included in **Table 2-5**.	**Assumptions** The Water Corporation has and maintains appropriate controls and processes to manage potential threats (e.g., impact from third parties) to the drinking water dams. There are no expansion or modification plans proposed for the IWSS that may change the interaction with the Proposal. The Water Corporation advises that more water will come from desalination with a new plant planned for the northern suburbs of Perth. There will be less reliance on dams[1]. **Uncertainties** Erosion mechanisms and early response criterion for turbidity. Limited stream flow data in several areas including the South Dandalup catchment. Lack of stream flow data in the Willowdale mine area (Alcoa, 2024c). Absence of salinity data in surface water in the Willowdale mine area. The performance of the drainage slots under the full range of field conditions. The performance of pit controls particularly on slopes greater than 16%. The effectiveness of the 100 m stream zone vegetation buffer to protect Environmental Values. The infiltration characteristics of the haul road and pit areas under a range of actual rainfall conditions. The accuracy of the Leaf Area Index (LAI) input to models. The nature and extent of lower rainfall/dry periods into the longer term. The potential impact of higher intensity rainfall (due to climate change) on stream flow and erosion. The extent to which illegal aquatic recreational use occurs within the PDWSA. Considering much of the Proposal area is gated and there are fines for such activities, the prevalence is likely low to negligible. However, accidental harm to drinking water supplies by parties unrelated to Alcoa cannot be definitively ruled out. Lack of comprehensive information on stream bank erosion after clearing. To address these gaps, Alcoa commits to ongoing and future investigations and studies (**Table 4-1**), incorporating consultation on study briefs with the ITAG.

[1] https://www.watercorporation.com.au/Our-water/Perths-water-supply/Integrated-water-supply-scheme

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental value:** Beneficial uses – **Drinking water supplies** (including significant current or potential water supplies). **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
<u>Studies and Modelling to Evaluate Changes in Stream Flow and Water Quality</u> Alcoa has undertaken several studies evaluating the impact of clearing and mining on stream flow, salinity, and salt load, and on groundwater levels. The multi-year Cameron Experimental Catchments in the Intermediate Rainfall Zone (IRZ) (Croton, 2011) reported no measured increased in stream flow or stream flow salinity due to mining, aside from Jayrup catchment (one year only). See **Table 2-5** for groundwater specific findings. Twenty-seven experimental catchments have been established to understand the effects of land use change on stream flow and water quality (especially salinity). Del Park, Seldom Seen, and More Seldom Seen were established specifically to evaluate the impacts in bauxite mining areas. A study on the O'Neil-to-McCoy mine area (Dalton, 2010) concluded there will likely be mining-related groundwater contributions to stream flow leading to additional salt-load. However, the increases in salt-load were considered to be low in a water resources context, and when up-scaled to Serpentine Reservoir inflows, the simulated increases resulted in an increase of only 1.8 mg/L in stream inflows. This compared with an average long-term inflow salinity of 134 mg/L for the Serpentine Reservoir, so such a change would likely not be detectable. This report provided support to the case for no adverse impact and that O'Neil to McCoy mining in the IRZ should go ahead. While a comprehensive uncertainty analysis was not reported, the authors stated that the effects at the local and small catchment scale were not fully evaluated. In 2014, approval was granted by the Department of Water to mine Rance 2 and 3 in the IRZ. After advice from the Bauxite Hydrology Committee, the Department of Water concluded the salinity risk to be low (Department of Water, 2014). Modelling confirms observations (and vice versa) that clearing generally results in rising groundwater tables due to less/absent uptake by deep rooted native vegetation and interception by leaves and native litter then evaporation. Extensive modelling has been undertaken to predict the increase in stream flow and in-stream salinity resulting from clearing and mining and the general conclusions are that stream flows would increase in the order of 25% over the mining years, and then reduce back to pre-mining levels within 10 years of rehabilitation (Croton, 2004), (Croton B. a., 2002). Models have been applied to predict hydrology responses at a catchment scale. Much modelling has been undertaken, with several models showing reliable alignment with the observed data. The WEC-C model (Croton) was used to model several catchments in the Alcoa lease with key objective to forecast the affects clearing for mining may have on the hydrology and groundwater and how impacts may be rectified by rehabilitation (Croton, 1998), (Croton, 2012i), (Croton, 2012f)), (Croton, 2005)), (Croton, 2012a), (Croton, 2012c), (Croton, 2012b), (Croton, 2012e), (Croton, 2012d), (Croton, 2012g), (Croton, 2012i), (Croton, 2004). The WEC-C has evolved over time with improvement in its predictive ability. This was supported by the Mining Bauxite Subcommittee (McIntosh, 2003) and the Independent Review undertaken by Hatton in 2003 (Hatton, 2003). Alcoa is undertaking a review of these programs to determine whether contemporary updates will provide value in confirming assumptions and findings remain valid. There is some discussion about the sensitivity of models to the LAI and the accuracy of these values (Department of Environment, 2004) (see Uncertainties). LAI is an important factor in the water mass balance. Several studies have sought to improve the accuracy of measurement for the LAI ((Colquhoun, a), (Boniecka, 2004)) and quantify the water intercepted by forest (Croton, Alcoa Bulletin No. 31 Rainfall Interception in the Del Park Catchment of the North Jarrah Forest, WA, 2011). Transpiration of the vegetation in the Northern Jarrah Forest rehabilitated area will be the largest component of the water balance of these areas when the plants are well established (>2 years since rehabilitation). The LAI of the sites will be the major plant factor affecting the transpiration rate (Colquhoun, a). Recent reporting (Okane, 2023) indicates LAI requires 7 to 10 years of recovery to achieve jarrah forest conditions. <u>Surface Water Monitoring</u> *Huntly Area* In the Huntly mine area, monitoring of water resources in the mine areas is undertaken by Alcoa, the Water Corporation, and DWER with periodic records going back to the 1970s (depending on the catchment). DWER monitors salinity and water temperature in Big Brook and South Dandalup tributary. Surface water is generally fresh with low salinity (<1,000 µS/cm), low turbidity (median turbidity values below 1.5 Nephelometric Turbidity Units (NTU)), and low Total Suspended Solids (TSS), maintaining high water quality due to the forested catchment (Wetland Research and Management, 2021). Some tributaries east of the 1,100 mm isohyet have higher Total Dissolved Solids (TDS) and salinity. Salinity and TDS are known to decrease in steam flows following precipitation events, emphasizing the importance of rainfall and surface water flow in the region. Recent and historical data indicates the median pH of all tributaries is neutral, with some tributaries reporting minimum pH values in the acidic range consistent with local geological setting. Monitoring of the Serpentine River (DWER) identifies some locations with marginally higher median turbidity values ranging from 1.6 to 2.6 NTU (GHD, 2022). Increases in salinity in surface water correlate with groundwater discharge when levels are higher (shallower).	

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental value:** Beneficial uses – **Drinking water supplies** (including significant current or potential water supplies). **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
Sporadic monitoring of extended analytical suites in the area indicates low nutrient levels and metal concentrations representative of the geological setting. Microbiological parameters are detected at all sampling sites, with widespread detection consistent with the presence of fauna species within the national park setting. Low concentrations of PFAS were detected at four sites, however all detections were significantly below the drinking water assessment criteria. PFAS above criteria has been detected in background/ambient locations and potable drinking water reservoirs. Elevated polycyclic aromatic hydrocarbons (PAHs) (above drinking water guidelines) have been recorded in some locations but have been associated with prescribed burns or bushfires (GHD, 2022). Monitoring of the Serpentine Dam and South Dandalup Dam is undertaken by the Water Corporation to ensure the water quality meets Australian Drinking Water Standards. The raw water to the Serpentine Dam contains *E. coli* and above detection concentrations of manganese and nitrate. Turbidity, iron and manganese have been recorded above the ADWG. Monitoring in the offtakes of the Serpentine Dam and South Dandalup Dam generally indicates turbidity is less than 1 NTU. Testing for pesticides ceased in 2001 (Water Corporation, 2007). Turbidity has remained low even with increased mining in the area. Reservoir colour data is used as an analogue for dissolved organic carbon (DOC). The historical colour data indicates that colour has varied between approximately between 1 and 4 (low) and does not display any trend associated with mining disturbance or the effects of large bushfires within the catchment. However, decreasing rainfall has led to low storage volumes in reservoirs and this has led to colour and turbidity spikes. Recent collation of turbidity data from continuous monitors found no evidence of turbidity spikes being associated with mining operations (Rare Environment, 2024). Results for total recoverable hydrocarbons (TRH); benzene, toluene, ethylbenzene, xylenes, and naphthalene (BTEXN); semi-volatile organic compounds (SVOC); chlorinated hydrocarbons; herbicides; and pesticides were not detected above the limit of reporting (LOR). Exceedances of ADWG have been reported for pH, salinity constituents, sulfate, dissolved iron, dissolved manganese and various PFAS compounds. *Willowdale Monitoring* Monitoring of surface water associated with the IWSS in the Willowdale area is limited. Salinity is typically representative of freshwater (TDS <200 mg/L), and turbidity generally less than 11 NTU. pH ranges from slightly acidic to neutral (pH range: 5.5 to 8.1). Where analysed, COPCs such as TRH, BTEXN, SVOCs, herbicides, and pesticides were all reported below the LOR and no exceedances of the ADWG were reported. All results for microbiology (thermotolerant coliform, enterococci, Escherichia Coli (*E. Coli*) and thermophilic amoeba) were reported below the LOR. PFAS exceedances have not been detected in the PDWSA. Nutrient concentrations are typically low and consistent with the predominantly undeveloped forested land use. Recent collation of turbidity data from continuous monitors found no evidence of turbidity spikes being associated with mining operations (Rare Environment, 2024). There were three events where the criteria were exceeded but these were attributed to 'false' events (e.g., organic debris covering the monitor) rather than true turbidity spikes. Monitoring of the Sampson Brook dam is undertaken by the Water Corporation to ensure the water quality meets Australian Drinking Water Standards. Water quality monitoring was undertaken in the Stirling Dam from April 1998 to March 1999 at the dam outlet. All parameters (turbidity, pH, colour, iron, manganese and aluminium) fall within the NHMRC ADWG values over the entire sampling period. *Studies Evaluating Drainage Measures and Impact of Slope on Erosion Potential and Resulting Stream Turbidity* Alcoa has undertaken substantial work aimed at understanding the causes of high turbidity events, particularly those associated with drainage events, and how to mitigate them in the future (Data Analysis Australia, 2023b). Several studies confirm intuitive concepts that impacts such as high turbidity events increase with an increase in cleared area and terrain slope and decrease with increasing rehabilitation. High turbidity events that occur on the same day as a drainage event are most often caused by drainage events related to mining activity – especially on haul roads – and are less likely to be related to rehabilitation (Data Analysis Australia, 2023a). At least one study discusses the success of sediment ponds in managing sediment from mining areas prior to release to stream. At least one study indicates gully erosion occurs at contributing areas greater than 0.6 ha or slopes greater than 10 degrees. Some studies indicate major erosion is unlikely, especially given the decline in rainfall and stream flow over the last few decades (Hydrological and Environmental Scientific Solutions Pty Ltd, 2022). Other studies conclude there are no indications of altered hydrology because of mining (Stokes, 2008). The same study discussed possible effects of short-term sedimentation apparent immediately downstream of one haul road crossing. Key concerns of the Water Corporation (Water Corporation, 2023) include: Turbid mine pit runoff discharging to stream zones via ripping and blasting of inundated drainage protection slots, i.e., ineffectiveness of drainage protection slots in preventing turbid flows from entering stream zones. Increased stream flow associated with clearing of native vegetation for mining resulting in stream bed erosion. The Water Corporation indicates this is known to be occurring in the Serpentine Pipehead catchment.	

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental value:** Beneficial uses – **Drinking water supplies** (including significant current or potential water supplies). **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
Increase inundation of the natural mid slope seepage areas due to changes to hill side hydrology associated with clearing for mining resulting in increased inundation, flow and subsequent increase in turbidity discharge from existing catchment features including forest tracks. These forest tracks are often used by Alcoa for operational purposes resulting in increased disturbance, erosion and subsequent turbidity. The studies described above go some way to addressing these concerns, however, Alcoa understands further work is required (see Uncertainties). <u>Impact of Rehabilitation on Stream Flow and Water Quality</u> Several studies (Department of Environment, 2003), (Croton, 2012f) indicate rehabilitation (reforestation) will result in stream flow, salinity, salt loads and groundwater levels returning to pre-mining levels within 10-15 years. Some commentary suggests the rehabilitation can be too effective in that stream flows reduce below pre-mining levels. Modelling indicates young mine revegetation has higher evapotranspiration rate than unmined forests and is thus reducing stream flow (Croton, 2005). Alcoa's overall objective for rehabilitation is "to establish, and return to the State, a self-sustaining Jarrah Forest ecosystem, that meets the agreed forest values that will support similar management practices as that employed in the surrounding Northern Jarrah Forest". Alcoa's rehabilitation activity is guided by the *Rehabilitation Design Manual* (Alcoa, 2024c) and performance is measured against the Rehabilitation Completion Criteria. Rehabilitation processes includes landscaping to blend the existing infrastructure (mined areas and haul roads) with the surrounding forest and re-establish drainage; return of soil including direct return soil (soil from a donor site); contour ripping and furrow creation. According to the *Rehabilitation Management Plan and Schedule - Huntly and Willowdale Mine* (Alcoa, 2024b), approximately 22,500 ha of the total disturbance footprint of approximately 28,000ha (as of 2024) has been rehabilitated (earthworks completed, topsoil and seed replaced, and revegetation in various ages of regrowth). For the Huntly, Willowdale and Jarrahdale mines, approximately 77%, 75% & 100% have been rehabilitated respectively. At the Jarrahdale mine 1,355 ha has received a 'certificate of acceptance' from the landholder (DBCA), a precursory requirement for mine lease relinquishment. <u>Groundwater Levels and Stream Flow</u> Several tributaries in the Proposal area are ephemeral. During the wet season stream flow is controlled by rainfall runoff and baseflow from groundwater. Groundwater level will typically increase during the wet season due to direct infiltration and this is more apparent in cleared areas (for mining). Rainfall runoff is greater in cleared areas or where the forest has been thinned (though see *Impact of Climate Change on Stream Flow*). This conceptualisation is supported by the work by Hughes (Hughes, 2011) . The multi-year study in the Cameron Experimental Catchments in the IRZ (Croton, 2011) concluded that while some groundwater levels did rise in response to mining, they were not to such an extent that a groundwater discharge would occur. This is counter to the general conceptualisation that groundwater provides baseflow to streams during certain times of the year. However, this study references data from a prolonged low rainfall period (see *Impact of Climate Change on Stream Flow* below for further discussion). <u>Infiltration and Compaction</u> The compaction undertaken to construct and resulting from operations on haul roads and pits causes a reduction in soil permeability with resulting reduction in infiltration. This can lead to increased surface water runoff. If the surface is not properly decompacted, the performance of rehabilitation will be sub-optimal. Several studies discuss the importance of decompaction (Hughes, 2012), and one study in the Del Park catchment (Bari, 1997) demonstrated the effectiveness of deep ripping to properly decompact former pit areas and haul roads. Work was undertaken in the 1990s and early 2000s on improving decompaction methods and these have been implemented with improvements in infiltration performance during rehabilitation (Croton, 2005). Work reported in 2023 (Okane, 2023) indicates the largest contributor to ineffective infiltration is a low conductivity pallid zone. The work stated that increasing the ripped pallid zone hydraulic conductivity results in higher storage capacity within the ripped pallid zone and increases the rate of percolation (infiltration). The modelling concluded that a saturated hydraulic conductivity above 0.1 m/day allows the system to drain rather than flow overland. <u>Impact of Climate Change on Stream Flow</u> Rainfall in the southwest of WA has been declining since the 1950s and this has led to reductions in stream flow unrelated to mining. Many studies of the area discuss the impact of climate change and reducing rainfall on stream flows in the area (Petrone, 2010b). Some of the larger streams in the High Rainfall Zone (HRZ) have previously exhibited perennial flows, however, a 15 to 20% reduction in rainfall since the 1970s has caused a significant reduction in stream flow. Discharge data shows that stream flow of tributaries has declined by up to 50 to 80% at some locations since 2000 (GHD, 2022). The reduction in rainfall continues to shift the hydrology of the region from perennial to ephemeral streams. Reduced rainfall mitigates the rise in groundwater level that may occur due to clearing and this can result in no additional runoff to stream flow if the groundwater level does not rise to the shallow profiles. The impact of the reduction in rainfall on groundwater level is discussed in **Table 2-5**.	

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental value:** Beneficial uses – **Drinking water supplies** (including significant current or potential water supplies). **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
<u>Potentially Hazardous Liquids Activities</u> The Alcoa-managed McCoy and Myara Reservoirs are used to store water extracted from Banksiadale Dam, site stormwater runoff, and treated wastewater. Treated wastewater from the McCoy wastewater treatment facility must achieve the water quality standards identified in the Huntly Part V Licence (L6210/1991/10) prior to release. This water is then released directly to the environment or transferred to the McCoy Reservoir and subsequently the Myara Reservoir for re-use on site. The Myara Reservoir is currently impacted by minor detections of PFAS. During the 2024 monitoring event detections were below the PFAS NEMP V2 95% Species Protection limit. Water from the Myara Reservoir is treated via the temporary PFAS treatment plant and must be confirmed non-detect for 28 PFAS species to ultra-trace levels prior to re-use on the site. Reservoir water is used for haul road dust suppression, crusher dust suppression, vehicle wash down, and workshop hose down. The Alcoa-managed Larego Reservoir is used to store water extracted from Samson Dam and treated wastewater. Treated wastewater from the Larego wastewater treatment facility must achieve the water quality standards identified in the Willowdale Part V Licence (L6465/1989/10) prior to release. This water is then released to the Larego Reservoir for re-use onsite. Reservoir water is used for haul road dust suppression, crusher dust suppression and wash down, conveyor belt wash, and workshop hose down.	

Table 2-4 State of Knowledge, Assumptions, and Uncertainties – Significant Ecosystems

Current Knowledge	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental Value:** Ecosystem health – **Significant Ecosystems:** Ecosystems supporting significant flora, vegetation communities and fauna species , Dams, Rivers and Stream (Serpentine Dam, Serpentine River, Harvey River, Murray River), Wetlands, Wild Rivers, Springs and Pools. **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected. The protection of this value is informed by the statement in the Inland Waters Guidance: The ecosystem health values related to Inland Waters generally include ability to sustain vegetation, aquatic fauna and birdlife and the ecological processes that support them.	
Aquatic ecosystems may rely on surface expression of groundwater which include the surface water courses that receive groundwater flow, groundwater fed springs and swamps and their respective biological and Environmental Values. The inherent value of aquatic ecosystems, habitats, and wildlife in waterways and riparian areas includes biodiversity, ecological interactions, plants, animals, key species and their habitats, as well as sources of food and drinking water. Consideration of freshwater aquatic ecosystems are relevant to the Proposal and estuarine and marine ecosystems are present down catchment of the Proposal area. Clearing and mining activities present a risk to hydrological regimes and the health of ecosystems. The hydrology including stream flow and water quality of the Proposal area and surrounds is described in **Table 2-3**. The water bodies in the PDWSA are important for the ecosystems of the area along with water bodies that are not part of the PDWSA. Major surface water bodies that are not in the PWDSA include the Drakesbrook Weir (Lake Moyanup), Waroona Dam (Lake Navarino), Logue Brook Dam, Harvey Dam, and the Murray River in the Willowdale area. **Wetlands** In locations where the water table is close to the surface, and groundwater connects with the valley floor there is evidence of groundwater discharge. In deeper catchments, this occurs as stream flow, and in broader, flatter valleys (particularly in the eastern part of the Darling Range) these are associated with wetlands or damplands. Wetland values are defined as beneficial use or ecosystem health conditions, with ecosystem health values in relation to wetlands including the ability to sustain vegetation, aquatic fauna and birdlife and the ecological processes that support them (EPA 2018). In the Huntly area, the Serpentine River system, North Dandalup and South Dandalup River systems are listed as Conservation category floodplains. In the Willowdale area, the northern tributaries to the Harvey Dam are registered as Conservation Category Wetlands (CCW) (Department of Biodiversity, Conservation and Attractions (DBCA)). Similarly to the ephemeral nature of surface water in the region, some wetlands and damplands in the region can be seasonal in nature. <u>Ramsar</u> There are no Ramsar wetlands in the Proposal area, and the Peel Yalgorup Ramsar wetland system is 18 km west of the Huntly area and 36 km northwest of the Willowdale area. Impacts to the Peel Yalgorup system from the mining activities are highly unlikely considering the separation distance to the Proposal area and the following description is included for completeness only. The Peel Yalgorup wetland is a large system of shallow estuary and saline, brackish and freshwater lakes hosting large numbers of waterbirds and vegetation. The site is considered the most important area for waterbirds and waders in south-west Australia. The Serpentine, Dandalup, Murray, and Harvey Rivers all discharge into the Peel Yalgorup system. The Peel-Harvey Estuary is poorly flushed and shows poor water quality with summer hypersalinity, high nutrient concentrations and, at times, elevated microalgal densities[2]. The estuarine river reaches are in poor health. The Waangaamaap Bilya (Serpentine River) has very high nutrient concentrations that fuel microalgal activity year-round with frequent blooms of potentially harmful microalgae. Oxygen in the bottom waters of the Bilya Maadjit (Murray River) is persistently low and occasional microalgal blooms and fish kills occur[3]. <u>Conservation Category Wetlands</u> Several mapped wetlands are within the Huntly mine area, but only the two at White Road (UFI 12240 and UFI 12238) intersect with operational areas. Most of the mapped wetlands in the area are classified by the DBCA as CCW. CCWs support high levels of ecological functions. While there are some mapped wetlands within the Willowdale mine area, the operational areas are outside the extent of the mapping. **Wild Rivers** There are no wild rivers in or around the Proposal area (Department of Water, 2009). **South West Index of River Condition** DWER administers the SWIRC program which assess the condition of rivers and estuaries in the south-west of Australia including the Harvey and Murray-Serpentine Rivers.	

[2] https://estuaries.dwer.wa.gov.au/estuary/peel-harvey-estuary/estuary/condition
[3] First Nations names are taken from the DWER website.

Current Knowledge	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental Value:** Ecosystem health – **Significant Ecosystems:** Ecosystems supporting significant flora, vegetation communities and fauna species , Dams, Rivers and Stream (Serpentine Dam, Serpentine River, Harvey River, Murray River), Wetlands, Wild Rivers, Springs and Pools. **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected. The protection of this value is informed by the statement in the Inland Waters Guidance: The ecosystem health values related to Inland Waters generally include ability to sustain vegetation, aquatic fauna and birdlife and the ecological processes that support them.	
Springs and Pools The Proposal area is dominated by first-order seasonal creeklines and ephemeral headwater swamps. In higher rainfall years, baseflow in higher-order streams may maintain isolated pool refuges over summer (Wetland Research and Management, 2021). Kennedy's Pool on South Dandalup River is potentially perennial, and Mundalup Pool upstream of the Holyoake area is semi-perennial. The pools provide a crucial refuge for aquatic fauna during summer and autumn. **Flora and Fauna** The Huntly and Willowdale mine areas support ecosystems of significant flora, vegetation communities, and fauna including amphibians, birds, mammals, and reptiles. Several studies have characterised the ecosystems in the mining areas (Streamtec, 2003), (GHD, 2021), (GHD, 2021a), (GHD, 2021c), (Phoenix Environmental Services, 2021), (Alcoa of Australia Ltd, 2023a), (Alcoa of Australia Ltd, 2024). Terrestrial habitat in the mining areas is characterised by five habitat types: Bullich forest, Blackbutt forest, Flooded Gum woodland, Melaleuca dampland and Jarrah-Marri forest. Jarrah-Marri forest is the predominant habitat type and comprises Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophyllal*) trees over shrubland. The shrubland often exists as a complex patchwork of low shrubs such as *Fabaceae, Hibbertia, Leucopogon, Adenanthos and Pteridium* (GHD, 2021c). These terrestrial ecosystems support a variety of local fauna, including some significant species. Significant terrestrial and aquatic fauna species are listed in the State *Biodiversity Conservation Act 2016* (BC Act) and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). Several studies have reported observations of these species in the mining areas (Alcoa of Australia Ltd, 2024): <u>Class Aves</u> • Baudin's Black Cockatoo (*Zanda baudinii*). • Carnaby's Black Cockatoo (*Zanda latirostris*). • Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*). • Masked Owl (southwest) (*Tyto novaehollandiae novaehollandiae*). • Peregrine Falcon (*Falco peregrinus*). <u>Class Bivalvia</u> Carter's Freshwater Mussel (*Westralunio carteri*). The *carteri* are known to exist in the western coastal drainages. More Westralunio species have recently been reported with *inbisi inbisi* in the southern coastal drainages and *inbisi meridiemus* in the southwestern corner. <u>Class Gastropoda</u> Minute Freshwater Snail (*Glacidorbis occidentalis*). <u>Class Mammalia</u> • Brush-tailed Phascogale (*Phascogale tapoatafa*). • Chuditch (Western Quoll) (*Dasyurus geoffroii*). • Quenda (Southern Brown Bandicoot) (*Isoodon obesulus fusciventer*). • Quokka (*Setonix brachyurus*). • Rakali (Water Rat) (*Hydromys chrysogaster*). • Western Brush Wallaby (*Notamacropus irma*). • Western False Pipistrelle (*Falsistrellus mackenziei*). • Woylie (*Bettongia penicillata ogilbyi*). • Western Ringtail possum (*Pseudocheirus peregrinus occidentalis*). <u>Class Reptilia</u> • Dell's Skink (*Ctenotus delli*). • Southern Death Adder (*Acanthophis antarcticus*). • Jarrah Forest freshwater snail *Glacidorbis occidentalis* (P3).	**Assumptions** Given the intermittent and seasonal hydrology of ephemeral/intermittent lotic features, it is assumed these habitat features do not support a sufficient forage base to sustain semi-aquatic wildlife populations. **Uncertainties** • Whether reports of increased rainfall intensities have occurred or are likely to eventuate. • Limited data available from southwest WA, in stream turbidity generation and by bauxite mining. • Limited knowledge of COPC in sumps. • Localised habitat in the Proposal area is not comprehensively understood. • The background (baseline) water quality condition of the Proposal area is not comprehensively understood. Data was collected in 2024 and is being evaluated. • The specific monitoring required for individual catchments is in development. • A detailed survey of river pools and farm dams has not been completed. The full extent of wetland systems has not been surveyed. To address these gaps, Alcoa commits to ongoing and future investigations and studies (**Table 4-1**), incorporating consultation on study briefs with the ITAG.

Current Knowledge	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental Value:** Ecosystem health – **Significant Ecosystems:** Ecosystems supporting significant flora, vegetation communities and fauna species , Dams, Rivers and Stream (Serpentine Dam, Serpentine River, Harvey River, Murray River), Wetlands, Wild Rivers, Springs and Pools. **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected. The protection of this value is informed by the statement in the Inland Waters Guidance: The ecosystem health values related to Inland Waters generally include ability to sustain vegetation, aquatic fauna and birdlife and the ecological processes that support them.	
The only significant aquatic species in the mining areas is Carter's Freshwater Mussel (*Westralunio carteri*). This species is known to reside in the Serpentine Dam and has been reported in Lake Banksiadale[4] and while it is possible for mussels to disperse upstream from the dam during high winter/spring flows, any dispersing mussels are unlikely to survive the extended dry summer period in upstream seasonal brooks/streams. Macroinvertebrates play critical roles in ecosystems as they can be more sensitive than other species and therefore are commonly used as a marker for localised stream health conditions and salinity thresholds. Mining activities can increase salinity in terrestrial freshwater ecosystems. Research on local macroinvertebrates indicate 3-5 g/L as a threshold of salinity in streams and indicated ability of animals to adapt to increasing salinity (Rutherford and Kefford, 2005). Additionally, local macroinvertebrates may have a community-level resistance to mild salinity increases and mature life stages were relatively tolerant to increasing salinity. The overall conclusion was that bauxite mining in the IRZ is unlikely to negatively impact the stream macroinvertebrate fauna (Kerp, 2006). Kennedy's Pool and Mundalup Pool upstream of the Huntly/Del Park mine regions are potential perennial water bodies that provide refuges for aquatic and terrestrial fauna on the South Dandalup River during the summer and autumn. Farm dams, where present, may also provide refuges for aquatic fauna during summer and autumn. Native aquatic species in the Willowdale area (outside of PDWSA) include the Western Pygmy perch fish in the Lough Brook Dam) and the Western Minnow fish in the Harvey Dam. <u>Other Studies</u> Several studies indicate that changes in ecology over time (multi-decade) are likely due to climate changes rather than due to mining (Stokes, 2008). A study that included ecological assessment in the HRZ and IRZ stated that while streams in the HRZ contained high numbers of semi-aquatic sensitive species (dragonflies, stoneflies, caddisflies and mayflies), there were only minor changes in functional organisation detected that could be related to fluctuations in turbidity and increased loads of suspended organics. In the IRZ, there were clear shifts in community composition over time at all monitoring sites. These shifts were due to increases in species that inhabit still-water environments, most likely a response to seasonal changes in stream flow with recent declines in rainfall. The study also stated that frog species presence and abundance have been recorded since 2001 in the IRZ and in the HRZ (at Jarrahdale, Huntly and Willowdale mines) since 1992. The study concluded there were no clear effects of mining on the number of frog species or their total numbers. Richness has shown a generally declining trend and concluded climate is the most likely driver (Stokes, 2008).	

[4] https://epbcpublicportal.environment.gov.au/_entity/sharepointdocumentlocation/53b79f2d-baaa-ef11-b8e9-000d3a6a1778/2ab10dab-d681-4911-b881-cc99413f07b6?file=00-2024-10009%20Referral.pdf

Table 2-5 State of Knowledge, Assumptions, and Uncertainties – Ecosystems Reliant on Groundwater or Surface Water Inputs – Riparian Vegetation – Groundwater Dependent Ecosystems (GDEs) – Subterranean Fauna

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental Value:** Ecosystem health – Ecosystems reliant on groundwater or surface water inputs – Riparian Vegetation – Groundwater dependent ecosystems (GDEs) – Subterranean Fauna. **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
Groundwater Aquifers Across the Proposal area, groundwater host rocks comprise the weathered and fresh Archaean crystalline rocks. More recent sediments are incised into the basement rocks coinciding with existing drainage lines. There are two main aquifer units. The unconfined shallow weathered zone aquifer (also referred to as the shallow regolith aquifer) comprises lateritic caprock and gravelly to sandy sediments. The shallow aquifer has variable permeability and storage potential due to the presence of clay (referred to as saprolite clays in **Figure 2-5**) and variable interconnectivity of the formation. The deeper fractured bedrock aquifer underlies the shallow unconfined system. The systems are hydraulically connected in some areas, but data shows they can also function independently. Shallow and deep monitoring bores show a similar response to rainfall events, and together with the similarly receding levels support the conclusion that the shallow and deep parts of the aquifer are hydraulically connected (GHD, 2021). **Groundwater Recharge** The shallow aquifer recharges through rainfall infiltration and from nearby surface water from losing streams. The deeper aquifer recharges through direct rainfall on exposed areas, vertical infiltration from the shallow aquifer, and streams. Root channels and soil cracks aid recharge (Turner & Johnston, 1987; McFarlane & Williamson, 2002). **Groundwater Levels** Groundwater levels in both aquifers vary across catchments with levels influenced by topography, sediment layers, and seasonal wet and drying seasons. Monitoring of groundwater has occurred in the Huntly and Willowdale mine areas since the 1990s (and some areas since the 1970s) following the increased mining activity in the region. In the Huntly mine region, groundwater is monitored by over 450 monitoring bores (GHD, 2021). Groundwater levels generally align with topography; with levels measured higher in elevated areas and lower in valleys (GHD, 2024; GHD, 2021). The groundwater table is generally 10 to 30 m below the surface in upland areas and shallower in the valleys. In the western high rainfall parts of the Darling Ranges, the groundwater is often close to the surface in the valleys and can discharge to stream channels all year. Further east as rainfall declines, the forest (via evapotranspiration) removes almost all the rain absorbed deep into the soil each winter limiting/reducing the groundwater recharge mechanism. As a result, the groundwater is often below the valley floor streams and are ephemeral, and only flow in winter (WWA v5, 2019). Groundwater levels are strongly correlated with seasonal weather patterns. Higher groundwater levels established during the winter rains persist during spring, remaining until the wet season ends. Historical groundwater level monitoring data reveals groundwater levels can vary up to 5 m over an annual cycle (GHD, 2021; GHD, 2024). One study examined groundwater data collected by Alcoa in six of its research catchments and compared it to runoff and rainfall data (Hughes, nd). The data showed that annual runoff (as a percentage of rainfall) is well correlated to the annual catchment groundwater level. **Groundwater Levels in Response to Clearing and Mining** Clearing associated with mining can result in a local rise in the ground water table due to the reduction in uptake (evapotranspiration) by deep rooted native vegetation and interception by leaves and native litter. Monitoring bores to the south of the Myara North (Huntly) mine region where mining occurred show increases in water levels in response to clearing and mining. Several models have predicted changes in groundwater levels due to clearing and mining in the mining areas (Croton B. a., 2002). The modelling has been able to predict actual changes in groundwater level with reasonable accuracy. The outcomes of modelling show the maximum simulated response due to mining to be about 8 m for piezometers in the mine areas, with typical values in the 2 to 6 m range (Croton B. a., 2002). The highest rise according to the GHD report (from monitoring post mining around 2016) was in bore MK42132A which recorded a water level increase of approximately 12 m about ten years after mining (GHD, 2021). While part of the rise is due to seasonal variations, the large component of the increase is associated with clearing. For valley floor piezometers below mine areas (unmined areas), the response was generally less than 2 m. One study predicted groundwater elevations due to mining would remain high for a period in the order of 15 years (Croton, 2004). **Groundwater Level Response to Rehabilitation** Groundwater levels are expected to return to pre-mining (or close to) levels sometime after rehabilitation (Department of Environment, 2003), (Croton, 2012f). One study indicated groundwater rise had reduced to one metre above simulated unlined levels six years after mining and following vegetation rehabilitation. The study in the Cameron Experimental Catchments in the IRZ (Croton, 2011), which included multi-year field monitoring at four gauging stations (flow, stream salinity, rainfall), 83 bores (groundwater levels), and measurement of LAI, concluded groundwater had returned to pre-mining levels. **Impact of Groundwater Level Rise on Stream Flow and Water Quality** In addition to wet season increase in rainfall, the removal of deep-rooted vegetation can increase recharge leading to a rise in groundwater levels. The rise in groundwater levels can provide base flow to streams. Water quality changes in streams can result from groundwater that has provided base flow (e.g.,	**Uncertainties** • Limited information on groundwater and surface water interactions. • Limited groundwater data informing assessment of likelihood of interception of groundwater during the mining phase. • Lack of baseline groundwater monitoring data in the Huntly and Willowdale mine areas. • Impact of varying depth to groundwater with topography on GDE. • Locations of GDEs across the Huntly and Willowdale mine areas. • Appropriate criteria and/or targets appropriate/ required for protection of GDEs. • The potential impact on groundwater levels (and subsequently on hydrology) due to climate change. To address these gaps, Alcoa commits to ongoing and future investigations and studies (**Table 4-1**), incorporating consultation on study briefs with the ITAG.

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental Value:** Ecosystem health – Ecosystems reliant on groundwater or surface water inputs – Riparian Vegetation – Groundwater dependent ecosystems (GDEs) – Subterranean Fauna. **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
groundwater with higher salinity) and erosion and turbidity issues associated with higher stream flow. This is supported by *Hydrology and Water Quality Assessment for Huntly Mine* (GHD, 2022). **Groundwater Water Quality** *Salinity* Historical and current monitoring data in the Huntly mine area indicates an average groundwater salinity of around 400 mg/L, though limited locations have recorded salinity up to 2,500 mg/L (GHD, 2021; GHD, 2022). Groundwater salinity in the Willowdale area mainly ranges between 500 mg/L and 1,000 mg/L TDS (DoW, 2012; Commonwealth Forests Taskforce, 1998). *Nutrients* Groundwater in the Huntly mine area has low nutrient levels, indicating lack of applied nutrients (GHD, 2021). However, areas in Willowdale associated with pine plantations near the Stirling Dam have been associated with an influx of nutrients. *Metals* Dissolved metal concentrations are generally representative of the geological setting (GHD, 2022), i.e., background. *PFAS and Hydrocarbons* Low concentrations of PFAS have been detected in groundwater in both the Huntly and Willowdale mine areas (references following). PFAS detections are generally isolated to areas associated with the historical use of firefighting foams to fight bushfires or prescribed burns. A study on PFAS in the Willowdale mine area determined that PFAS detections were isolated to specific areas. In most areas, PFAS detections were below assessment criteria, however in isolated areas in Arundel (Willowdale) PFAS was identified in six bores associated with testing and maintenance of fire suppression systems resulting in impacts to soils and sumps and subsequent leaching/infiltration to groundwater above drinking water levels, though not considered risk as not in same catchment as receptors (GHD, 2024). In the Huntly mine area, PFAS was detected in four of the sampled bores, however, all detections were significantly below the drinking water assessment criteria. PAHs and Total Recoverable Hydrocarbons (TRHs) have been detected in low concentrations, likely associated with bushfire or prescribed burn effects. Historically, fire response may have used PFAS in firefighting foams, however, DFES has not used firefighting implements containing PFAS since 2003 (GHD, 2022). **Groundwater Dependent Ecosystems (GDE)** GDEs potentially exist in and around the Huntly and Willowdale mine areas where groundwater plays a crucial role in sustaining aquatic or terrestrial habitats on a permanent or intermittent basis. There are no confirmed aquatic or terrestrial GDEs in the Willowdale and Huntly mine areas as indicated by the Bureau of Meteorology (BoM) GDE Altas database (Bureau of Meteorology, 2022). However, GDEs can be inferred or predicted by the vegetation composition, proximity to riparian and swamp areas, groundwater contribution to baseflow or local groundwater elevation (EHS Flora and Fauna Review Executive Summary, 2024). Two GDEs identified by Geoscience Australia (2014) have relevance to the Proposal area: 1. Terrestrial vegetation that relies on the availability of shallow groundwater; and 2. Wetlands such as paperbark swamps and forests and mound springs. The study of GDEs within WA has primarily been undertaken on the Swan Coastal Plain (Froend et al., 2004, Sommer and Froend, 2010) and, to a lesser extent, the Blackwood Plateau (Froend and Loome, 2005) and Collie Basin (SKM and WRM,2010). Surveys have been undertaken to assess the potential for GDEs to occur within the Huntly and Willowdale mine areas based on vegetation types and key indicator species that prefer and occur on seasonally moister and wetter soils on the swamps, valley floors, and lower slopes. Key plant species considered indicative of potential GDEs within the Proposal area include *Banksia littoralis*, *Hakea varia*, *Acacia divergens*, *Boronia molloyae*, *Thomasia paniculata*, *Astartea scoparia*, *Babingtonia camphorosmae*, *Calothamnus lateralis*, *Eucalyptus rudis*, Hypocalymma angustifolium, *Melaleuca Preissiana*, *Melaleuca rhaphiophylla*, *Melaleuca lateritia*, *Melaleuca viminea*, Regelia ciliata, *Gahnia trifida*, and *Taxandra linearifolia* (Mattiske, 2021a). Based on surveys and assessments undertaken, the following Site Vegetation Types (SVTs) are considered to be associated with potential GDEs across the Proposal area. <u>Swamps and Broad Valleys</u> A: Tall shrubland of *Melaleuca lateritia*, *Hakea varia*, *Melaleuca viminea* and *Melaleuca incana subsp. incana* on clay loams in seasonally wet valley floors. AC: Open woodland of *Eucalyptus rudis – Melaleuca preissiana – Eucalyptus patens – Banksia littoralis* with dense *Taxandria linearifolia* and *Astartea scoparia* in understorey on broad swamps and water courses. AD: Low open woodland of *Eucalyptus rudis* and *Eucalyptus marginata over Banksia littoralis*, *Hakea prostrata* and *Pericalymma ellipticum* over low shrubs and herbs on leached sands over sandy-gravel on lower slopes.	

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental Value:** Ecosystem health – Ecosystems reliant on groundwater or surface water inputs – Riparian Vegetation – Groundwater dependent ecosystems (GDEs) – Subterranean Fauna. **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
AW: Low open woodland of *Eucalyptus patens* and *Melaleuca preissiana* over *Banksia littoralis*, *Hakea prostrata* and *Pericalymma ellipticum* over low shrubs and herbs on leached sands over sandy-gravel on lower slopes. AX: Open woodland of *Eucalyptus rudis* over *Acacia saligna*, *Melaleuca incana subsp. incana* and *Hypocalymma angustifolium* on clay-loams on valley floors. AW/AX: Localised patchy mosaic of AW and AX. D: Open forest of *Eucalyptus marginata*, *Corymbia calophylla – Hakea prostrata* on lower slopes with mixed low understorey species, including *Babingtonia camphorosmae* and *Acacia extensa* on clay loams to gravelly clay-loams. DA: Open forest of *Eucalyptus marginata – Corymbia calophylla – Hakea prostrata* on lower slopes with patches of *Melaleuca preissiana*, *Banksia littoralis* and *Hakea varia* over mixed low understorey species, including *Babingtonia camphorosmae* and *Acacia extensa* on clay loams to gravelly clay-loams. Local variant also includes *Xylomelum occidentale*. DG: Open forest of *Corymbia calophylla* and *Eucalyptus marginata* over *Hakea lissocarpha*, *Macrozamia riedlei*, *Pericalymma ellipticum*, *Grevillea bipinnatifida*, *Allocasuarina humilis*, *Acacia alata*, *Babingtonia camphorosmae*, *Hypocalymma angustifolium* and *Lysiandra calycina* on clay-loams on lower slopes with localised patches of outcropping. E: Open woodland of *Eucalyptus marginata* and *Corymbia calophylla* over *Mesomelaena tetragona*, *Kingia australis*, *Leptospermum erubescens* and *Babingtonia camphorosmae* on sandy to sandy-loam soils on slopes. J: Open woodland to open forest of *Eucalyptus marginata*, *Corymbia calophylla* and *Eucalyptus patens* over *Mesomelaena tetragona*, *Leptocarpus scariosus*, *Babingtonia camphorosmae* and *Stirlingia latifolia* on broad sandy-loam flats valley slopes. WA: Open forest of *Eucalyptus megacarpa – Eucalyptus patens – Corymbia calophylla* on lower slopes with mixed low understorey species, including *Banksia littoralis* and occasional *Melaleuca preissiana* over *Acacia extensa* and *Hypocalymma angustifolium* on seasonally moister sandy-loam gravelly soils. <u>Valley Floors and Lower Slopes</u> C: Woodland to open forest of *Eucalyptus patens – Corymbia calophylla – Banksia littoralis and Banksia seminuda* with dense *Taxandria linearifolia* and *Astartea scoparia* in understorey on creek lines and water courses. CW: Woodland to open forest of *Eucalyptus patens – Eucalyptus megacarpa – Corymbia calophylla – Banksia littoralis* with dense *Taxandria linearifolia* and *Astartea scoparia* in understorey on creek lines and water courses. W: Open forest of *Eucalyptus megacarpa – Eucalyptus patens – Corymbia calophylla* on lower slopes with mixed low understorey species, including *Acacia extensa* and *Hypocalymma angustifolium* on seasonally moister sandy-loam gravelly soils. Q: Open rorest of *Eucalyptus marginata – Corymbia calophylla – Eucalyptus patens* with mixed understorey species, including *Trymalium floribundum*, *Acacia extensa* and *Lysiandra calycina* on loam soils on lower slopes. <u>Slopes with Higher Seasonal Moisture</u> PW: Open forest of *Allocasuarina fraseriana – Eucalyptus marginata – Corymbia calophylla* with scattered understorey, including *Grevillea wilsonii*, *Adenanthos barbiger*, *Babingtonia camphorosmae* and *Hypocalymma angustifolium* on sandy gravels. SW: Open forest of *Eucalyptus marginata – Corymbia calophylla – Banksia grandis* with scattered understorey, including *Adenanthos barbiger*, *Hypocalymma angustifolium* and *Styphelia tenuiflora* on seasonally moister sandy-gravelly soils. These SVTs, which are considered as potential GDEs, are expected to be subject to seasonal inundation and/or waterlogging due to groundwater and/or surface water flows and are primarily located within or adjacent to stream zones, which form part of the mapped stream zone + 100 m buffer. **Riparian Vegetation** In parts of the Jarrah forest, riparian vegetation is considered a potential GDE, particularly where groundwater contributes to baseflow or where the groundwater level is within 10 m of the natural ground surface (GHD, 2021). Groundwater elevation data has been used to support the mapping of potential GDEs within mining areas. Groundwater hydrographs can indicate locations where regional (fresh) groundwater lasts through the dry season supporting GDEs, as compared to other bore logs which indicate groundwater that dissipates during summer months (GHD, 2021). Potential GDEs are in stream zones and swamps of the Huntly mine DE, located in valleys (1-2 m) of the Holyoake region (Alcoa of Australia Ltd, 2023b). In the Holyoake Region (Huntly) the depth to water in the valley floors (>10 m) indicates that potential GDEs are not solely supported by regional groundwater discharge and are more likely the result of seasonal saturation of a shallow perched aquifer in the valley floor (GHD, 2021). The jarrah forest vegetation is dominated by the predominant tree *Eucalyptus marginata* (Jarrah), which comprises about 60-80% of the LAI. *E. marginata* has a dimorphic root system comprising dense lateral roots in the topsoil and overburden above the caprock and ‘sinker’ roots which extend vertically accessing moisture in moisture bearing clay. The roots are in shallower soil which have the greatest potential to supply water in winter, and deep tap roots maintain access to water reserved during the drier summer and autumn seasons. Evapotranspiration from Jarrah forests affects groundwater levels, as roots can extend up to 40 m deep. **Hyporheic Zone Fauna**	

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental factor: Inland Waters **Environmental Value:** Ecosystem health – Ecosystems reliant on groundwater or surface water inputs – Riparian Vegetation – Groundwater dependent ecosystems (GDEs) – Subterranean Fauna. **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
The alluvial/colluvial sediments within streams and swamps are subject to seasonal saturation through surface and groundwater inflows, creating hyporheic zones that may provide habitat for macroinvertebrates. These zones can provide refuge for invertebrate aquatic fauna that can burrow to avoid desiccation during dry periods and/or high flow events (WRM 2021), including crustaceans, earthworms and insect larvae (GHD, 2023). Stygal amphipods have also been recovered from the hyporheic zone of streams within the Huntly mine, which may be potential SRE fauna (WRM 2021).	

Table 2-6 State of Knowledge, Assumptions, and Uncertainties – Water Supplies (Non-potable Use and Commercial Activities)

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental Factor: Inland Waters **Environmental Value:** Beneficial uses – **Water supplies** (non-potable use and commercial activities). **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
Alcoa Use of Water The Huntly mine is licensed by DWER to abstract water from four surface water sources (Alcoa of Australia Ltd, 2023c): • Banksiadale Dam supplies water to the Huntly Central offices, McCoy facilities, White Road facilities, and the Myara facilities via a header tank on Radio Hill. • Boronia Waterhole supplies water to the Del Park facilities and conveyor belt transfer station. • Pig Swamp and Marrinup Nursery (Lot 908 on Marrinup Brook) supplies are disconnected from the main water supply network, however, they are both being maintained for emergency water supply purposes or potential future use. The Huntly mine has a Bulk Water Agreement with the Water Corporation to purchase water from the South Dandalup Dam. The Willowdale mine is licensed by DWER to abstract water from the Samson Dam (Alcoa of Australia Ltd, 2023) and has a Bulk Water Agreement with the Water Corporation for the purchase of this water. Samson Dam supplies water to the Orion facilities, Arundel facilities and Larego facilities. **Agriculture and Other Uses of Water** The Harvey River intersects the majority of the Willowdale mine. The catchment is highly regulated and Harvey Dam, Logue Brook Dam, Waroona Dam, Drakes Brook Dam and Wokalup Creek Pipehead Dam are used to supply the Harvey and Waroona irrigation districts. Rural farm dams include Gooralong Brook, Davis Brook, Swamp Oak Brook (Alcoa's Inland Waters EMP, Oct 2023). There is an agricultural farm adjacent to the Serpentine Main Dam and a timber industry. Logue Brook Dam, approximately 10 km west-southwest of the Larego crusher, supports irrigation water. The Murray River's upper catchment lies east of the Northern Jarrah Forest and covers extensive agricultural land uses of the Avon Wheatbelt, which results in elevated salinity in this river (DWER, 2024).	• The impact of climate change on availability of water. • The potential for Alcoa to require an increased allocation to support mine activities and the potential impact on water supplies for other users including ecosystems. • The potential for third parties to require increased water allocations and the potential impact on water supplies for Alcoa. To address these gaps, Alcoa commits to ongoing and future investigations and studies (**Table 4-1**), incorporating consultation on study briefs with the ITAG.

Table 2-7 State of Knowledge, Assumptions, and Uncertainties – Ecosystems supporting significant amenity, recreation and cultural values

Current Knowledge and Description of Impacts	Key Assumptions and Uncertainties
Environmental Factor: Inland Waters **Environmental Value:** Ecosystem Services – Ecosystems supporting significant amenity, recreation and cultural values. **Objective:** To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.	
Recreation Water-based recreational activities including swimming, canoeing, fishing and marroning are not permitted in the PDWSA[5],[6] (Department of Water and Environment Regulation, 2019b). Water bodies in the Proposal area outside the PDWSA and potentially used for recreational activity include Gooralong Brook (Jarrahdale townsite), Murray River (Lane Poole Reserve), Serpentine River downstream, and the Murray River (Alcoa, 2023b). The Murray River downstream of the Holyoake area runs through Lane Poole Reserve and is incorporated into several recreational facilities as a foreshore and for swimming and paddling (Alcoa, 2023b). **Aboriginal Cultural Heritage** Aboriginal cultural heritage sites in the Proposal area are identified through review of the Aboriginal Cultural Heritage Inquiry System (ACHIS); assessing the reports of any previous surveys undertaken by Alcoa; use of the peer-reviewed Archaeological Predictive Model (APM) to inform the approach to archaeological surveys; and undertaking ground surveys in consultation with Traditional Owners. Table 10-1 of (Alcoa of Australia Ltd, 2023c) lists the Aboriginal cultural heritage studies undertaken (and ongoing) in the area since 2006. Aboriginal cultural heritage sites relating to water are known along the Serpentine, North and South Dandalup Rivers in the Huntly mine area and along the Murray River in the Willowdale area. Registered cultural heritage sites include the Serpentine River, North, South Dandalup and Murray Rivers themselves. **European and Other Heritage** European heritage sites associated with water in the Huntly and Willowdale mine areas are Harvey Weir and Logue Brook Dam. No World Heritage Sites or Commonwealth Heritage Sites occur within 5 km of the Huntly and Willowdale mine areas (Alcoa of Australia Ltd, 2023c).	**Uncertainties** The extent to which illegal aquatic recreational use occurs within the PDWSA. Considering much of the Proposal area is gated and there are fines for such activities, the prevalence is likely low to negligible. However, accidental harm to Environmental Values by parties unrelated to Alcoa cannot be definitively ruled out. The extent to which the installation of turbidity monitors to be installed in the Serpentine River will impact Aboriginal heritage. The uncertainty is mitigated by Alcoa's commitment to engagement with the Gnaala Karla Booja Aboriginal Corporation and DPLH to ensure appropriate approvals are in place, wherever required, prior to installation of the monitors.

[5] Serpentine Dam WA | Picnic Area, Address, Opening Hours & Water Levels
[6] https://www.watercorporation.com.au/About-us/Media-releases/2023/January-2023/Fishing-remains-prohibited-at-public-drinking-water-dams-during-marron-season#:~:text=To%20prevent%20bacterial%20and%20chemical,public%20drinking%20water%20source%20areas.

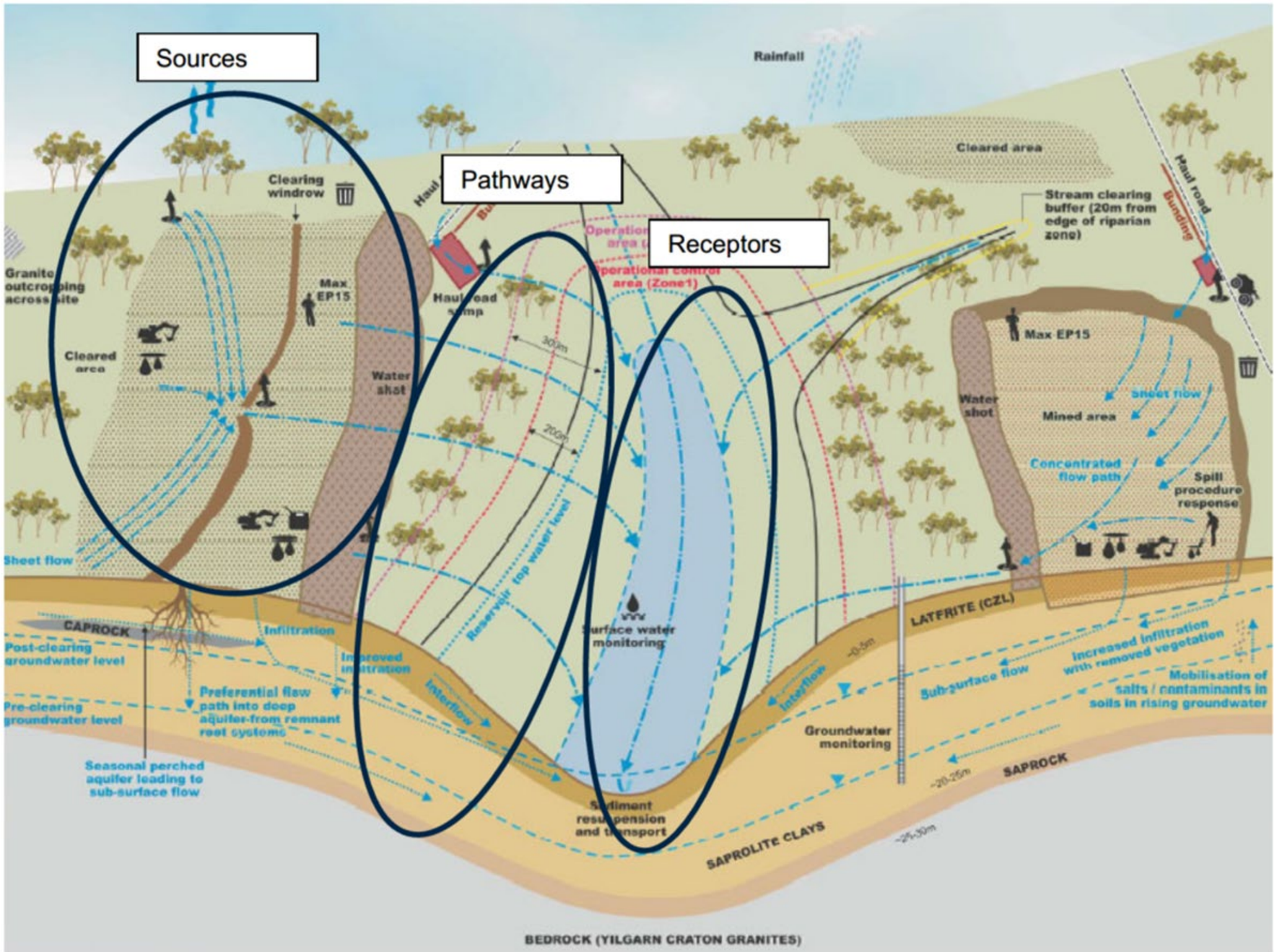
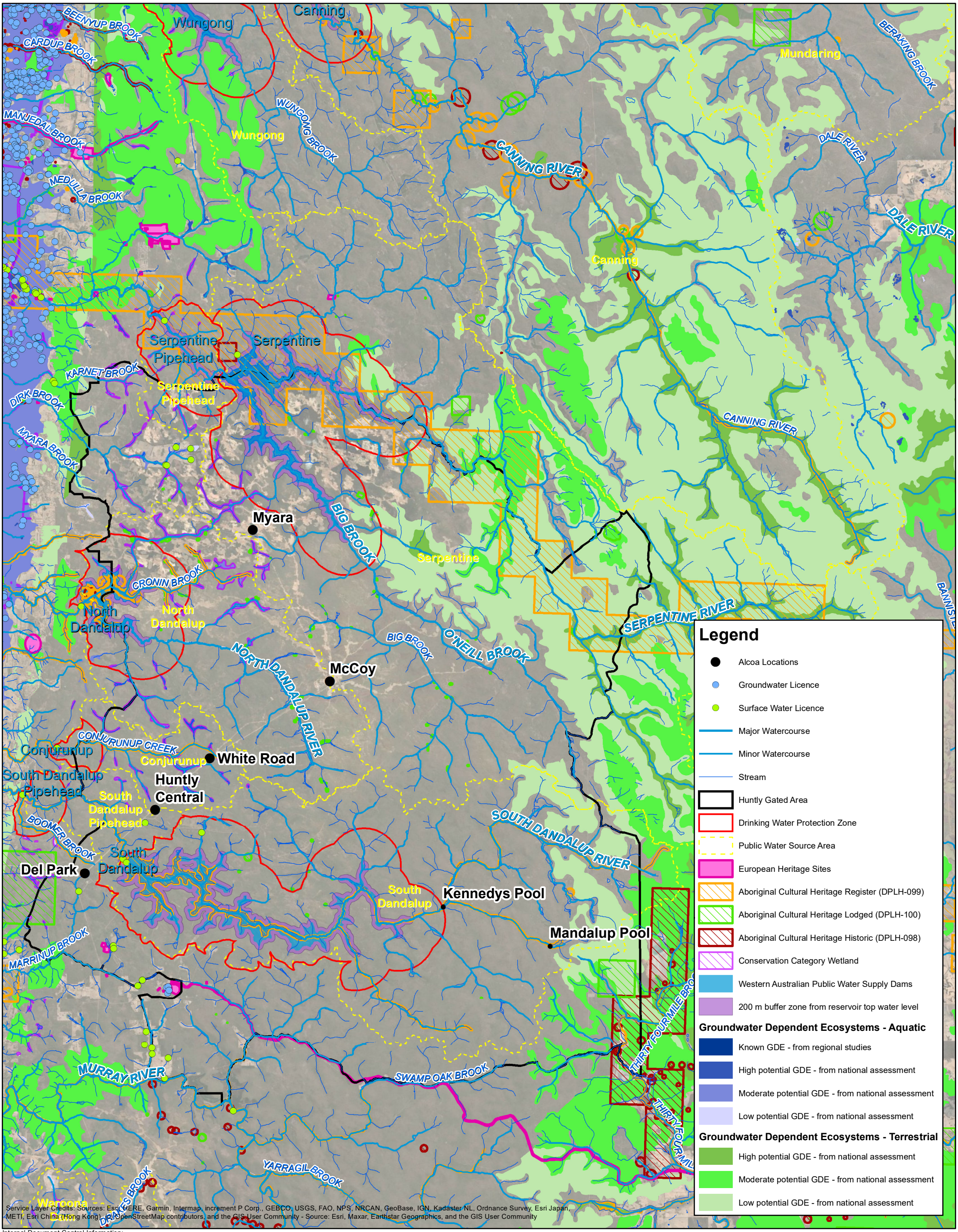


Figure 2-5 Source, Pathway and Receptor Examples Relating to Mining Areas (GHD, 2023)



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 21/01/25 3:45:31 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Source Pathway Receptor (Huntly)

0 2.5 5 10 15 20 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

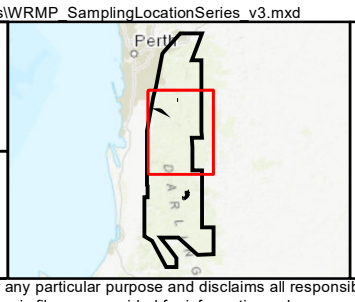
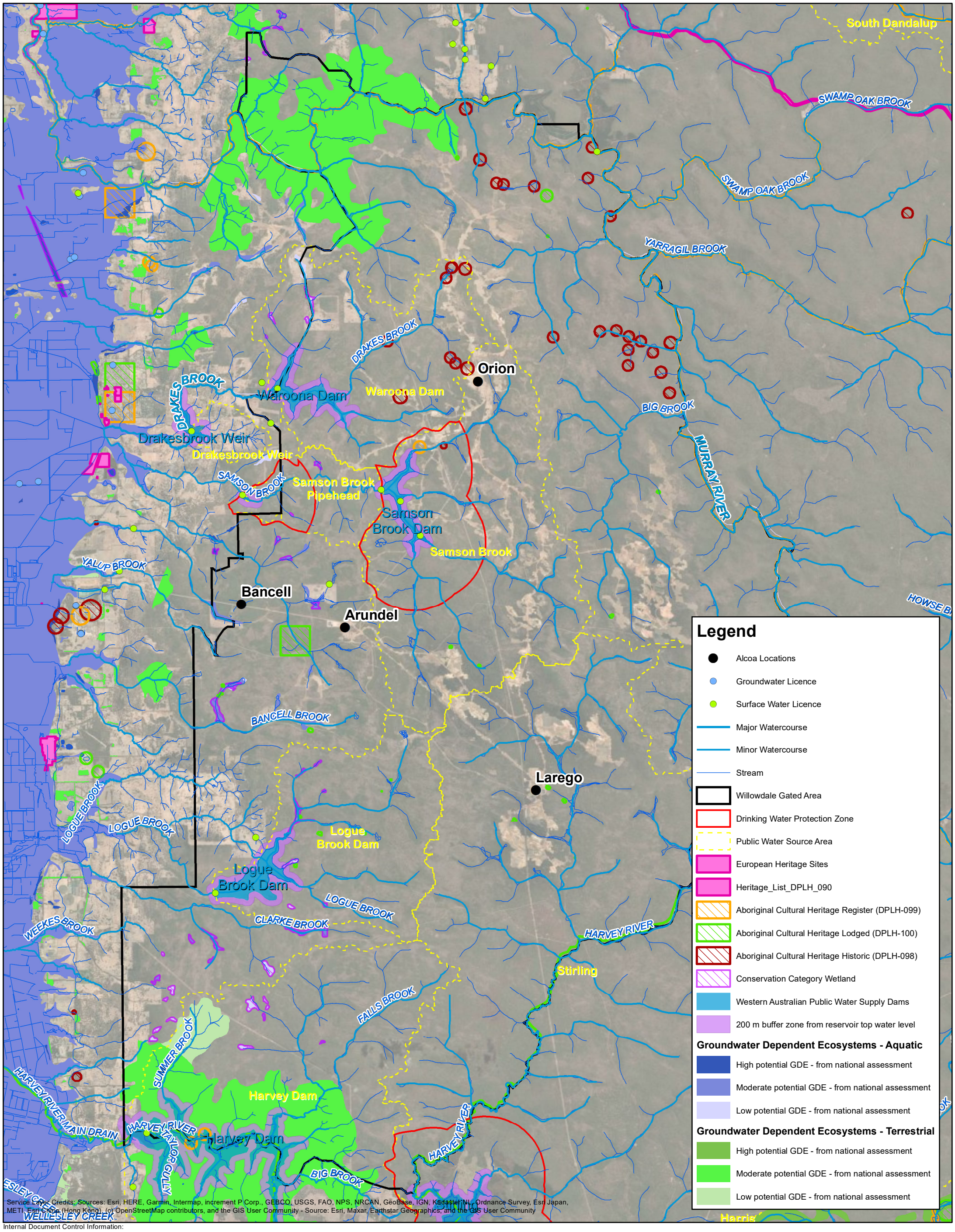


FIGURE 2-6

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:184,940
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 21/01/25 3:45:31 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Source Pathway Receptor (Willowdale)

0 1.5 3 6 9 12 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

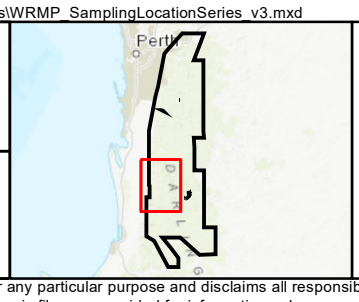


FIGURE 2-7

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:113,200
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

3 WRMP Components

This section of the WRMP identifies the provisions that Alcoa will implement to ensure the defined environmental objectives are met during the implementation. Monitoring is designed to inform if the corresponding environmental objectives and outcomes are being achieved and to respond as required.

The monitoring program will be implemented in a staged approach to align with project milestones and risk-based priorities. Rather than deploying the full program immediately, the installation of monitoring bores and in-stream monitors will occur progressively. This phased implementation ensures resources are allocated efficiently and monitoring efforts are focused on addressing the most critical risks first, allowing for adaptive management as new data becomes available.

Key preventative measures for source protection, including RPZ, are essential in safeguarding public drinking water. The RPZ is a public exclusion zone, acting as a critical barrier to protect water quality.

Objectives, management targets and the corresponding management action are provided in **Table 3-1**. Specific measurable outcomes with trigger and threshold criteria with detailed information on the monitoring program are provided in **Table 3-2**. The monitoring plan provisions tables (**Table 3-1** and **Table 3-2**) provide a structured framework to address moderate and high residual risks identified in the risk assessment **Appendix A**. The management targets, which show whether environmental objectives are being met, are directly tied to management actions. These actions are steps taken to address the moderate and high residual risk and prevent or mitigate potential impacts on water resources. Detailed information on the sites monitored and the analytical suites is provided in **Appendix E, Table E1.**

Outcome-based provisions are applied where a sufficient level of information exists to establish objectives and measurable criteria (EPA, 2024). Environmental criteria are defined to assess performance against the environmental outcome, these are:

- Trigger criteria: Criteria where indicators are selected for monitoring to provide a warning that if exceeded the outcome may not be achieved. They are intended to forewarn of the approach of the threshold criteria and trigger response actions.
- Threshold criteria: Criteria where indicators have been selected to represent the limit of acceptable impact beyond which the environmental outcome is not being met and where there is likely to be a significant impact on the environment.

Alcoa will continue implementation of the WRMP to provide assurances that mine activities are adequately managed to minimise groundwater and surface water impacts. Triggers and thresholds are established at levels that enable responses proportional to potential threats, ensuring the achievement of desired environmental outcomes and the protection of environmental values.

This WRMP will be updated to align with the adaptive management approach (refer to **Section 4**).

Table 3-1 Management Plan Provisions – Objective-based

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Objectives:

1. Implement all practicable measures to prevent and minimise impacts to drinking water quality from contamination.
2. Implement all practicable measures to prevent and minimise erosion and turbidity.
3. Ensure changes to surface water flows are minimised.
4. Minimise impacts on shallow aquifer groundwater levels and the associated effects on streamflow.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow. Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Objective-based

#	Management Targets / Objectives	Management Actions	Monitoring: Timing/Frequency of Actions Monitoring	Reporting
1	Implement all practicable measures to prevent and minimise impacts to drinking water quality from contamination.	• No clearing, exploration, mining or operations within 1 km of the top water level of any water reservoir.[7] • No clearing, exploration, mining or operations within the Serpentine Pipehead Dam Catchment.[7] • No clearing, exploration, mining or operations within the RPZ or water reservoir where the average slope is greater than 16%.[7] • Minimise pathogen sources by restricting access to RPZ for personnel. • Biological waste bagged and disposed of outside of RPZ. • Permit to Work in Close Proximity to Water Catchment Areas. • Restrict the volume of hazardous materials stored in mobile fuel tankers to 15,000 L capacity. • Earthmoving and ancillary equipment are maintained in accordance with preventative maintenance programs. • Bulk hazardous materials and wastes will be stored at designated construction compounds or other storage facilities in accordance with *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 1997* as applicable to the specific materials. • Temporary fuel storages are appropriately transported and self-contained. • Underground pipes associated with fuel handling are double-sleeved with inspection points. • Fuel storages are bunded in accordance with Australian standards and guidance. Tanks may be double contained or bunded. • Oily water contained in management systems including sumps and treated in separators and dissolved air flotation units. • Minimise loss of containment of hazardous materials by storing them within appropriately sized secondary containment and /or hardstand areas. • Restrict the volume of hazardous materials transported across Big Brook Causeway and Samson Dam Causeway to 15,000 L. • Restrict the volume of hazardous materials transported (at any one time) across Dellamadellena stream crossing to 8,000 L. • Minimise the use of fertilisers and herbicide within the catchment as per manufacturer's specifications. • Minimise contamination of water sources from herbicide and fertiliser use by applying them only outside a 50 m buffer from streams, reservoirs, and bores, unless approval has been obtained from DOH/DWER.	• Monitoring of surface water and groundwater quality (**Table 3-2**). • Annual clearing/rehabilitation review. • Catchment Checklist Clearance to Work Permit – as required. • Self-Assessment Audits in accordance with the schedule.	All incidents will be included in the monthly report to the Water Corporation. *Compliance Assessment Report* Compliance Assessment Report (CAR) will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (Table 2-2). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. *Annual Environmental Reporting* Annual Review to JTSI,

[7] Does not apply to stabilisation or rehabilitation activities, environmental monitoring activities, use and maintenance of existing infrastructure, modification of existing road infrastructure, construction of drainage control infrastructure.

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Objectives:

1. Implement all practicable measures to prevent and minimise impacts to drinking water quality from contamination.
2. Implement all practicable measures to prevent and minimise erosion and turbidity.
3. Ensure changes to surface water flows are minimised.
4. Minimise impacts on shallow aquifer groundwater levels and the associated effects on streamflow.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow. Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Objective-based

#	Management Targets / Objectives	Management Actions	Monitoring: Timing/Frequency of Actions Monitoring	Reporting
		• Fertiliser program execution on non-rain days/dry part of year- during optimal time of year for uptake of nutrients by plants (Spring) • GIS coordinates adhered to for buffer zone maintenance via flight logs. • Herbicide application locations recorded and submitted to Water Corporation • Minimise contamination of water by containing and cleaning up spills using spill response equipment. • Ensure a minimum freeboard is maintained for containment infrastructure. • Exploration drilling that utilises wet drilling methods can only use drill fluid additives as listed in the Department of Health, Schedule 6 'Materials, products and substances in contact with drinking water' or materials approved through the document *Alcoa Submission form for the Approval of Chemical Use in a Drinking Water Catchment* • Alcoa will submit the Water Corporation document *Alcoa Submission form for the Approval of Chemical Use in a Drinking Water Catchment* and receive approval to use materials that are applied to ground or at high risk of having residual amounts within the catchment. • All environmentally hazardous materials are reviewed and approved through Alcoa's Paratox software system prior to delivery, storage, and use on-site. • Collection of sewage and/or liquid waste by a licensed waste contractor and waste tracking as a controlled waste under the *Environmental Protection (Controlled Waste) Regulations 2004.* • Control overflow assessments to ensure drainage blow-out will not occur. If controls are determined to be inadequate during as-built, adaptive management may include increasing the size of DPS, ripping to increase infiltration, pumping and abstraction or additional upslope capacity. • Assessment of sumps prior to winter to determine risk and develop a management strategy. • Sediment / silt regularly cleaned out of sumps and other storages. • Speed restrictions and crash deterrent barriers to prevent a vehicle crash off the causeway into rivers. • Maintain use of PFAS-free fire suppression systems in the mine fleet. • Site infrastructure and equipment for Myara Reservoir, Larego reservoir and Arundel pretreatment dams designed and operated in accordance with DWER License L6465 and L6210. • Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events. • Spill kits and spill remediation equipment kept on-hand.		

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Objectives:

1. Implement all practicable measures to prevent and minimise impacts to drinking water quality from contamination.
2. Implement all practicable measures to prevent and minimise erosion and turbidity.
3. Ensure changes to surface water flows are minimised.
4. Minimise impacts on shallow aquifer groundwater levels and the associated effects on streamflow.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow. Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Objective-based

#	Management Targets / Objectives	Management Actions	Monitoring: Timing/Frequency of Actions Monitoring	Reporting
2	Implement all practicable measures to prevent and minimise erosion and turbidity.	• No clearing, exploration, mining or operations within the RPZ where the average slope is greater than 16%[8]. • No clearing, exploration, mining or operations within Serpentine Pipehead Dam sub-catchment[8]. • No exploration drilling within the mapped or derived (i.e., in the absence of vegetation mapping) stream zone vegetation.[9] • Design and construction of drainage management in accordance with Alcoa drainage design principles. • Permits required for activities involving clearing of vegetation and/or disturbance of land with specific queries relating to drainage plans in the area, slope of land, and sensitive receptors; a clear indication of where ground disturbance is prohibited; list of conditions for approval; and clear statement of whether the activity is approved and signatory responsibilities. • Review of mapped and derived stream zone vegetation prior to conducting drilling. • Minimise clearing in proximity to watercourses, drainage lines, and other sensitive ecosystems. • Design mine infrastructure to avoid, wherever practicable, disturbance to natural drainage lines. • Maintain the Limited Disturbance Area (LDA)[10] of the 100 m mapped stream zone vegetation buffer. • Minimise erosion by designing and locating stream crossings in accordance with the Drainage Design Manual. • Ensure a minimum freeboard is maintained for containment infrastructure. • Installing drainage protection slots on contours as soon as practicable following clearing. • Minimise surface water runoff by limiting high risk activities (backfilling and stripping) during rain events. • Minimise surface water runoff by installing pit faces, sumps and trenches as mining commences. • Review weather forecasts weekly to identify significant rainfall event predictions to allow early deployment of flood mitigation measures. • Control overflow assessments to ensure drainage blow-out will not occur. If controls are determined to be inadequate during as-built, adaptive management may include increasing the size of DPS, ripping to increase infiltration, pumping and abstraction or additional upslope capacity.	• Monitoring of turbidity and erosion (**Table 3-2**). • Drainage Control Installation Inspection Checklist – weekly drainage inspections. • Rehabilitation monitoring – nine months and 15 months following rehabilitation completion and ongoing assessment of permanent plots. • Annual clearing/rehabilitation review. • Drone flights for end of month review of storage capacity of sumps. • Seasonal soil stability tests. • UAV photography is processed to produce Digital Elevation Models (DEMs) and Orthomosaics of the rehabilitated landscape. These two spatial datasets are used to look for erosion and measure specific metrics for comparison with the completion criteria.	Turbidity events exceeding 25 NTU for one hour or longer recorded at the final turbidity monitoring point prior to a stream reaching a drinking water dam (regardless of whether mining related or non-mining related) must be reported to the Water Corporation within 24 hours or as soon as practicable after the event is identified. These events will be included in the monthly report to the Water Corporation. Upon becoming aware of a drainage incident arising from or associated with the Proposal, Alcoa must; • Report the incident to DWER within 24 hours; and • Provide an investigation report within 21 days *Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. *Annual Environmental Reporting* Annual Review to JTSI.

[8] Does not apply to stabilisation or rehabilitation activities, environmental monitoring activities, use and maintenance of existing infrastructure, modification of existing road infrastructure, construction of drainage control infrastructure.
[9] Excludes any requirement/s for drilling, monitoring bores or geotechnical investigation.
[10] LDA which is a spatial area which prohibits mine pits but allows for infrastructure and haul roads.

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Objectives:

1. Implement all practicable measures to prevent and minimise impacts to drinking water quality from contamination.
2. Implement all practicable measures to prevent and minimise erosion and turbidity.
3. Ensure changes to surface water flows are minimised.
4. Minimise impacts on shallow aquifer groundwater levels and the associated effects on streamflow.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow. Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Objective-based				
#	**Management Targets / Objectives**	**Management Actions**	**Monitoring: Timing/Frequency of Actions Monitoring**	**Reporting**
		• Stream crossings will be constructed in a manner which facilitates their removal and rehabilitation after use, unless required for ongoing forest management or other purposes. • Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule, using monitoring trends and data to prioritize areas. Start from the upper slopes to maintain pit capacity and gradually reduce the catchment and slope size • Rehabilitate open areas prioritising areas with an average slope greater than 16% within an RPZ. • Rehabilitate Drinking Water catchments as a priority. • Rehabilitation pit designs are developed based on Completion Criteria standards. • Diversion bunds installed to either divert runoff water away from areas sensitive to inundation, or towards natural or constructed drainage features intended to contain that runoff. • Revegetation establishes a native understorey and overstorey with more than 80 per cent of the floristic diversity of un-mined forest. Substantial establishment of understorey coverage within five years. • Rehabilitation substrate includes deep ripping of regolith, application of minimum 200 mm overburden/topsoil and ripping on the contour. Deep ripping promotes infiltration of runoff into the regolith. • Application of minimum overburden provides a gravel-sand layer that protects finer grained regolith materials from erosion. Contour ripping creates a furrowed surface that promotes retention and infiltration of runoff. • Rehabilitation prescription limits final landform to slopes less than 16 degrees. Downslope toe of rehabilitated pits can have a reverse batter that creates a ‘sunken’ landform that retains surface runoff and prevents discharge. • Rehabilitated mine pits designed and executed to prevent overflow during a 1 per cent 24hr AEP rainfall event. • Pre-landscaping ripping is carried out in compacted areas, under pit faces, under areas receiving fill and through in-pit haul roads with the straight tine to improve infiltration. • Post-landscape ripping is carried out across the final landscaped pit, prior to contour ripping with a winged tine and / or straight tine (in rocky areas) to improve infiltration and root penetration. Contour ripping is carried out to control surface water runoff and improve infiltration. • Infiltration calculations using 24 mm/day which is conservative compared to actual measured conditions.		

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Objectives:

1. Implement all practicable measures to prevent and minimise impacts to drinking water quality from contamination.
2. Implement all practicable measures to prevent and minimise erosion and turbidity.
3. Ensure changes to surface water flows are minimised.
4. Minimise impacts on shallow aquifer groundwater levels and the associated effects on streamflow.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow. Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Objective-based

#	Management Targets / Objectives	Management Actions	Monitoring: Timing/Frequency of Actions Monitoring	Reporting
		• Upgrade drainage infrastructure by integrating sediment traps, silt fences, and erosion control methods such as geotextiles and riprap on vulnerable slopes and runoff areas. These systems would slow water flow and allow sediment to settle before it reaches vulnerable water bodies. • Gully erosion will not exceed size >30 cm wide or deep or >100 m long; or unintended Gully deposition size > 0.1 ha. • Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events. • Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies). • Implementing pumping programs across sumps and storages to re-distribute volume to other areas to prevent continuous overflow and turbid water runoff.		
3	Ensure changes to surface water flows are minimised.	• Design and construction of drainage management in accordance with Alcoa drainage design principles. • Sumps installed downslope of haul roads and tracks upstream of streams. • Sump volumes sized using established practices and include volume to hold water created by design rainfall plus additional volume for safety factor plus freeboard to avoid filling the storage above design envelope. • Sumps designed with spillways / proper outfall to allow controlled release in the event of higher than design flows. • No exploration drilling within the mapped or derived (i.e., in the absence of vegetation mapping) stream zone vegetation.[11] • Review of mapped and derived stream zone vegetation prior to conducting drilling. • Design mine infrastructure to avoid, wherever practicable, disturbance to natural drainage lines. • Maintain the Limited Disturbance Area (LDA)[12] of the 100 m mapped stream zone vegetation buffer. • Minimise erosion by designing and locating stream crossings in accordance with the Drainage Design Manual. • Installing drainage protection slots on contours as soon as practicable following clearing. • Minimise surface water runoff by limiting high risk activities (backfilling and stripping) during rain events. • Minimise surface water runoff by installing pit faces, sumps and trenches as mining commences.	• Monitoring of flow rate (**Table 3-2**). • Post-exploration activity inspections. • Regular of exploration disturbance. • Reconciliation of the exploration plan and drill holes. • Review of mapped and derived stream zones as required. • Annual spatial database review of Protection Zones, LDA. • Annual clearing/rehabilitation review. • Self-Assessment Audits in accordance with the schedule. • Groundwater Risk Assessment Framework (GWRAF) decision matrix. • Drone flights for end of month review of storage capacity of sumps.	*Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. If the management action was conducted during the reporting period, the compliance assessment report will include discussion around the assessment/s and whether revision of the management action or target is required. *Annual Environmental Reporting* Annual Review to JTSI.

[11] Excludes any requirement/s for drilling, monitoring bores or geotechnical investigation.
[12] LDA which is a spatial area which prohibits mine pits but allows for infrastructure and haul roads.

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Objectives:

1. Implement all practicable measures to prevent and minimise impacts to drinking water quality from contamination.
2. Implement all practicable measures to prevent and minimise erosion and turbidity.
3. Ensure changes to surface water flows are minimised.
4. Minimise impacts on shallow aquifer groundwater levels and the associated effects on streamflow.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow. Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Objective-based

#	Management Targets / Objectives	Management Actions	Monitoring: Timing/Frequency of Actions Monitoring	Reporting
		• Review weather forecasts weekly to identify significant rainfall event predictions to allow early deployment of flood mitigation measures. • Stream crossings will be constructed in a manner which facilitates their removal and rehabilitation after use, unless required for ongoing forest management or other purposes. • Minimise surface water run off by undertaking clearing activities in 3 to 6 ha blocks (where practicable). • Diversion bunds installed to either divert runoff water away from areas sensitive to inundation, or towards natural or constructed drainage features intended to contain that runoff. • Rehabilitated mine pits designed and executed to prevent overflow during a 1 per cent 24hr AEP rainfall event.		
4	Minimise impacts on shallow aquifer groundwater levels and the associated effects on streamflow.	• No clearing, exploration, mining or operations within the RPZ where the average slope is greater than 16%[13]. • No clearing, exploration, mining or operations within Serpentine Pipehead Dam sub-catchment[8]. • Maintain the Limited Disturbance Area (LDA)[14] of the 100 m mapped stream zone vegetation buffer. • Permits required for activities involving clearing of vegetation and/or disturbance of land with specific queries relating to drainage plans in the area, slope of land, and sensitive receptors; a clear indication of where ground disturbance is prohibited; list of conditions for approval; and clear statement of whether the activity is approved and signatory responsibilities. • Maintenance of a minimum 2m separation between mine pit floor and groundwater for all mining areas approved by the 2023-2027 MMP and subsequent approvals. • Groundwater risk assessment decision matrix guides must be undertaken to evaluate whether groundwater investigation is required. • Groundwater investigations (i.e. Groundwater interim surface model) required for moderate and high-risk areas. • Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule, using monitoring trends and data to prioritize areas. Start from the upper slopes to maintain pit capacity and gradually reduce the catchment and slope size • Rehabilitate open areas prioritising areas with an average slope greater than 16% within an RPZ. • Rehabilitate Drinking Water catchments as a priority. • Rehabilitation pit designs are developed based on Completion Criteria standards	• Monitoring of groundwater levels (**Table 3-2**). • Annual spatial database review of Protection Zones, LDA. • Annual clearing/rehabilitation review. • Self-Assessment Audits in accordance with the schedule. • Groundwater Risk Assessment Framework (GWRAF) decision matrix. • Post Clearing inspection and Mine Clearing Register.	*Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. If the management action was conducted during the reporting period, the compliance assessment report will include discussion around the assessment/s and whether revision of the management action or target is required. *Annual Environmental Reporting* Annual Review to JTSI.

[13] Does not apply to stabilisation or rehabilitation activities, environmental monitoring activities, use and maintenance of existing infrastructure, modification of existing road infrastructure, construction of drainage control infrastructure.
[14] LDA which is a spatial area which prohibits mine pits but allows for infrastructure and haul roads.

Table 3-2 Monitoring Plan Provisions – Outcome-based

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Outcomes:

1. Ensure that turbidity levels in surface water bodies do not exceed 1 NTU over a rolling one-hour average during flowing conditions at designated receptor locations.
2. Ensure that TDS levels in surface water bodies do not exceed 1200 mg/L over a 24-hour average at designated in stream monitoring locations.
3. No reduction in the quality of groundwater or surface water as a result of mining activities.
4. No contamination of groundwater attributable to hydrocarbon storage areas.
5. No contamination of surface water because of discharge from wastewater treatment facilities.
6. No adverse impacts from bacterial contamination shall occur in surface water within PDWSA.
7. Outcome: Minimise changes to streamflow of McKnoes Brook from discharge of treated water to McKnoes Brook.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Outcome-based

#	Trigger Criteria Threshold Criteria	Response Actions: - Trigger level actions - Threshold contingency actions	Monitoring	Timing/Frequency of Monitoring	Reporting
Outcome: Ensure that turbidity levels in surface water bodies do not exceed 1 NTU over a rolling one-hour average during flowing conditions at designated receptor locations.					
1	**Trigger Criteria** ≥25 (NTU) over a rolling one-hour average during flowing conditions at in-stream monitoring site **Threshold Criteria** ≥ 1 (NTU) over a rolling one-hour average during flowing conditions at receptor monitoring sites.	**Trigger Level Actions** • Identify source(s) of turbidity via inspection from impact sites working up hydraulic gradient to areas of mining activity. • Review whether it is a true turbidity exceedance and not a false exceedance, and investigate. • Actively monitor turbidity at Receptor site to ensure turbidity remains below the threshold criterion. • Pump water from any pits or containment infrastructure that are overflowing into backup containment sumps, pits or infiltration areas. • Ensure the availability of sufficient back-up containment sumps with adequate capacity to handle additional water volumes. Regularly inspect and maintain these sumps to ensure they remain operational. Develop and maintain infrastructure capable of efficiently transferring water to these containment areas when required to mitigate potential overflow or containment issues. • Monitor turbidity at monitoring sites to ensure turbidity falls below 25 NTUs over a rolling one-hour average during flowing conditions at in stream monitoring site proximal to (or immediately downgradient of) impact site. **Threshold Contingency Actions** • Implement recovery actions ○ Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies).	**Indicator: Turbidity** Method of Data Collection and Analysis *Surface Water* Continuous data collection at in stream monitors. Location of In-Stream Monitoring Sites *Surface Water* • In-Stream Monitoring Locations (installed) • In-Stream Monitoring Locations (proposed) Refer to **Figure 3-1** and **Figure 3-2** for turbidity monitoring sites.	**Indicator: Turbidity** *Surface Water* • Pre-mining to capture seasonal variation – Baseline sites: Twice per year during continuous flow supplemented by continuous data collection at select compliance impact sites upstream of the reservoir for a period of two years where practicable. • Operations: Continuous during continuous flow. • Rehabilitation: Continuous during rehabilitation activities and once per year for two years post rehabilitation completion.	*Incidents/Events* Turbidity events exceeding 25 NTU for one hour or longer recorded at the final turbidity monitoring point prior to a stream reaching a drinking water dam (regardless of whether mining related or non-mining related) must be reported to the Water Corporation within 24 hours or as soon as practicable after the event is identified. These events will be included in the monthly report to the Water Corporation. Upon becoming aware of a drainage incident arising from or associated with the Proposal, Alcoa must; • Report the incident to DWER within 24 hours; and • Provide an investigation report within 21 days. *Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance.

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Outcomes:

1. Ensure that turbidity levels in surface water bodies do not exceed 1 NTU over a rolling one-hour average during flowing conditions at designated receptor locations.
2. Ensure that TDS levels in surface water bodies do not exceed 1200 mg/L over a 24-hour average at designated in stream monitoring locations.
3. No reduction in the quality of groundwater or surface water as a result of mining activities.
4. No contamination of groundwater attributable to hydrocarbon storage areas.
5. No contamination of surface water because of discharge from wastewater treatment facilities.
6. No adverse impacts from bacterial contamination shall occur in surface water within PDWSA.
7. Outcome: Minimise changes to streamflow of McKnoes Brook from discharge of treated water to McKnoes Brook.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Outcome-based

#	Trigger Criteria Threshold Criteria	Response Actions: - Trigger level actions - Threshold contingency actions	Monitoring	Timing/Frequency of Monitoring	Reporting
		○ Implementing pumping programs across sumps and storages to re-distribute volume to other areas to prevent continuous overflow and turbid water runoff. • Continue to implement recovery actions until confirmed that the impact is below criteria level.			*Annual Environmental Reporting* Annual Review to JTSI, AER to DWER as per any Part V Annual Reporting Guidelines.
Outcome: Ensure that TDS levels in surface water bodies do not exceed 1200 mg/L at designated in stream monitoring locations.					
2	**Trigger Criteria** TDS at in-stream monitoring site exceeds 600 mg/L based on a 24-hour average. **Threshold Criteria** TDS at in-stream monitoring locations exceeds 1,200 mg/L based on a 24-hour average.	**Trigger Level Actions** • Undertake groundwater gauging and water quality monitoring of nominated bore network to identify source of salinity. **Threshold Contingency Actions** • Increase monitoring programme (locations and frequency) as appropriate to the exceedance to determine scale of impact at receptor sites. .	**Indicator: TDS** Method of Data Collection and Analysis *Surface Water* Continuous data collection at in stream monitors. Location of In-Stream Monitoring Sites *Surface Water* • In-Stream Monitoring Locations (installed) • In-Stream Monitoring Locations (proposed) • Refer to **Figure 3-1** and **Figure 3-2** for turbidity monitoring sites (TDS sensors to be added to existing and proposed telemetry).	**Indicator: TDS** *Surface Water* • Pre-mining to capture seasonal variation – Baseline sites: Twice per year during continuous flow for a period of two years where practicable. • Operations: Continuous at receptor sites and twice per year during continuous flow at other locations. • Rehabilitation: Continuous at receptor sites during rehabilitation activities and once per year for two years post rehabilitation completion.	*Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. *Annual Environmental Reporting* Annual Review to JTSI.
Outcome: No reduction in the quality of groundwater or surface water because of mining activities					
3	**Trigger Criteria** Statistically significant increasing trends at receptor sites (when sufficient data available to conduct statistical	**Trigger Level Actions** • Undertake additional impact site sampling and continue to monitor until parameter stabilisation.	**Indicator: Water Quality Parameters** Method of Data Collection and Analysis *Surface Water*	**Indicator: ADWG Parameters** *Surface Water* • Pre-mining to capture seasonal variation – Baseline sites: Twice per year during	*Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include:

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Outcomes:

1. Ensure that turbidity levels in surface water bodies do not exceed 1 NTU over a rolling one-hour average during flowing conditions at designated receptor locations.
2. Ensure that TDS levels in surface water bodies do not exceed 1200 mg/L over a 24-hour average at designated in stream monitoring locations.
3. No reduction in the quality of groundwater or surface water as a result of mining activities.
4. No contamination of groundwater attributable to hydrocarbon storage areas.
5. No contamination of surface water because of discharge from wastewater treatment facilities.
6. No adverse impacts from bacterial contamination shall occur in surface water within PDWSA.
7. Outcome: Minimise changes to streamflow of McKnoes Brook from discharge of treated water to McKnoes Brook.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Outcome-based

#	Trigger Criteria Threshold Criteria	Response Actions: - **Trigger level** actions - **Threshold contingency actions**	Monitoring	Timing/Frequency of Monitoring	Reporting
	analysis and to establish natural variation) for chemicals from ADWG (2011) and ANZECC (2000) guideline (**Appendix C** Table C2) and/or monitoring results concentrations are less than and/or within a nominal 15%[15] of the relevant criteria, where insufficient data available to conduct statistical analysis. **Threshold Criteria** Exceedance of health-based ADWG (2011) and ANZECC (2000) guideline at receptor sites (**Appendix C** Table C2).	• Review mining activities within sub-catchment to identify source and contributing factors. Undertake improvement actions, if required. • Review against reference dataset to identify other source and contributing factors (climatic conditions). • Review monitoring plan and consider increasing monitoring frequency. **Threshold Contingency Actions** • Undertake surface water sampling at Impact site and receptor sites to assess if elevated chemicals persist and are migrating to receptor. • Review reference site data and assess if elevated concentrations represent background concentrations or potentially related to mining activities. • Review monitoring program (locations and frequency) to ensure appropriate to determine scale of impact and allow for data collection associated with assessment against threshold criteria. • Review mining activities within sub-catchment to identify source and contributing factors.	Grab samples are collected at designated points and analysed for contaminants and screened against the guidelines. *Groundwater* Grab sample at designated bores and analysed for contaminants against the guidelines. Location of Monitoring Sites *Surface Water* • Receptor site (reservoir prior to treatment). • Baseline sites / reference site. Refer to **Figure 3-3**, **Figure 3-4**, for surface water monitoring sites. *Groundwater* • Existing and primary **Figure 3-5**, **Figure 3-6 Figure 3-7**, **Figure 3-8, Figure 3-9** and **Figure 3-10** • Downstream of biomax - **Figure 3-15** and **Figure 3-16**	continuous flow for a period of two years where practicable. • Operations: Grab samples for water quality twice per year. • Rehabilitation: Grab samples twice per year during rehabilitation activities and once per year for two years post rehabilitation completion. *Groundwater* • Pre-mining to capture seasonal variation – Baseline sites: Twice per year for a period of two years where practicable. • Operations: Grab samples for water quality twice per year. • Operations: Downstream of biomax monthly. • Rehabilitation: Twice per year during rehabilitation activities. Areas identified as moderate or high risk in the GWRAF will continue groundwater monitoring for a minimum of two years post rehabilitation landform completion.	• Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. *Annual Environmental Reporting* Annual Review to JTSI.
Outcome: No contamination of groundwater attributable to hydrocarbon storage areas.					
4	**Trigger Criteria** Statistically significant increasing trends of hydrocarbon groundwater bores (when sufficient data available to conduct statistical analysis and to establish natural variation) for chemicals ANZG (2018), and NPUG (DoH (2024)	**Trigger Level Actions** • Undertake additional sampling at impact sites and continue to monitor until parameter stabilisation. • Review mining activities within sub-catchment to identify source and contributing factors. Undertake improvement actions, if required. **Threshold Contingency Actions**	*Groundwater* • Hydrocarbon Groundwater Bores Refer to **Figure 3-13** and **Figure 3-14** for groundwater bore monitoring sites (hydrocarbons).	*Groundwater* • Operations: Quarterly.	*Incidents/Events* Condition 29 of Ministerial Approval Conditions for the 2023-2027 Mining and Management Program. In the event of a failure of drainage or discharge from containment infrastructure that includes potentially environmentally hazardous materials, the Water Corporation, DWER, and the State Development Minister must be notified within 24 hours. Provide a report to the State Development Minister within 21 days.

[15] 15% selected as a suitably conservative interim proxy (based on general consideration of the magnitude of LORs relative to criteria values) until natural variation can be established statistically.

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Outcomes:

1. Ensure that turbidity levels in surface water bodies do not exceed 1 NTU over a rolling one-hour average during flowing conditions at designated receptor locations.
2. Ensure that TDS levels in surface water bodies do not exceed 1200 mg/L over a 24-hour average at designated in stream monitoring locations.
3. No reduction in the quality of groundwater or surface water as a result of mining activities.
4. No contamination of groundwater attributable to hydrocarbon storage areas.
5. No contamination of surface water because of discharge from wastewater treatment facilities.
6. No adverse impacts from bacterial contamination shall occur in surface water within PDWSA.
7. Outcome: Minimise changes to streamflow of McKnoes Brook from discharge of treated water to McKnoes Brook.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Outcome-based

#	Trigger Criteria Threshold Criteria	Response Actions: - **Trigger level** actions - **Threshold contingency actions**	Monitoring	Timing/Frequency of Monitoring	Reporting
	Parameters presented in **Appendix C** (Table C2 and C3) and/or monitoring results concentrations are less than and/or within a nominal 15%[16] of the relevant criteria, where insufficient data available to conduct statistical analysis. **Threshold Criteria** Exceedance of targets for chemicals ANZG (2018), PFAS NEMP (2020) and NPUG (DoH (2024) of hydrocarbon groundwater bores. Parameters presented in **Appendix C** (Table C2 and C3).	• Review against baseline or reference dataset to identify other source and contributing factors (climatic conditions). • Review monitoring plan and consider increasing monitoring frequency.			*Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. *Annual Environmental Reporting* Annual Review to JTSI.
Outcome: No contamination of surface water because of discharge from wastewater treatment facilities.					
5	**Trigger criteria** Wastewater contaminant levels exceed licence discharge limits (**Appendix C** Table C4 and C5) for one sampling event. **Threshold criteria** Wastewater contaminant levels exceed licence discharge limits (**Appendix C** Table C4 and C5) for three consecutive sampling events.	**Trigger Level Actions** • Discharge of wastewater is suspended and re-analysis is required. • If results still exceed limits, re-processing of wastewater is required prior to discharge. • Undertake workplace inspections and verifications to identify any treatment plan maintenance or repairs. • Discharge of wastewater is suspended and re-analysis is required.	Grab samples at wastewater discharge locations and analysed in a laboratory according to the ADWG and License conditions. Location of Monitoring Sites Refer to **Figure 3-11** and **Figure 3-12** for wastewater discharge site locations	*Wastewater* • Pre-mining to capture seasonal variation – Baseline sites: NA. • Operations and rehabilitation: Daily, or prior to discharge per Licence Conditions.	*Incidents/Events* Condition 29 of Ministerial Approval Conditions for the 2023-2027 Mining and Management Program. In the event of a failure of drainage or discharge from containment infrastructure that includes potentially environmentally hazardous materials, the Water Corporation, DWER, and the State Development Minister must be notified within 24 hours. Provide a report to the State Development Minister within 21 days. *Compliance Assessment Report*

[16] 15% selected as a suitably conservative interim proxy (based on general consideration of the magnitude of LORs relative to criteria values) until natural variation can be established statistically.

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Outcomes:

1. Ensure that turbidity levels in surface water bodies do not exceed 1 NTU over a rolling one-hour average during flowing conditions at designated receptor locations.
2. Ensure that TDS levels in surface water bodies do not exceed 1200 mg/L over a 24-hour average at designated in stream monitoring locations.
3. No reduction in the quality of groundwater or surface water as a result of mining activities.
4. No contamination of groundwater attributable to hydrocarbon storage areas.
5. No contamination of surface water because of discharge from wastewater treatment facilities.
6. No adverse impacts from bacterial contamination shall occur in surface water within PDWSA.
7. Outcome: Minimise changes to streamflow of McKnoes Brook from discharge of treated water to McKnoes Brook.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Outcome-based

#	Trigger Criteria Threshold Criteria	Response Actions: - Trigger level actions - Threshold contingency actions	Monitoring	Timing/Frequency of Monitoring	Reporting
		• If results still exceed limits, re-processing of wastewater is required prior to discharge. **Threshold Contingency Actions** • Discharge of wastewater is suspended and re-analysis is required. • If results still exceed limits, re-processing of wastewater is required prior to discharge. • Arrange for wastewater to be disposed offsite. • Undertake investigation to determine source of exceedance. • Implement a remedial action plan (if required). • Continue to monitor management action implementation and compliance. .			CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. *Annual Environmental Reporting* (Annual Review to JTSI.
Outcome: No adverse impacts from bacterial contamination shall occur in surface water within PDWSA.					
6	**Trigger Criteria** • Background site records >2,000 to 20,000 E. coli per 100 mL (Heavy contamination as per ADWG 2011) **Threshold Criteria** • Receiving site records >2,000 to 20,000 E. coli per 100 mL (Heavy contamination as per ADWG 2011) within PDWSA and outside of OCA2	**Trigger Level Actions** • Undertake workplace inspections and interviews to ensure hygiene practises are being adhered to. • Undertake additional impact sampling and continue to monitor until parameter stabilisation. • Review mining activities within sub-catchment to identify source and contributing factors. Undertake improvement actions, if required. • Review against baseline or reference dataset to identify source and contributing factors (climatic conditions, other activities). • Review monitoring plan and consider increasing monitoring frequency.	**Indicator: *E. coli*** Method of Data Collection and Analysis *Surface Water* Grab samples collected at designated points and analysed for microbial contamination, specifically *E. coli* levels, measured per 100 mL designated points and analysed in a laboratory according to the ADWG. Location of Monitoring Sites *Surface Water* • Impact sites	**Indicator: *E. coli*** *Surface Water* • Pre-mining to capture seasonal variation – Baseline sites: Twice per year during continuous flow for a period of two years where practicable. • Operations: Grab samples quarterly. • Rehabilitation: Grab samples twice per year during rehabilitation activities and once per year for two years post rehabilitation completion.	Condition 29 of Ministerial Approval Conditions for the 2023-2027 Mining and Management Program. In the event of a failure of drainage or discharge from containment infrastructure that includes potentially environmentally hazardous materials, the Water Corporation, DWER, and the State Development Minister must be notified within 24 hours. Provide a report to the State Development Minister within 21 days. *Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**).

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Outcomes:

1. Ensure that turbidity levels in surface water bodies do not exceed 1 NTU over a rolling one-hour average during flowing conditions at designated receptor locations.
2. Ensure that TDS levels in surface water bodies do not exceed 1200 mg/L over a 24-hour average at designated in stream monitoring locations.
3. No reduction in the quality of groundwater or surface water as a result of mining activities.
4. No contamination of groundwater attributable to hydrocarbon storage areas.
5. No contamination of surface water because of discharge from wastewater treatment facilities.
6. No adverse impacts from bacterial contamination shall occur in surface water within PDWSA.
7. Outcome: Minimise changes to streamflow of McKnoes Brook from discharge of treated water to McKnoes Brook.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Outcome-based					
#	**Trigger Criteria Threshold Criteria**	**Response Actions: - Trigger level actions - Threshold contingency actions**	**Monitoring**	**Timing/Frequency of Monitoring**	**Reporting**
		Threshold Contingency Actions • Review monitoring programme (locations and frequency) to ensure appropriate to determine scale of impact, particularly in reservoir. • Review mining activities within sub-catchment to identify source and contributing factors. Undertake improvement actions, if required. • Undertake incident investigation to determine source of exceedance and if associated with mining activities. • Implement a remedial action plan (if required). • Continue to monitor management action implementation and compliance.	• Baseline / reference sites. • Receptor site (reservoir prior to treatment). Refer to **Figure 3-3**, **Figure 3-4.**		• An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance. *Annual Environmental Reporting* Annual Review to JTSI.

EPA factor and objective: To maintain the hydrological regimes and quality of groundwater and surface water so that Environmental Values are protected.

Outcomes:

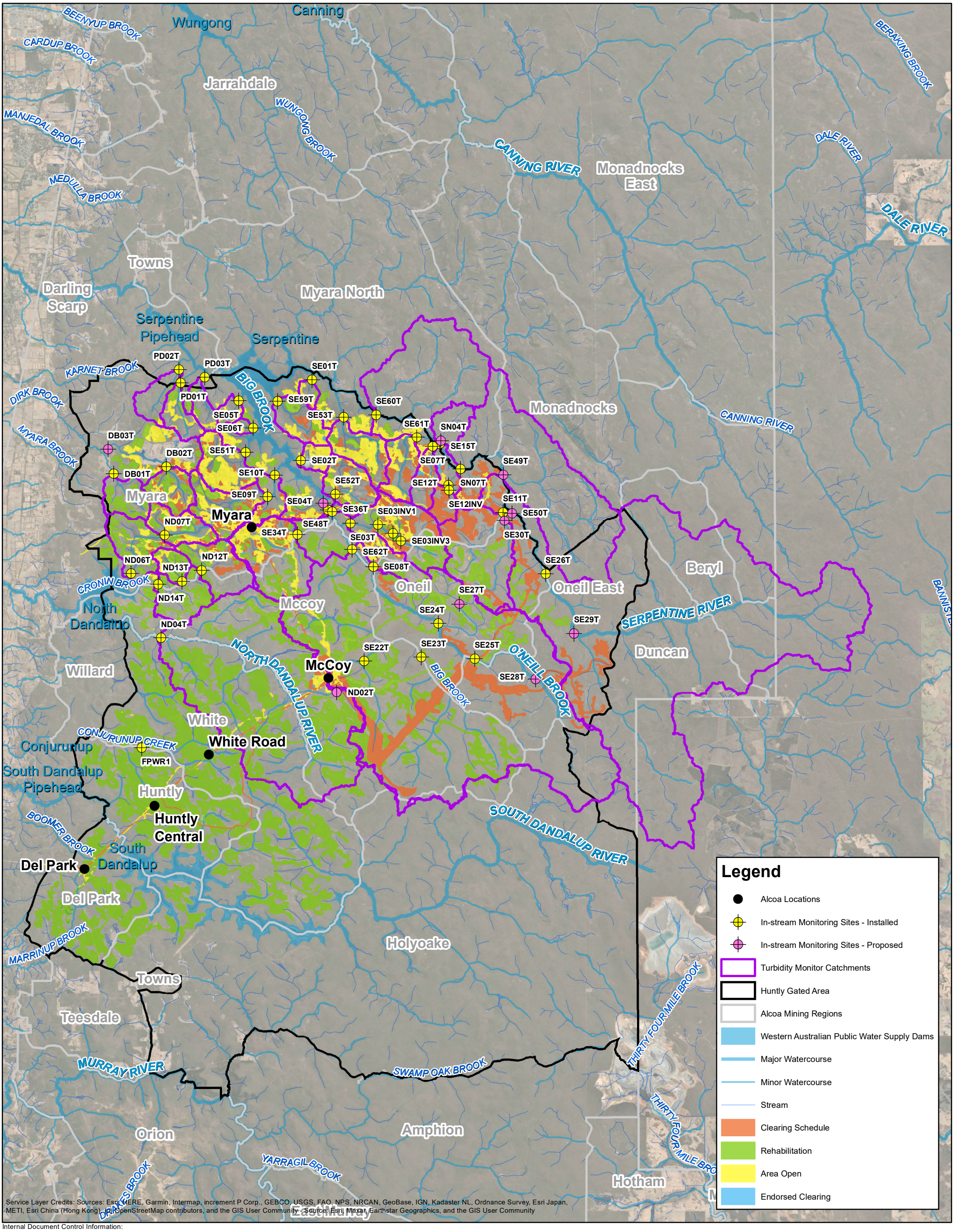
1. Ensure that turbidity levels in surface water bodies do not exceed 1 NTU over a rolling one-hour average during flowing conditions at designated receptor locations.
2. Ensure that TDS levels in surface water bodies do not exceed 1200 mg/L over a 24-hour average at designated in stream monitoring locations.
3. No reduction in the quality of groundwater or surface water as a result of mining activities.
4. No contamination of groundwater attributable to hydrocarbon storage areas.
5. No contamination of surface water because of discharge from wastewater treatment facilities.
6. No adverse impacts from bacterial contamination shall occur in surface water within PDWSA.
7. Outcome: Minimise changes to streamflow of McKnoes Brook from discharge of treated water to McKnoes Brook.

Key Environmental Values: Drinking water supply, wetlands, springs and pools, ecosystems which support significant flora, vegetation and fauna species or communities, and ecosystems which support significant amenity, recreation and cultural values.

Key impacts and risks: The loss of containment of hazardous substances, such as pathogens and hydrocarbons, poses a significant threat to water quality. Land clearing, unstable disturbed landscapes, and steep slopes increase the risk of erosion and turbidity in nearby water sources. Change to stormwater / surface water flow, resulting in impacts to stream zone vegetation and/or catchment inflow Clearing deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs.

Outcome-based

#	Trigger Criteria Threshold Criteria	Response Actions: - Trigger level actions - Threshold contingency actions	Monitoring	Timing/Frequency of Monitoring	Reporting
Outcome: Minimise changes to streamflow of McKnoes Brook from discharge of treated water to McKnoes Brook.					
7	**Trigger Criteria** • Discharge flow rate is more than 20 L/second release rate for 60 hours followed by 60 hours with no discharge, repeating. **Threshold Criteria** • Exceedance of wastewater discharge release rates as per licence and discharge to the environment has occurred.	**Trigger Level Actions** • Adjust discharge operations to reduce flow rates below the regulatory threshold as quickly as possible. • Store excess wastewater in holding tanks or temporary reservoirs to minimise direct discharge. **Threshold Contingency Actions** • Review and revise discharge schedules to prevent non-compliance with Part V licence	**Indicator: Flow Rate** Method of Data Collection and Analysis *Wastewater* Discharge pipeline flowmeter. Location of Monitoring Sites *Wastewater* McKnoes Brook. Refer to **Figure 3-12** for McKnoes brook discharge point.	**Indicator: Flow Rate** *Wastewater* • Pre-mining to capture seasonal variation – Baseline sites: NA. • Operations: Continuous. • Rehabilitation: NA.	*Incidents/Events* Notify DWER, within 7 days of becoming aware of any non-compliance with conditions. *Compliance Assessment Report* CAR will be submitted to the State Development Minister within six months of MMP approval and annually thereafter. The CAR will include: • Monitoring data and activities undertaken in accordance with Condition 18(b) and (c) (**Table 2-2**). • An evaluation of monitoring's ability to substantiate compliance with the limitations. • Evidence of the scientific robustness of monitoring methodologies. • Results of monitoring conducted in accordance with Condition 28 (**Table 2-2**), including supporting data, will be provided to DWER and Water Corporation as per an agreed monitoring schedule. • Evidence of compliance or non-compliance with MMP conditions, progress on WRMP updates, and corrective actions taken for any non-compliance.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 28/01/25 9:54:13 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

In-stream Monitoring (Huntly)

0 2.5 5 10 15 20 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

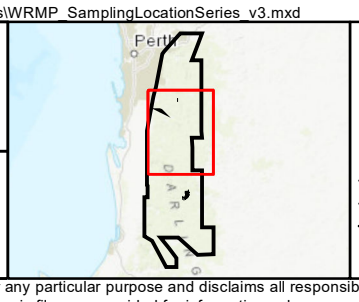
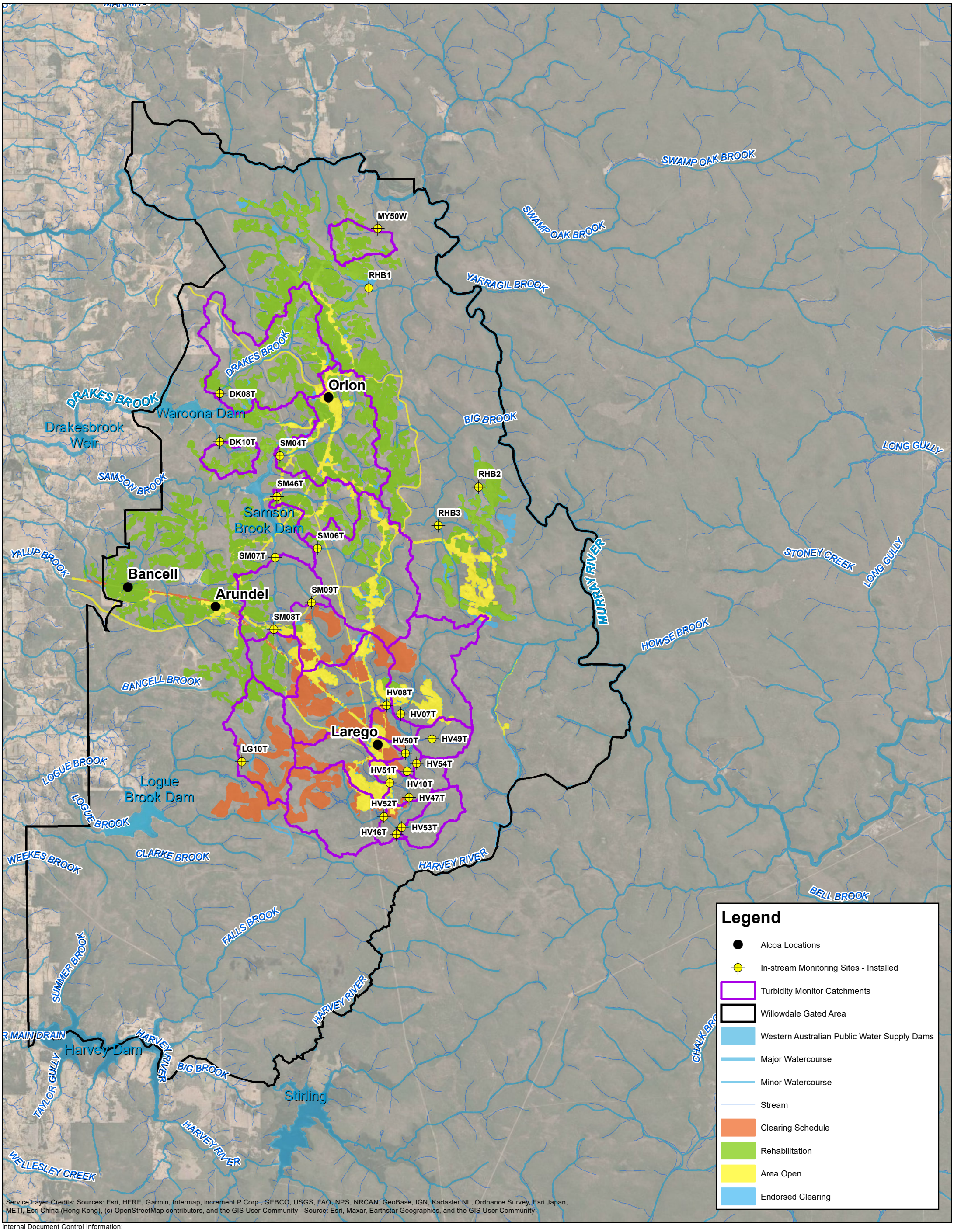


FIGURE 3-1

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:184,940
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 28/01/25 9:54:13 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

In-stream Monitoring (Willowdale)

0 1.75 3.5 7 10.5 14 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

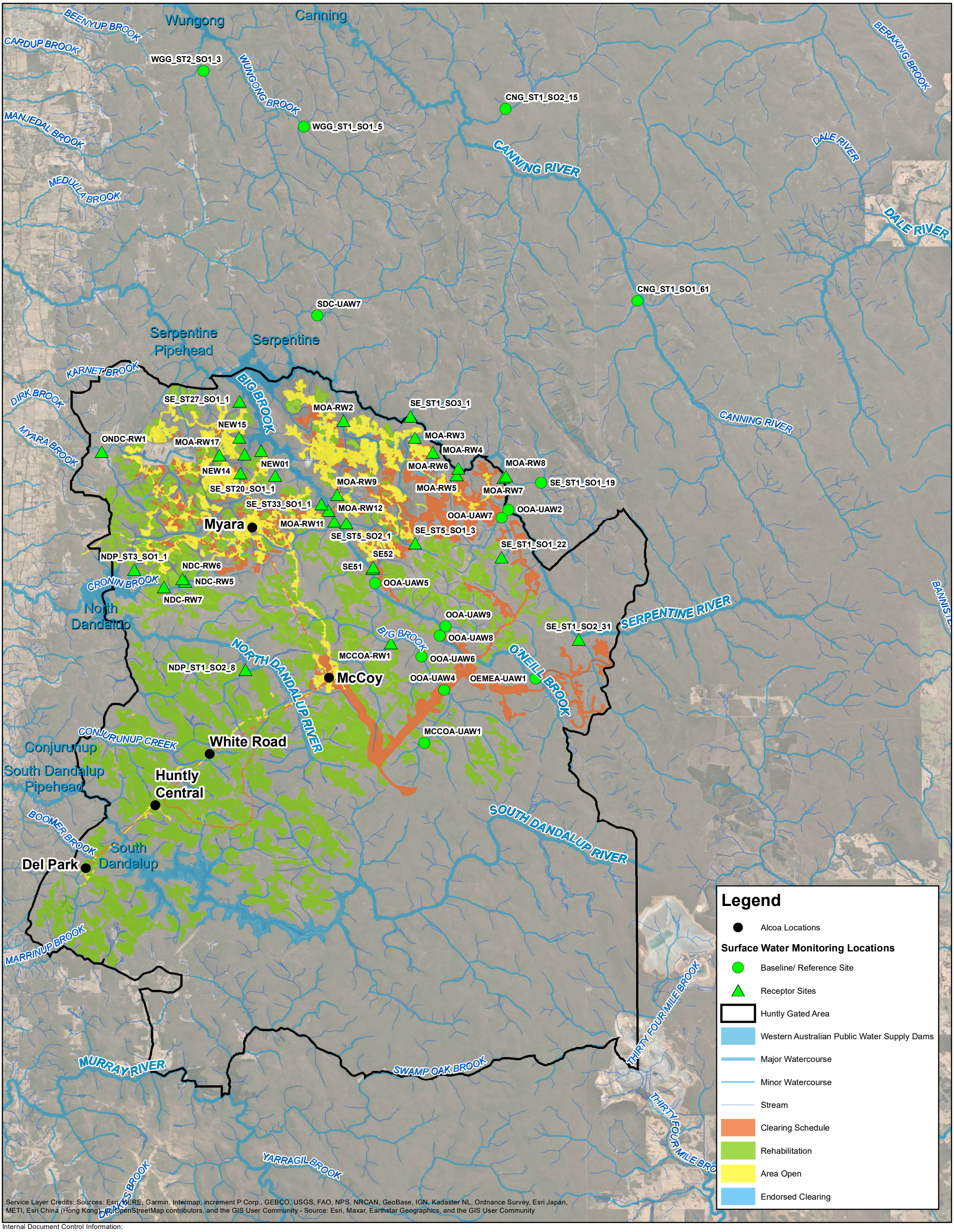
EHS Support

FIGURE 3-2

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:133,480
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

First Round Surface Water Monitoring Locations Implemented as Part of WRMP (Huntly)

0 2.5 5 10 15 20 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

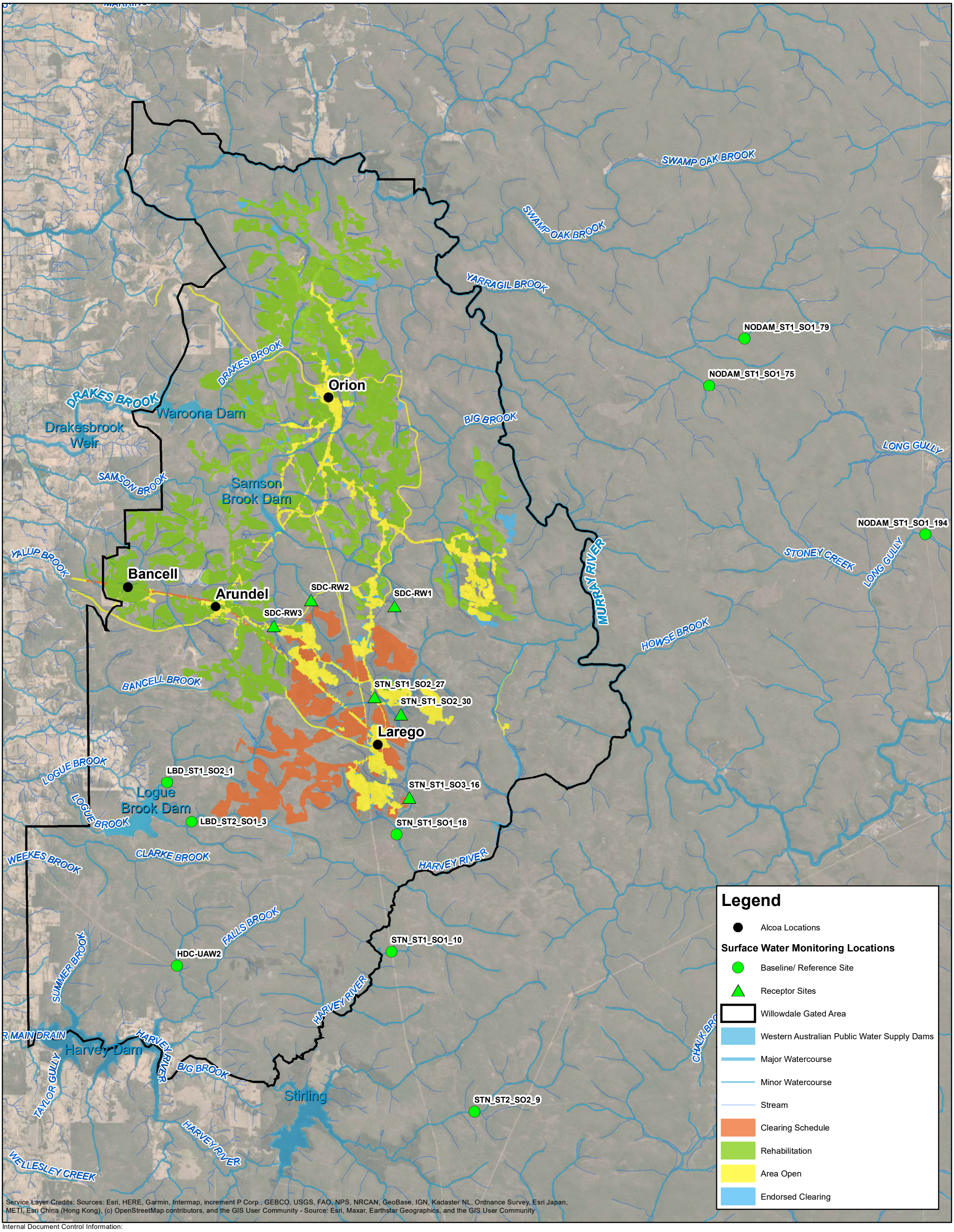
EHS Support

FIGURE 3-3

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:185,620
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

First Round Surface Water Monitoring Locations Implemented as Part of WRMP (Willowdale)

0 1.75 3.5 7 10.5 14 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

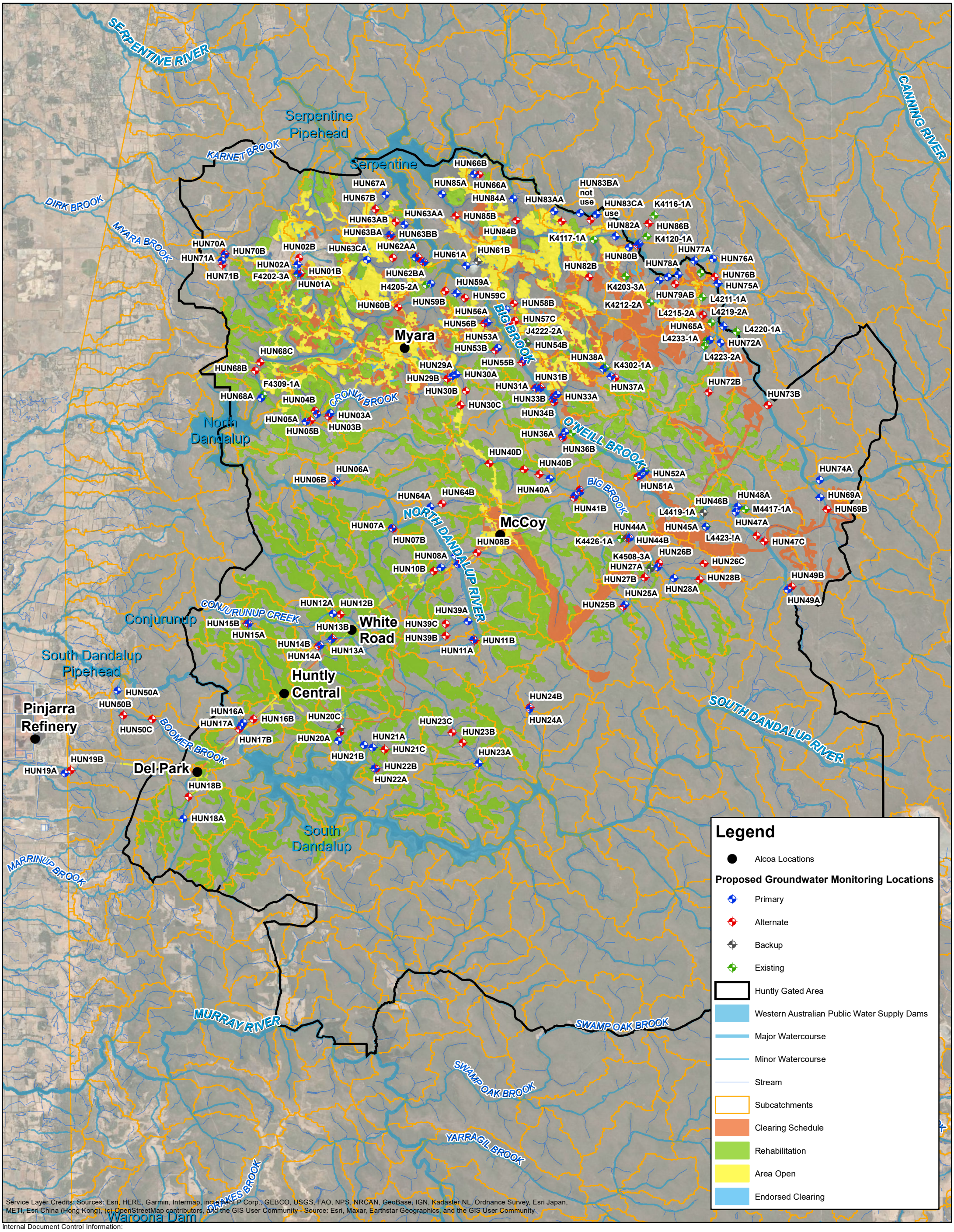
EHS Support

FIGURE 3-4

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:133,480
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Proposed Subcatchment Discharge Zone Groundwater Monitoring Locations (Huntly)

0 2 4 8 12 16 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

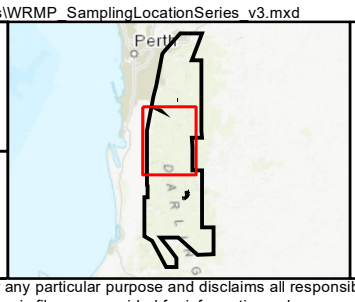
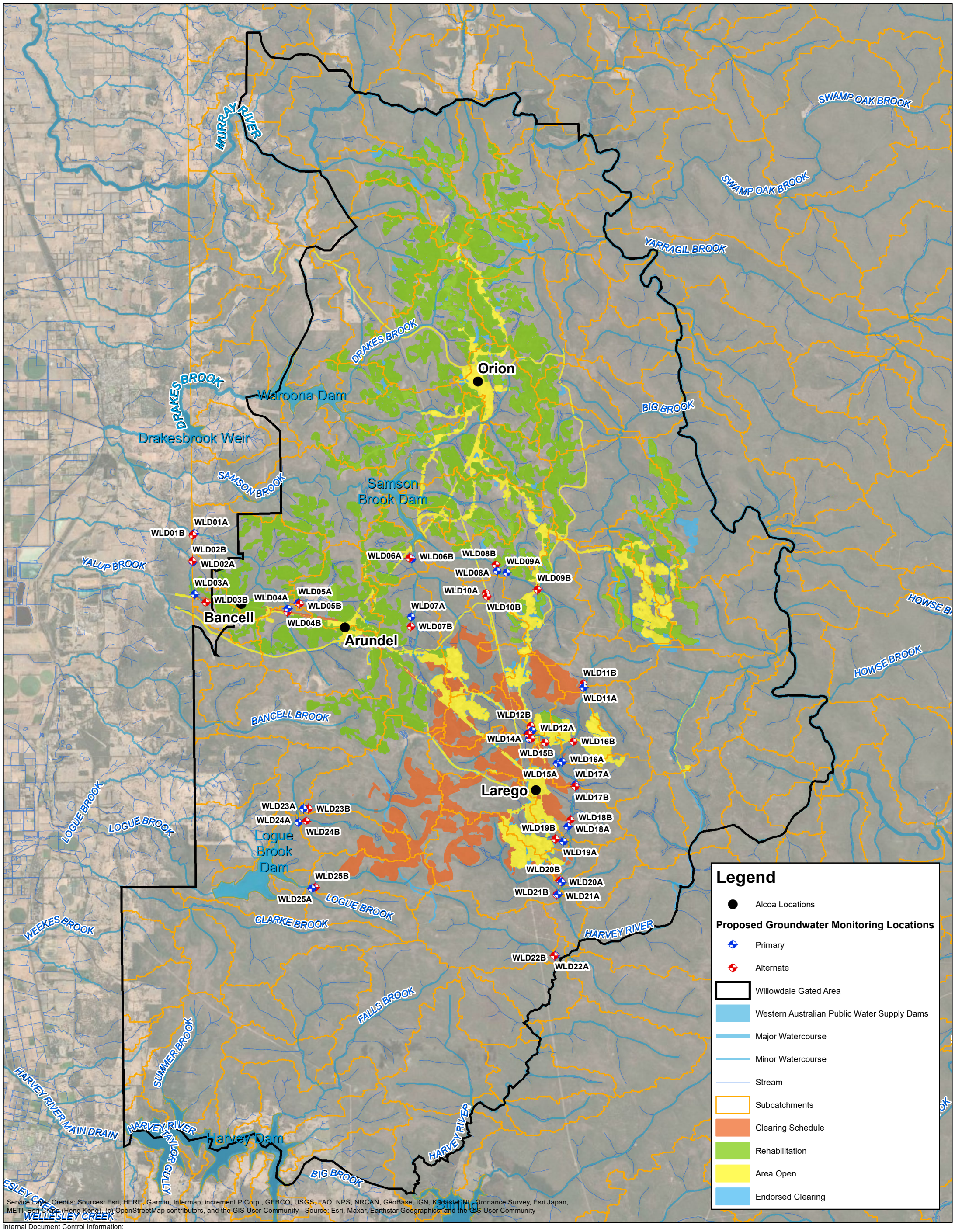


FIGURE 3-5

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:149,120
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Proposed Subcatchment Discharge Zone Groundwater Monitoring Locations (Willowdale)

0 1.5 3 6 9 12 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

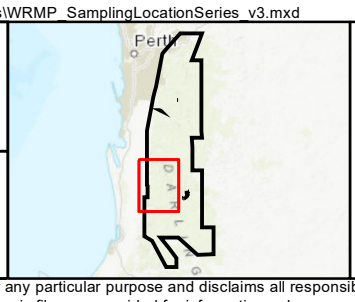
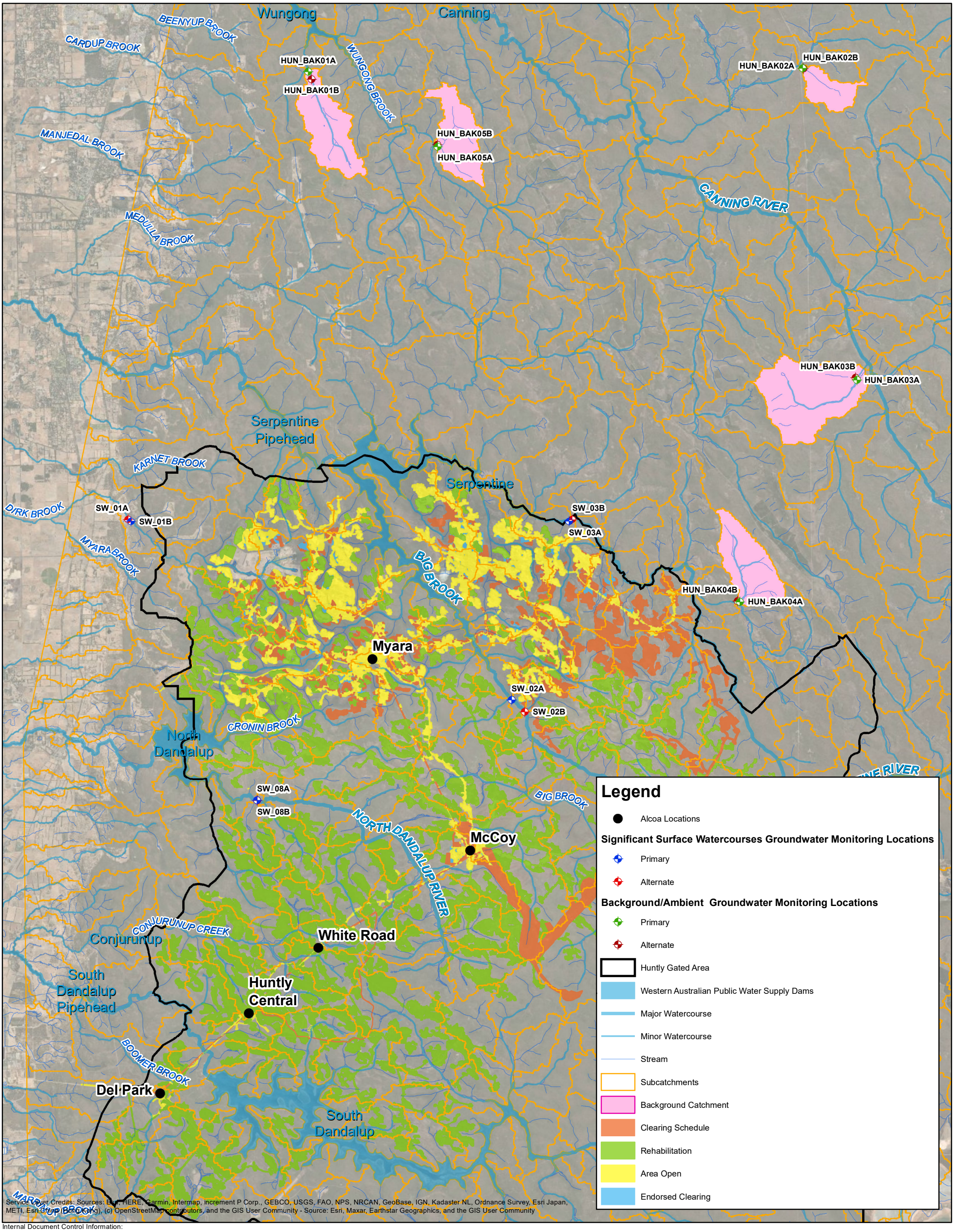


FIGURE 3-6

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:113,200
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 05/12/24 7:17:07 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Background/Ambient and Significant Surface Watercourses Groundwater Monitoring Locations (Huntly)

0 2 4 8 12 16 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

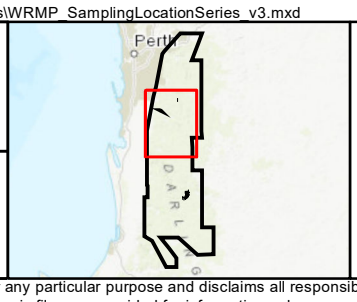
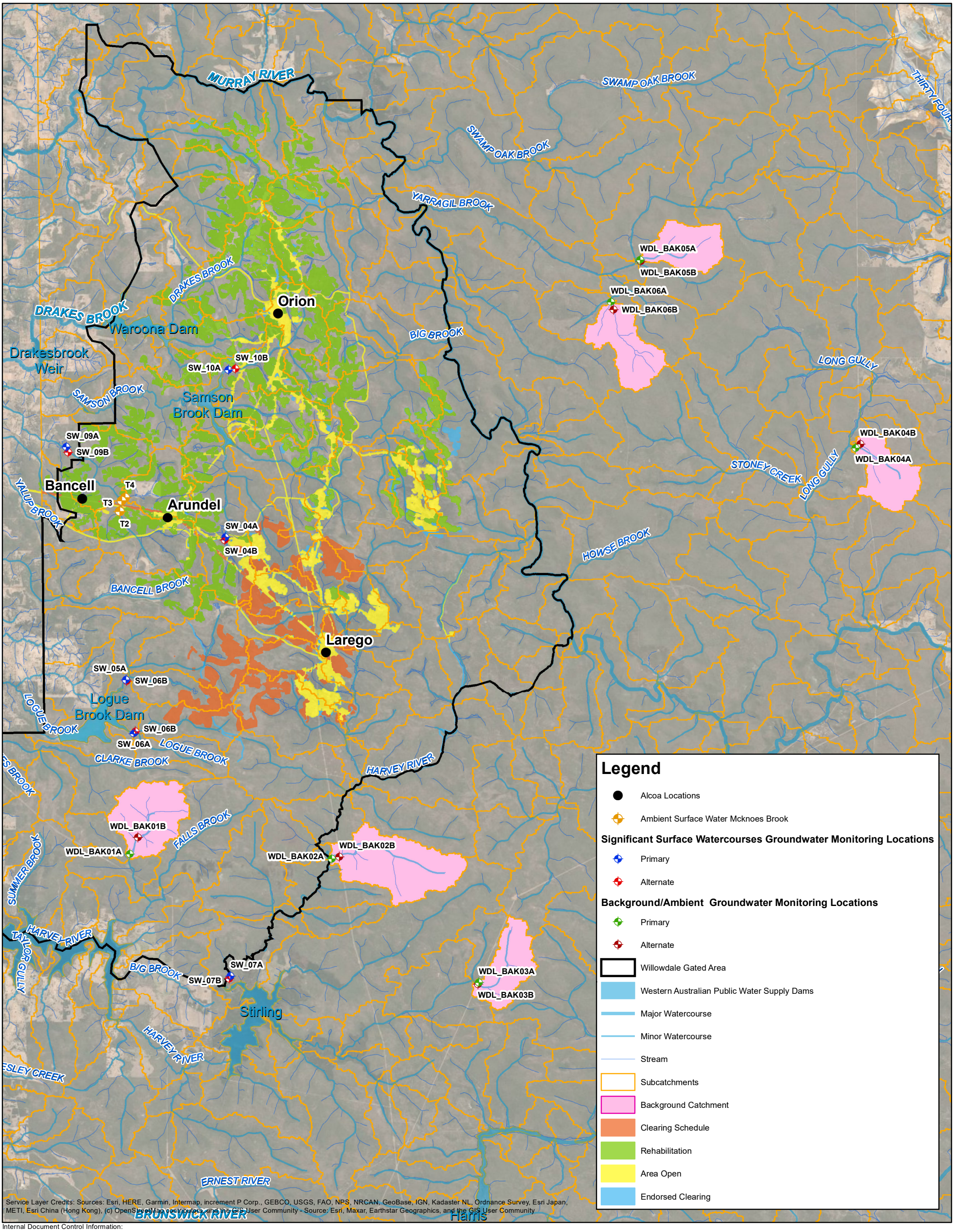


FIGURE 3-7

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:145,410
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 28/01/25 10:11:44 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Background/Ambient and Significant Surface Watercourses Groundwater Monitoring Locations (Willowdale)

0 1.75 3.5 7 10.5 14 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan:
Water Resources Management Plan
Sampling Program

EHS Support

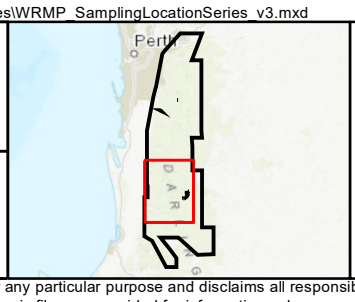
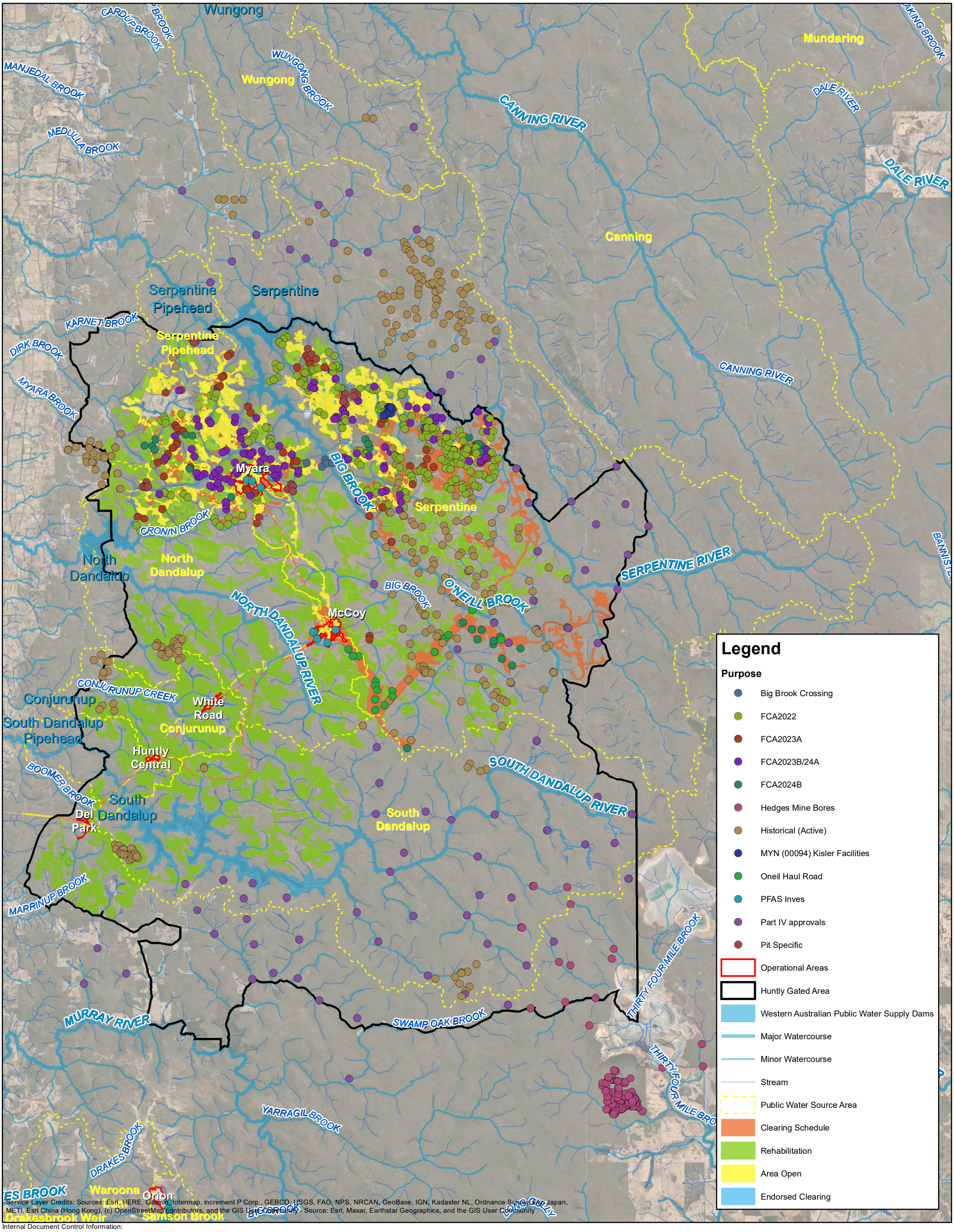


FIGURE 3-8

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:136,600
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community. Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 05/12/24 7:17:07 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Active and/or Historical Groundwater Monitoring Locations (Huntly)

0 2.5 5 10 15 20 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan:
Water Resources Management Plan
Sampling Program

EHS Support

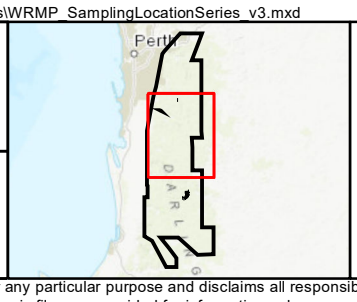
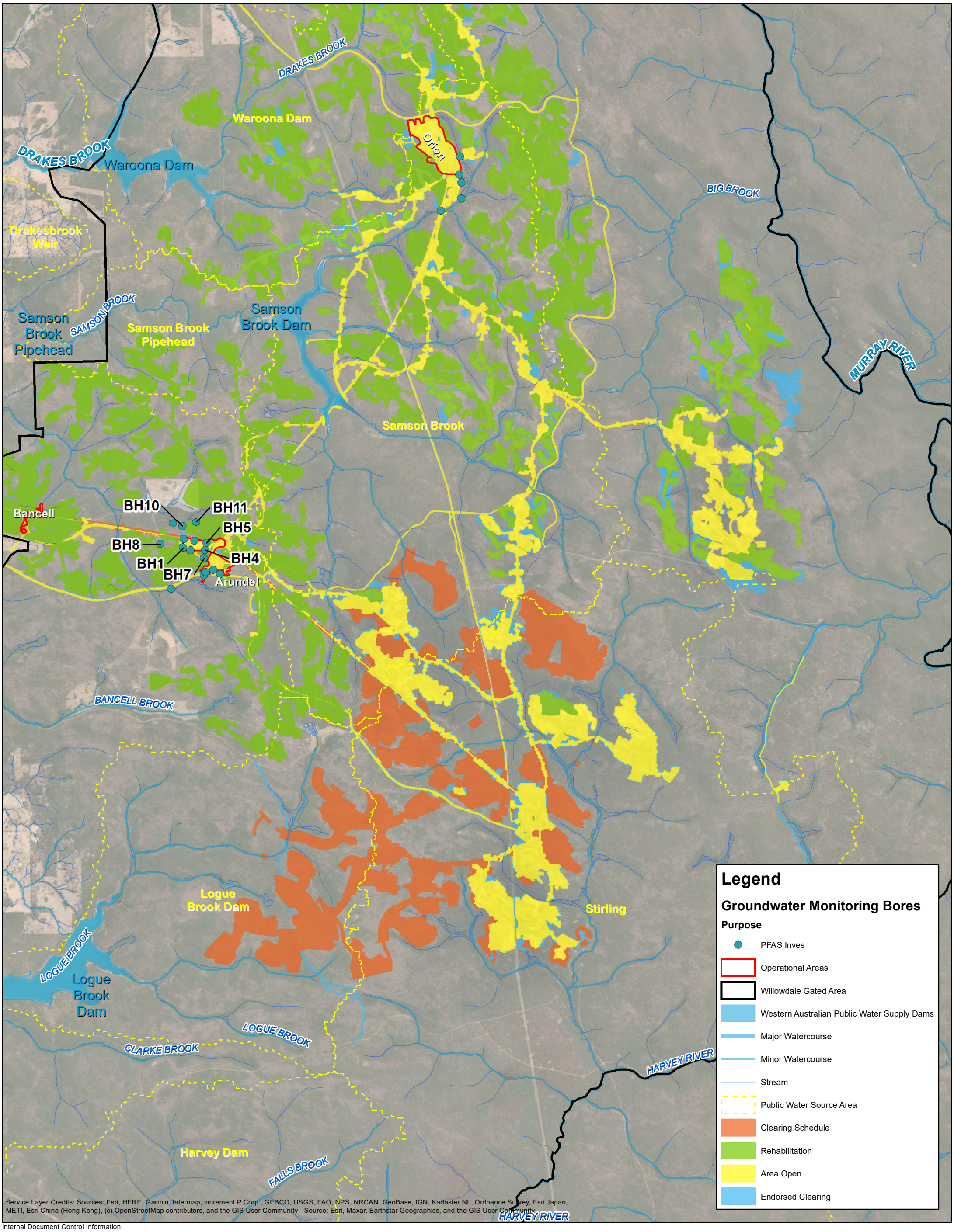


FIGURE 3-9

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:185,130
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 28/01/25 9:54:13 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Active and/or Historical Groundwater Monitoring Locations (Willowdale)

0 0.75 1.5 3 4.5 6 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

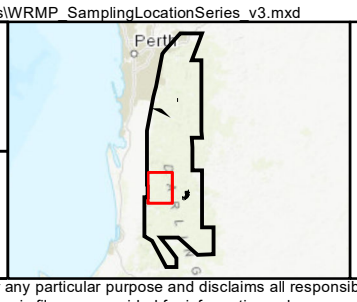
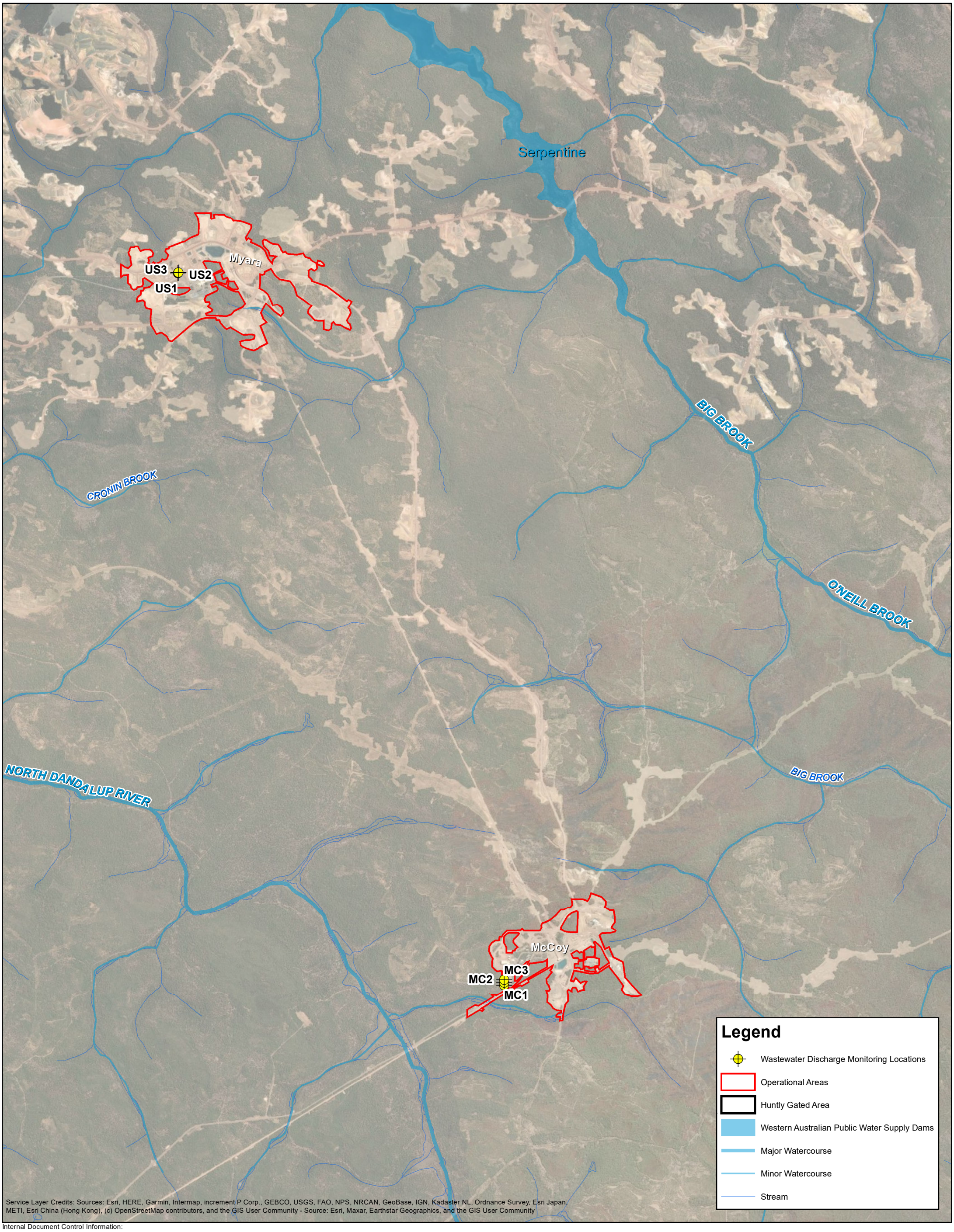


FIGURE 3-10

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:68,040
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 28/01/25 9:54:13 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Wastewater Discharge Monitoring Locations (Huntly)

0 0.5 1 2 3 4 Kilometers

1 cm = 0 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

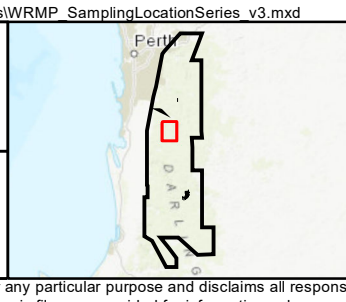
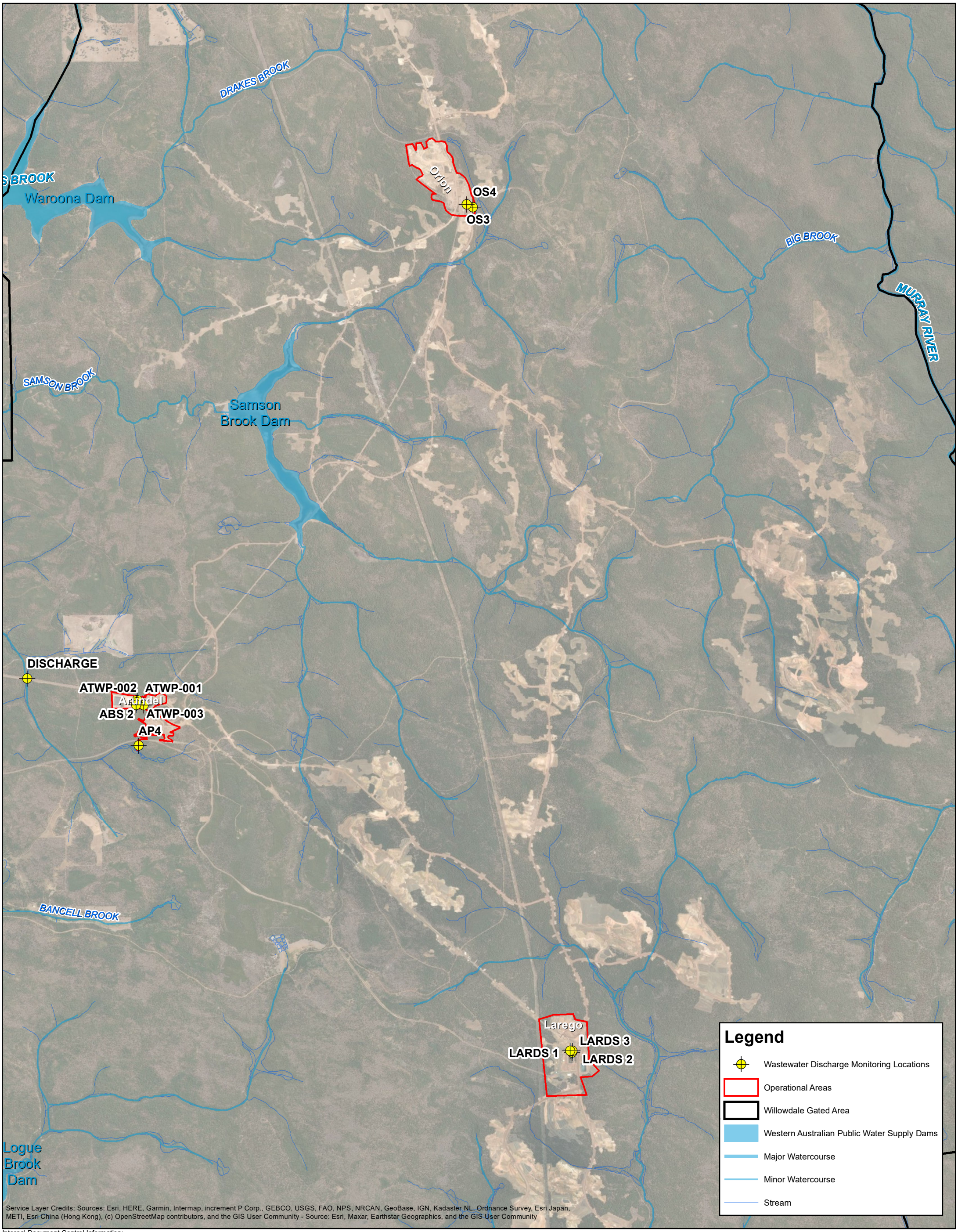


FIGURE 3-11

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:41,820
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 28/01/25 9:54:13 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Wastewater Discharge Monitoring Locations (Willowdale)

0 0.5 1 2 3 4 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

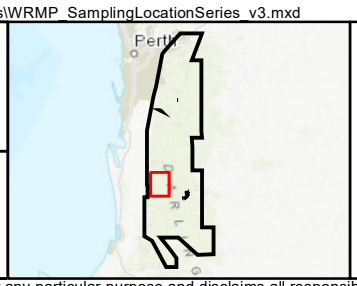
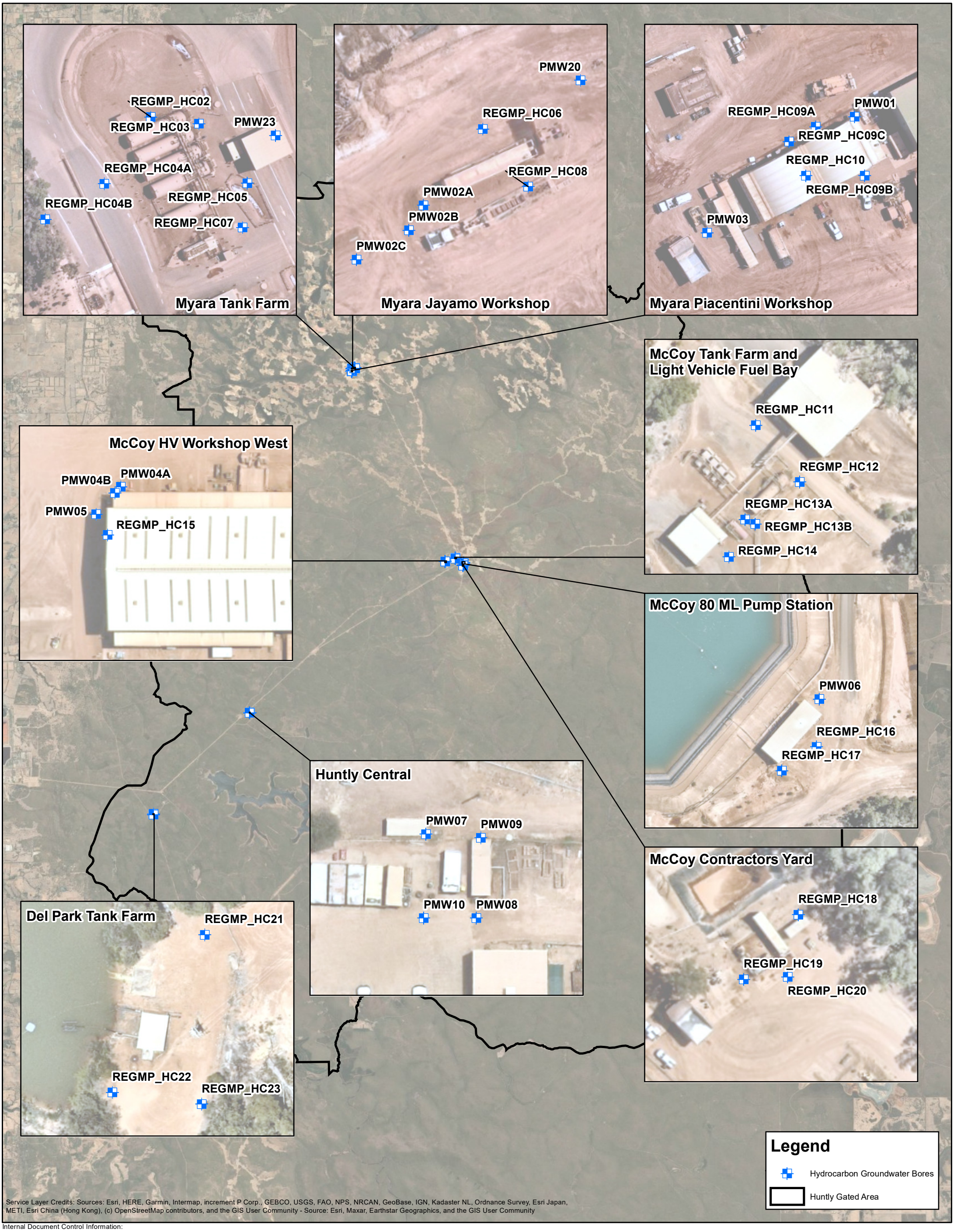


FIGURE 3-12

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:52,170
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 13/01/25 12:35:04 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_Hydrocarbon_Huntly.mxd

Hydrocarbon Groundwater Wells (Huntly)

0 2 4 8 12 16 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

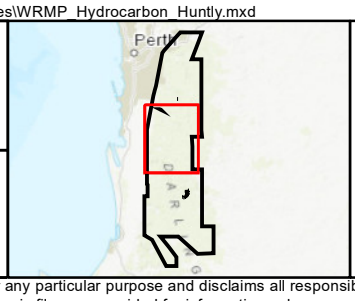


Figure 3-13

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:150,000
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

Orion Bulk Fuel Storage Farm

PMW11

REGMP_HC30

REGMP_HC31

REGMP_HC33

REGMP_HC34

Arundel

REGMP_HC35

REGMP_HC36

REGMP_HC37

REGMP_HC38

PMW22

REGMP_HC39A

PMW12

REGMP_HC39B

PMW13

PMW15

PMW14

JRM yard

PMW24

Larego Tank Farm

PMW16

PMW18

PMW21

PMW19

PMW17

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Legend

- Hydrocarbon Groundwater Bores
- Willowdale Gated Area

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 13/01/25 11:48:56 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_Hydrocarbon_Willowdale.mxd

Hydrocarbon Groundwater Wells (Willowdale)

0 1.5 3 6 9 12 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan:
Water Resources Management Plan
Sampling Program

EHS Support

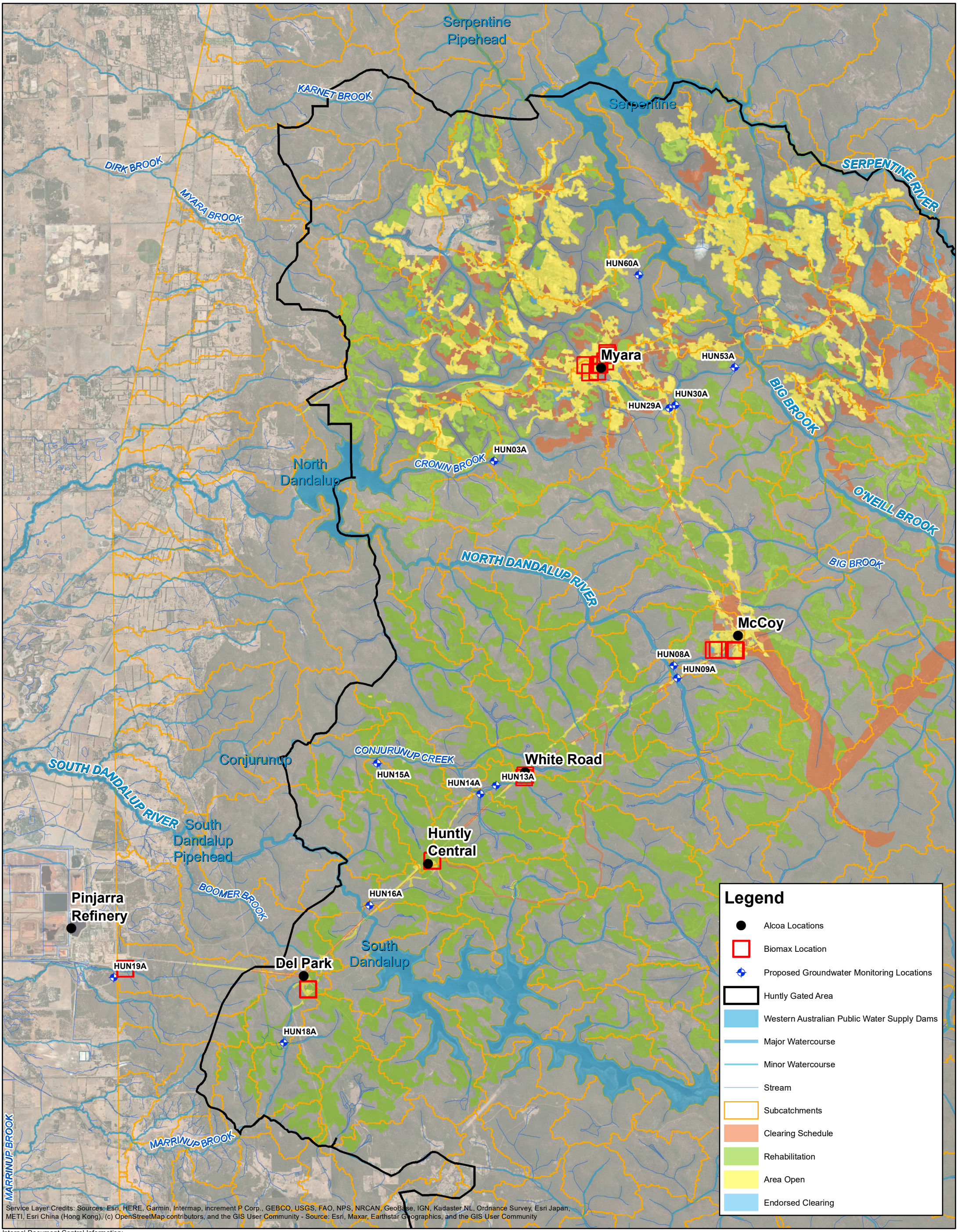
Perth

Figure 3-14

N

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:118,612
AERIAL IMAGE SOURCE:	ESRI Basemap

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 29/01/25 9:58:26 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Groundwater Monitoring Downstream of Biomax Locations (Huntly)

0 1.25 2.5 5 7.5 10 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

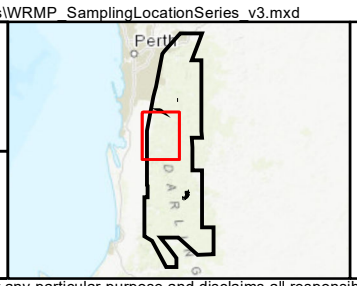


FIGURE 3-15

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:104,340
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

DRAKES BROOK
DRAKES BROOK
Orion
Waroona Dam
BIG BROOK
MURRAY RIVER
SAMSON BROOK
Samson Brook Pipehead
Samson Brook Dam
Bancell
WLD04A
Arundel
BANCELL BROOK
WLD14A
WLD17A
Laregо
WLD18A
WLD19A
LOGUE BROOK
Logue Brook Dam
LOGUE BROOK
CLARKE BROOK
HARVEY RIVER
FALLS BROOK

Legend

- Alcoa Locations
- Biomax Location
- Proposed Groundwater Monitoring Locations
- Willowdale Gated Area
- Western Australian Public Water Supply Dams
- Major Watercourse
- Minor Watercourse
- Stream
- Subcatchments
- Clearing Schedule
- Rehabilitation
- Area Open
- Endorsed Clearing

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 29/01/25 9:58:26 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Groundwater Monitoring Downstream of Biomax Locations (Willowdale)

0 0.75 1.5 3 4.5 6 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan:
Water Resources Management Plan
Sampling Program

EHS Support

Perth

FIGURE 3-16

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:62,490
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

4 Adaptive Management and Review of the EMP

Alcoa recognises the dynamic nature of ecosystems and supports an adaptive management approach under this WRMP. Adaptive management includes planning, organising, leading and controlling an operation in a manner that changes iteratively as new knowledge becomes available.

The WRMP iteratively collates the key findings and knowledge of the technical studies to inform the required adaptive management to enable achievement of outcome-based objectives.

The adaptive management is risk-based and is expected to proactively prevent, mitigate or manage potential impacts (both predicted and actual) to an acceptable level. Where trigger or threshold criteria are exceeded, the following post response activities will be undertaken:

- Review mining activities within sub-catchment to identify source and contributing factors. Undertake improvement actions, if required.
- Undertake incident investigation to determine source of exceedance and if associated with mining activities.
- Implement a remedial action plan (if required).
- Continue to monitor management action implementation and compliance.
- Review monitoring programme (locations and frequency) to ensure appropriate to determine scale of impact, if required.

This WRMP is developed using the best available data and methodologies. However, it is acknowledged there are inherent uncertainties and assumptions within this plan due to current data limitations and environmental variability (**Table 2-3**).

The adaptive management approach can accommodate the uncertainty in knowledge base whilst maintaining the value of the receiving receptor which may be impacted by changes in hydrological processes or by water quality. This is done through a combination of preventative water management controls, allowing for the application of precautionary principles to be considered as the scientific knowledge evolves through baseline assessments and the monitoring of predicted and actual outcomes; and using feasible water mitigation controls to mitigate and offset impacts.

To address these knowledge gaps, Alcoa commits to ongoing and future investigations and studies, incorporating consultation on study briefs with the ITAG, aligning with established standard practices to ensure a robust and collaborative WRMP. The ongoing and proposed future investigations and studies are summarised in **Table 4-1**. Outcomes from additional studies will be incorporated into the WRMP in accordance with the risk assessment process (**Appendix B**).

Alcoa will continually review the WRMP throughout the Project implementation and will update the Plan as required to include new data and information obtained with ongoing survey and monitoring activities and research programmes, in accordance with the adaptive management approach described above. If and when, substantial changes are made to the Plan, Alcoa will consult with all relevant stakeholders regarding the changes.

4.1 Effectiveness of Controls

The drainage controls are developed in accordance with the Drainage Design Manual, which has been refined based on industry standards, anecdotal evidence accumulated through long standing practice, investigations and studies, and regulatory feedback.

Information regarding the effectiveness of controls is collected through monitoring data (see Appendix D) and through several studies in progress (see table 41). As these programs are still in their early stages, a qualitative self-assessment has been undertaken in the interim to provide an understanding of control effectiveness.

The Control Self-Assessment (CSA) has been developed to detail the key controls' ability to minimise the occurrence and impact of a mining-related drainage incidents (See Appendix F).

Table 4-2 Ongoing and Proposed Future Investigations and Studies

Commitment Statement	Scope / Objective	Further Information
Upgraded Monitoring System for Surface Water and Groundwater	This program aims to improve monitoring of both surface water and groundwater to ensure all streams, catchments and systems are monitored. We will install in-stream turbidity monitors and flow measurement devices to track surface water quality and flow. For groundwater, we will install pressure transducers in sentinel monitoring bores. The data we collect will support studies on triggers and thresholds, using reference catchments for reliable comparisons. This program will provide accurate data to support better environmental management and decision-making.	Surface water sampling program commenced in 2024 (see results in Appendix D). Remainder of program to be implemented by Alcoa in phased approach following submission of WRMP.
Field study into drainage protection slot effectiveness	Field study into drainage protection slot effectiveness, focussing on upslope and downslope surface water characteristics under a range of actual rainfall conditions	Initial study submitted December 2024. It was recommended to do further studies in 2025, scope and schedule to be agreed with DWER.
Erosion modelling study	Erosion modelling and implications of drainage protection slot and pit controls, particularly on slopes greater than 16% and effectiveness of the 100 m streamzone vegetation buffer. Validation of the quantitative model will be undertaken through further field studies and testing	Testing done, report to be presented to Alcoa in February.
Infiltration testing in mining areas	Infiltration test work on haul road and pit areas under a range of actual rainfall conditions, in order to guide appropriate controls and management actions.	50% of infiltration tests concluded, to be finalised by end of February. Submission anticipated in April 2025.
Development of Drainage Design Manual	The objective of this program is to obtain approval of the Drainage Design Manual from the ITAG and ensure its effective application for managing mine drainage	In progress, timelines to be confirmed with ITAG

Commitment Statement	Scope / Objective	Further Information
	controls in disturbed areas. The key steps in the program include: • Consultation with ITAG to review and discuss the Design Manual. • Update of the Design Manual based on feedback from ITAG consultation. • Peer review of the updated Design Manual to ensure its technical accuracy. • Further updates to the Design Manual based on peer review outcomes. • Final approval of the Design Manual by ITAG. Upon endorsement of the Design Manual, it will guide the application of risk-based mine drainage controls in all disturbed areas. While the manual will inform the development of DCMPs for each pit, submission to ITAG for approval may not always be required.	
Catchment Scale Risk Assessment Tool	Development of catchment scale risk assessment tool in alignment with ITAG.	Scope and timelines to be confirmed via consultation with ITAG.
Rehabilitation Design Manual	The objective of this program is to develop a Rehabilitation Design Manual that establishes minimum standards for rehabilitation design, with a particular focus on pit rehabilitation. The manual will support the design and implementation of rehabilitation activities, ensuring they meet regulatory requirements and industry best practices.	Scope and timelines to be confirmed via consultation with ITAG.

Commitment Statement	Scope / Objective	Further Information
Further Studies on Turbidity	The objective of this program is to establish an effective framework for monitoring and managing turbidity at impact sites. Key goals include: • Assess likelihood of bank erosion within catchments of concern. • Establish baseline conditions for streambank stability and turbidity. • Use remote sensing for bank erosion monitoring. • Monitor turbidity in reservoirs. • Determine early response criterion and triggers for turbidity at impact sites. • Compile and analyse datasets to establish baseline turbidity conditions. • Focus on unmined catchments and natural background levels. • Support establishment of turbidity trigger values and decision-making. • Address time series irregularities and response curve inconsistencies. • Improve temporal and spatial resolution with expanded monitoring networks. • Evaluate causes and trends of turbidity spikes. • Compare impacts of short-duration high NTU vs. prolonged low NTU exposure. This program aims to improve turbidity monitoring practices, leading to more accurate predictions and better management of environmental impacts.	Scope and timelines to be confirmed via consultation with ITAG.
Receptor (Reservoir) Floating Buoy Array	A Receptor (reservoir) floating buoy array is proposed as a collaborative collective action “layered monitoring system” endeavour, however further consultation is required with Water Corporation.	Project subject to Water Corp approval and collaboration. Scope and timelines to be confirmed via consultation with ITAG.
Stream Flow / Rainfall and Groundwater Study	This research aims to explore stream flow, rainfall, and groundwater to assess salinity risks and trends. It will examine long-term patterns in stream flow, groundwater levels, salinity fluctuations, and rainfall variability. The data collected will inform modelling efforts and contribute to water resource management decisions. The findings will support strategies for water	Scope and timelines to be confirmed via consultation with ITAG.

Commitment Statement	Scope / Objective	Further Information
	quality, ecosystem health, and salinity mitigation.	
Understanding Groundwater and Surface Water Interaction	This study will examine the age of groundwater and how it connects with surface water, looking at how these systems interact over time. It will track groundwater pathways and study how contaminants behave in the forest environment, considering spatial, temporal, and cumulative impacts. The study will help understand how groundwater and surface water influence each other, improving groundwater management and protecting forest ecosystems.	Scope and timelines to be confirmed via consultation with ITAG.
PFAS Ambient and Receiving Monitoring Program	The purpose of this program is to establish both background/ambient PFAS concentrations and the concentrations that may be present in receiving surface water environments down-gradient from Alcoa's mining activities.	Huntly and Willowdale sampling programs undertaken in 2024. Report being prepared for delivery to Alcoa in Q1 2025 which will guide management actions regarding PFAS.
Contaminants of Potential Concern in Sumps	Develop a monitoring program to monitor high risk sumps and/or sumps within sensitive areas for contaminants of potential concern. associated rainfall infiltration into the shallow groundwater system, and potential discharge to surface water receptors.	Scope and timelines to be confirmed via consultation with ITAG.
Impact of Climate Change on Permanent and Ephemeral Streams	This study will compare permanent and ephemeral streams to understand how climate change affects them. It will look at what determines whether a stream is permanent or ephemeral and how changes in rainfall and temperature impact their flow. The study will track how streamflow varies over time and space, and how these changes affect water availability and ecosystems. The results will help guide water management and conservation strategies in response to climate change.	Scope and timelines to be confirmed via consultation with ITAG.
Catchment Specific Sampling and Analysis Quality Plans	Development of Catchment Specific Sampling and Analysis Quality Plans (SAQPs), expanding on existing monitoring programs to assist in the accurate execution of the objectives of the WRMP and ensure the data collected is representative and allows for evaluation against Management Targets and efficacy of Management Actions. The key objectives of the Catchment Specific SAQPs are: • To ensure data collected is suitable for making informed decisions by	Scope and timelines to be confirmed via consultation with ITAG.

Commitment Statement	Scope / Objective	Further Information
	ensuring appropriate data quality objectives are met for each sampling methodology and media and meet the required standards for accuracy and reliability. • To address specific data gaps (e.g., baseline assessments) and WRMP Objectives. • To ensure data collected is reliable to support informed decision making consistent with the objectives of the WRMP.	
Improve knowledge of Groundwater Dependent Ecosystems (GDEs)	This work will involve studies and assessments to investigate possible GDEs in the Huntly and Willowdale mine regions.	Refer to Flora and Vegetation Management Plan

5 Stakeholder Consultation

The stakeholder consultation strategy has been adopted from the *Principles for Engagement with Communities and Stakeholders* (2005) by the Ministerial Council on Mineral and Petroleum Resources (MCMPR). This includes:

- open and effective communication;
- two–way communication;
- clear, accurate and relevant information;
- timeliness;
- transparency, requiring a process for communication and feedback;
- collaboration, working cooperatively to seek mutually beneficial outcomes;
- inclusiveness, with the aim of recognising, understanding and involving stakeholders early and throughout the process; and
- integrity, with engagement undertaken in a manner that fosters mutual respect and trust.

The outcomes of the consultation strategy are recorded in the Stakeholder Consultation Register. Consultation to date has comprised predominately of meetings and correspondence with several State and Federal departments and agencies, Local Government Authorities, Traditional Owners and non–government organisations and interest groups. Comments from stakeholders on the initial Draft WRMP (Rev 1) have been reviewed and addressed. outlines the comments received, the corresponding actions taken, and the relevant sections in this WRMP.

Alcoa is committed to ongoing stakeholder identification, communication, engagement and consultation through the planning and approval phase, and through to construction, operational and closure phases of the Proposal. We will engage with stakeholders through regular meetings, provide clear and relevant information, circulate study briefs for review and feedback, and ensure formal agreement processes are in place to maintain alignment with these principles and established practices.

The key stakeholders in Inland Waters values include:

- state government;
- federal government;
- local government; “
- Traditional Owner groups; and
- non–government organisations and interest groups.

A comprehensive list of key stakeholders is provided in **Table 5-1**.

Table 5-1 Key Stakeholders

Stakeholder Group	Stakeholder	Key Interests
State Government	Environmental Protection Authority (EPA)	• Administration of the *Environmental Protection Act 1986* (EP Act) • Part IV (EP Act) Environmental Impact Assessment (EIA)
	Department of Water and Environmental Regulation (DWER)	• Input into environmental scoping and assessments • Water catchments • Compliance reporting
	Water Corporation	• Catchment management
	Department of Energy, Mines, Industry Regulation and Safety (DEMIRS)	• Administration of the *Mining Act 1978* • Tenement conditions • Closure and rehabilitation • Safety
	Department of Biodiversity, Conservation and Attractions (DBCA)	• Administration of the *Biodiversity Conservation Act 2016* (BC Act) • Flora, fauna and habitat conservation • State Herbarium • Threatened and priority ecological communities' specialists
	Department of Planning, Lands and Heritage (DPLH)	• Native title and indigenous requirements • Heritage sites
	Department of Fire and Emergency Services	• Emergency services • Fire breaks • Fire reduction
	Main Roads Western Australia	• Use of public roads
Federal Government	Department of Climate Change, Energy, the Environment and Water (DCCEEW)	• Administration of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) • Referral and assessment of environmental impact assessments of matters of national environmental significance
Local Government Authorities	Shires of Armadale Shire of Serpentine Shire of Harvey Shire of Waroona Shire of Kwinana Shire of Bunbury	• Use of public roads and infrastructure

Stakeholder Group	Stakeholder	Key Interests
Non–government organisations and interest groups	Local landholders Local NRM group (Peel-Harvey) Institute of Foresters Local Indigenous Groups Universities and Researchers Dieback Working Groups Conservation Council of Western Australia Wilderness Society WA Forest Alliance	• Protection of conservation significant species • Forest management • Research groups • Potential interest in baseline flora and fauna survey data
Government Advisory Groups	Bauxite Senior Executive Committee (BSEC) Independent Technical Advisory Group (ITAG)	• Consultation on study briefs, scope and methodology • Discussion on implementation of mitigating actions for trigger action response plans • Consultation on trigger criteria for monitoring parameters

6 Glossary

Abbreviation/ Term	Description
16% Slope	In relation to the deriving the average slope for areas (refer note below), Alcoa will use the original version of the DOLA contours to derive the slope layer. The methodology to be used to develop the slope layer and associated average slope is as follows: Clip the contours to the active and future mining region. Run Topo to Raster (available from ArcGIS Pro) with the clipped contours as the input and using the default settings (extent of the contours to be used as the processing extent). Clip the resulting raster to the region of interest using Clip Raster (available from ArcGIS Pro). Convert the resulting raster to a slope (percent rise) raster using the Slope (available from ArcGIS Pro) tool. The above steps were completed for each region of interest and merged into a single raster. The calculation of the pit slope average using the slope layer as describe above is: the individual continuous pit polygon (inclusive of current and future clearing) is used to clip the slope raster. the resulting raster properties are used to obtain the mean slope value. Note: An area is determined by Open areas (includes existing haul roads, infrastructure, and pits) and s6 native vegetation disturbance footprint (include historically endorsed FCAs and MMP 5 year clearing schedule). Rehabilitation is excluded.
ADWG	Australian Drinking Water Guidelines
AER	Annual Environmental Report
ACHIS	Aboriginal Heritage Inquiry System
Alcoa	Alcoa of Australia Limited
APM	Archaeological Predictive Model
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure
ASS	Acid Sulphate Soils
ANZECC	Australia and New Zealand Environmental and Conservation Council
Baseline	Baseline data is considered to be monitoring data collected prior to any mining activities occurring. Once mining activities commence, these sites may become impact monitoring locations and the baseline data used to identify any potential impact.
BC Act	Biodiversity Conservation Act 2016
BoM	Bureau of Meteorology
BSEC	Bauxite Senior Executive Committee
BTEXN	Benzene, toluene, ethylbenzene, xylenes, and naphthalene
CAR	Compliance Assessment Report
CCW	Conservation Category Wetland

Abbreviation/ Term	Description
Clearing Restrictions	Defined in the Ministerial Approval Conditions for the 2023-2027 Mining and Management Program (MMP) as; 8. Alcoa will not undertake any MMP-related clearing until the Mine Operations Group (MOG) has provided its endorsement of the relevant FCA. 9. Alcoa will not clear more than 800ha of native vegetation for MMP-related mining activities per calendar year for the duration of the Exemption Order.10. Unused capacity from the annual clearing cap detailed within Condition 9 may be rolled over into the following year, only following approval from the State Development Minister as part of any subsequent MMP submissions. 11. Alcoa will ensure that FCA submissions to the MOG for pits or haul roads within the public drinking water catchment areas are accompanied by Drainage Control Management Plans (DCMP) that are capable of meeting the requirements of condition 14(b)(iii). DCMPs are conceptual designs and will be developed using the Drainage Design Manual and field data and will include an assessment against the Groundwater Risk Assessment Framework (2021 Forest Clearing Advice 23 March 2022). 12. Alcoa will ensure that for MOG-endorsed clearing for haul roads or pits where the average slope is greater than· 16% or where sub-catchments in which mining disturbance is greater than 30% of the total sub catchment area: (a) pit and drainage control as-builts and details on any design variations will be provided to the MOG twice a year, at least 4 months apart; (b) conceptual rehabilitation designs will be provided to the MOG 6 months after FCA endorsement; (c) no clearing will be undertaken where the topographic wetness index is greater than or equal to 9, and groundwater data availability is less than 12 months; (d) undertake targeted fauna and flora and vegetation surveys for all future clearing under the MMP, as per the Flora and Vegetation and Fauna Management Plans; and Following completion of the work required by condition 26(a), undertake a clearing risk assessment to ensure appropriate avoidance and management measures are implemented for all future clearing under the MMP, and submit these to MOG with each FCA submission.
COPC	contaminants of potential concern
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DCMP	Drainage Control Management Plan
DE	Development Envelope
DEM	Digital Elevation Model
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
DOC	dissolved organic carbon
DPAW	Department of Parks and Wildlife (former)
DPLH	Department of Planning, Lands and Heritage
DPS	Drainage Protection Slot
Drainage Incident	Drainage Incident means — (a) a runoff from a disturbance area to the surrounding environment of surface water that has a turbidity of at least 25

Abbreviation/ Term	Description
	nephelometric turbidity units for a period of at least 1 hour; or (b) a discharge from containment infrastructure that includes or may include environmentally hazardous material;
DWER	Department of Water and Environmental Regulation
DWRA	Drinking Water Risk Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EP Act	Environmental Protection Act 1986
EPA	Environmental Protection Authority
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
FCA	Forest Clearing Advice
GDE	Groundwater Dependent Ecosystems
GW	Groundwater
GWRAF	Groundwater Risk Assessment Framework
HRZ	High Rainfall Zone
Impact site	Operational sites (where activities are occurring).
Infrastructure	Construction, operation and rehabilitation of mining related infrastructure by Alcoa within ML1SA. This includes: • haul road, access road and causeways; • utilities (power, water, electricity); and • mine facilities (for example, workshops, water treatment plants).
IRZ	Intermediate Rainfall Zone
ITAG	Independent Technical Advisory Group
IWSS	Integrated Water Supply System
JTSI	Department of Jobs, Tourism, Science and Innovation
LAI	Leaf Area Index
LDA	Limited Disturbance Area
LOR	Limit of reporting
MAZ	Mining Avoidance Zones
MCMPR	Ministerial Council on Mineral and Petroleum Resources
Mining Activities	All mining relations activities undertaken by Alcoa within ML1SA. This includes: • exploration; • native vegetation clearing; • topsoil and over-burden removal; • pit development and operation; • haul road, access road and causeway construction and operation; • utilities (power, water, electricity) construction and operation; • construction and operation of Mine Facilities (for example, workshops, water treatment plants; and • rehabilitation of pits and infrastructure.

Abbreviation/ Term	Description
ML1SA	Mining Lease 1SA
MMP	Mining and Management Program
MMPLG	Mining and Management Program Liaison Group
NEMP	National Environmental Management Plan
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NRJ	Northern Jarrah Forest
NRM	Natural Resource Management
NRMMC	Natural Resource Management Ministerial Council
NTU	Nephelometric Turbidity Unit
OCA	Operational Control Area
Operational restrictions	Defined in the Ministerial Approval Conditions for the 2023-2027 Mining and Management Program (MMP) as; 5. Alcoa must not undertake any clearing, exploration, mining or other operations: (a) within 1 km of the top water level of any water reservoir; or (b) within the Serpentine Pipehead Dam Catchment; (c) in any area with an average slope greater than 16% within the Reservoir Protection Zone of any water reservoir; or (d) within 10 metres of any Black Cockatoo nesting trees or Black Cockatoo significant trees. 6. Condition 5 does not apply to: (a) stabilisation or rehabilitation activities; or (b) environmental monitoring activities; or (c)-use and maintenance of existing infrastructure; or (d) modification of existing road infrastructure with the written consent of the State Development Minister; or (e) construction of drainage control infrastructure; or (f) mining within 1 kilometre of the top water level of any water reservoir in Myara Central and Myara South carried out before 30 June 2024. 7. If any activity described in paragraphs (b) - (f) of condition 6 is undertaken, the disturbance must be stabilised either within 12 months of the relevant activity ceasing, or within the first available rehabilitation season, whichever is earliest. Alcoa must implement drainage controls in the affected area until the area is stabilised.
PAHs	polycyclic aromatic hydrocarbons
PDWSA	Public Drinking Water Source Area
PFAS	Per- and polyfluoroalkyl Substances
Proposal	Alcoa's WA Mining Operations Water Resources Management Plan
Reference	Reference data or sites are monitoring locations which are not considered to be impacted by mining activities. Reference data or sites may be used if insufficient baseline data is used.

Abbreviation/ Term	Description
Rehabilitation Completion	Rehabilitation ≥ 15 years (≥ 12 current standard) of age that has been assessed and met the agreed Completion Criteria that indicate the success of rehabilitation and enable Alcoa to demonstrate when its liability for ongoing management of an area will cease.
RPZ	Reservoir Protection Zone
SAQP	Sampling and Analysis Quality Plan
Significant	Significance associated with Management Targets is defined in the Monitoring Programme (**Table 2-3**). The Threshold Criteria is based upon significant impacts, which are reflective of potential impacts to receptors.
SPR	Source Pathway Receptor
STP	Short Term Planning
Stream	Ephemeral
SVOC	Semi-volatile organic compounds
SVTs	Site Vegetation Types
SWIRC	South West Index of River Condition
TDS	total dissolved solids
TRHs	Total Recoverable Hydrocarbons
TSS	Total Suspended Solids
UFI	Unique Feature Identification
WA	Western Australia
WC	Water Corporation
WEC-C	Water & Environmental Consultants - Catchment
WQPN	Water Quality Protection Note
WRMP	Water Resource Management Plan
WSAA	Water Services Association of Australia

7 Changes to an EMP

Based on result of the review process, Alcoa will update and adjust the measures and strategies as per **Table 7-1**.

Table 7-1 Changes to the Water Resources Management Plan

Complexity of changes			**Minor revisions ☐ Moderate revisions ☐ Major revisions ☒**	
Number of Key Environmental Factors			**One ☒ 2-3 ☐ > 3 ☐**	
Date revision submitted to EPA: DD/MM/YYYY				
Proponent's operational requirement timeframe for approval of revision Reason for Timeframe:			**< One month ☐ < Six months ☐ > Six months ☐ None ☐**	
Item no.	**EMP section no.**	**EMP page no.**	**Summary of change**	**Reason for change**
1.	All	All	The document has undergone a full review. The key changes include: Section 2 – Information and rationale to support the management actions and objectives. Section 3 – Monitoring provisions table describing what is being monitored and how and when monitoring will be done. Section 4 – Trigger criteria that forms the adaptive management approach. Figures – Figures to support the information provided in the WRMP are included in the report.	All sections have been updated to address feedback from ITAG, Alcoa internal stakeholders and align with the EPA's *Instructions: How to prepare Environmental Protection Act1986 Part IV environmental management plans.*
2.				
3.				

8 References

Alcoa. (2022a). *Drainage Design Manual - Mining Pits and Haul Roads.*

Alcoa. (2023b). *Pinjarra Alumina Refinery Revised Proposal - Inland Waters Environmental Management Plan - Mine Component.*

Alcoa. (2024b). *DCMP Summary - Forest Clearing Advice.*

Alcoa. (2024b). *Rehabilitation Management Plan and Schedule, Huntly and Willowdale Mine.*

Alcoa. (2024c). *Bauxite Mining on the Darling Range in the Southwest of WA – 2022 to 2026 and 2023 to 2027 - Environmental Review Document.*

Alcoa. (2024c). *Drainage Control Management Plan, Wittwer 8, Huntley Mine.*

Alcoa. (2024c). *Rehabilitation Design Manual.*

Alcoa. (a). *AUACDS-2056-536 - Describe McCoy Stormwater & Wastewater Management Overview (HUN).*

Alcoa. (b). *Waste Water and Storm Water Management Overview - Willowdale.*

Alcoa. (c). *Waste Water Monitoring Program – Huntley.*

Alcoa. (d). *Waste Water Monitoring Program – Willowdale.*

Alcoa of Australia. (2024). *Rehabilitation Management Plan and Schedule - Huntly and Willowdale.* Unpublished Report.

Alcoa of Australia Ltd. (2023a). *Flora and Vegetation Management Plan Huntly and Willowdale Mines.* Unpublished Report.

Alcoa of Australia Ltd. (2023b). *Inland Waters EMP - (Huntly) Mine Component.*

Alcoa of Australia Ltd. (2023c). *Mining and Management Program (MMP) 2023-2027 inclusive Huntly Mine and Willowdale Mine - Final.* Unpublished Report.

Alcoa of Australia Ltd. (2024). *Environmentally Hazardous Materials Management Plan.* Unpublished Report.

Alcoa of Australia Ltd. (2024). *Fauna Management Plan Huntly and Willowdale Mines.* Unpublished Report.

Alcoa of Australia Ltd. (2024). *Forest Clearing Advise FCA2023B - DCMP Summary - Huntly Mine and Willowdale Mine.* Unpublished Report.

Alcoa of Australia Ltd. (2024). *Life Cycle Mine Planning Risk Methodology.* Unpublished Report.

Alcoa of Australia Ltd. (n.d.). *Waste Water & Storm Water Management (WDL) (AUACDS-2056-101).* Unpublished Document.

Alcoa of Australia Ltd. (2022). *Drainage Design Manual - Mining Pits and Haul Roads.* Unpublished Report.

Aloca of Australia. (2023d). *Reservoir Protection Zone Management Plan.* Unpublished Report.

Alumina Refinery (Pinjarra) Agreement Act 1969. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_34_homepage.html

Alumina Refinery (Wagerup) Agreement and Acts Amendment Act 1978. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_35_homepage.html

Alumina Refinery Agreement Act 1961. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/law_a29.html

Alumina Refinery Agreements (Alcoa) Amendment Act 1987. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/law_a30.html

ANZG. (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Canberra ACT, Australia: Australian and New Zealand Governments and Australian state and territory governments.

ANZG. (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Australian and New Zealand Governments.

Bari, C. a. (1997). *The effect of bauxite mining on the infiltration characteristics of Darling*

Range soils (Waters and Rivers Commission. Waters and Rivers Commission.
Biodiversity Conservation Act 2016. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/law_a147120.html
Boniecka. (2004). *Estimation of Leaf Area Index from Landsat TM data in the Northern Jarrah Forest.*
Churchward, H., & Dimmock, G. (1989). The Soils and Landforms of the Northern Jarrah Forest. (J. Havel, N. Malajczuk, & B. Dell, Eds.) *In The Jarrah Forest - Geobotany*.
Colquhoun, C. a. (a). *Measuring leaf area index: A comparison of destuctive harvesting, hemispherical photography and point sampling methods.*
Conservation and Parks Commission. (2023). *Forest Management Plan 2024-2033.* Perth, Western Australia: Conservation and Parks Commission.
Consultants, W. a. (2011). *Salinity Risk Assessment 2011 Update for the O'Neil to McCoy Area mine areas in the IRZ.*
Croton. (1998). *Summary of WEC-C modelling of the Conjurunup catchments.*
Croton. (2004). *Alcoa bulletin #32 Estimating the hydrologic response of the Del Park catchment to bauxite mining .*
Croton. (2004). *Salinity Management Modelling of the Lemon Catchment Using WEC-C.*
Croton. (2005). *Estimated stream flow changes due to bauxite mining in forest management in the Seldom Seen catchments SLUI37.*
Croton. (2005). *The History of the Development of Winged Tynes.*
Croton. (2011). *Alcoa Bulletin No. 31 Rainfall Interception in the Del Park Catchment of the North Jarrah Forest, WA.*
Croton. (2011). *Review of the Trial Mining Project .*
Croton. (2012a). *WEC-C Modelling of 31 Mile Brook catchment.*
Croton. (2012b). *WEC-C Modelling of Chandler Road catchment (.*
Croton. (2012c). *WEC-C Modelling of Cobiac catchment.*
Croton. (2012d). *WEC-C Modelling of Coccinea Rd and Curtis Rd catchments.*
Croton. (2012e). *WEC-C Modelling of Hansen catchment.*
Croton. (2012f). *WEC-C Modelling of Seldom Seen and More Seldom Seen catchments.*
Croton. (2012g). *WEC-C Modelling of Vardi Road catchment.*
Croton. (2012h). *WEC-C Modelling of X catchment.*
Croton. (2012i). *WEC-C North Rd catchment.*
Croton, B. a. (2000). *Predicting the impacts of land use changes on stream flow and salinity by a fully distributed catchment model.*
Croton, B. a. (2002). *Assessing the effects of valley reforestation on stream flow and salinity using the WEC-C model.*
Croton, B. a. (2002). *Formulation and application of the unsaturated / saturated catchment models SUSCAT and WEC_C.*
Croton, J. T. (2017). *Minesite Drainage Handbook (AUACDS-2053-2221).* for Alcoa of Australia Ltd.
CSIRO. (2009). *Surface Water Yields in South-West Western Australia. A Report to the Australian Government from the CSIRO South-West Western Australia Sustainable Yields Project.*
Dalton, C. a. (2010). *Salinity Risk Assessment for the O'Neil to McCoy Mining Area.*
Dalton, C. a. (2010). *Salinity Risk Assessment for the O'Neil to McCoy Mining Area.*
Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_2770_homepage.html
Data Analysis Australia. (2023a). *Identifying Relationships between High Turbidity Events.*
Data Analysis Australia. (2023b). *Analysis of High Turbidity Events .*
DCCEEW. (2024). *Environmental Management Plan Guidelines.* Canberra: Department of Climate Change, Energy, the Environment and Water.
DEMIRS. (2024, December). *Mine Closure and Development Proposals Risk Assessment Template.* Retrieved from DEMIRS Website:

https://www.dmp.wa.gov.au/Environment/Mining-Development-and-Closure-32574.aspx
Department of Environment. (2003). *Water yield response to land use change in southwest WA (WA government, Dep. of Environment, 2003).* Government of Western Australia.
Department of Environment. (2004). *Salinity and land use impacts SLUI35 - WEC-C modelling of Yarragil 4X undisturbed forest catchment.* Government of Western Australia.
Department of Water. (2009). *Wild Rivers in Western Australia (Water Notes, WN37).* Government of Western Australia.
Department of Water. (2014). *Approvals to Mine Rance 2&3 pits in Intermediate Rainfall Zone.* Government of Western Australia.
Department of Water and Environment Regulation. (2019b). *Operational Policy 13: Recreation within public drinking water source areas on crown land.* Perth: Government of Western Australia.
DER. (2015a). *Guideline: Identification and investigation of acid sulfate soils and acidic landscapes.* Western Australia: Department of Environmental Regulation.
DER. (2015b). *Guideline: Treatment and management of soil and water in acid sulfate soil landscapes.* Western Australia: Department of Environmental Regulation.
DWER. (2015). *Water quality protection note 65: Toxic and hazardous substances.* Government of Western Australia.
DWER. (2017). *Managing releases for the Serpentine River Serpentine River allocation statement.* Western Australia: Department of Water and Environmental Regulation.
DWER. (2018). *Industry Regulation Guide to Licensing: Part V Environmental Protection Act 1986.* Western Australia: Department of Water and Environmental Regulation.
DWER. (2019). *Guideline: Decision Making.* Western Australia: Department of Water and Environmental Regulation.
DWER. (2020). *Water quality protection note 10 - Contaminant spills - emergency response plan.* Government of Western Australia.
DWER. (2021). *Water Quality Protection Note 25 - Land use compatibility tables for public drinking water source areas.* Department of Water and Environmental Regulation.
EHS Support. (2024). *Application of Site-Specific Human Health and Ecological Criteria for PFAS – Alcoa Mines, Western Australia.*
enHealth. (2012). *Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards.* Environmental Health Standing Committee.
Environment Protection and Biodiversity Conservation Act 1999. (Cth). Retrieved from https://www.legislation.gov.au/C2004A00485/latest/text
Environmental Protection (Alcoa - Huntly and Willowdale Mine Sites) Exemption Order 2004. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/prod/gazettestore.nsf/FileURL/gg2004_114.pdf/$FILE/Gg2004_114.pdf?OpenElement
Environmental Protection Act 1986. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_304_homepage.html
EPA. (2004). *0646 - Pinjarra Refinery Efficiency Upgrade, Pinjarra.* Western Australia: Environmental Protection Authority. Retrieved from https://www.epa.wa.gov.au/0646-pinjarra-refinery-efficiency-upgrade-pinjarra
EPA. (2006). *0728 - Wagerup Alumina Refinery - Production to a maximum capacity of 4.7 million tonnes per annum and associated bauxite mining.* Western Australia: Environmental Protection Authority. Retrieved from https://www.epa.wa.gov.au/0728-wagerup-alumina-refinery-production-maximum-capacity-47-million-tonnes-annum-and-associated
EPA. (2018). *Environmental Factor Guideline - Inland Waters.* Western Australia: Environmental Protection Authority.
EPA. (2021). *1157 - Wagerup Alumina Refinery - Production to a Maximum Capacity of 4.7 Million Tonnes Per Annum and Associated Bauxite Mining.* Western Australia:

Environmental Protection Authority. Retrieved from https://www.epa.wa.gov.au/1157-wagerup-alumina-refinery-production-maximum-capacity-47-million-tonnes-annum-and-associated

EPA. (2021). *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2021.* State of Western Australia. Retrieved from https://www.epa.wa.gov.au/administrative-procedures

EPA. (2021). *Interim Guidance - Environmental Outcomes and outcomes-based conditions.* Western Australia: Environmental Protection Authority.

EPA. (2023). *Statement of environmental principles, factors, objectives and aims of EIA.* Western Australia: Environmental Protection Authority.

EPA. (2024). *Instructions: How to prepare Environmental Protection Act1986 Part IV environmental management plans.* Western Australia: Environmental Protection Authority.

GHD. (2021). *Holyoake Terrestrial Fauna Survey and Black Cockatoo Assessment.*

GHD. (2021a). *Hydrological setting and understanding – Myara North and Holyoake, Pinjarra Alumina Refiner.*

GHD. (2021c). *Terrestrial Fauna Survey and Black Cockatoo Habitat Assessment for Huntly Mine – Myara North.*

GHD. (2022). *Hydrology and Water Quality Assessmernt for Huntly Mine.* Unpublished report for Alcoa of Australia.

GHD. (2023). *Alcoa WA Mining operations water monitoring framing study.* Unpublished report for Alcoa of Australia Limited.

GHD. (2023). *Drinking Water Risk Assessment: Serpentine, Serpentine Pipehead, South Dandalup, and Wugong Brook Catchments.* Prepared for Alcoa of Australia Ltd.

GHD. (2024). *Catchment Mapping - Preliminary Identification of 5-year mine plan SW water monitoring network.*

GHD. (2024). *Preliminary indication of mine plan groudnwater monitoring network 2024 to 2027 MMP.*

GHD. (2024). *Recreational Trail and Facilities Management Plan Willowdale Mine - Larego mine region.* Prepared for Alcoa of Australia Ltd.

Grigg, A. H. (2017, August). Hydrological response to bauxite mining and rehabilitation in the jarrah forest in south west Australia. *Journal of Hydrology: Regional Studies, 12*, 150-164. doi:10.1016/j.ejrh.2017.05.008.

Hatton. (2003). *Joint Intermediate Rainfall Zone Research Program - Independent Review.* CSIRO.

Heads of EPA Australia and New Zealand. (2020). *PFAS National Environmental Management Plan Version 2.0.* Canberra: Commonwealth of Australia.

Holdgate, M. W. (1979). *A perspective of environmental pollution.* Cambridge, UK: Cambridge University Press.

Hughes. (2011). *Groundwater – surface water connection in the Northern Jarrah Forest and implication for thinning strategies.*

Hughes. (2012). *Mining effects on rainfall groundwater recharge lags - research bulletin 41.*

Hughes. (nd). *Using GW – riparian zone connection to target management.*

Hydrological and Environmental Scientific Solutions Pty Ltd. (2022). *The impact of Land Use Change on Sediment Mobilisation and Stream Turbidity: A Review.* Unpublished Report.

Kerp. (2006). *The Potential Effect of Mining-induced Salinisation on Macro-invertebrates of temporary jarrah forest systems .*

McFarlane, C., Grigg, A. H., & Daws, M. I. (2017). A standardised Landsat time series (1973-2016) of forest leaf area index. *Remote Sensing Applications: Society and Environment, 6*, 1-14. doi:10.1016/j.rsase.2017.01.006

McIntosh. (2003). *Bauxite Sub-committee – Annual Report 2003.*

MCMPR. (2005). *Principles for Engagement with Communities and Stakeholders.* Canberra: Ministerial Council on Mineral and Petroleum Resources.

Mining Act 1978. (WA). Retrieved from

https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_604_homepage.html
National Health and Medical Research Council. (2022). *Australian Drinking Water Guidelines 2011.* Australian Government.
NHMRC, NRMMC. (2011). *Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy.* Canberra: National Health and Medical Research Council, National Resource Management Ministerial Council, Commonwealth of Australia.
NRMMC, EPHC, NHMRC. (2009). *National Water Quality Management Strategy - Australian guidelines for water recycling: Managing health and environmental risks (Phase 2) - Managed Aquifer Recharge.* Canberra: Natural Resource Management Ministerial Council, Environment Protection and Heritage Council, and the National Health and Medical Research Council.
Okane. (2023). *Alcoa Rehabilitation Surface Water Modelling.*
Petrone. (2010b). *Stream flow decline in South Western Australia 1950 to 2008.*
Petrone, K. C., Hughes, J. D., Van Niel, T. G., & Silberstein, R. P. (2010). Streamflow decline in Southwestern Australia, 1950-2008. *Geophysical Research Letters, 37*(L11401), 1-7. doi:10.1029/2010GL043102
Phoenix Environmental Services. (2021). *Short-range endemic invertebrate fauna survey for the Huntly Mine – Myara North and Holyoake.*
Rare Environment. (2024). *Willowdale Mine - Water Quality Monitoring System Data Review.*
Reed. (2005). *Proposed hydrological processes research in the high rate for zone of the Darling plateau, HR-02/2006.*
Rights in Water and Irrigation Act 1914. (WA). Retrieved from https://legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_844_homepage.html
Rutherford and Kefford. (2005). *Effect of Salinity on Stream Ecosystems – Improving Models for Macroinvertebrates.* CSIRO.
Stokes, G. a. (2008). *Review of Alcoa's Streamzone Ecological Monitoring and Planned Monitoring for the Proposed O'Neil Mining Region .*
Streamtec. (2003). *Aquatic Ecosystems Cameron Corridor – Baseline Monitoring Surveys.*
The Environmental Protection (Darling Range Bauxite Mining Proposals) Exemption Order 2023. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/law_s54585.html
Turner, J. V., & Johnston, C. D. (1987). Environmental isotope hydrology of salinized experimental catchments. *Journal of Hydrology, 94*(1-2), 87-107.
Water Corporation. (2007). *Serpentine Dam Catchment Drinking Water Source Protection Plan.*
Water Corporation. (2023). *Catchment Risk Assessment Alcoa 2023 – 2027 MMP.* Western Australia: Water Corporation.
Water Corporation. (2024, November 19). *Integrated water supply scheme*. Retrieved from Water Corporation: https://www.watercorporation.com.au/Our-water/Perths-water-supply/Integrated-water-supply-scheme
Water Services Act 2012. (WA). Retrieved from https://www.legislation.wa.gov.au/legislation/statutes.nsf/main_mrtitle_12961_homepage.html
Waters and Rivers Commission. (1998). *Hydrological and associated research related to bauxite mining in the Darling Range of WA - 1997 review .* Government of Western Australia.
Wetland Research and Management. (2021). *Aquatic Fauna Desktop Assessment for Myara North and Holyoake Regions.* Unpublished Report for GHD.
WSAA. (2015). *Manual for the application of Health-Based Targets for Drinking Water Safety.* Water Services Association of Australia Limited.
WSP Golder. (2023). *Catchment Risk Assessment User Manual - Alcoa Mine Site.*

Appendix A Qualitative Risk Assessment

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
Environmental Value: Beneficial Uses												
1	All	Reduction in public drinking water quality as a result of loss of containment from vehicles transporting sewage/liquid waste within PDWSA Reservoir Protection Zones (RPZs)	Loss of containment from vehicles transporting sewage/liquid waste	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs. Willowdale - Stirling and Samson Brook reservoirs.	Catastrophic	Possible	Very high	~ Restrict the volume of hazardous materials transported across Big Brook Causeway and Samson Dam Causeway to 15,000 L. ~ Restrict the volume of hazardous materials transported (at any one time) across Dellamadellena stream crossing to 8,000 L ~ Restrict the volume of hazardous materials transported in mobile fuel tankers to 15,000 L capacity. ~ Tankers are maintained in accordance with preventative maintenance programs. ~ Permit to Work in Close Proximity to Water Catchment Areas. ~ Collection of sewage and/or liquid waste by a licensed waste contractor and waste tracking as a controlled waste under the Environmental Protection (Controlled Waste) Regulations 2004. ~ Three-stage sumps at Big Brook Causeway and two-stage sumps at Samson Dam Causeway, which operate in a closed system. ~ Inspection of sumps regularly and maintained in a storm ready state. ~ Assessment of sumps prior to winter to determine risk and appropriate actions. ~ Sediment / silt regularly cleaned out of sumps and other storages. ~ Speed restrictions and crash deterrent barriers to prevent a vehicle crash off the causeway into rivers. ~ Training for all personnel on chemicals management and loss of containment procedure	~ Emergency response team available at all Alcoa locations who are suitably trained and qualified to respond to spill events ~ Spill kits and emergency response trailers available for rapid response ~ Mining Policy on Loss of Containment Cleanup and Reporting. ~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events	Catastrophic	Rare	High
2	All	Reduction in drinking water quality due to release of pathogens from mining activities and associated infrastructure	Staff / contractor faecal release in the field or sewage and treatment infrastructure (pathogens)	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs. Willowdale - Stirling and Samson Brook reservoirs.	Catastrophic	Possible	Very high	~ Exclusion zones - no clearing, exploration, mining or operations within 1 km of any water reservoir (excludes rehabilitation, monitoring activities and use/maintenance of existing infrastructure) ~ No clearing, exploration, mining or operations within the Serpentine Pipehead Dam Catchment Area reservoir (excludes rehabilitation, monitoring activities and use/maintenance of existing infrastructure) ~ Minimise pathogen sources by restricting access to RPZ for personnel. ~ Fit for work policy includes restriction to RPZ for personnel with gastrointestinal symptoms. ~ Training and awareness around hygiene practices within the RPZ. ~ Biological waste bagged and disposed of outside of RPZ. ~ Permit to Work in Close Proximity to Water Catchment Areas. ~ Portable toilets provided in designated areas. ~ Collection of sewage and/or liquid waste by a licensed waste contractor and waste tracking as a controlled waste under the *Environmental Protection (Controlled Waste) Regulations 2004.* ~ Maintain the Limited Disturbance Area (LDA) of the 100 m mapped stream zone vegetation buffer.	~ Emergency response team available at all Alcoa locations who are suitably trained and qualified to respond to spill events ~ Spill kits and emergency response trailers available for rapid response ~ Mining Policy on Loss of Containment Cleanup and Reporting. ~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Moderate	Rare	Moderate

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
3	All	Reduction in public drinking water quality as a result of loss of containment from vehicles transporting hazardous materials within PDWSA Reservoir Protection Zones (RPZs)	Loss of containment from vehicles transporting hydrocarbons/chemicals	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs. Willowdale - Stirling and Samson Brook reservoirs.	Major	Almost Certain	Very high	~ Restrict the volume of hazardous materials transported across Big Brook Causeway and Samson Dam Causeway to 15,000 L. ~ Restrict the volume of hazardous materials transported (at any one time) across Dellamadellena stream crossing to 8,000 L ~ Restrict the volume of hazardous materials transported in mobile fuel tankers to 15,000 L capacity. ~ Tankers are maintained in accordance with preventative maintenance programs. ~ Permit to Work in Close Proximity to Water Catchment Areas. ~ Collection of sewage and/or liquid waste by a licensed waste contractor and waste tracking as a controlled waste under the Environmental Protection (Controlled Waste) Regulations 2004. ~ Three-stage sumps at Big Brook Causeway and two-stage sumps at Samson Dam Causeway, which operate in a closed system. ~ Inspection of sumps regularly and maintained in a storm ready state. ~ Assessment of sumps prior to winter to determine risk and appropriate actions. ~ Sediment / silt regularly cleaned out of sumps and other storages. ~ Speed restrictions and crash deterrent barriers to prevent a vehicle crash off the causeway into rivers. ~ Training for all personnel on chemicals management and loss of containment procedure	~ Emergency response team available at all Alcoa locations who are suitably trained and qualified to respond to spill events ~ Spill kits and emergency response trailers available for rapid response ~ Mining Policy on Loss of Containment Cleanup and Reporting. ~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events	Moderate	Rare	Moderate
4	All	Reduction in public drinking water quality as a result of loss of containment of hazardous material from mining and associated activities within PDWSA RPZs	Loss of containment from moving plant and machinery, refueling and maintenance activities in pre-mining, mining, development. Wastewater systems, workshop facilties, stormwater material, hazardous material storage facilties and dangerous goods; sump failure events.	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs. Willowdale - Stirling and Samson Brook reservoirs.	Major	Possible	Very high	~ No clearing, exploration, mining or operations within 1 km of the top water level of any water reservoir (excludes infrastructure, rehabilitaton and monitoring activities). ~ No clearing, exploration, mining or operations within the Serpentine Pipehead Dam Catchment (excludes infrastructure, rehabilitation and monitoring activities). ~ Prohibition of fuel storage within the RPZ ~ Permit to Work in Close Proximity to Water Catchment Areas. ~ Restrict the volume of hazardous materials transported in mobile fuel tankers to 15,000 L capacity. ~ Earthmoving and ancillary equipment are maintained in accordance with preventative maintenance programs. ~ Bulk hazardous materials and wastes will be stored at designated construction compounds or other storage facilities in accordance with Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 1997 as applicable to the specific materials. ~ Temporary fuel storages are appropriately transported and self-contained. ~ Underground pipes associated with fuel handling are double-sleeved with inspection points. ~ Fuel storages are bunded in accordance with Australian standards and guidance. Tanks may be double contained or bunded. ~ Oily water contained in management systems including sumps and treated in separators and dissolved air flotation units. ~ Minimise loss of containment of hazardous materials by storing them within appropriately sized secondary containment and /or hardstand areas.	~ Emergency response team available at all Alcoa locations who are suitably trained and qualified to respond to spill events ~ Spill kits and emergency response trailers available for rapid response ~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ Mining Policy on Loss of Containment Cleanup and Reporting. ~ Incident reporting and investigation in accordance with the Loss of Containment (Spill or Release) Response, Notification and Reporting Procedure. ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Moderate	Unlikely	Moderate

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
5	All	Reduction in public drinking water quality as a result of loss of containment of hazardous material from mining and associated activities in PDWSA catchment (i.e. LOC event outside of RPZ areas) mobilised by surface water runoff	Loss of containment from moving plant and machinery, refueling and maintenance activities in pre-mining mining, development. Includes wastewater systems, workshop facilties, stormwater material, hazardous material storage facilties and dangerous goods; sump failure events.	PDWSA Catchments: Huntly - Serpentine, North Dandalup, South Dandalup, Conjurunup Willowdale - Stirling and Sampson Brook	Major	Unlikely	High	~ Earthmoving and ancillary equipment are maintained in accordance with preventative maintenance programs ~ Bulk hazardous materials and wastes will be stored at designated construction compounds or other storage facilities in accordance with Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 1997 as applicable to the specific materials ~ Temporary fuel storages are appropriately transported and self-contained ~ Underground pipes associated with fuel handling are double-sleeved with inspection points ~ Fuel storages are bunded in accordance with Australian standards and guidance. Tanks may be double contained or bunded ~ Oily water contained in management systems including sumps and treated in separators and dissolved air flotation units ~ Minimise loss of containment of hazardous materials by storing them within appropriately sized secondary containment and /or hardstand areas ~ Ensure a minimum freeboard is maintained for containment infrastructure ~ Exploration drilling that utilises wet drilling methods can only use drill fluid additives as listed in the Department of Health, Schedule 6 ‘Materials, products and substances in contact with drinking water’ or materials approved through the document Alcoa Submission form for the Approval of Chemical Use in a Drinking Water Catchment ~ Alcoa will submit the Water Corporation document Alcoa Submission form for the Approval of Chemical Use in a Drinking Water Catchment and receive approval to use materials that are applied to ground or at high risk of having residual amounts within the catchment. ~ Assessment of sumps prior to winter to determine risk and develop a management strategy. ~ Sediment / silt regularly cleaned out of sumps and other storages. ~ Maintain use of PFAS-free fire suppression systems in the mine fleet.	~ Emergency response team available at all Alcoa locations who are suitably trained and qualified to respond to spill events ~ Spill kits and emergency response trailers available for rapid response ~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ Mining Policy on Loss of Containment Cleanup and Reporting. ~ Incident reporting and investigation in accordance with the Loss of Containment (Spill or Release) Response, Notification and Reporting Procedure. ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Minor	Unlikely	Low
6	Clearing and development	Sediment-laden run off entering PDWSA reservoirs and impacting safe supply of drinking water	Hazards identified during clearing and development phase that increase the risk of turbidity releases include: drainage control failures (run-off from site), stream crossings, fire events and clearing of steep slopes (greater than 16 degrees)	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs. Willowdale - Stirling and Samson Brook reservoirs.	Major	Almost Certain	Very high	~No clearing, exploration, mining or operations within the RPZ where the average slope is greater than 16% (excludes infrastructure, rehabilitation and monitoring). ~ No clearing, exploration, mining or operations within the Serpentine Pipehead Dam Catchment Area reservoir (excludes rehabilitation, monitoring activities and use/maintenance of existing infrastructure) ~ Maintain the Limited Disturbance Area (LDA) of the 100 m mapped stream zone vegetation buffer. ~ Permits required for activities involving clearing of vegetation and/or disturbance of land with specific queries relating to drainage plans in the area, slope of land, and sensitive receptors; a clear indication of where ground disturbance is prohibited; list of conditions for approval; and clear statement of whether the activity is approved and signatory ~ Minimise clearing in proximity to watercourses, drainage lines, and other sensitive ecosystems. ~ Woody windrows installed during clearing. ~ Installing drainage protection slots (DPS) on contours as soon as practicable following clearing. ~ Minimise surface water runoff by limiting high risk activities	~ Deployment of sediment curtains or booms to reduce turbidity ~ Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies). ~ Compliance Assessment Plan – Turbidity response actions. ~Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ Installed turbidity monitors provide real-time data in order to identify potential turbidity events early and facilitate a rapid response ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required	Moderate	Unlikely	Moderate

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
								(backfilling and stripping) during rain events. ~ Minimise surface water runoff by installing pit faces, sumps and trenches as mining commences. ~ Review weather forecasts daily to identify significant rainfall event predictions to allow early deployment of flood mitigation measures. ~ Control overflow assessments to ensure drainage blow-out will not occur. If controls are determined to be inadequate during as-built, adaptive management may include increasing the size of DPS, ripping to increase infiltration, pumping and abstraction or additional upslope capacity. ~ Stream crossings will be constructed in a manner which facilitates their removal and rehabilitation after use, unless required for ongoing forest management or other purposes.	changes to triggers and thresholds established within the WRMP			
7	Mining	Sediment-laden run off entering PDWSA reservoirs and impacting safe supply of drinking water	Hazards identified during clearing and development that increase the risk of turbidity releases include: drainage control failures (run-off from site), stream crossings, fire events and clearing of steep slopes (greater than 16 degrees); re-entering mining areas and re-working materials.	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs. Willowdale - Stirling and Samson Brook reservoirs.	Major	Almost Certain	Very high	~No clearing, exploration, mining or operations within the RPZ where the average slope is greater than 16% (excludes infrastructure, rehabilitation and monitoring). ~ No clearing, exploration, mining or operations within 1 km of the top water level of any water reservoir (excludes infrastructure, rehabilitation and monitoring). ~ No clearing, exploration, mining or operations within the Serpentine Pipehead Dam Catchment (excludes infrastructure, rehabilitation and monitoring). ~ No clearing, exploration, mining or operations within the RPZ or water reservoir where the average slope is greater than 16% (excludes infrastructure, rehabilitation and monitoring). ~ Design and construction of drainage management in accordance with Alcoa drainage design principles outlined in the Drainage Design Manual. ~ Permits required for activities involving clearing of vegetation and/or disturbance of land with specific queries relating to drainage plans in the area, slope of land, and sensitive receptors; a clear indication of where ground disturbance is prohibited; list of conditions for approval; and clear statement of whether the activity is approved and signatory responsibilities. ~ Minimise clearing in proximity to watercourses, drainage lines, and other sensitive ecosystems. ~ Design mine infrastructure to avoid, wherever practicable, disturbance to natural drainage lines. ~ Maintain the Limited Disturbance Area (LDA) of the 100 m mapped stream zone vegetation buffer. ~ Minimise erosion by designing and locating stream crossings in accordance with the Drainage Design Manual. ~ Control overflow assessments to ensure drainage blow-out will not occur. If controls are determined to be inadequate during as-built, adaptive management may include increasing the size of DPS, ripping to increase infiltration, pumping and abstraction or additional upslope capacity.	~ Deployment of sediment curtains or booms to reduce turbidity ~ Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies). ~ Installed turbidity monitors provide real-time data in order to identify potential turbidity events early and facilitate a rapid response ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Moderate	Unlikely	Moderate
8	Rehabiliation	Sediment-laden run off entering PDWSA reservoirs and impacting safe supply of drinking water	Erosion and sediment laden run-off prior to rehabilitation	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs.	Major	Almost Certain	Very high	~ Rehabilitation pit designs are developed based on Completion Criteria standards. ~ Diversion bunds installed to either divert runoff water away from areas sensitive to inundation, or towards natural or constructed drainage features intended to contain that runoff. ~ Rehabilitation substrate includes deep ripping of regolith, application of minimum 200 mm overburden/topsoil and ripping on the contour. Deep ripping promotes infiltration of runoff into the regolith. ~ Application of minimum overburden provides a gravel-sand layer that protects finer grained regolith materials from erosion.	~ Deployment of sediment curtains or booms to reduce turbidity ~ Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies). ~ Compliance Assessment Plan – Turbidity response actions. ~Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with	Moderate	Unlikely	Moderate

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
				Willowdale - Stirling and Samson Brook reservoirs.				Contour ripping creates a furrowed surface that promotes retention and infiltration of runoff. ~ Rehabilitation prescription limits final landform to slopes less than 16 degrees. Downslope toe of rehabilitated pits can have a reverse batter that creates a 'sunken' landform that retains surface runoff and prevents discharge. ~ Rehabilitated mine pits designed and executed to prevent overflow during a 1 per cent 24hr AEP rainfall event. ~ Pre-landscaping ripping is carried out in compacted areas, under pit faces, under areas receiving fill and through in-pit haul roads with the straight tine to improve infiltration. ~ Post-landscape ripping is carried out across the final landscaped pit, prior to contour ripping with a winged tine and / or straight tine (in rocky areas) to improve infiltration and root penetration. ~ Contour ripping is carried out to control surface water runoff and improve infiltration. ~ Infiltration calculations using 24 mm/day which is conservative compared to actual measured conditions. ~ Upgrade drainage infrastructure by integrating sediment traps, silt fences, and erosion control methods such as geotextiles and riprap on vulnerable slopes and runoff areas. These systems would slow water flow and allow sediment to settle before it reaches vulnerable water bodies. ~ Gully erosion will not exceed size >30 cm wide or deep or >100 m long; or unintended Gully deposition size > 0.1 ha. ~ Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies). ~ Implementing pumping programs across sumps and storages to re-distribute volume to other areas to prevent continuous overflow and turbid water runoff. ~Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule, using monitoring trends and data to prioritize areas. Start from the upper slopes to maintain pit capacity and gradually reduce the catchment and slope size ~ Rehabilitate open areas prioritising areas with an average slope greater than 16% within an RPZ. ~ Rehabilitate Drinking Water catchments as a priority.	water suppliers to ensure immediate response and coordination during high-risk events ~ Installed turbidity monitors provide real-time data in order to identify potential turbidity events early and facilitate a rapid response ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP			
9	Mining	Reduction in public drinking water quality caused by residual contamination of soil and water from historical use of PFAS containing firefighting foams	Contamination of soils within PDWSA reservoir areas from historical use of PFAS containing firefighting foams	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs. Willowdale - Stirling and Samson Brook reservoirs.	Major	Unlikely	High	~ Complete DSI of potential source areas to evaluate risk to receptors. ~ PFAS WWTP to remove any potential PFAS contamination prior to water resuse on site ~ Assessment of sumps (where identified as potentially containing contaminants) prior to winter to determine risk and develop a management strategy. ~ Soil remediation, where elevated risks to receptors are considered. Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events	~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events	Moderate	Rare	Moderate
10	Development and Mining	Long term reduction in water supply to the PDWSA due to mining activities	Long term change in hydrological and hydrogeological regime due to change in surface	Drinking water reservoirs, groundwater, surface water and ecosystem	Major	Unlikely	High	~ Groundwater risk assessment decision matrix guides must be undertaken to evaluate whether groundwater investigation is required. ~ Groundwater investigations (i.e. Groundwater interim surface model) required for moderate and high-risk areas.	~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds	Minor	Unlikely	Low

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
			water runoff and groundwater volumes as a result of mining of within the catchment					~ Maintenance of a minimum 2m separation between mine pit floor and groundwater for all mining areas approved by the 2023-2027 MMP and subsequent approvals ~ Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule to return hydrological and hydrogeological regimes to pre-mining trends	established within the WRMP			
11	Clearing and development	Increased salinity resulting in degradation of public drinking water quality	Removal of deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs	Based on monitoring data	Moderate	Possible	High	~ Groundwater risk assessment decision matrix guides must be undertaken to evaluate whether groundwater investigation is required. ~ Groundwater investigations (i.e. Groundwater interim surface model) required for moderate and high-risk areas. ~ Maintenance of a minimum 2m separation between mine pit floor and groundwater for all mining areas approved by the 2023-2027 MMP and subsequent approvals ~ Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule to return hydrological and hydrogeological regimes to pre-mining trends	~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Minor	Unlikely	Low
12	Mining	Changes to hydrological regime from mining activity resulting in long term impacts to stream zone vegetation and/or catchment inflow	Mine pit development reduces the overall catchment area leading to a long term decrease in surface water run-off due to change in hydrological regime.	Surface Water, Groundwater, Ecosystem Health	Moderate	Likely	High	~ Maintain the Limited Disturbance Area (LDA) of the 100 m mapped stream zone vegetation buffer. ~ Groundwater risk assessment decision matrix guides must be undertaken to evaluate whether groundwater investigation is required. ~ Groundwater investigations (i.e. Groundwater interim surface model) required for moderate and high-risk areas. ~ Maintenance of a minimum 2m separation between mine pit floor and groundwater for all mining areas approved by the 2023-2027 MMP and subsequent approvals ~ Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule, using monitoring trends and data to prioritize areas	~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Moderate	Unlikely	Moderate
13	All	Long term reduction in surface and groundwater quality as a result of loss of containment from mining activities, with potential impact on ecosystem health	Includes failure of containment infrastructure that may contain hazardous material, PFAS, moving plant and machinery, refueling and maintenance activities	Surface Water, Groundwater, Ecosystem Health	Moderate	Almost certain	Very high	~ No clearing, exploration, mining or operations within 1 km of the top water level of any water reservoir (excludes infrastructure, monitoring and rehabilitation activities). ~ No clearing, exploration, mining or operations within the Serpentine Pipehead Dam Catchment (excludes infrastructure, monitoring and rehabilitation activities). ~ No fuel storage within the RPZ ~ Maintain the Limited Disturbance Area (LDA) of the 100 m mapped stream zone vegetation buffer. ~ Earthmoving and ancillary equipment are maintained in accordance with preventative maintenance programs ~ Bulk hazardous materials and wastes will be stored at designated construction compounds or other storage facilities in accordance with Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 1997 as applicable to the specific materials ~ Underground pipes associated with fuel handling are double-sleeved with inspection points ~ Fuel storages are bunded in accordance with Australian standards and guidance. Tanks may be double contained or bunded ~ Oily water contained in management systems including sumps and treated in separators and dissolved air flotation units ~ Minimise loss of containment of hazardous materials by storing them within appropriately sized secondary containment and /or hardstand areas ~ Ensure a minimum freeboard is maintained for containment infrastructure ~ Exploration drilling that utilises wet drilling methods can only	~ Emergency response team available at all Alcoa locations who are suitably trained and qualified to respond to spill events ~ Spill kits and emergency response trailers available for rapid response ~ Mining Policy on Loss of Containment Cleanup and Reporting. ~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Moderate	Possible	High

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
								use drill fluid additives as listed in the Department of Health, Schedule 6 'Materials, products and substances in contact with drinking water' or materials approved through the document Alcoa Submission form for the Approval of Chemical Use in a Drinking Water Catchment ~ Alcoa will submit the Water Corporation document Alcoa Submission form for the Approval of Chemical Use in a Drinking Water Catchment and receive approval to use materials that are applied to ground or at high risk of having residual amounts within the catchment. ~ Assessment of sumps prior to winter to determine risk and develop a management strategy. ~ Sediment / silt regularly cleaned out of sumps and other storages. ~ Maintain use of PFAS-free fire suppression systems in the mine fleet.				
14	All	Long term reduction in surface and groundwater quality as a result of loss of containment from vehicles transporting hazardous materials, with potential impact on ecosystem health	Loss of containment from vehicles of transport of hazardous materials	Surface Water, Groundwater, Ecosystem Health	Moderate	Almost certain	Very high	~ Restrict the volume of hazardous materials transported across Big Brook Causeway and Samson Dam Causeway to 15,000 L. ~ Restrict the volume of hazardous materials transported (at any one time) across Dellamadellena stream crossing to 8,000 L ~ Restrict the volume of hazardous materials transported in mobile fuel tankers to 15,000 L capacity. ~ Tankers are maintained in accordance with preventative maintenance programs. ~ Permit to Work in Close Proximity to Water Catchment Areas. ~ Collection of sewage and/or liquid waste by a licensed waste contractor and waste tracking as a controlled waste under the Environmental Protection (Controlled Waste) Regulations 2004. ~ Three-stage sumps at Big Brook Causeway and two-stage sumps at Samson Dam Causeway, which operate in a closed system. ~ Inspection of sumps regularly and maintained in a storm ready state. ~ Assessment of sumps prior to winter to determine risk and appropriate actions. ~ Sediment / silt regularly cleaned out of sumps and other storages. ~ Speed restrictions and crash deterrent barriers to prevent a vehicle crash off the causeway into rivers. ~ Training for all personnel on chemicals management and loss of containment procedure	~ Emergency response team available at all Alcoa locations who are suitably trained and qualified to respond to spill events ~ Spill kits and emergency response trailers available for rapid response ~ Mining Policy on Loss of Containment Cleanup and Reporting. ~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Moderate	Unlikely	Moderate
15	Mining	Residual contamination of soil and water from historical use of PFAS containing firefighting foams leading to impacts to ecosystem health	Contamination of soils within PDWSA reservoir areas from historical use of PFAS containing firefighting foams	Key PDWSA reservoirs: Huntly - Serpentine, Serpentine Pipehead, Wungong, and South Dandalup reservoirs. Willowdale - Stirling and Samson Brook reservoirs.	Moderate	Possible	High	~ Complete DSI of potential source areas to evaluate risk to receptors. ~ PFAS WWTP to remove any potential PFAS contamination prior to water resuse on site ~ Assessment of sumps (where identified as potentially containing contaminants) prior to winter to determine risk and develop a management strategy. ~ Soil remediation, where elevated risks to receptors are considered.	~ Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ Undertake incident investigation to determine source of exceedance and if associated with mining activities. ~ Implement a remedial action plan (if required). ~ Continue to monitor management action implementation and	Moderate	Unlikely	Moderate

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
									compliance. ~ Review monitoring program (locations and frequency) to ensure appropriate to determine scale of impact, if required.			
16	Clearing and Development	Sediment-laden run off from clearing and development activities leading to reduction in surface water quality with potential impacts on ecosystem health	Hazards identified during clearing and development phase that increase the risk of turbidity releases include: drainage control failures (run-off from site), stream crossings, fire events and clearing of steep slopes (greater than 16 degrees)	Surface Water, Ecosystem Health	Moderate	Possible	High	~ Maintain the Limited Disturbance Area (LDA) of the 100 m mapped stream zone vegetation buffer. ~ Design and construction of drainage management in accordance with Alcoa drainage design principles outlined in the Drainage Design Manual. ~ Permits required for activities involving clearing of vegetation and/or disturbance of land with specific queries relating to drainage plans in the area, slope of land, and sensitive receptors; a clear indication of where ground disturbance is prohibited; list of conditions for approval; and clear statement of whether the activity is approved and signatory responsibilities. ~ Minimise clearing in proximity to watercourses, drainage lines, and other sensitive ecosystems. ~ Design mine infrastructure to avoid, wherever practicable, disturbance to natural drainage lines. ~ Minimise erosion by designing and locating stream crossings in accordance with the Drainage Design Manual. ~ Control overflow assessments to ensure drainage blow-out will not occur. If controls are determined to be inadequate during as-built, adaptive management may include increasing the size of DPS, ripping to increase infiltration, pumping and abstraction or additional upslope capacity.	~ Compliance Assessment Plan – Turbidity response actions. ~Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ Installed turbidity monitors provide real-time data in order to identify potential turbidity events early and facilitate a rapid response ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Moderate	Unlikely	Moderate
17	Mining	Sediment-laden run off from mining activities leading to reduction in surface water quality with potential impacts on ecosystem health	Hazards identified during mining that increase the risk of turbidity releases include: drainage control failures (run-off from site), stream crossings, fire events and clearing of steep slopes (greater than 16 degrees); re-entering mining areas and re-working materials	Surface Water	Moderate	Possible	High	~ Maintain the Limited Disturbance Area (LDA) of the 100 m mapped stream zone vegetation buffer. ~ Design and construction of drainage management in accordance with Alcoa drainage design principles outlined in the Drainage Design Manual. ~ Permits required for activities involving clearing of vegetation and/or disturbance of land with specific queries relating to drainage plans in the area, slope of land, and sensitive receptors; a clear indication of where ground disturbance is prohibited; list of conditions for approval; and clear statement of whether the activity is approved and signatory responsibilities. ~ Minimise clearing in proximity to watercourses, drainage lines, and other sensitive ecosystems. ~ Design mine infrastructure to avoid, wherever practicable, disturbance to natural drainage lines. ~ Minimise erosion by designing and locating stream crossings in accordance with the Drainage Design Manual. ~ Control overflow assessments to ensure drainage blow-out will not occur. If controls are determined to be inadequate during as-built, adaptive management may include increasing the size of DPS, ripping to increase infiltration, pumping and abstraction or additional upslope capacity.	~ Deployment of sediment curtains or booms to reduce turbidity ~ Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies). ~ Compliance Assessment Plan – Turbidity response actions. ~Emergency response protocols that include rapid deployment of early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ Installed turbidity monitors provide real-time data in order to identify potential turbidity events early and facilitate a rapid response ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Moderate	Unlikely	Moderate
18	Rehabilitation	Sediment-laden run off from rehabilitation activities leading to reduction in surface water quality with potential impacts on ecosystem	Hazards include delays to commencement of rehabilitation/stabilisation works, significant rainfall events prior to establishment of stabilising	Surface Water	Moderate	Possible	High	~ Rehabilitation pit designs are developed based on Completion Criteria standards. ~ Diversion bunds installed to either divert runoff water away from areas sensitive to inundation, or towards natural or constructed drainage features intended to contain that runoff. ~ Rehabilitation substrate includes deep ripping of regolith, application of minimum 200 mm overburden/topsoil and ripping on the contour. Deep ripping promotes infiltration of runoff into the regolith.	~ Deployment of sediment curtains or booms to reduce turbidity ~ Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies). ~ Compliance Assessment Plan – Turbidity response actions. ~Emergency response protocols that include rapid deployment of	Moderate	Unlikely	Moderate

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
		health	vegetation					~ Application of minimum overburden provides a gravel-sand layer that protects finer grained regolith materials from erosion. Contour ripping creates a furrowed surface that promotes retention and infiltration of runoff. ~ Rehabilitation prescription limits final landform to slopes less than 16 degrees. Downslope toe of rehabilitated pits can have a reverse batter that creates a 'sunken' landform that retains surface runoff and prevents discharge. ~ Rehabilitated mine pits designed and executed to prevent overflow during a 1 per cent 24hr AEP rainfall event. ~ Pre-landscaping ripping is carried out in compacted areas, under pit faces, under areas receiving fill and through in-pit haul roads with the straight tine to improve infiltration. ~ Post-landscape ripping is carried out across the final landscaped pit, prior to contour ripping with a winged tine and / or straight tine (in rocky areas) to improve infiltration and root penetration. ~ Contour ripping is carried out to control surface water runoff and improve infiltration. ~ Infiltration calculations using 24 mm/day which is conservative compared to actual measured conditions. ~ Upgrade drainage infrastructure by integrating sediment traps, silt fences, and erosion control methods such as geotextiles and riprap on vulnerable slopes and runoff areas. These systems would slow water flow and allow sediment to settle before it reaches vulnerable water bodies. ~ Gully erosion will not exceed size >30 cm wide or deep or >100 m long; or unintended Gully deposition size > 0.1 ha. ~ Remediating erosion as it occurs (to avoid turbid water migrating to drinking water supplies). ~ Implementing pumping programs across sumps and storages to re-distribute volume to other areas to prevent continuous overflow and turbid water runoff. ~Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule, using monitoring trends and data to prioritize areas. Start from the upper slopes to maintain pit capacity and gradually reduce the catchment and slope size ~ Rehabilitate open areas prioritising areas with an average slope greater than 16% within an RPZ. ~ Rehabilitate Drinking Water catchments as a priority.	early warning measures and securing direct communication with water suppliers to ensure immediate response and coordination during high-risk events ~ Installed turbidity monitors provide real-time data in order to identify potential turbidity events early and facilitate a rapid response ~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP			
19	Mining	Long term changes to groundwater levels as a result of mining activities influencing ecosystem function	Increase in groundwater level due to clearing	Groundwater, Ecosystem Health	Minor	Possible	Moderate	~ Groundwater risk assessment decision matrix guides must be undertaken to evaluate whether groundwater investigation is required. ~ Groundwater investigations (i.e. Groundwater interim surface model) required for moderate and high-risk areas. ~ Maintenance of a minimum 2m separation between mine pit floor and groundwater for all mining areas approved by the 2023-2027 MMP and subsequent approvals ~ Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule, using monitoring trends and data to prioritize areas	~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Minor	Unlikely	Low
20	Rehabilitation	Reduction in surface water quality as a result of the application of fertilisers during rehabiliation (driect or indirect effect such as eutrophication)	Direct usage of chemicals increasing loading of nutrients to water waters.	Surface Water, Groundwater, Ecosystem Health	Minor	Possible	Moderate	~ Minimise contamination of water sources from herbicide and fertiliser use by applying them only outside a 50 m buffer from streams, reservoirs, and bores, unless approval has been obtained from DOH/DWER. ~ Alcoa will submit the Water Corporation document Alcoa Submission form for the Approval of Chemical Use in a Drinking Water Catchment and receive approval to use materials that are applied to ground or at high risk of having residual amounts within the catchment.	~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Minor	Unlikely	Low

#	Mining Stage	Potential Impact	Risk Pathway	Receptors	Inherent Risk (before controls)			Preventative	Mitigating	Residual Risk		
					Consequence	Likelihood	Risk Rating			Consequence	Likelihood	Risk Rating
								~ All environmentally hazardous materials are reviewed and approved through Alcoa's Paratox software system prior to delivery, storage, and use on-site. ~Fertiliser program execution on non-rain days/dry part of year- during optimal time of year for uptake of nutrients by plants (Spring)				
21	Clearing and development	Increased salinity resulting in reduction in water quality and potential impacts to ecosystem health	Removal of deep-rooted vegetation reduces water interception and uptake, leading to increased salinity levels in stream water and subsequent reservoirs	Surface Water, Groundwater, Ecosystem Health	Minor	Possible	Moderate	~ Groundwater risk assessment decision matrix guides must be undertaken to evaluate whether groundwater investigation is required. ~ Groundwater investigations (i.e. Groundwater interim surface model) required for moderate and high-risk areas. ~ Maintenance of a minimum 2m separation between mine pit floor and groundwater for all mining areas approved by the 2023-2027 MMP and subsequent approvals ~ Rehabilitate open areas progressively as per the 5-year rolling rehabilitation schedule, using monitoring trends and data to prioritize areas	~ WRMP monitoring program to identify baseline levels and trends, as well as inform any required changes to triggers and thresholds established within the WRMP	Minor	Unlikely	Low

Appendix B Risk Assessment Methodology

1.1 Scope and Purpose

This document outlines the qualitative risk assessment process undertaken by Alcoa to evaluate the risks and potential impacts from mining activities to Inland Waters. The risk assessment is used to inform the Water Resource Management Plan and adaptive management approach to manage potential impacts to Inland Waters.
The risk register is provided as **Appendix A**.
The purpose of the risk assessment is to highlight the potential impacts to ecosystem health and beneficial use values related to Inland Waters from Alcoa's Huntly and Willowdale bauxite mines; and to outline the controls that have been implemented to manage the risks.
All phases of mining activity were considered in developing the risk assessment, including:

- Pre-mining - exploration, surveys, investigations
- Clearing - clearing vegetation
- Development - removal of topsoil and overburden
- Mining - Bauxite mining
- Rehabilitation - rehabilitation, closure, post-mining (landforms)
- All - refers to all phases, associated infrastructure and general activities

1.2 Frameworks

To guide the risk assessment process, the following frameworks were applied:

- Water Quality Protection Note No. 77 Risk assessment process for public drinking water areas to assess the risk to beneficial use values (DWER, 2022).
- Mine Development and Closure Proposals (MDCP) risk assessment methodology to assess the risk to ecosystem health values (DEMIRS, 2024).

1.3 Risk Assessment Process

The risk assessment was developed using the following steps:

1. Identifying the potential sources, pathways and receptors.
2. Identifying the potential impacts to receptors and defining the potential risk pathways.
3. Analysing and consolidating the key impacts to beneficial use and ecosystem health values for all phases of activity.
4. Estimating the level of inherent risk for the impacts and pathways using the above frameworks with consideration of the different receptors.
5. Documenting the relevant preventative and mitigative operational controls that have been implemented.
6. Re-evaluating the risk and assigning a residual value.

Qualitative measures of likelihood

Descriptor	Frequency	Description
Almost certain	Once, or more per year	The risk event is expected to occur in most circumstances. High number of known incidents across industry.
Likely	Once in 5 years	The risk event is expected to occur in most circumstances. Regular incidents known across industry.
Possible	Once in 10 years	The risk event might or should occur in some circumstances. Incidents known across industry
Unlikely	Once in 20 years	The risk event could occur in some uncommon circumstances, as this is known to occur at comparable sites. Some occurrences known across industry.
Rare	Once in 50 years	Highly unlikely, but the risk event may occur in exceptional circumstances, as may have occurred at comparable sites. Very few or no known occurrences across industry.

1.5 Qualitative measures of consequence

Indicator	Insignifcant	Minor	Moderate	Major	Catastrophic
Surface water quality (DEMIRS)	Negligible changes to local surface water quality that negatively impacts environmental values.	Minor and or short term (< 1 year) change to surface water quality that negatively impacts environmental values.	Moderate and or medium term (1–5 years) change to surface water quality that negatively impacts environmental values	Long term decline (5–10 years) in surface water quality that negatively impacts environmental values.	Decline in surface water quality that negatively impacts environmental values on a regional scale. Nonrecoverable impact.
Surface water quantity (DEMIRS)	Incidental, short-term changes to local surface water volumes. Negligible impact to environmental values or water users.	Minor, short term changes to local surface water volumes. Recoverable within 1 year and/or localised impact to environmental values or water users.	Medium-term changes to surface water volumes. Recoverable within 1–5 years and/or negative impact to environmental values or water users.	Long-term changes to surface water volumes. Recoverable within 10 years and/or negative impact to environmental values or water users.	Project causes permanent modifications to surface water volumes. Non-recoverable impact/permanent impact to environmental values or water users.
Ground water quality (DEMIRS)	Incidental, short-term changes to local groundwater quality. Negligible impact to environmental values.	Short-term (<1 year) localised decline in groundwater quality that negatively impacts environmental values.	Medium-term (1–5 years) localised decline in groundwater quality that negatively impacts environmental values	Long-term (5–10 years) regional decline in groundwater quality that negatively impacts environmental values	Permanent decline in groundwater quality that negatively impacts environmental values. Non-recoverable impact.
Ground water quantity (DEMIRS)	Incidental changes to local groundwater levels/ availability and/or negligible impact to environmental values or water users	Local changes to groundwater levels/availability. Recoverable within 1 year and/or localised impact to environmental values or water users.	Changes to groundwater levels/availability in the medium-term. Recoverable within 5 years and/or negative impact to environmental values or water users	Regional changes to groundwater levels/availability in the long-term. Recoverable within 10 years and/or negative impact to environmental values or water users	Regional changes to groundwater levels/availability in the long-term. Non-recoverable impact permanent impact to environmental values or water users.

Flora and Vegetation (DEMIRS)	No direct loss of native vegetation although increased stress may be incurred through indirect or induced pressures. And/or No direct loss of conservation significant vegetation.	Localised and short-term (<1 years) loss of native vegetation which is widely distributed outside of the activity envelope.	Medium-term (1-5 years) loss of native vegetation which is widely distributed outside of the activity envelope. Project places minimal pressure on continued survival of conservation significant vegetation on a local scale	Long-term (5-10 years) loss of native vegetation which is not widely distributed outside the activity envelope. Project places significant pressure on continued survival of conservation significant vegetation on a regional scale.	Permanent loss of native vegetation causing significant pressure or potential extinction of conservation significant vegetation on a regional scale.
Drinking water (WQPN 77)	Little disruption to normal operation, low increase in normal operational costs	Minor impact for small population, some manageable operation disruptions, some increase in operating costs	Minor impact for large population, significant modification to normal operation but manageable, operation costs increased, increased monitoring. Salinity, colour (Residual)	Major impact for small population, systems significantly compromised and abnormal operation if at all, high level of monitoring required. Pesticides, Hydrocarbons, Nutrients, Chemicals, Turbidity (Residual)	Major impact for large population, complete failure of system. Pathogen impact (Residual).

1.6 Risk analysis matrix

		Most credible consequence level				
		(1) Insignificant	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
Likelihood	(5) Almost Certain	MODERATE	HIGH	VERY HIGH	VERY HIGH	VERY HIGH
	(4) Likely	MODERATE	HIGH	HIGH	VERY HIGH	VERY HIGH
	(3) Possible	LOW	MODERATE	HIGH	VERY HIGH	VERY HIGH
	(2) Unlikely	LOW	LOW	MODERATE	HIGH	VERY HIGH
	(1) Rare	LOW	LOW	MODERATE	HIGH	HIGH

2 References

DEMIRS. (2024). *Mine Development and Closure Proposals.* Retrieved from Department of Energy, Mines, Industry Regulation and Safety: https://www.dmp.wa.gov.au/Environment/Mining-Development-and-Closure-32574.aspx

DWER. (2022). *WQPN 77 Risk assessment process for public drinking water source areas.* Retrieved from Department of Water and Environmental Regulation: https://www.wa.gov.au/government/publications/wqpn-77-risk-assessment-process-public-drinking-water-source-areas

Appendix C Analytes and Applicable Screening Criteria/ Guidelines

Water Quality Guideline Selection Rationale

The proposed water analytical guidelines are intended to consider:

- Potential impacts to Public Drinking Water Source Areas and water resources;
- Potential impacts to surface water and groundwater (i.e. freshwater ecosystem protection); and
- Potential contamination of water resources (used for recreational, irrigation and other non-potable beneficial uses).

The following Australian guidance documents and reports inform the selected criteria:

- Australian Drinking Water Guidelines (2011) – Updated September 2022 (NHMRC).
- ANZG. (2018). Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia (Previously ANZECC & ARMCANZ (2000) Water Quality Guidelines.
- ANZG. (2023). Toxicant default guideline values for aquatic ecosystem protection: PFOS in freshwater. Australian and New Zealand Guidelines for Fresh and Marne Water Quality. CC BY 4.0. Australian and New Zealand Governments and Australian State and Territory Governments, Canberra, ACT, Australia.
- DoH 2014, Contaminated sites ground and surface water chemical screening guidelines. Non-potable groundwater use (NPUG).
- NEPC. (2013). National Environmental Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM) as amended 16 May 2013, Commonwealth of Australia, Canberra.
- PFAS NEMP 2020 criteria.
- *Environmental Protection Act 1986* Part V Environmental Licence Conditions.

Site specific criteria have been developed for PFAS constituents and the derivation is described in *Derivation of Site- Specific Human Health and Ecological Criteria for PFAS* (EHS 2024).

Where the above Australian guidance documents do not capture specific COPCs, International guidance (such as from Canada, the Netherlands, and the USA) will be sought. Where International guidelines are not available, reputable published papers on freshwater toxicity of a specific contaminant maybe applicable.

The selected analytical schedules to which the above guidance applies are informed by the Analytical Suite Rationale presented in Section 2.4.4 of the WRMP with a summary of the COPCs and the main source and activities, presented in the **Table C1**, below.

The water quality guidelines for each environmental value is provided in **Table C2**, below.

Environmental License Condition are provided in **Table C3**, below.

Table C1 Relevant COPCs, Sources, Activities and Facilities

COPC	Mine Region	Source	Activities	Facilities	Omissions
Metals Hydrocarbons VOCs and SVOCs Solvents Degreasers Glycols Surfactants as methylene blue active substances (MBAS)	Huntly and Willowdale mines (all areas)	Spills and leaks from mobile equipment	• Servicing of Alcoa and contractor fleet • Refuelling • Standard mining activities	• Pits • Haul roads • Workshops • Fuel bays (bulk diesel storage sites) • Heavy vehicle (HV) park-up areas	
Metals Hydrocarbons Solvents Degreasers Glycols MBAS	Huntly and Willowdale mines (all areas)	Spills and leaks from fixed plant	Ore crushing and transport activities	• Conveyor line • Transfer facilities • Crusher facilities • High voltage power network	
Turbidity Total suspended solids (TSS)	Huntly and Willowdale mines (all areas)	Mining operations involving soil disturbance. Dust from fixed plant	• Clearing • Haul road construction • Mine development • Ore extraction • Rehabilitation • Crushing/ore transport	• Pits • Haul roads (sumps) • Haul roads (construction phase) • Fixed plant sumps • Unsealed areas	
Per and polyfluoroalkyl substances (PFAS) Detailed Site Investigation Huntly Mine (GHD, July 2024) Detailed Site Investigation Willowdale Mine (GHD, August 2024) PFAS Inventory Report Huntly Mine (EHS Support December 2023) PFAS Inventory Report Willowdale Mine (EHS Support December 2023)	• Huntly mine – Myara, McCoy, White Road, Huntly Central, O'Neil, Del Park operational areas • Willowdale mine – Arundel, Orion, Bancell operational areas	• Firefighting training pads (PFAS leaching from concrete) • Concrete water storage tanks • Secondary sources in soil and groundwater	• Historical firefighting training • Historical firefighting response • Appliance testing • Fire water storage	• Firefighting training areas including associated drains, sumps and concrete water tanks. • Firefighting appliance testing areas. • Areas where firefighting incidents occurred.	PFAS containing foams are no longer in use at Alcoa mines and firefighting appliances and equipment have been decontaminated or replaced. As such firefighting appliances and equipment no longer represents an ongoing primary or secondary source of PFAS. PFAS was not historically used at Larego and Myara North/Holyoake at the Huntly mine
E.coli Faecal Coliforms Nutrients (nitrite, nitrate, total nitrogen, total phosphorus) Phenolic compounds	Huntly and Willowdale mines (all areas)	Sewage treatment/disposal	Leaks and spills from sewage treatment plant and/or associated pipework.	• Haul road for transport • Office areas • Satellite ablution blocks • Irrigation fields	
PCBs	• Huntly mine –Del Park operational area • Willowdale mine – Arundel, Orion, Bancell operational areas	Historical leaks from spills and leaks from fixed plant (substations and transformers)	Electricity transmission	Transformers and substations	• Willowdale mine – All of Willowdale's transformer oils have been tested and confirmed to be PCB free. • Huntly mine – PCBs are no longer in use at Huntly mine. Historical locations include subs (MW03, MW04, 11, 21, 12, 22, M00, Marrinup nursery, Del Park workshop, Huntly Central, Huntly crusher locations, Pig Swamp, Boronia).

COPC	Mine Region	Source	Activities	Facilities	Omissions
Herbicides	Huntly and Willowdale mines (all areas)	• Application of herbicides around fixed plant • Mining operations • Spills and leaks of herbicide concentrate.	Weed management via herbicide application	• Conveyor line • Transfer facilities • Crusher facilities • High voltage power network • Pits • Haul roads • Offices/workshops • Biomax irrigation • Explosive magazine	
Ammonium nitrate Hydrocarbons	• Huntly mine – McCoy operational area • Willowdale mine – Bancell operational area	Spills and leaks from explosive storage	Explosives storage	• Explosive magazine • Orica yard	
TDS (salinity)	Huntly and Willowdale mines (all areas)	• Construction activities • Haul road construction • Clearing operations • Mining operations • Groundwater	• Dewatering activities • Rehabilitation • Clearing	• Pits • Haul roads • Fixed plant sumps • Offices/workshops • Transfer facilities • Crusher facilities	
pH (acid sulfate soils)	Huntly and Willowdale mines (all areas)	• Fixed plant • Haul road construction exposure of sulfidic soils to air where potential acid sulfate soils are present. • Mining can expose acid sulfate soils, causing acid and heavy metals to pollute water and soil.	Dewatering, excavation of acid sulfate soils	• Conveyor alignment • Haul roads (stream crossings)	
Nutrients (nitrite, nitrate, total nitrogen, total phosphorus)	Huntly and Willowdale mines (all areas)	Application of fertilisers not in accordance with manufacturer's instructions within Rehabilitation areas	Fertiliser application	Rehabilitated pits	

Table Notes:

BTEXN – Benzene, toluene, ethylbenzene, meta & para xylene, ortho xylene, total xylene, naphthalene

PAH – Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1.2.3.cd)pyrene, Dibenz(a.h)anthracene, Benzo(g.h.i)perylene

PFAS – (PFBS, PFPeS, PFHxS, PFHpS, PFOS, PFDS) (PFBA, PFPeA, PFHxA, PFHxA, PFHpA, PFOA, PFNA, PFDA, PFUnDA, PFDoDA, PFTrDA, PFTeDA) (FOSA, MeFOSA, EtFOSA, MeFOSE, EtFOSE, MeFOSAA, EtFOSAA) (4:2 FTS, 6:2 FTS, 8:2 FTS, 10:2 FTS)

Metals – Ag, Al, As, Ba, Be, Bo, Cd, Co CrIII, Cu, Fe, Hg, Pb, Mn, Mo, Ni, Hg, Se, U, Zn

Table C2 Guideline Values for Water Quality

Analyte	Units	Drinking Water ADWG - Aesthetic	Drinking Water ADWG - Health	Drinking Water PFAS NEMP (2020)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Long term irrigation water)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Short term irrigation water)	Freshwater Ecosystems 99% Freshwater Protection[17] ANZG (2018)	Freshwater Ecosystems 95% Freshwater Protection ANZG (2018)	Freshwater Ecosystems 99% Freshwater Protection PFAS NEMP (2020)	Non potable Groundwater Use (NPUG) DoH (2014)	Recreational Water PFAS NEMP (2020)
Field Screening and/or Laboratory											
pH	pH	6.5-8.5			6.0-8.5	6.0-8.5					
Redox	mV										
EC	dS/m				0.65 d	0.65 d					
TDS	mg/L	600	Not necessary								
TSS	mg/L										
Turbidity	NTU	5									
Cations											
Sodium	mg/L	180	Not necessary		115 d	115 d					
Potassium	mg/L										
Magnesium	mg/L										
Calcium	mg/L										
Anions											
Chloride	mg/L	250			175 d	175 d				250	
Sulphate	mg/L	250								1000	
Nitrate (as Nitrate)	mg/L		50								
Total hardness (as $CaCO_3$)	mg/L	200	Not necessary								
Total alkalinity											
Nutrients											
Ammonia (as Ammonia)	mg/L	0.5					320	900		0.5	
Total Nitrogen	mg/L				5.0	25-125					
Nitrite (as Nitrite)	mg/L		3.0							30	
Nitrate (as Nitrate)	mg/L		50							500	
TKN	mg/L										
Total Phosphorus	mg/L				0.05	0.8-12					
Reactive Phosphorus as P (Orthophosphate as P)	mg/L										
Microbial Parameters											
E-coli	unit/ 100mL		<1								
Faecal coliforms (Thermotolerant	unit/ 100mL		<1		10 – 10,000 [c]	10 – 10,000 [c]					

[17] 99% protection applies at receiving environments and 95% protection applies at operational areas

Analyte	Units	Drinking Water ADWG - Aesthetic	Drinking Water ADWG - Health	Drinking Water PFAS NEMP (2020)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Long term irrigation water)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Short term irrigation water)	Freshwater Ecosystems 99% Freshwater Protection[17] ANZG (2018)	Freshwater Ecosystems 95% Freshwater Protection ANZG (2018)	Freshwater Ecosystems 99% Freshwater Protection PFAS NEMP (2020)	Non potable Groundwater Use (NPUG) DoH (2014)	Recreational Water PFAS NEMP (2020)
coliforms)											
Enterococci (intestinal)	unit/ 100mL		Non detect								
PFAS											
PFOS	µg/L								0.00023		
PFHxS	µg/L										
PFOA	µg/L		0.56	0.56					19	0.56	10
Sum of PFOS+PFHxS	µg/L		0.07	0.07						0.07	2
BTEXN											
Benzene	µg/L		1				600	950		10	
Toluene	µg/L	25	800				110	180		25	
Ethylbenzene	µg/L	3	300				50	80		3	
Xylene (o)	µg/L						200	350			
Xylene Total	µg/L	20	600							20	
Naphthalene	µg/L						2.5	16			
Total Recoverable Hydrocarbons											
C6-C10 Fraction (F1)	µg/L										
C6-C10 (F1 minus BTEX)	µg/L										
>C10-C16 (F2)	µg/L										
>C10-C16 Fraction (F2 minus Naphthalene)	µg/L										
>C16-C34 Fraction (F3)	µg/L										
>C34-40 Fraction (F4)	µg/L										
>C10-C40 Fraction (sum)	µg/L										
Pesticides – Organophosphorus											
Azinphos methyl	µg/L		30				0.01	0.02		300	
Chlorpyrifos	µg/L		10				0.00004	0.01		100	
Demeton	µg/L										
Demeton-S-methyl	µg/L										
Diazinon	µg/L		4				0.00003	0.01		40	
Dimethoate	µg/L		7				0.1	0.15		70	
Fenitrothion	µg/L		7				0.1	0.2		70	
Glyphosate	mg/L		1				0.18	0.32		10	

Analyte	Units	Drinking Water ADWG - Aesthetic	Drinking Water ADWG - Health	Drinking Water PFAS NEMP (2020)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Long term irrigation water)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Short term irrigation water)	Freshwater Ecosystems 99% Freshwater Protection[17] ANZG (2018)	Freshwater Ecosystems 95% Freshwater Protection ANZG (2018)	Freshwater Ecosystems 99% Freshwater Protection PFAS NEMP (2020)	Non potable Groundwater Use (NPUG) DoH (2014)	Recreational Water PFAS NEMP (2020)
Malathion	µg/L		70				0.002	0.05		700	
Parathion	µg/L		20				0.0007	0.004		200	
Profenofos	µg/L		0.3				0.02 [e]	0.02 [e]		3	
Temephos	µg/L		400				0.05 [e]	0.05 [e]		4000	
Pesticides – Organochlorine											
Aldrin	µg/L		0.3 [a]				0.001 [e]	0.001 [e]		3 [a]	
Chlordane	µg/L		2				0.03	0.08		20	
DDE	µg/L										
DDT	µg/L		9				0.006	0.01		90	
Dicofol	µg/L		4				0.5 [e]	0.5 [e]			
Dieldrin	µg/L		0.3 [a]				0.01 [e]	0.01 [e]		3 [a]	
Endosulfan	µg/L		20				0.03	0.2		200	
Endosulfan alpha	µg/L										
Endosulfan beta	µg/L										
Endrin	µg/L						0.01	0.02			
Heptachlor	µg/L		0.3				0.01	0.09		3	
Lindane (γ-HCH)	µg/L		10				0.07	0.2		100	
Methoxychlor	µg/L		300				0.005 [e]	0.005 [e]		3000	
Mirex	µg/L						0.04 [e]	0.04 [e]			
Toxaphene	µg/L						0.1	0.2			
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	µg/L										
Anthracene	µg/L										
Benz(a)anthracene	µg/L										
Benzo(a) pyrene	µg/L		0.01				0.1	0.2		0.1	
Benzo(k)fluoranthene	µg/L										
Chrysene	µg/L										
Dibenz(a,h)anthracene	µg/L										
Fluoranthene	µg/L						1	1.4			
Fluorene	µg/L										
Indeno(1,2,3-c,d)pyrene	µg/L										
Pyrene	µg/L										
PAHs (Sum of total)	µg/L		0.01								

Analyte	Units	Drinking Water ADWG - Aesthetic	Drinking Water ADWG - Health	Drinking Water PFAS NEMP (2020)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Long term irrigation water)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Short term irrigation water)	Freshwater Ecosystems 99% Freshwater Protection[17] ANZG (2018)	Freshwater Ecosystems 95% Freshwater Protection ANZG (2018)	Freshwater Ecosystems 99% Freshwater Protection PFAS NEMP (2020)	Non potable Groundwater Use (NPUG) DoH (2014)	Recreational Water PFAS NEMP (2020)
Phenols											
2,6-D	µg/										
Picloram	µg/						6.3	87			
Semi Volatile Organic Compounds and Volatile Organic Compounds											
1,2-dichlorobenzene	µg/	1	1,500				120	160		1	
1,3-dichlorobenzene	µg/	20	ID				160	260		20	
1,4-dichlorobenzene	µg/	0.3	40				40	60		0.3	
1,2,3-trichlorobenzene	µg/	5	30							5	
4-chlorotoluene	µg/										
Bromobenzene	µg/										
Chlorobenzene	µg/	10	300							10	
1,2-dibromoethane	µg/										
Bromomethane	µg/										
Dichlorodifluoromethane	µg/										
Trichlorofluoromethane	µg/										
1,2,4-trimethylbenzene	µg/										
1,3,5-trimethylbenzene	µg/										
Isopropylbenzene	µg/										
Styrene	µg/	4	30							4	
Methyl Ethyl Ketone	µg/										
4-Methyl-2-pentanone	µg/										
Acetone	µg/										
Allyl chloride	µg/										
Carbon disulfide	µg/						20 [e]	20 [e]			
1,1,1,2-tetrachloroethane	µg/										
1,1,1-trichloroethane	µg/		ID				130	270			
1,1,2,2-tetrachloroethane	µg/						200	400			
1,1,2-trichloroethane	µg/						5,400	6,500			
1,1-dichloroethane	µg/		ID								
1,1-dichloroethene	µg/		30							300	
1,2,3-trichloropropane	µg/										
1,2-dichloroethane	µg/		3				1,000	1,900		30	
1,2-dichloropropane	µg/						600	900			

Analyte	Units	Drinking Water ADWG - Aesthetic	Drinking Water ADWG - Health	Drinking Water PFAS NEMP (2020)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Long term irrigation water)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Short term irrigation water)	Freshwater Ecosystems 99% Freshwater Protection[17] ANZG (2018)	Freshwater Ecosystems 95% Freshwater Protection ANZG (2018)	Freshwater Ecosystems 99% Freshwater Protection PFAS NEMP (2020)	Non potable Groundwater Use (NPUG) DoH (2014)	Recreational Water PFAS NEMP (2020)
1,3-dichloropropane	µg/						700	1,100			
Bromochloromethane	µg/										
Bromodichloromethane	µg/										
Bromoform	µg/										
Carbon tetrachloride	µg/		3				150	240			
Chlorodibromomethane	µg/										
Chloroethane	µg/										
Chloroform	µg/						370	770			
Chloromethane	µg/										
cis-1,2-dichloroethene[18]	µg/		60							600	
Dibromomethane	µg/										
Dichloromethane	µg/		4				3,000	4,000		40	
Trichloroethene	µg/										
Tetrachloroethene	µg/		50							500	
trans-1,2-dichloroethene[3]	µg/		60								
Vinyl chloride	µg/		0.3							3	
Surfactants											
Anionic Surfactants as MBAS	mg/L										
Oil and grease	mg/L										
Ethylene glycol	µg/						330 [e]	330 [e]			
Propylene glycol	µg/										
Triethylene glycol	µg/										
Metals											
Aluminium	mg/L	0.2	ID		5.0	20				0.2	
Arsenic	mg/L		0.01		0.1	2.0				0.1	
Barium	mg/L		2							20	
Beryllium	mg/L		0.06		0.1	0.5				0.6	
Boron	mg/L		4		0.5	0.5 [d]				40	
Cadmium	mg/L		0.002		0.01	0.05				0.02	
Cobalt	mg/L				0.05	0.1				0.5	
Copper	mg/L	1	2		0.2	5.0				1	

[18] Criterion is for 1,2-dichloroethene and does not specify cis isomer

Analyte	Units	Drinking Water ADWG - Aesthetic	Drinking Water ADWG - Health	Drinking Water PFAS NEMP (2020)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Long term irrigation water)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Short term irrigation water)	Freshwater Ecosystems 99% Freshwater Protection[17] ANZG (2018)	Freshwater Ecosystems 95% Freshwater Protection ANZG (2018)	Freshwater Ecosystems 99% Freshwater Protection PFAS NEMP (2020)	Non potable Groundwater Use (NPUG) DoH (2014)	Recreational Water PFAS NEMP (2020)
Lead	mg/L		0.01		2.0	5.0				0.3	
Manganese	mg/L	0.1	0.5		0.2	10				5	
Mercury	mg/L		0.001		0.002	0.002				0.01	
Molybdenum	mg/L		0.05		0.01	0.05				0.5	
Nickel	mg/L		0.02		0.2	2.0				0.2	
Selenium	mg/L		0.01		0.02	0.05				0.1	
Silver	mg/L	0.1								1	
Uranium	mg/L		0.02		0.01	0.1				0.17	
Zinc	mg/L	3	ID		2.0	5.0				3	
Aluminium (filtered)	mg/L	0.2	ID		5.0	20	27 [f]	55 [f]		0.2	
Arsenic (filtered)	mg/L		0.01		0.1	2.0	0.8 [g]	13 [g]		0.1	
Barium (filtered)	mg/L		2							20	
Beryllium (filtered)	mg/L		0.06		0.1	0.5				0.6	
Boron (filtered)	mg/L		4		0.5	0.5 [d]	340	940		40	
Cadmium (filtered)	mg/L		0.002		0.01	0.05	0.06	0.2		0.02	
Chromium (III+VI) (filtered)	mg/L				0.05	0.1	1.4 [e]	1.4 [e]		0.5	
Cobalt (filtered)	mg/L	1	2		0.2	5.0	1	1.4		1	
Copper (filtered)	mg/L		0.01		2.0	5.0	1	3.4		0.3	
Lead (filtered)	mg/L	0.1	0.5		0.2	10	1,200	1,900		5	
Manganese (filtered)	mg/L		0.001		0.002	0.002	0.06	0.6		0.01	
Mercury (filtered)	mg/L		0.05		0.01	0.05	34 [e]	34 [e]		0.5	
Molybdenum (filtered)	mg/L		0.02		0.2	2.0	8	11		0.2	
Nickel (filtered)	mg/L		0.01		0.02	0.05	5	11		0.1	
Selenium (filtered)	mg/L		0.02		0.01	0.1	0.5 [e]	0.5 [e]		0.17	
Silver (filtered)	mg/L							0.5			
Uranium (filtered)	mg/L	3	ID		2.0	5.0	2.4	8		3	
Vanadium (filtered)	mg/L	0.2	ID		5.0	20	27 [f]	55 [f]		0.2	
Zinc (filtered)	mg/L		0.01		0.1	2.0	0.8 [g]	13 [g]		0.1	

Criteria Notes:

a – Criterion is for Aldrin + Dieldrin, has been conservatively adopted.

b – Trigger values for chloride for assessing increased cadmium uptake in plants, low risk threshold has been selected for long term and high risk has been selected for short term exposure.

c – Range due to dependence on irrigation use for food vs non-food crops and irrigation for pasture and fodder.

d – Crop dependent, most conservative value selected, should be refined based on actual irrigation use.

Analyte	Units	Drinking Water ADWG - Aesthetic	Drinking Water ADWG - Health	Drinking Water PFAS NEMP (2020)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Long term irrigation water)	Irrigation ANZECC & ARMCANZ 2000 (Beneficial Use – Short term irrigation water)	Freshwater Ecosystems 99% Freshwater Protection[17] ANZG (2018)	Freshwater Ecosystems 95% Freshwater Protection ANZG (2018)	Freshwater Ecosystems 99% Freshwater Protection PFAS NEMP (2020)	Non potable Groundwater Use (NPUG) DoH (2014)	Recreational Water PFAS NEMP (2020)

e – Level of species protection is unknown for guideline value.

f – pH dependent, relevant for pH > 6.5.

g – conservatively assumed to be all As V, values for As III are 1 and 24 micrograms respectively.

ID – Insufficient data.

Table C3 Site Specific PFAS Criteria

PFAS	Units	Groundwater	Surface Water					
		Intrusive Maintenance Worker	Recreational User	Drinking Water[19]	99%SPL (Direct)	99% SPL (Indirect)	95%SPL (Direct)	995 SPL (Indirect)
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	100000	90	-				
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	50000	40	-				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	20000	10	-				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	20000	10	-				
Perfluorooctanesulfonamide (FOSA)	µg/L	2000	2	-				
Methylperfluorooctanesulfonamide (MeFOSA)	µg/L	2000	2	-				
Ethyl perfluorooctane sulfonamido acetic acid (EtFOSAA)	µg/L	2000	2	-				
Ethyl perfluorooctane sulfonamido acetic acid (PFBS)	µg/L	30000	30	-				
Perfluorodecanesulfonic acid (PFDS)	µg/L	8000	7	-				
Perfluoroheptanesulfonic acid (PFHpS)	µg/L	30000	20	-				
Perfluorohexanesulfonic acid (PFHxS)	µg/L	2000	2	0.07				
Perfluorooctane sulfonate (PFOS)	µg/L	2000	2					
Perfluoropentanesulfonic acid (PFPeS)	µg/L	16000000	14000	-				

[19] Criteria based on the sum of PFOS and PFHxS. This includes PFOS only, PFHxS only and the sum of PFOS and PFHxS

PFAS	Units	Groundwater	Surface Water					
		Intrusive Maintenance Worker	Recreational User	Drinking Water[19]	99%SPL (Direct)	99% SPL (Indirect)	95%SPL (Direct)	995 SPL (Indirect)
Perfluorobutanoic acid (PFBA)	µg/L	100000	90	-				
Perfluorobutanoic acid (PFDA)	µg/L	3100	3	-				
Perfluorododecanoic acid (PFDoDA)	µg/L	5100	4	-				
Perfluoroheptanoic acid (PFHpA)	µg/L	1600000	1400	-				
Perfluorohexanoic acid (PFHxA)	µg/L	50000	40	-				
Perfluorooctanoic acid (PFOA)	µg/L	20000	10	0.56				
Perfluoropentanoic acid (PFPeA)	µg/L	50000	40	-				
Perfluorononanoic acid (PFNA)	µg/L	300	0.3	-				
Perfluorotetradecanoic acid (PFTeDA)	µg/L	10000	90	-				
Perfluorotridecanoic acid (PFTrDA)	µg/L	50000	50	-				
Perfluoroundecanoic acid (PFUnDA)	µg/L	30000	30	-				
PFOS sum (PFOS, FOSA, MeFOSA, EtFOSAA, PFDS, PFHpS, PFHxS, PFNS)	µg/L				0.043	0.058	1.2	0.089
PFOA sum (PFOA, 8:2 FTS, 10:2 FTS, PFPeS, PFHpA)	µg/L				19	3.2	220	4.9
PFBA sum (PFBA, PFTeDA, 4:2 FTS)	µg/L				3000	23	9400	160
PFNA sum (PFNA, PFDA, PFDoDA, PFTrDA, PFUnDA	µg/L				0.013	0.89	0.57	1.6
PFHxA sum (PFHxA, PFPeA, 6:2 FTS, PFBS)	µg/L				150	22	1200	104

Table C4 Huntly License Discharge Limits

Huntly Licence L6210/1991/10		
Emission Source	**Parameter**	**Limit (including units)**
Mccoy WWTP Sump MC1, MC2 and MC3 Myara WWTP Batching tank US1, US2 and US3	pH	Within the range of 5.5 – 9.0
	Total Dissolved Solids	1,000 mg/L
	Oil and Grease	5 mg/L
	Surfactants (as MBAS)	
	Zinc	
	Total phosphorous	2 mg/L
	Chromium	0.06 mg/L
	Copper	1 mg/L

Table C5 Willowdale License Discharge Limits

Willowdale License L6465/1989/10		
Sample locations from Arundel Treated Water Ponds 1, 2 and 3 (ATWP-001, ATWP-002 and ATWP-003) sample points	pH[1]	Within the range of 6.5 – 8 mg/L
	Total Dissolved Solids	1,000 mg/L
	Total Suspended Solids	25 mg/L
	Surfactants as MBAS	5 mg/L
	Total Phosphorous	0.2 mg/L
	Oil and Grease[3]	5 mg/L
	Total Recoverable Hydrocarbons	5 mg/L

Willowdale License L6465/1989/10		
	Chromium	0.0033 mg/L
	Copper	0.0014 mg/L
	Zinc	0.008 mg/L
	10:2 Fluorotelomer sulfonic acid (10:2 FTS)[2]	0.001 or <LOR
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)[2]	0.001 or <LOR µg/L
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.005 µg/L
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.005 µg/L
	Perfluoro-1-octanesulfonamidoacetic acid (FOSAA)[2,4]	0.005 or <LOR µg/L
	Perfluorobutanesulfonic acid (PFBS)[2]	0.001 or <LOR µg/L
	Perfluorobutanoic acid (PFBA)[2]	0.005 or <LOR µg/L
	Perfluorodecanesulfonic acid (PFDS) (free acid)	0.001 µg/L
	Perfluorodecanoic acid (PFDA)	0.001 µg/L
	Perfluoroheptanesulfonic acid (PFHpS)	0.001 µg/L
	Perfluoroheptanoic acid (PFHpA)	0.001 µg/L
	Perfluorohexane sulfonic acid (PFHxS)	0.001 µg/L
	Perfluorohexanoic acid (PFHxA)	0.001 µg/L
	Perfluorononanesulfonic acid (PFNS)	0.001 µg/L
	Perfluorononanoic acid (PFNA)	0.001 µg/L
	Perfluorooctane sulfonic acid (PFOS)	0.0002 µg/L
	Perfluorooctanoic acid (PFOA)	0.001 µg/L
	Perfluoropentane sulfonic acid (PFPeS)[2]	0.001 or <LOR µg/L
	Perfluoropentanoic acid (PFPeA)[2]	0.001 or <LOR µg/L

Willowdale License L6465/1989/10		
	Perfluorotridecanoic acid (PFTrDA)	0.001 µg/L
	Perfluoroundecanoic acid (PFUnDA or PFUnA)	0.001 µg/L

Table Notes:

1: In-field non-NATA accredited analysis permitted.

2: Where laboratory analysis reports a result <LOR, and the <LOR is greater than the corresponding numeric limit, this is a compliant result.

3: To be sampled with USEPA method 5520B.

4: Laboratory non-NATA accredited analysis permitted.

Appendix D Historical Water Quality Data

Historical water quality data collected over the past four years, from surface water and groundwater monitoring sites across the Huntly and Willowdale mine sites has been reviewed and validated. Statistical analysis has been performed and the data has been screened against the ADWG and PFAS NEMP screening criteria for potable water use. Erroneous results identified for field parameters have been excluded from the analysis within this appendix.

The objective of this data analysis is to develop an understanding of ambient and baseline water quality conditions across the Huntly and Willowdale mine sites to inform the risk assessment, and subsequently better define the location of the proposed surface water and groundwater monitoring programs, by identifying high risk impact areas. To facilitate this review, each sample location was categorized by monitoring purpose, outlined for each matrix below.

Surface water and groundwater sampling has been conducted under different monitoring programs, each with a specific purpose or objective, relating to different contaminant sources and receptor targets. Some of these monitoring programs have required a high density of sampling locations focussed in one area and other programs have required a greater spatial distribution. Further the sampling frequency and analytical suites adopted have varied. Therefore, this data has been used to provide a basis for the development of the proposed surface water and groundwater monitoring programs that form part of the WRMP.

1 Surface Water

Historical and current surface water monitoring programs have been designed and implemented to evaluate ambient surface water conditions, improve knowledge around how climate may influence surface water flow and water quality, understand potential impacts associated with Alcoa's mining infrastructure at operational areas and other general mining footprint associated activities. Surface water monitoring programs have been developed to meet the requirements of existing agreements, compliance and licence monitoring requirements and/or operational requirements as detailed within Section 3-1 of the WRMP.

To facilitate this review, surface water sampling locations have been categorised according to the following monitoring purposes:

- Surface Water Body: locations within a public drinking water reservoir or other water storage dam within a surface water catchment.
- Background/Ambient Location: locations upgradient from mining activities.
- Sump: sump locations in operational areas or along haul roads to mitigate drainage runoff.
- Receiving Environment – General Mining: locations within receiving waterways which are downgradient of general mining areas.
- Receiving Environment – Source Area: locations within receiving waterways which are downgradient of source areas such as operational areas or known areas of contamination.

The siting and spatial distribution of the surface water sampling network has improved the conceptual understanding of contaminant migration pathways. The analytical data collected has supported the derivation of trigger/threshold setting to inform key response indicators.

A summary of surface water quality based on the historical dataset, and from the first round of surface water sampling completed in September 2024 that fulfills the surface water sampling obligations of the WRMP is provided below. Further discussion on the surface water sampling program that forms part of the WRMP is summarised in **Table 2-3** of the WRMP.

1.1 Willowdale

1.1.1 Historical Dataset

Surface water sampling locations across the Willowdale mine site included in the historical dataset are presented in **Figure D1** (**Attachment A**). Refer to attached **Table D1** (**Attachment B**) for the comprehensive historical surface water analytical data screened against ADWG and PFAS NEMP criteria, and a statistical summary. An overview of the historical monitoring network across the Willowdale mine site is provided in **Table 1**, below. A summary of key water quality parameters where exceedances were identified or where concentrations of specific constituents were consistently above the LOR is presented in **Table 2**.

Table 2 Willowdale Mine Site – Historical Dataset Monitoring Program Summary

Purpose	Number of Sampling Locations	Sampling Date Range	Total Number of Samples Analysed at the Laboratory
Surface Water Body	35	7/7/2020 – 3/10/2024	57
Background / Ambient	29	30/11/2020 – 2/10/2024	50
Receiving Environment – General Mining	50	14/7/2020 – 27/9/2024	97
Receiving Environment – Source Area	44	14/7/2020 – 20/9/2024	68
Sump / On-Operational Area	84	23/11/2019 – 21/11/2023	408
Total	**242**	**23/11/2019 – 3/10/2024**	**680**

Table 3 Willowdale Mine Site – Historical Water Quality Summary for Key Water Quality Indicators

Analyte	Unit	Surface Water Body	Background / Ambient	Receiving Environment – General Mining	Receiving Environment – Source Area	Sump / On-operational Area
pH	SU	--	5.61 – 8.03 (8)	5.55 – 8.10 (11)	5.71 – 6.82 (12)	5.50 – 8.84 (4)
Total Dissolved Solids	mg/L	--	85 – 204	80 – 147	102 – 128	47 – 140
Turbidity	NTU	--	0 – 6.65	0 – 10.77	0 – 2.51	--
Chloride	mg/L	--	35 – 89 (0)	30 – 77 (0)	34 – 44 (0)	6 – 30 (0)
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.0001 – 0.0013 (0)	0.0001 – 0.0013 (0)	0.0001 – 0.00094 (0)	0.0001 – 0.017 (12)	0.0001 – 0.36 (166)
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.0002 – 0.001 (0)	<0.0004 – <0.001 (0)	0.0002 – 0.001 (0)	0.0002 – 0.024 (0)	0.0002 – 0.2 (6)
Perfluorooctanoic acid (PFOA)	µg/L	0.0002 – 0.01 (0)	<0.0002 – <0.01 (0)	<0.0002 – <0.01 (0)	0.0002 – 0.01 (0)	0.0002 – 0.56 (1)
Sum of PFHxS and PFOS	µg/L	0.0002 – 0.002 (0)	0.0002 – 0.0013 (0)	0.0002 – 0.0013 (0)	0.0002 – 0.034 (0)	0.0002 – 0.4 (10)

Table Notes:

-- indicates no data available for analyte.

Count of exceedances for each analyte where applicable criteria exist indicated in brackets after the concentration range (0= no exceedance).

The pH recorded at various surface water monitoring locations across the sub-catchments within the Willowdale mine site ranges from slightly acidic to neutral (pH range: 5.5 to 8.1). The TDS of surface water is considered fresh (TDS <200 mg/L), and turbidity has been recorded at less than 11 NTU. TDS and chloride concentrations are slightly elevated in background/ambient samples compared to receiving environment and sump locations.

Where analysed, COPCs such as TRH, BTEXN, SVOCs, herbicides, and pesticides were all reported below the LOR and no exceedances of the ADWG were reported. All results for microbiology (thermotolerant coliform, enterococci, Escherichia Coli (*E. Coli*) and thermophilic amoeba) were reported below the LOR.

Exceedances of ADWG were only reported for pH and various PFAS compounds within the Willowdale mine area. Exceedances of pH criteria were identified across all location types, with similar ranges observed for each monitoring purpose. PFAS exceedances were only identified within sump and receiving environment locations downstream from PFAS source areas. Receiving environment locations with PFAS exceedances were only identified in the Arundel area, outside of the PDWSA. Specific locations include DWER locations within McKnoe's Brook, a known source area relating to the PFAS Treatment Unit (PTU), and other areas around the Arundel Operational Area. The Arundel area is incorporated into the WRMP surface water monitoring program.

Sump and water treatment dam compliance monitoring is part of ongoing commitments in operational areas or where historical activities may have resulted in diffuse contamination such as PFAS. Concentrations of key analytes may be elevated in samples from these monitoring locations. These results are included for completeness; however, COPC concentrations from these monitoring locations are not reflective of the ambient or receiving environment down gradient of general mining areas.

1.1.2 Round 1 WRMP Dataset – September 2024

This section discusses the surface water quality from the first round of surface water sampling that fulfills the surface water sampling obligations of the WRMP. Surface water sampling locations included in this dataset are shown on **Figure D2** (**Attachment A**). It should be noted that a select number of surface water locations were sampled in August 2023 as part of another sampling program, as it provided an opportunity to collect a limited dataset at the time.

Refer to attached **Table D2** (**Attachment B**) for the comprehensive WRMP surface water analytical data screened against ADWG and PFAS NEMP criteria, and a statistical summary. An overview of the WRMP monitoring network across the Willowdale mine site is provided in **Table 3**, below. A summary of key water quality parameters where exceedances were identified or where concentrations are consistently above the LOR is presented in **Table 4**.

Table 4 Willowdale Mine Site – WRMP Dataset Monitoring Program Summary

Purpose	Number of Sampling Locations	Sampling Date Range	Total Number of Samples Analysed at the Laboratory
Source Surface Water Body	0	--	--
Background / Ambient Location	5	23/08/2023 – 26/09/2024	6
Receiving Tributary Downstream from Source Area	0	--	--
Receiving Tributary Downstream from General Mining Area	6	21/08/2023 – 26/09/2024	9
Sump	0	--	--
Total	**11**	**21/08/2023 – 26/09/2024**	**15**

Source surface water bodies and receiving tributaries downstream from a source area were sampled in September and October 2024 and analysed for PFAS only, based on the absence of other COPCs as presented in the historical dataset. The PFAS results have been discussed above and presented in the historical dataset (refer to Table 1).

Table 5 Willowdale Mine Site – WRMP Water Quality Summary for Key Water Quality Indicators

Analyte	Unit	Background / Ambient Location	Receiving Environment – General Mining
pH	SU	6.11 – 6.61 (5)	5.55 – 6.59 (8)
Turbidity	NTU	0.1 – 0.8	0 – 10.77
TDS	mg/L	85 – 143	80 – 147
Chloride	mg/L	39 – 81	41 – 77

Where analysed, concentrations of PFAS, TRHs, BTEXN, PAHs, glycols, pesticides, herbicides and microbiological parameters were reported below the laboratory LOR across background/ambient and receiving environment locations; COPC concentrations are consistent across the background and receiving environment locations.

Nutrients and metals were reported below the applicable criteria however detections were reported for aluminium, arsenic, barium, cobalt, iron, manganese, nickel, zinc, phosphorus, ammonia, nitrate, TKN and total nitrogen in background/ambient and receiving environment locations. These constituents were comparable across background/ambient or receiving environment locations.

No exceedances were identified outside of those for pH, which is considered to be representative of background/ambient conditions and not influenced by mining operations, in the background/ambient or receiving environment locations.

1.2 Huntly

1.2.1 Historical Dataset

Surface water sampling locations across the Huntly mine site included in the historical dataset are shown on **Figure D3** (**Attachment A**). Refer to attached **Table D3** (**Attachment B**) for the comprehensive historical surface water analytical data screened against ADWG and PFAS NEMP criteria, and a statistical summary. An overview of the historical monitoring network across the Huntly mine site is provided in **Table 5**, below. A summary of key water quality parameters where exceedances were identified or where concentrations are consistently above the LOR is presented in **Table 6**.

Table 6 Huntly Mine Site – Historical Dataset Monitoring Program Summary

Purpose	Number of Sampling Locations	Sampling Date Range	Total Number of Samples Analysed at the Laboratory
Surface Water Body	13	3/7/2020 – 12/9/2024	23
Background / Ambient	128	3/8/2020 – 1/10/2024	420
Receiving Environment – General Mining	63	3/7/2020 – 1/10/2024	80
Receiving Environment – Source Area	33	24/6/2020 – 29/8/2024	232
Sump / On-Operational Area	221	22/12/2004 – 16/9/2024	1,571
Total	**458**	**22/12/2004 – 1/10/2024**	**2,326**

Table 7 Huntly Mine Site – Historical Water Quality Summary for Key Water Quality Indicators

Analyte	Unit	Surface Water Body	Background / Ambient	Receiving Environment – General Mining	Receiving Environment – Source Area	Sump / On-operational Area
pH	SU	6.34 (1)	4.4 – 8.27 (163)	6.12 – 7.07 (12)	5.7 – 6.63 (5)	6 – 10 (108)
Turbidity	NTU	0.3	0 – 90	0.2 – 30	1.02 – 3.05	--
Total Dissolved Solids	mg/L	124	1.29 – 1171 (1)	72 – 330 (0)	100 – 304 (0)	1.36 – 4200 (24)
Chloride	mg/L	77	14 – 789 (1)	27 – 182 (0)	31 – 138 (0)	7 – 38 (0)
Hardness (as $CaCO_3$)	mg/L	21 (0)	1 – 363 (1)	13 – 54 (0)	13 – 43 (0)	--
Calcium	mg/L	2	1 – 40	1 – 5	1 – 4	1 – 9
Magnesium	mg/L	4	1 – 64	2 – 10	2 – 8	1
Potassium	mg/L	1	1 – 6	1 – 3	1 – 2	1 – 7
Sodium	mg/L	37 (0)	13 – 390 (1)	18 – 93 (0)	24 – 72 (0)	4 – 23 (0)
Sulfate (as SO_4)	mg/L	6 (0)	1 – 517 (1)	5 – 19 (0)	5 – 11 (0)	1 – 4 (0)
Iron (filtered)	mg/L	0.06 (0)	0.005 – 0.23 (0)	0.05 – 1.64 (3)	--	--
Manganese (filtered)	mg/L	0.005 (0)	0.001 – 1.07 (10)	0.001 – 0.106 (1)	--	--
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.0002 – 0.0018 (0)	0.0002 – 0.0081 (0)	0.0002 – 0.0383 (2)	0.0002 – 0.0194 (0)	0.0001 – 0.1 (2)
Perfluorooctanesulfonic acid (PFOS)	µg/L	0.0001 – 0.0042 (1)	0.0001 – 0.0371 (4)	0.0001 – 0.0116 (3)	0.0001 – 0.027 (6)	0.0001 – 2.6 (18)
Perfluorooctanoic acid (PFOA)	µg/L	<0.0005 – <0.01 (0)	0.0002 – 0.01 (0)	0.0002 – 0.01 (0)	0.0002 – 0.01 (0)	0.0002 – 0.103 (0)
Sum of PFHxS and PFOS	µg/L	0.0002 – 0.0048 (0)	0.0002 – 0.0447 (0)	0.0001 – 0.0499 (0)	0.0001 – 0.0286 (0)	0.0001 – 2.6 (5)
Coliform,Thermotolerant	cfu/100mL	--	--	<1 – 52	--	--
ENTEROCOCCI	orgs/100mL	--	<1 – 3,100	<1 – 15	--	--
Escherichia Coli (E. Coli)	orgs/100mL	--	<1 – 2,300	<1 – 33	--	--

Table Notes:

-- indicates no data available for analyte.

Count of exceedances for each analyte where applicable criteria exist indicated in brackets after the concentration range.

The pH recorded at various surface water monitoring locations across the sub-catchments within the Huntly mine site ranges from mildly acidic to neutral (pH range: 4.4 to 8.3). The TDS of surface water in the background/ambient environment and downgradient of mining areas is considered fresh, and turbidity has been recorded up to 90 NTU in the background/ambient environment, noting that the mean turbidity from 324 background/ambient locations is ~2 NTU.

Where analysed, results for TRHs, BTEXN, SVOCs, chlorinated hydrocarbons, herbicides, and pesticides were all reported below the LOR and no exceedances were identified.

Exceedances of ADWG were reported for pH, TDS, chloride, sodium, sulfate, dissolved iron, dissolved manganese and various PFAS compounds within the Huntly mine area.

Exceedances of pH criteria were identified at all location types, with similar ranges observed for each monitoring purpose. TDS and pH values are generally consistent across the mine site and commensurate with background conditions. It is noted that there are localised areas of different geochemistry leading to higher pH and TDS which may be related to salinity impacts (i.e. where groundwater with higher salinity, as a result of clearing and/or mobilisation of salts from the soil zone, provides baseflow to a tributary).

PFAS above criteria has been detected in background / ambient locations and potable drinking water reservoirs. Concentrations are generally similar between background / ambient and receiving environment locations, downgradient from both general mining and PFAS source areas.

Escherichia coli (*E. coli*) and enterococci are used as the primary indicator of faecal contamination of drinking-water supplies (NHMRC & NRMMC, 2011). The Australian Drinking Water Guidelines (ADWG) suggest *E. coli* and enterococci should not be detected in any 100 mL sample of drinking water, whilst the World Health Organization (WHO) notes a zero count of *E. coli* per 100 mL of water is considered safe for drinking. Conversely, (Odonkor & Mahami, 2020) note a count of 1 to 10 MPN/100 mL is regarded as low risk for drinking water supplies, whilst a count of 11 to 100 MPN/100 mL is medium risk.

Elevated *Enterococci*, thermotolerant coliform and *E. Coli* were identified in background / ambient and receiving environment locations. No detections were reported for thermophilic amoeba. Concentrations of enterococci and *E.Coli* within background / ambient areas were two orders of magnitude higher than receiving environment locations, however only seven receiving environment samples have been analysed for microbiological parameters focussing on the Biomax wastewater treatment facilities, compared to approximately 180 background / ambient samples. The most elevated concentrations were identified at SN02 and SW02 which are located to the north of the Huntly mine site in the Myara North area. Results within Holyoake and Holyoake east were also among the most elevated. The reasons for elevated results were unspecified.

1.2.2 Round 1 WRMP Dataset – September 2024

This section discusses the surface water quality from the first round of surface water sampling that fulfills the surface water sampling obligations of the WRMP. Locations included in this dataset are shown on **Figure D4** (**Attachment A**).

Refer to attached **Table D4** (**Attachment A**) for the comprehensive WRMP surface water analytical data screened against ADWG and PFAS NEMP criteria, and a statistical summary. An overview of the WRMP monitoring network across the Huntly mine site is provided in **Table 7**, below. A summary of key water quality parameters where exceedances were identified or where concentrations are consistently above the LOR is presented in **Table 8**.

Table 8 Huntly Mine Site – WRMP Dataset Monitoring Program Summary

Purpose	Number of Sampling Locations	Sampling Date Range	Total Number of Samples Analysed at the Laboratory
Source Surface Water Body	1	3/09/2024	1
Background/Ambient Location	14	13/8/2024 – 1/10/2024	14
Receiving tributary downstream from Source Area	0	--	0
Receiving tributary downstream from General Mining Area	30	15/8/2024 – 1/10/2024	31
Sump	0	--	0
Total	**45**	**--**	**46**

Table 9 Huntly Mine Site – WRMP Water Quality Summary for Key Water Quality Indicators

Analyte	Unit	Source Surface Water Body	Background / Ambient Location	Receiving Environment – General Mining
pH	SU	6.34 (1)	6.2 – 7.02 (1)	6.12 – 7.07 (11)
Turbidity	NTU	0.3	0.4 – 6.5	0.2 – 30
TDS	mg/L	124	80 – 222 (0)	72 – 330 (0)
Chloride	mg/L	77	27 – 126(0)	27 – 182 (0)
Calcium	mg/L	2	1 – 3	1 – 5
Magnesium	mg/L	4	2 – 8	2 – 10
Potassium	mg/L	1	1 – 2	1 – 3
Sodium	mg/L	37 (0)	20 – 68 (0)	18 – 93 (0)
Sulfate (as SO_4)	mg/L	6 (0)	7 – 17 (0)	5 – 19 (0)
Iron (filtered)	mg/L	0.06 (0)	0.05 – 0.23 (0)	0.05 – 1.64 (3)
Manganese (filtered)	mg/L	0.005 (0)	0.001 – 0.013 (0)	0.001 – 0.106 (1)
Coliform,Thermotolerant	cfu/100ml	--	--	<1 – 52
ENTEROCOCCI	cfu/100ml	--	--	<1 – 15
Escherichia Coli (E. Coli)	cfu/100ml	--	--	<1 - 33

Table Notes:

-- indicates no data available for analyte.

Count of exceedances for each analyte where applicable criteria exist indicated in brackets after the concentration range.

Where analysed, results for TRHs, BTEXN, SVOCs, PAHs, herbicides, and pesticides were reported below the LOR.

Exceedances were identified for pH, dissolved iron and dissolved manganese. Exceedances for pH were consistent across each location purpose while metals exceedances were limited to receiving environment locations.

In addition to the exceedances identified above, detections below criteria were identified for aluminium, barium, boron, copper, nickel, zinc, phosphorus, ammonia nitrate, TKN and total nitrogen across background / ambient and receiving environment locations. Listed metals and ammonia was detected within the source surface water sample. Overall, the surface water metal concentrations are typical of 'natural' conditions and representative of the geological setting.

Minor detections for PFOS and 6:2 FTS were noted in background / ambient locations. PFOS was also detected within North Dandalup Dam. Minor PFAS detections below criteria in receiving environment locations were identified for PFBA, PFHxS, PFOS and PFPeA.

Microbial analysis was only undertaken on surface water samples in the vicinity of the Biomax facility, along tributaries classified as receiving environment locations. Detections of *Enterococci*, thermotolerant coliform and *E. Coli* were identified in receiving environment locations. No detections were reported for thermophilic amoeba. The analytical results for the WRMP receiving environment locations are lower than those reported for background / ambient samples in the historical dataset.

2 Groundwater

Groundwater monitoring bores have been installed across the Huntly and Willowdale mine sites for different internal Alcoa projects and for various purposes, not all of which are directly relevant to the WRMP. **Figure D5** and **D6** (**Attachment A**) show the historical groundwater monitoring bore locations that have been active and utilised over the past 10 years across the Huntly and Willowdale mine sites, respectively. The purpose of the various groundwater monitoring programs implemented at the mine sites include:

- Determine background/ambient groundwater quality conditions in various catchments;
- Evaluate contamination within the vicinity of operational areas (i.e., fuel storage areas), water treatment facilities and/or water storage dams;
- Assess groundwater quality downgradient of general mining areas;
- Assess groundwater / surface water interaction processes through groundwater hydraulic and water quality data;
- Confirm groundwater levels in the vicinity of active and proposed mine pits to evaluate potential waterlogging risks and to ensure mine pit levels are not within 2 m of the base of mining pits;
- Salinity monitoring; and
- Support specific research projects and closing knowledge gaps.

Groundwater monitoring programs have been developed to meet the requirements of existing agreements, compliance and licence monitoring requirements and/or operational requirements as detailed within **Section 3-1** of the WRMP.

To facilitate this review, groundwater sampling locations with a comprehensive water quality dataset over the past four years has been provided by Alcoa, and have been categorised according to the following monitoring purposes:

- Background / Ambient Location: bores located upgradient or away from mining activities or in areas where no mining has occurred or is planned.
- Discharge Zone Monitoring: bores located within general mining areas (i.e., outside operational areas).
- Existing Operational Areas: bores located within operational areas (i.e., adjacent to infrastructure such as conveyors, buildings and fuelling areas).
- Water Level Monitoring: bores which are only monitored for water level / elevation.

There are a number of groundwater monitoring bores that have been installed within existing and proposed mining areas which have been grouped as Discharge Zone Monitoring locations. These have been installed to allow an evaluation of groundwater quality prior to and during the 5-year mining program. This aligns with the proposed discharge zone monitoring category for proposed groundwater monitoring bores that forms part of the groundwater monitoring program in accordance with the WRMP (refer to **Section 3-1** of the WRMP).

Groundwater monitoring bores have not been installed for the proposed groundwater monitoring network that forms part of the WRMP requirements, (but they will be installed in 2024), albeit historical water quality data provides context around baseline groundwater quality. Hydrographs have been prepared for groundwater monitoring bores with both water quality and groundwater elevation data and are provided in **Attachment C**.

2.1 Willowdale

Groundwater monitoring bore locations included in this dataset are shown on **Figure D7** (**Attachment A**). Refer to attached **Table D5** (**Attachment B**) for the comprehensive historical groundwater analytical data screened against ADWG and PFAS NEMP criteria, and a statistical summary. An overview of the historical groundwater monitoring network across the Willowdale mine site is provided in **Table 9**, below. A summary of key water quality parameters where exceedances were identified or where concentrations are consistently above the LOR is presented in **Table 10**.

Table 10 Summary **Willowdale Mine Site – Historical Groundwater Monitoring Program**

Location Purpose	Number of Groundwater Monitoring Wells	Sample Date Range	Total Number of Samples Analysed at the Laboratory	Number of Monitoring Rounds
Discharge Zone Monitoring	98	21/11/2022 – 04/05/2023	176	3
Existing Operational Area	20	05/07/2022 – 13/7/2023	21	4
Water Level Monitoring Only (no water quality data)	0	--	--	--
Total	**118**	**05/07/2022 – 13/07/2023**	**197**	**--**

Table 11 Indicators **Willowdale Mine Site – Water Quality Summary for Key Water Quality**

Analyte	Unit	Discharge Zone Monitoring	Existing Operational Area
pH	SU	4.19 – 6.4 (162)	4.78 – 5.5 (3)
Electrical Conductivity	µS/cm	87.1 – 1368	100.7 – 204.2
Chloride	mg/L	15 – 200 (0)	18 – 35 (0)
Calcium	mg/L	0.5 – 45	1.5 – 2.2
Magnesium	mg/L	0.5 – 18	3.2 – 4.2
Potassium	mg/L	0.5 – 19	1.2 – 3.7
Sodium	mg/L	0.5 – 130 (0)	27 – 30 (0)
Sulfate (as SO_4)	mg/L	2.4 – 20 (0)	2 – 6.6 (0)
Phosphorus		0.04 – 25,000	0.17 - 40
Aluminium		<0.02	0.35 – 8.3
Manganese (total)	mg/L	--	0.013 – 0.22 (1)
Perfluorohexanesulfonic acid (PFHxS)	µg/L	--	0.0005 – 0.107 (4)
Perfluorooctanesulfonic acid (PFOS)	µg/L	--	0.0002 – 0.0642 (4)
Perfluorooctanoic acid (PFOA)	µg/L	--	0.0005 – 0.005 (0)

Analyte	Unit	Discharge Zone Monitoring	Existing Operational Area
Sum of PFHxS and PFOS	µg/L	--	0.0002 – 0.132 (4)
C10 – C36 Fraction (Sum)	µg/L	< 40 – 41,000	< 40 – 1100
>C10 – C40 Fraction (Sum)	µg/L	< 50 – 45,920	< 50 – 1240
Benzene	µg/L	1 – 6 (9)	< 1

High water quality variability between groundwater monitoring locations with the same purpose is observed across the mine site. This is likely due to the localised nature of some of the sub-catchments (i.e., there is not a regionally extensive hydraulically connected aquifer) and many of the monitoring bores are screened within different aquifer units. Additionally, there is water quality variation between the monitoring purposes, with elevated electrical conductivity, chloride, major ions and phosphorus observed in discharge monitoring locations.

Elevated hydrocarbons observed in Discharge Zone monitoring bores appear to be localised around the Larego Tank Farm and fuel storage areas.

PFAS exceedances have been recorded within the Arundel Operational Area, a known PFAS contaminated zone.

No data is available for background / ambient groundwater across the Willowdale mine site.

2.2 Huntly

Groundwater monitoring bore locations included in this dataset with water quality data are presented in **Figure D8** (**Attachment A**). Additional bores within the Huntly mine site that are only used for water level measurement are shown on **Figure D9** (**Attachment A**). These monitoring bores are utilised for validating that the groundwater level is deeper than 2 m below the base of proposed or active mining pits, or have been used for research purposes. Hydrographs for each bore where elevation data is available are presented in **Attachment C**.

Refer to attached **Table D6** (**Attachment B**) for the comprehensive historical groundwater analytical data screened against ADWG and PFAS NEMP criteria, and a statistical summary. An overview of the historical groundwater monitoring network across the Huntly mine site is provided in **Table 11**, below. A summary of key water quality parameters where exceedances were identified or where concentrations are consistently above the LOR is presented in **Table 12**.

Table 12 Huntly Mine Site - Historical Groundwater Monitoring Program Summary

Location Purpose	Number of Wells	Sample Date Range	Total Number of Samples Analysed at the Laboratory	Number of Monitoring Rounds
Background / Ambient	71	13/10/2020 – 03/04/2023	280	10
Discharge Zone Monitoring	314	13/10/2020 – 12/07/2023	697	10
Existing Operational Area	9	14/04/2023 – 12/07/2023	17	3
Water Level Monitoring Only (no water quality data)	351	01/01/2015 – 01/06/2023	--	95
Total	**674**		**714**	**--**

Table 13 Huntly Mine Site – Water Quality Summary for Key Water Quality Indicators

Analyte	Unit	Background / Ambient	Discharge Zone Monitoring	Existing Operational Area
pH	SU	4.25 – 11.08 (137)	3.08 – 7.7 (413)	4.67 – 5.68 (9)
TDS	mg/L	1.85 – 3705 (34)	108 – 274 (0)	78 – 550 (0)
Chloride	mg/L	22 – 1,530 (42)	13 – 1,000 (24)	11 – 257 (1)
Hardness (as $CaCO_3$)	mg/L	8 – 1,220 (40)	--	--
Calcium	mg/L	1 – 189	0.5 – 66	1 – 5
Magnesium	mg/L	1 – 181	1.2 – 90	1 – 14
Potassium	mg/L	1 – 19	0.5 – 84	1 – 4
Sodium	mg/L	11 – 959 (35)	7.3 – 770 (17)	11 – 119 (0)
Sulfate (as SO_4)	mg/L	1 – 253 (1)	1 – 150 (0)	5 – 28 (0)
Lead (filtered)	mg/L	< 0.0001 – 0.057 (4)	--	--
Manganese (filtered)	mg/L	< 0.001 – 2.52 (154)	--	--
Nickel (filtered)	mg/L	< 0.0005 – 0.051 (5)	--	--
Zinc (filtered)	mg/L	< 0.001 – 20.2 (3)	--	--
Ammonia	mg/L	< 0.01 – 0.28 (0)	< 0.02 – 2.1 (1)	< 0.02
Perfluorooctanesulfonic acid (PFOS)	µg/L	< 0.0002 – 0.0046 (1)	< 0.0002	< 0.0002 – 0.0008
C10 – C36 Fraction (Sum)	µg/L	< 50 – 6,260	< 40 – 19,260	< 40
>C10 – C40 Fraction (Sum)	µg/L	< 100 – 6,440	< 50 – 21,200	< 50
Benzene	µg/L	< 1 – 28 (1)	< 1 – 16 (6)	< 1

Where analysed, results for pesticides were below the LOR. Minor detections for some PAH compounds were noted in background / ambient locations within the Holyoake and Myara North areas, however no exceedances were reported. Benzene detections and exceedances were identified within background and discharge monitoring locations to the east of Myara near the edge of the gated area (discharge monitoring), south of Myara and within BH02 in the Holyoake area.

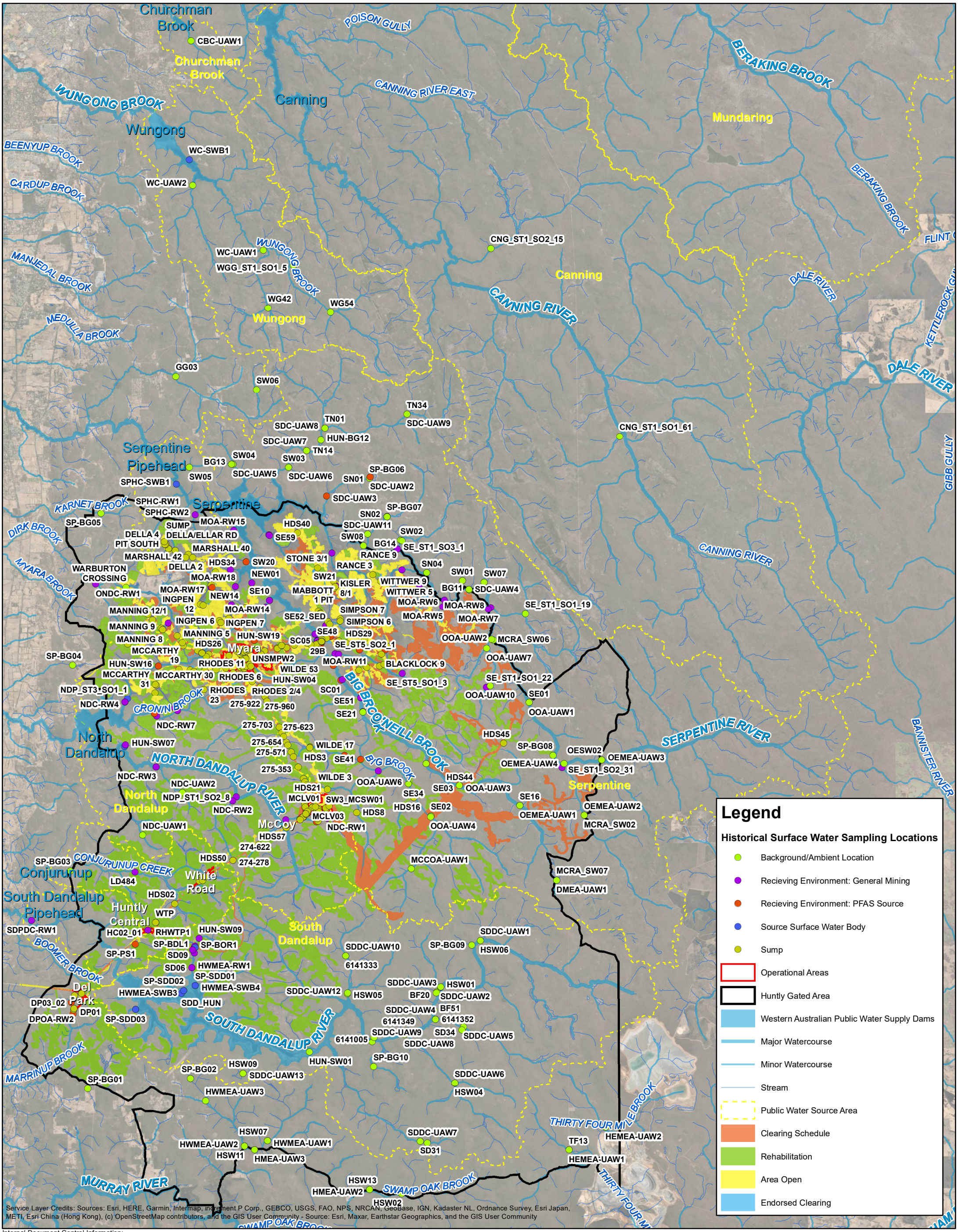
Background locations show a broader range of pH and TDS compared to those in operational areas and discharge monitoring locations. Elevated major ions, with exceedances of criteria for sodium were identified in both background/ambient and discharge zone monitoring locations.

Elevated metals concentrations were identified in background/ambient locations with exceedances for lead, manganese, nickel and zinc. No metals data is available for discharge zone or existing operational area monitoring locations.

A single exceedance for ammonia was reported within discharge zone monitoring bore L4213-8A which is located to the east of the Myara Operational Area, near the boundary of the gated area. Ammonia results for background/ambient and operational areas were all below criteria, with concentrations from locations within operational areas below detection.

Detections and a single exceedance for PFOS were identified within background/ambient locations while concentrations at discharge zone monitoring locations were all below detection, and minor detections were identified at operational area locations.

Elevated hydrocarbon concentrations were identified within discharge zone monitoring locations to the east of the Myara Operational Area and to a lesser degree in background location BH05 within the Holyoake expansion area, along the South Dandalup River.



Legend

Historical Surface Water Sampling Locations

- Background/Ambient Location
- Recieving Environment: General Mining
- Recieving Environment: PFAS Source
- Source Surface Water Body
- Sump
- Operational Areas
- Huntly Gated Area
- Western Australian Public Water Supply Dams
- Major Watercourse
- Minor Watercourse
- Stream
- Public Water Source Area
- Clearing Schedule
- Rehabilitation
- Area Open
- Endorsed Clearing

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Historical Surface Water Monitoring Locations (Huntly)

0 2.5 5 10 15 20 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

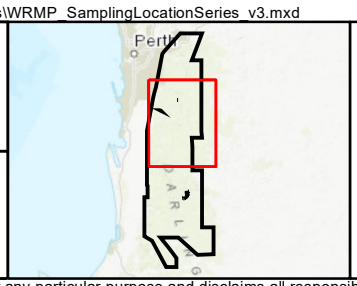
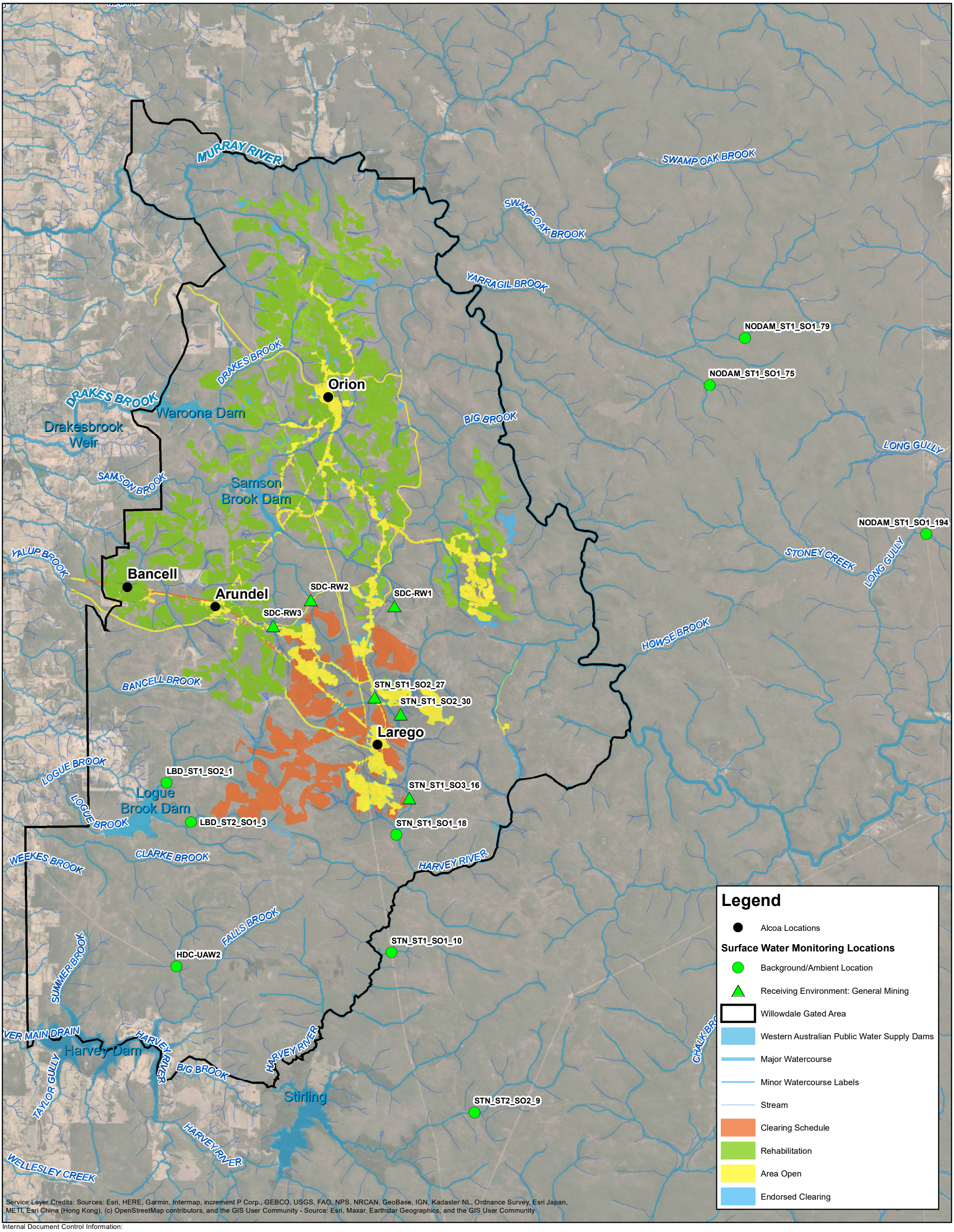


FIGURE D1

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:190,740
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 26/11/24 9:52:48 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

First Round Surface Water Monitoring Locations Implemented as Part of WRMP (Willowdale)

0 1.75 3.5 7 10.5 14 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

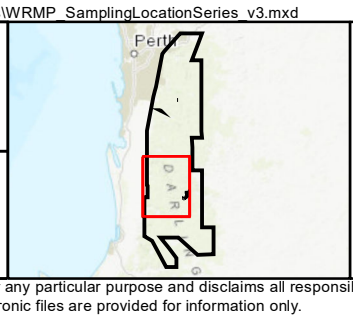
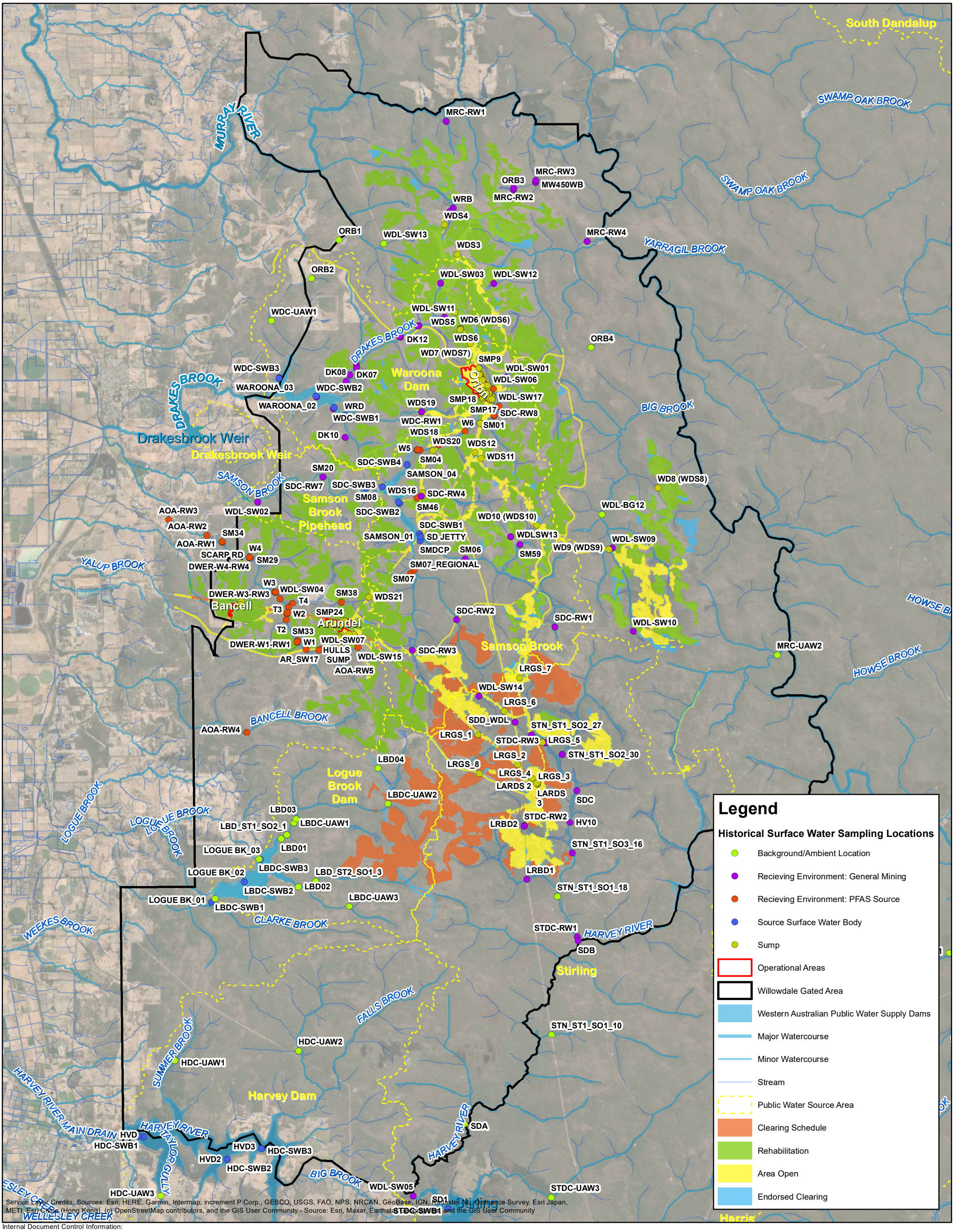


FIGURE 8

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:133,250
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Historical Surface Water Monitoring Locations (Willowdale)

0 1.5 3 6 9 12 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan:
Water Resources Management Plan
Sampling Program

EHS Support

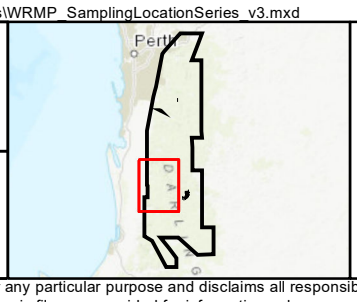
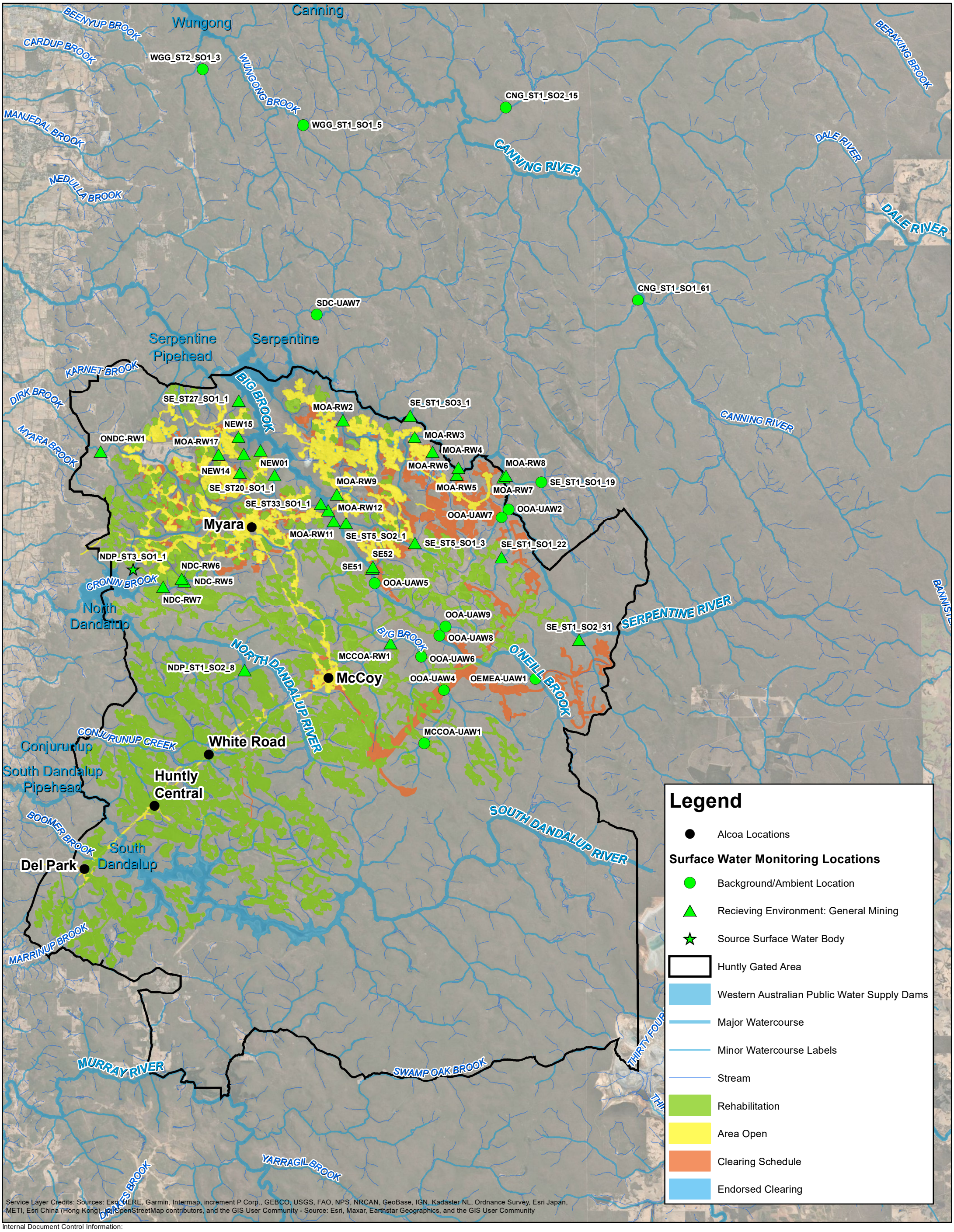


FIGURE D3

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:113,200
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), © OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 15/11/24 12:31:05 PM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

First Round Surface Water Monitoring Locations Implemented as Part of WRMP (Huntly)

0 2.5 5 10 15 20 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

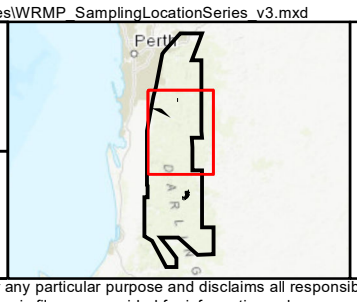


FIGURE 6

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:184,940
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

Active and/or Historical Groundwater Monitoring Locations (Huntly)

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

Legend

Purpose

- Big Brook Crossing
- FCA2022
- FCA2023A
- FCA2023B/24A
- FCA2024B
- Hedges Mine Bores
- Historical (Active)
- MYN (00094) Kisler Facilities
- Oneil Haul Road
- PFAS Inves
- Part IV approvals
- Pit Specific
- Operational Areas
- Huntly Gated Area
- Western Australian Public Water Supply Dams
- Major Watercourse
- Minor Watercourse
- Stream
- Public Water Source Area
- Clearing Schedule
- Rehabilitation
- Area Open
- Endorsed Clearing

0 2.5 5 10 15 20 Kilometers

1 cm = 2 km [Page Size: A3]

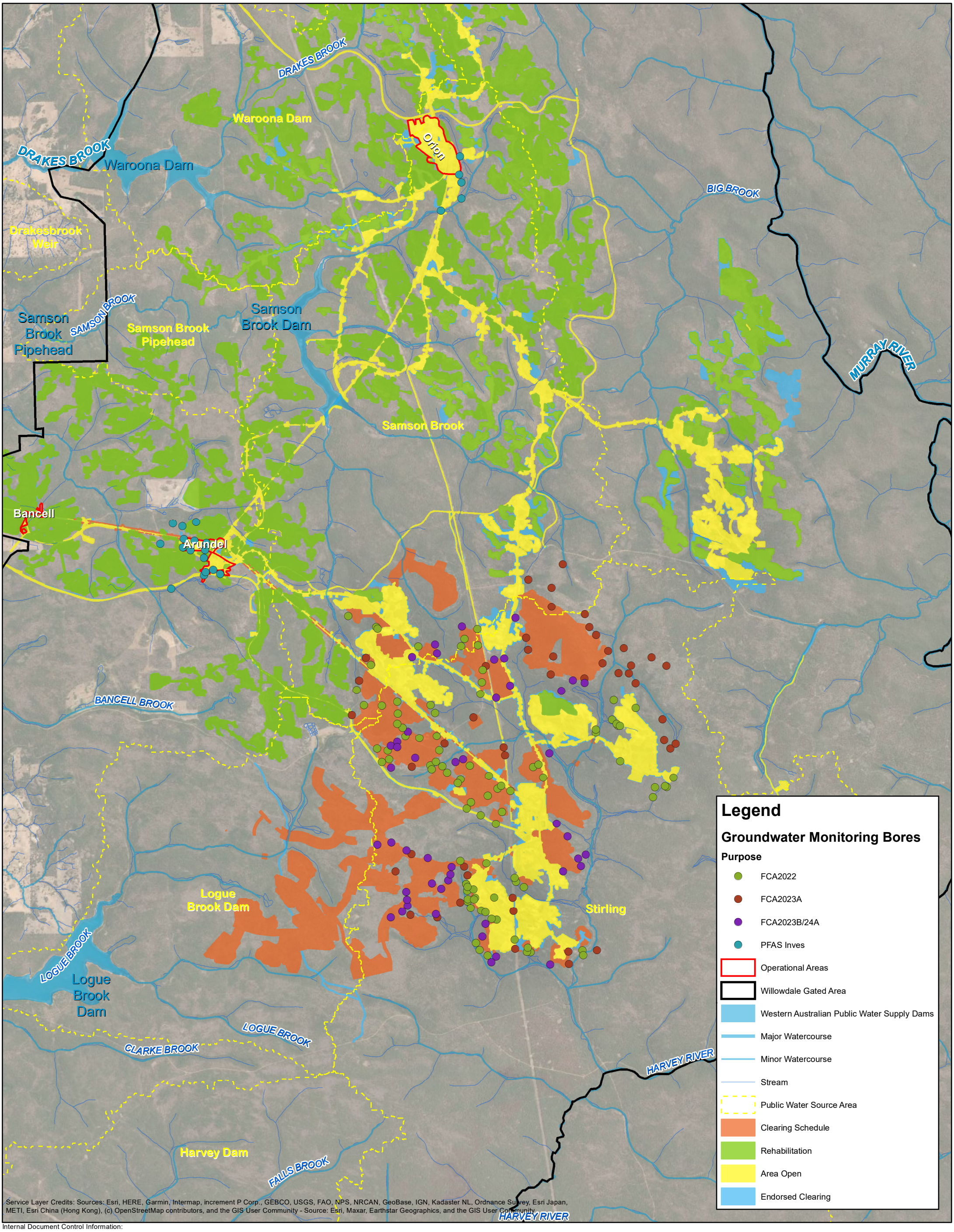
FIGURE D5	
CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:185,210
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Active and/or Historical Groundwater Monitoring Locations (Willowdale)

0 0.75 1.5 3 4.5 6 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

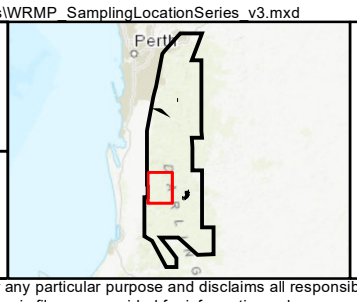
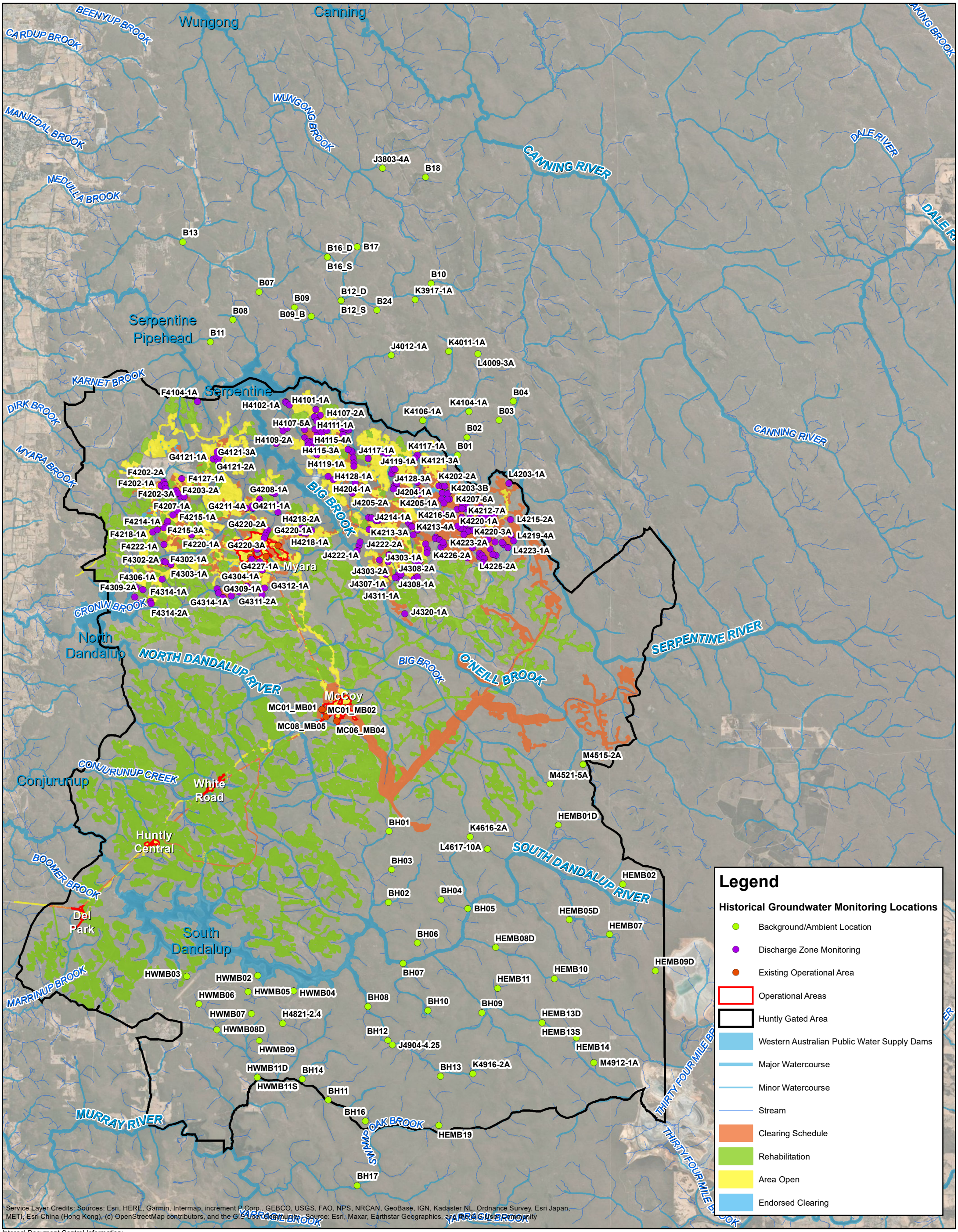


FIGURE D6

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:68,040
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Historical Groundwater Monitoring Locations with Water Quality Data (Huntly)

0 2.25 4.5 9 13.5 18 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan:
Water Resources Management Plan
Sampling Program

EHS Support

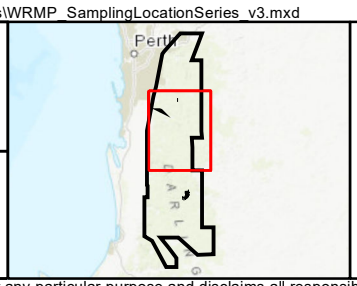
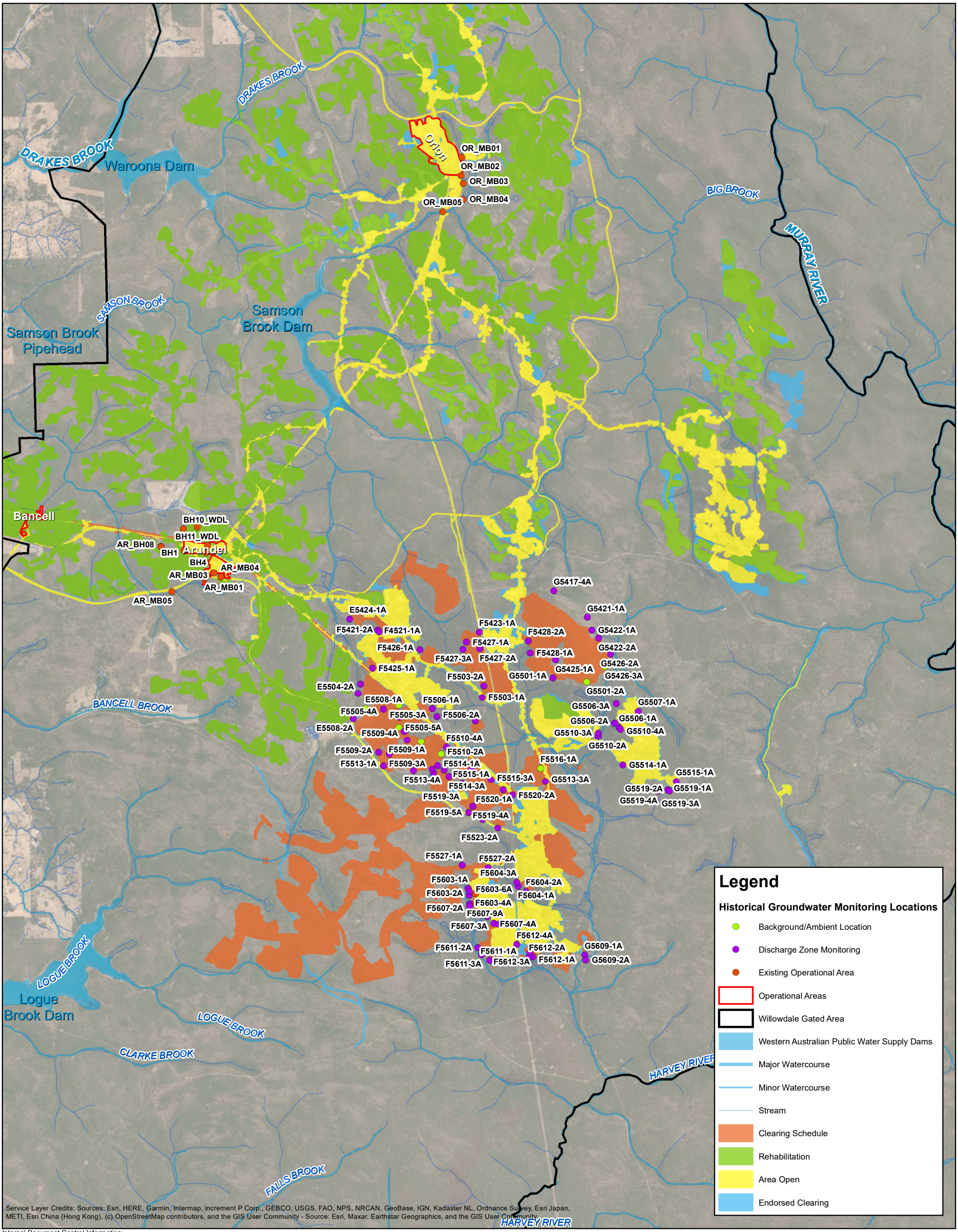


FIGURE D7

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:175,780
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Historical Groundwater Monitoring Locations with Water Quality Data (Willowdale)

0 0.75 1.5 3 4.5 6 Kilometers

1 cm = 1 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

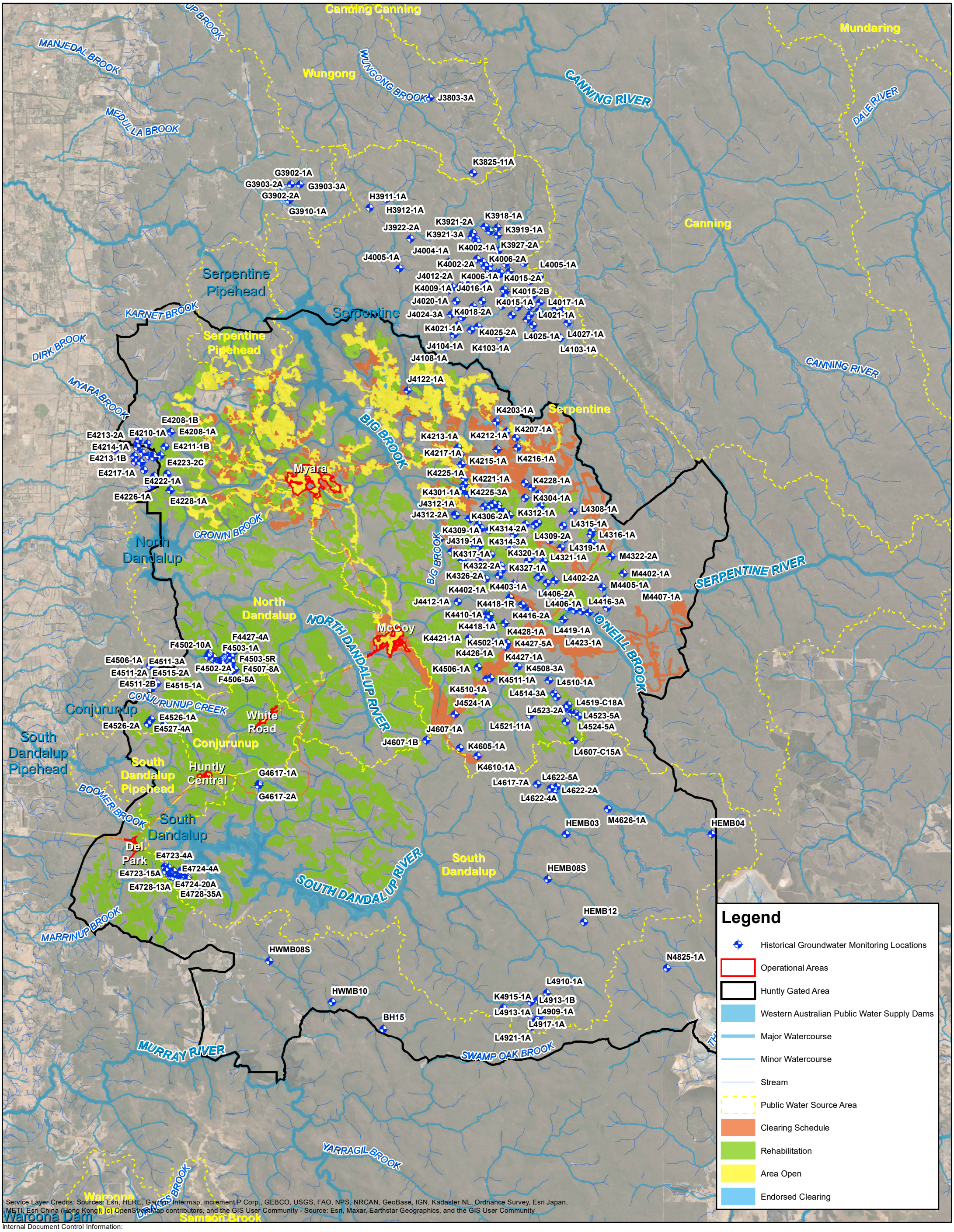
EHS Support

FIGURE D8

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:68,040
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community - Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Internal Document Control Information:
User Name: Danny.Barnes; Date and Time Printed: 04/12/24 9:33:43 AM; Document Path: J:\EHSS_GIS\AUSC04709_AlcoaWA_Mines\01_ANALYSIS\20241031_WRMP_SamplingLocationSeries\WRMP_SamplingLocationSeries_v3.mxd

Historical Groundwater Monitoring Locations with Groundwater Elevation Data Only (Huntly)

0 2.25 4.5 9 13.5 18 Kilometers

1 cm = 2 km [Page Size: A3]

Sampling and Analysis Quality Plan: Water Resources Management Plan Sampling Program

EHS Support

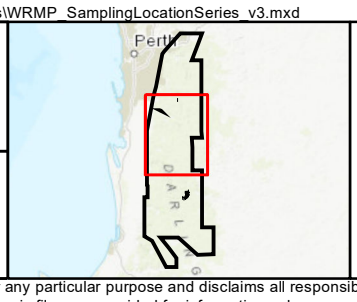


FIGURE D9

CREATED BY:	D. Barnes
APPROVED BY:	R. Fraser
PROJECT REF. NO:	PTY.05654
MAP PROJECTION:	Transverse Mercator
GRID/DATUM:	GDA2020 MGA Zone 50
SCALE:	1:175,220
AERIAL IMAGE SOURCE:	ESRI Basemap

N

Whilst every care is taken by EHS Support to ensure the accuracy of the digital data, EHS Support makes no representation or warranties about its accuracy, reliability, completeness, suitability for any particular purpose and disclaims all responsibility and liability (including without limitation, liability in negligence for any expenses, losses, damages (including indirect or consequential damage) and costs which may be incurred as a result of data being inaccurate in anyway for any reason. Electronic files are provided for information only.

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY									HERBI							
Analyte							Dissolved Oxygen	DO %	Oxidation-Reduction Potential	pH (Field)	Temperature	Conductivity	Electrical Conductivity @ 25°C	Fluoride	Methylene Blue Active Substances	Oil & Grease, Total Rec	pH Value	Total Dissolved Solids (Residue, Filterable)	Total Suspended Solids	Turbidity	2,4 Db	2,4,5-T (Trichlorophenoxyacetic Acid)	2,4-D (Dichlorophenoxyacetic Acid)	2,4,6-T	2,6-D	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba
Fraction							T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																											
Minimum							7.24	86.5	36.9	5.5	9.6	80.8	148	< 0.1	0.05	1	5.87	47	5	-1.47	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Maximum							11.21	105.6	271.7	8.84	16.1	227.6	253	< 0.1	0.1	5	7.5	204	15	10.77	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mean							9.9	97.1	148.1	6.8	13.1	153.9	182	--	0.06	2	6.79	108	5	1.5	--	--	--	--	--	--	--	--
Median							10.17	97.2	140	6.8	13.3	152.7	170	--	0.05	1	7	106	5	0.3	--	--	--	--	--	--	--	--
Sample Count							40	34	40	53	40	40	11	6	29	26	43	71	37	45	11	11	11	11	11	11	11	11
Detect Count							40	34	40	53	40	40	11	0	12	8	43	71	3	45	0	0	0	0	0	0	0	0
Percentage of samples analysed							5.8%	4.9%	5.8%	7.6%	5.8%	5.8%	1.6%	0.9%	4.2%	3.8%	6.2%	10.2%	5.3%	6.5%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Screening Criteria																												
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																												
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																												
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																												
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																												
NHMRC ADWG 2015 Health														**1.5**								**100**	**30**			**2000**	**100**
NHMRC ADWG 2015 Health Exceed Count														*0*								*0*	*0*			*0*	*0*
NHMRC ADWG 2015 Aesthetic							**85**			**6.5 - 8.5**							**6.5 - 8.5**	**600**		**5000**								
NHMRC ADWG 2015 Aesthetic Exceed Count							*0*			*21*							*14*	*0*		*0*								
Unit							mg/L	%	mV	SU	deg c	us/cm	us/cm	mg/L	mg/L	mg/L	SU	mg/L	mg/L	NTU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																						
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	LR SP	LR SP	22/11/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	LIZARD RD STANDPIPE	Lizard Rd standpipe	23/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	LIZARD RD STANDPIPE	Lizard Rd standpipe	23/01/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1 DUP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP DUP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASP	ASP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASP	ASP DUP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	WORKSHOP DRAIN	Workshop Drain	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASP	ASP	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	1 LS1 SUMP	1 LS1 Sump	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	2 LS6 SUMP	2 LS6 Sump	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	3 LS6 INFLOW	3 LS6 Inflow	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	5 LS12A INFLOW	5 LS12A Inflow	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	6 LS12A SUMP	6 LS12A Sump	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	18/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	29/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	GH DI WATER	GH DI Water	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	GH TAP	GH Tap	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	GH WATER BOTTLE	GH Water Bottle	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	ORION RAW WATER	Orion Raw water	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS1	OS1	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON CAUSEWAY	Samson Causeway	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON PUMP HOUSE	Samson Pump House	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	GHB	GHB	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	HV10	HV10	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM06	SM06	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM07	SM07	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	17/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	20/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	20/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	24/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	24/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	24/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	COPPERHEAD4_ORION	Copperhead 4	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																						HERBI
WILLOWDALE	WAROONADAM	Sump	Other	COPPERHEAD4_ORION	Copperhead 4	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	GREENHOUSE B INSITU	Greenhouse B Insitu	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2 DUP	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4 DUP	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	WORKSHOP DET	Workshop Det	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	CHP4DA	CHP4DA	18/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	CHP4DB	CHP4DB	18/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	CHP4DC	CHP4DC	18/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	CHP4DD	CHP4DD	18/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	10/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	10/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	9/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	9/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	9/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	9/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	5/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	COPPERHEAD4_ORION	Copperhead 4	16/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	BKG/Ambient Location	Other	ORB2	ORB2	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	SM05	SM05	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM06	SM06	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM07_REGIONAL	SM07	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	HV10	HV10	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD	HVD	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD	HVD	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD01	LBD1	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD02	LBD2	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD03	LBD3	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD1	LRB1	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD2	LRB2	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	Other	SDA	SDA	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDB	SDB	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDD_WDL	SDD	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	SAMSON	SAMSON	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP23	SMP23	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP24	SMP24	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP25	SMP25	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP26	SMP26	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP27	SMP27	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	BCD1	BCD1	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	BCD2	BCD2	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS1_HOTSPOT	OS1	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2_HOTSPOT	OS2	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3_HOTSPOT	OS3	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4_HOTSPOT	OS4	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP10	SMP10	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP11	SMP11	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP12	SMP12	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP13	SMP13	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP14	SMP14	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP15	SMP15	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP16	SMP16	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	SMP17	SMP17	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP18	SMP18	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	SMP19	SMP19	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																						HERBI
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP9	SMP9	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	ORB3	ORB3	7/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	ORB4	ORB4	7/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WRB	WRB	7/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK08	DK08	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	MW450WB	MW450B	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	ND1	ND1	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVEROUTAREA	Sump	Other	WDS3	WDS3	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVEROUTAREA	Sump	Other	WDS4	WDS4	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WD6 (WDS6)	WD6 (WDS6)	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WD7 (WDS7)	WD7 (WDS7)	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WD10 (WDS10)	WDS10	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	OUTSAMSONDAM	Sump	Other	WD8 (WDS8)	WDS8	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	OUTSAMSONDAM	Sump	Other	WD9 (WDS9)	WDS9	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS11	WDS11	10/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS12	WDS12	10/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW14	WDS14	10/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS16	WDS16	11/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WDS19	WDS19	11/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	WDS20	WDS20	11/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	WDS21	WDS21	14/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	22/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	22/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	22/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	17/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	17/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	17/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	17/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	14/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	7/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	12/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	14/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	19/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	24/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ABS 3	ABS3	26/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	26/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	27/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	30/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	30/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	30/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	4/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	4/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	6/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	9/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	12/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2 DUP	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD01	LBD01	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD02	LBD02	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD03	LBD03	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD04	LBD04	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_01	LOGUE BK_01	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_02	LOGUE BK_02	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_03	LOGUE BK_03	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	WDL-BG12	BG12	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK08	DK08	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																					HERBI
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK10	DK10	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_01	SAMSON_01	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_02	SAMSON_02	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_03	SAMSON_03	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM03	SM03	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM06	SM06	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM46	SM46	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM53	SM53	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM59	SM59	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SMDCP	SMDCP	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK07	DK07	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK12	DK12	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	ORB1	ORB1	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	BKG/Ambient Location	Other	ORB2	ORB2	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SM20	SM20	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_01	WAROONA_01	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_02	WAROONA_02	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_03	WAROONA_03	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Source SW Body	Other	WRD	WRD	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	HV10	HV10	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD1	LRB1	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD2	LRB2	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDB	SDB	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDC	SDC	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDD_WDL	SDD	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW10	SW10	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW14	SW14	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW01	SW01	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	WDL-SW03	SW03	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WDS6	WDS6	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WRB	WRB	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM01	SM01	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM29	SM29	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM33	SM33	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM38	SM38	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW04	SW04	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	WDL-SW06	SW06	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW07	SW07	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW09	SW09	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	OUTSAMSONDAM	Sump	Other	WD9 (WDS9)	WDS9	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	MW450WB	M450W	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	ORB3	ORB3	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	ORB4	ORB4	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_1	LRGS_1	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_2	LRGS_2	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_3	LRGS_3	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_4	LRGS_4	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_5	LRGS_5	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_6	LRGS_6	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_7	LRGS_7	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_8	LRGS_8	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS18	WDS18	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SM08	SM08	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW02	SW02	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	WDL-SW11	SW11	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW12	SW12	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDLSW13	SW13	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD1	HVD1	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD2	HVD2	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD3	HVD3	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	Other	SD1	SD1	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	Other	SD2	SD2	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	Other	SD3	SD3	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	Other	SDA	SDA	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	WDL-SW05	SW05	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																					HERBI
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	19/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	19/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	19/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	16/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	16/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	16/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	16/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	16/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	16/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK07	DK07	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_01	WAROONA_01	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_02	WAROONA_02	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_03	WAROONA_03	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD1	HVD1	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD2	HVD2	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD3	HVD3	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD01	LBD01	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD02	LBD02	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD03	LBD03	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_01	LOGUE BK_01	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_02	LOGUE BK_02	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_03	LOGUE BK_03	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	Other	SD1	SD1	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	Other	SD2	SD2	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	Other	SD3	SD3	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	Other	SDA	SDA	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	WDL-SW05	SW05	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS1	2/06/2022	--	--	--	--	--	--	--	--	0.09	< 1	7.1	87	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS1	3/06/2022	--	--	--	--	--	--	--	--	0.05	< 1	7.4	89	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS2	8/06/2022	--	--	--	7	--	--	--	--	< 0.05	< 5	7	89	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS3	8/06/2022	--	--	--	6.3	--	--	--	--	< 0.05	< 5	6.8	47	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	BONEYARD SUMP	Boneyard sump	9/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	9/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK12	DK12	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	MW450WB	M450B	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	ORB3	ORB3	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	WDL-SW03	SW03	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW12	SW12	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	WDL-SW13	SW13	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WDS5	WDS5	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WDS6	WDS6	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WRB	WRB	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM01	SM01	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM03	SM03	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM53	SM53	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW01	SW01	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	WDL-SW06	SW06	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	WDL-SW17	SW17	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS18	WDS18	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK08	DK08	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_01	SAMSON_01	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_02	SAMSON_02	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																						HERBI
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_03	SAMSON_03	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_04	SAMSON_04	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SM08	SM08	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM46	SM46	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SMDCP	SMDCP	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW1	ASW1	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM29	SM29	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM33	SM33	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM34	SM34	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM38	SM38	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW04	SW04	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW07	SW07	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW15	SW15	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS1	23/06/2022	--	--	--	6.8	--	--	--	--	< 0.05	< 1	7.3	87	< 5	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	23/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	1/07/2022	--	--	--	--	--	--	--	--	0.08	< 1	7	85	< 5	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	1/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	1/07/2022	--	--	--	--	--	--	--	--	0.08	< 1	7.1	73	< 5	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	1/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	DISCHARGE	Discharge	5/07/2022	8.07	--	147.7	--	13.2	123.8	--	--	--	--	5.89	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PTD-001	PTD-001	5/07/2022	9.39	--	53.3	--	12.1	100.9	--	--	--	--	6.84	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PTD-002	PTD-002	5/07/2022	7.24	--	36.9	--	13.5	80.8	--	--	--	--	7.02	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	T2	T2	5/07/2022	8.75	--	122.5	--	13.3	122.5	--	--	--	--	5.87	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	T3	T3	5/07/2022	8.73	--	151.3	--	11.9	120.1	--	--	--	--	6.19	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	T4	T4	5/07/2022	7.6	--	153.3	--	12	163.3	--	--	--	--	6.27	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	WDL-BG12	BG12	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	HV10	HV10	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD04	LBD04	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDB	SDB	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDD_WDL	SDD	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM06	SM06	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM59	SM59	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW09	SW09	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW10	SW10	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	OUTSAMSONDAM	Sump	Other	WD9 (WDS9)	WDS9	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD1	LRBD1	12/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD2	LRBD2	12/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS1	18/07/2022	--	--	--	--	--	--	--	--	0.08	< 1	7	84	< 5	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	18/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1 Retest	18/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS2	29/07/2022	--	--	--	--	--	--	--	--	< 0.05	< 1	7	73	< 5	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	Unknown	Unknown	Other	LAREGO OFFTAKE	Laregp Offtake	1/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	10/08/2022	--	--	--	--	--	--	--	--	0.09	< 1	6.9	70	< 5	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump WA	15/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump WB	15/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																						HERBI
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	17/01/2023	--	--	--	6.98	--	--	--	--	< 0.05	< 1	7.2	96	< 5	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	17/01/2023	--	--	--	7.26	--	--	--	--	< 0.05	< 1	7.2	100	< 5	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	17/01/2023	--	--	--	7.46	--	--	--	--	< 0.05	1.7	7.3	120	< 5	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	31/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	31/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	8/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	20/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	20/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	3/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	3/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD	3/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD	3/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PFFWa	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PFFWb	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PPFW1a	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PPFW1b	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PPFW2a	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PPFW2b	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	12/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD Jetty	14/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2 DUP	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1 DUP	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2 DUP	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD Jetty	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	26/04/2023	--	--	--	6.77	--	--	--	--	0.05	< 1	6.9	140	15	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	QC2A	QC2A	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	QC3	QC3	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	QC4	QC4	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	W1	W1	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	W2	W2	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	W3	W3	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	W4	W4	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	W5	W5	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	W6	W6	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	372 SAMPSON BK	372 Sampson Bk:Culver	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	MCKNOWS BROOK	McKnows brook	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SCARP RD	Scarp Rd	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SCOUT CAMP	Scout Camp	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW2	ASW2	15/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW1	ASW1	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS1	OS1	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP10	SMP10	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP11	SMP11	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP13	SMP13	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP16	SMP16	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	SMP17	SMP17	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP23	SMP23	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP9	SMP9	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4 DUP	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1 DUP	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2 DUP	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AR04_SW04	AR_SW04	18/05/2023	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AR07_SW08	AR_SW08	18/05/2023	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AR08_SW09	AR_SW09	18/05/2023	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AR08_SW10	AR_SW10	18/05/2023	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AR09_SD13_SW16	AR_SW16	18/05/2023	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																					HERBI
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	23/05/2023	--	--	--	5.5	--	--	--	--	0.08	3.9	7.3	130	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ABS 2	ABS 2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ABS 3	ABS 3	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASP	ASP	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW1	ASW1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW2	ASW2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP23	SMP23	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP24	SMP24	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP25	SMP25	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP26	SMP26	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	9/06/2023	--	--	--	7.3	--	--	--	--	0.08	1.7	7.1	130	9	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	9/06/2023	--	--	--	7	--	--	--	--	0.06	3.2	7.5	130	7	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	20/06/2023	--	--	--	7.1	--	--	--	--	0.06	< 1	7.4	110	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	AR_SW17	AR_SW17	13/07/2023	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	13/07/2023	--	--	--	7.37	--	--	--	--	< 0.05	1.3	7.1	95	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	21/07/2023	--	--	--	7.34	--	--	--	--	< 0.05	1.4	7.3	91	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	3/08/2023	--	--	--	7.16	--	--	--	--	< 0.05	< 1	6.9	91	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	3/08/2023	--	--	--	7.22	--	--	--	--	< 0.05	< 1	7	79	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW4	AOA-RW4	21/08/2023	9.94	93.7	91.4	6.82	12.7	141.7	--	--	--	--	--	120	--	2.51	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W1-RW1	DWER-W1-RW1	21/08/2023	9.97	97.3	113.7	6.02	14.2	156.4	--	--	--	--	--	102	--	-1.47	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W3-RW3	DWER-W3-RW3	21/08/2023	9.98	97.1	171.2	6.14	14.1	166.6	--	--	--	--	--	108	--	0.38	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W4-RW4	DWER-W4-RW4	21/08/2023	10.2	97.8	125	6.26	13.4	169.8	--	--	--	--	--	110	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-SWB1	LBDC-SWB1	21/08/2023	10.8	105.6	206.6	8.03	14.3	158.1	--	--	--	--	--	129	--	2.04	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-SWB3	LBDC-SWB3	21/08/2023	10.34	105.1	110	7.75	16.1	168.1	--	--	--	--	--	132	--	4.31	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW3	SDC-RW3	21/08/2023	9.99	97.2	142.5	5.87	14.1	156.6	--	--	--	--	--	102	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW1	STDC-RW1	21/08/2023	10.21	96.9	137.4	7.23	13	136.6	--	--	--	--	--	115	--	0.25	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW2	STDC-RW2	21/08/2023	9.65	94.5	131.4	6.57	14.4	115.2	--	--	--	--	--	94	--	1.25	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW3	STDC-RW3	21/08/2023	9.96	99.5	89.5	6.86	15.3	145.2	--	--	--	--	--	116	--	0.3	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW3	MRC-RW3	22/08/2023	10.78	97.4	102.6	7.27	10.8	118.9	--	--	--	--	--	106	--	6.05	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW4	MRC-RW4	22/08/2023	11.21	98.5	45.8	8.1	9.6	126.1	--	--	--	--	--	116	--	1.31	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	AREMP	MRC-UAW1	MRC-UAW1	22/08/2023	10.97	98.7	168.2	7.65	10.6	227.6	--	--	--	--	--	204	--	0.12	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	AREMP	MRC-UAW2	MRC-UAW2	22/08/2023	10.97	100.6	119	7.91	11.4	195.5	--	--	--	--	--	172	--	0.19	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-RW2	WDC-RW2	22/08/2023	10.14	96.9	204.2	5.82	13.3	163.8	--	--	--	--	--	107	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB1	WDC-SWB1	22/08/2023	10.26	99.6	117.8	6.86	14	216.7	--	--	--	--	--	141	--	10.59	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB2	WDC-SWB2	22/08/2023	10.33	98.1	183.3	6.94	13	215.1	--	--	--	--	--	140	--	6.28	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB3	WDC-SWB3	22/08/2023	10.25	95.1	202.2	6.74	12	214.7	--	--	--	--	--	140	--	6.38	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	BKG/Ambient Location	AREMP	WDC-UAW1	WDC-UAW1	22/08/2023	9.37	91	145.9	5.61	14	174.1	--	--	--	--	--	113	--	1.29	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW1	AOA-RW1	23/08/2023	10.43	102.6	93	6.23	14.6	182.8	--	--	--	--	--	119	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW2	AOA-RW2	23/08/2023	10.33	100.1	79.9	6.25	13.9	191.1	--	--	--	--	--	124	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW3	AOA-RW3	23/08/2023	10.38	105.2	112.2	6.5	16	196.9	--	--	--	--	--	128	--	0.43	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	DWER-W5-RW5	DWER-W5-RW5	23/08/2023	10.2	96.3	208.4	5.85	12.7	133.1	--	--	--	--	--	113	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	DWER-W6-RW6	DWER-W6-RW6	23/08/2023	9.69	94.1	211.9	5.71	14	135	--	--	--	--	--	111	--	0.95	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	AREMP	HDC-UAW1	HDC-UAW1	23/08/2023	10.49	98.4	188	6.86	12.4	201.9	--	--	--	--	--	173	--	6.65	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	WRMP	HDC-UAW2	HDC-UAW2	23/08/2023	10.11	93.7	254.9	6.61	11.9	130.3	--	--	--	--	--	113	--	-0.33	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW1	LBDC-UAW1	23/08/2023	9.98	92.8	212.4	5.84	12.1	123.2	--	--	--	--	--	106	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW2	LBDC-UAW2	23/08/2023	10.19	94.8	219.5	5.74	12.1	104.1	--	--	--	--	--	90	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW1	MRC-RW1	23/08/2023	10.63	102	109.1	6.57	13.5	127.2	--	--	--	--	--	83	--	2.86	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW2	MRC-RW2	23/08/2023	9.24	89.3	123	5.89	13.8	130.1	--	--	--	--	--	85	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW1	SDC-RW1	23/08/2023	8.96	86.5	256.3	5.55	13.7	152.3	--	--	--	--	--	126	--	10.77	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW2	SDC-RW2	23/08/2023	10.22	94.4	217.6	5.81	11.8	153	--	--	--	--	--	134	--	0.04	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	AREMP	SDC-RW4	SDC-RW4	23/08/2023	9.95	94.6	271.7	6.01	13.1	146.2	--	--	--	--	--	123	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	SDC-RW8	SDC-RW8	23/08/2023	10.23	95.6	93.8	6.13	12.3	170.2	--	--	--	--	--	111	--	0	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	29/08/2023	--	--	--	8.84	--	--	--	--	< 0.05	1.7	6.8	84	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	29/08/2023	--	--	--	8.62	--	--	--	--	< 0.05	< 1	7	81	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	13/09/2023	--	--	--	7.15	--	--	--	--	< 0.05	< 1	7	76	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	21/11/2023	--	--	--	7.2	--	--	--	--	0.08	1.9	7.4	120	< 5	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW1	MRC-RW1	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW2	MRC-RW2	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW3	MRC-RW3	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW4	MRC-RW4	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	DWER-W5-RW5	DWER-W5-RW5	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	DWER-W6-RW6	DWER-W6-RW6	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	SDC-RW8	SDC-RW8	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-RW1	WDC-RW1	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB1	WDC-SWB1	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB2	WDC-SWB2	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB3	WDC-SWB3	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	BKG/Ambient Location	AREMP	WDC-UAW1	WDC-UAW1	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW1	AOA-RW1	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW2	AOA-RW2	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY														HERBI							
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW3	AOA-RW3	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW5	AOA-RW5	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W1-RW1	DWER-W1-RW1	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W2-RW2	DWER-W2-RW2	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W3-RW3	DWER-W3-RW3	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W4-RW4	DWER-W4-RW4	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW1	SDC-RW1	19/09/2024	--	--	--	--	--	--	166	--	--	--	6.32	84	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW2	SDC-RW2	19/09/2024	--	--	--	--	--	--	189	--	--	--	6.35	100	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW3	SDC-RW3	19/09/2024	--	--	--	--	--	--	148	--	--	--	6.42	80	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO2_27	STN_ST1_SO2_27	19/09/2024	--	--	--	--	--	--	160	--	--	--	6.59	84	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	AREMP	SDC-RW4	SDC-RW4	19/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW3	STDC-RW3	19/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-RW2	WDC-RW2	19/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW4	AOA-RW4	20/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW2	STDC-RW2	20/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	WRMP	LBD_ST1_SO2_1	LBD_ST1_SO2_1	24/09/2024	--	--	--	--	--	--	160	--	--	--	6.14	85	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	WRMP	LBD_ST2_SO1_3	LBD_ST2_SO1_3	24/09/2024	--	--	--	--	--	--	170	--	< 0.1	--	6.15	95	< 5	0.1	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-SWB1	LBDC-SWB1	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	AREMP	LBDC-SWB2	LBDC-SWB2	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-SWB3	LBDC-SWB3	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW1	LBDC-UAW1	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW2	LBDC-UAW2	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW3	LBDC-UAW3	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	AREMP	HDC-SWB1	HDC-SWB1	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	AREMP	HDC-SWB2	HDC-SWB2	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	Source SW Body	AREMP	HDC-SWB3	HDC-SWB3	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	AREMP	HDC-UAW1	HDC-UAW1	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	WRMP	HDC-UAW2	HDC-UAW2	25/09/2024	--	--	--	--	--	--	177	--	--	--	6.17	99	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	AREMP	HDC-UAW3	HDC-UAW3	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	AREMP	HDC-UAW4	HDC-UAW4	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	AREMP	MRC-UAW1	MRC-UAW1	26/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW1	STDC-RW1	26/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	WRMP	STN_ST1_SO1_10	STN_ST1_SO1_10	26/09/2024	--	--	--	--	--	--	253	--	--	--	6.11	143	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	BKG/Ambient Location	WRMP	STN_ST1_SO1_18	STN_ST1_SO1_18	26/09/2024	--	--	--	--	--	--	159	--	< 0.1	--	6.28	97	< 5	0.5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO2_30	STN_ST1_SO2_30	26/09/2024	--	--	--	--	--	--	252	--	< 0.1	--	6.19	147	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO3_16	STN_ST1_SO3_16	26/09/2024	--	--	--	--	--	--	171	--	--	--	6.29	95	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	AREMP	MRC-UAW2	MRC-UAW2	27/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Rec Env: Gen Mining	AREMP	SDC-RW7	SDC-RW7	27/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Source SW Body	AREMP	SDC-SWB1	SDC-SWB1	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Source SW Body	AREMP	SDC-SWB2	SDC-SWB2	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Source SW Body	AREMP	SDC-SWB3	SDC-SWB3	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Source SW Body	AREMP	SDC-SWB4	SDC-SWB4	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	AREMP	STDC-UAW1	STDC-UAW1	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	AREMP	STDC-UAW2	STDC-UAW2	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	AREMP	STDC-UAW3	STDC-UAW3	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	AREMP	STDC-SWB1	STDC-SWB1	3/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	AREMP	STDC-SWB2	STDC-SWB2	3/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Source SW Body	AREMP	STDC-SWB3	STDC-SWB3	3/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																						MAJOR IONS												
Dichloroprop	Fluroxypyr	MCPA	MCPB	MCPP	Picloram	Silvex (2,4,5-TP)	Triclopyr	Benzene	Benzene	Ethylbenzene	Ethylbenzene	M,P-Xylene	M,P-Xylene	O-Xylene (1,2-Dimethylbenzene)	O-Xylene (1,2-Dimethylbenzene)	Toluene	Toluene	Total BTEX	Xylenes	Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total	Calcium	Cations Total	Chloride (As Cl)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	D	T	T	T	D	D	D	D
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.001	< 1	< 0.001	< 2	< 0.002	< 2	< 0.001	< 2	< 0.001	< 2	< 1	< 0.003	< 2	1	< 1	< 1	1	0.19	1	0.17	6	0.28	1	1	4	1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.001	< 1	< 0.001	< 2	< 0.002	< 2	< 0.001	< 2	< 0.001	< 2	< 1	< 0.003	< 2	25	< 1	< 1	25	2.82	4	2.55	89	14.6	5	2	51	56
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	5	1.54	1	1.44	45	3.79	2	1	28	8
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.42	1	1.36	42	3.58	2	1	27	6
11	11	11	11	11	11	11	11	6	11	6	11	6	11	6	11	6	11	11	6	11	51	51	51	51	51	51	51	51	49	51	51	51	51
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	50	51	22	51	51	49	47	38	51	51
1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	0.9%	1.6%	0.9%	1.6%	0.9%	1.6%	0.9%	1.6%	0.9%	1.6%	1.6%	0.9%	1.6%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.4%	7.1%	7.4%	7.4%	7.4%	7.4%
100		**40**			**300**	**10**	**20**	**0.001**	**1**	**0.3**	**300**					**0.8**	**800**		**0.6**	**600**													
0		*0*			*0*	*0*	*0*	*0*	*0*	*0*	*0*					*0*	*0*		*0*	*0*													
										0.003	**3**					**0.025**	**25**		**0.02**	**20**										**250**			**180**	**250**
										0	*0*					*0*	*0*		*0*	*0*										*0*			*0*	*0*
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L	ug/L	mg/L	ug/L	mg/L	ug/L	mg/L	ug/L	ug/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																					MAJOR IONS												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																					MAJOR IONS												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																					MAJOR IONS												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																					MAJOR IONS												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																					MAJOR IONS												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																					MAJOR IONS												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																					MAJOR IONS												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

CIDES																					MAJOR IONS												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																																	
Total Hardness	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium	Beryllium	Boron	Boron	Cadmium	Cadmium	Chromium (III)	Chromium, hexavalent	Chromium, total	Chromium, total	Cobalt	Cobalt	Copper	Copper	Iron	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum	Nickel	Nickel	Phosphorus	Selenium
D	D	T	D	T	D	T	D	T	D	T	D	T	D	D	D	T	D	T	D	T	D	D	T	D	T	D	T	D	T	D	T	T	D
11	0.01	0.02	< 0.001	0.001	0.01	0.006	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	0.001	0.001	0.001	0.001	< 0.001	< 0.001	0.05	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	0.001	0.001	0.001	0.001	0.01	< 0.001
21	0.12	0.4	< 0.001	0.002	0.036	0.02	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0002	< 0.0002	< 0.01	< 0.01	0.002	0.05	0.001	0.002	< 0.001	< 0.005	0.25	< 0.001	< 0.001	0.06	0.084	< 0.0001	< 0.0001	0.005	0.007	0.003	0.003	0.04	< 0.01
15	0.04	0.12	--	0.001	0.02	0.012	--	--	--	--	--	--	--	--	0.001	0.006	0.001	0.001	--	--	0.1	--	--	0.007	0.008	--	--	0.002	0.002	0.001	0.001	0.01	--
15	0.05	0.08	--	0.001	0.02	0.01	--	--	--	--	--	--	--	--	0.001	0.005	0.001	0.001	--	--	0.05	--	--	0.004	0.004	--	--	0.001	0.001	0.001	0.001	0.01	--
11	17	17	17	17	17	17	6	17	17	17	17	17	11	11	17	32	17	6	17	43	11	17	17	17	17	17	17	17	17	17	17	37	17
11	11	16	0	3	13	15	0	0	0	0	0	0	0	0	1	2	1	1	0	0	4	0	0	12	11	0	0	2	4	2	1	5	0
1.6%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	0.9%	2.5%	2.5%	2.5%	2.5%	2.5%	1.6%	1.6%	2.5%	4.6%	2.5%	0.9%	2.5%	6.2%	1.6%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	5.3%	2.5%
			0.01	**0.01**	**2**	**2**	**0.06**	**0.06**	**4**	**4**	**0.002**	**0.002**		**0.05**							**2**	**2**		**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**	**0.02**	**0.02**		**0.01**
			0	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*							*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*
																					1	**1**	**0.3**			**0.1**	**0.1**								
																					0	*0*	*0*			*0*	*0*								
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.03	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.04	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.03	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	METALS																															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

										MICROBIOLOGY																					
Selenium	Silver	Titanium	Titanium	Uranium	Uranium	Vanadium	Vanadium	Zinc	Zinc	Coliform, Thermotolerant	ENTEROCOCCI	Escherichia Coli (E. Coli)	Thermophilic Amoeba	Ammonia as N	Nitrate and Nitrite	Nitrate as N	Nitrite	Phosphate	Total Kjeldahl Nitrogen	Total Nitrogen, All Forms, Calculated	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b+j)fluoranthene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[a]pyrene TEQ (zero)	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene
T	D	D	T	D	T	D	T	D	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.000001	< 0.005	< 0.005	0.005	0.005	< 1	< 1	< 1	< 1	0.01	0.01	0.01	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
< 0.01	< 0.001	< 0.005	< 0.005	< 0.005	< 0.001	< 0.01	< 0.005	0.032	0.03	< 1	< 1	< 1	< 1	0.11	0.06	0.06	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
--	--	--	--	--	--	--	--	0.016	0.016	--	--	--	--	0.02	0.02	0.02	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	0.008	0.01	--	--	--	--	0.01	0.01	0.01	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
17	11	6	6	6	17	17	6	17	32	3	3	3	3	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
0	0	0	0	0	0	0	0	12	18	0	0	0	0	4	5	5	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
2.5%	1.6%	0.9%	0.9%	0.9%	2.5%	2.5%	0.9%	2.5%	4.6%	0.4%	0.4%	0.4%	0.4%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
0.01	**0.1**			**17**	**0.017**												**3**									**0.01**							
0	*0*			*0*	*0*												*0*									*0*							
								3	**3**																								
								0	*0*																								
mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	cfu/100ml	Unitless	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

										MICROBIOLOGY																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

										MICROBIOLOGY																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

										MICROBIOLOGY																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

										MICROBIOLOGY																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

										MICROBIOLOGY																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

										MICROBIOLOGY																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

									MICROBIOLOGY																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

										MICROBIOLOGY																					
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							PESTICIDES												PESTICIDES (OC)															
Indeno(1,2,3-C,D)Pyrene	Naphthalene	Naphthalene	Phenanthrene	Pyrene	Sum of Aldrin + Dieldrin	Sum of PAHs	Azinphos, Methyl (Guthion)	Bromophos-ethyl	Carbophenothion (Trithion)	Demeton-S-methyl	Endosulfan	Fenamiphos (Nemacur)	Monochrotophos	Oxychlordane	Parathion, Ethyl	Parathion, Methyl	Sum of DDD + DDE + DDT	SUM_CHLORDANE	Aldrin	alpha BHC (Alpha Hexachlorocyclohexane	Alpha Endosulfan	beta BHC (Beta Hexachlorocyclohexane)	Beta Endosulfan	cis-Chlordane	delta BHC (Delta Hexachlorocydohexane)	Dieldrin	Endosulfan sulfate	Endrin	Endrin Aldehyde	gamma BHC (Lindane)	Heptachlor	Heptachlor epoxide - isomer b	Hexachlorobenzene
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01
< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
					0.3		**30**	**10**	**0.5**		**20**	**0.5**			**20**	**0.7**															**10**	**0.3**		
					0		*0*	*0*	*0*		*0*	*0*			*0*	*0*															*0*	*0*		
ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							PESTICIDES												PESTICIDES (OC)													
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							PESTICIDES												PESTICIDES (OC)													
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							PESTICIDES												PESTICIDES (OC)													
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							PESTICIDES												PESTICIDES (OC)													
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							PESTICIDES												PESTICIDES (OC)													
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							PESTICIDES												PESTICIDES (OC)													
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							PESTICIDES												PESTICIDES (OC)													
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PESTICIDES																				PESTICIDES (OC)															
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES (OP)																													
Methoxychlor	P,P'-DDD	P,P'-DDE	P,P'-DDT	trans-Chlordane	Chlorofenvinphos	Chlorpyrifos	Chlorpyrifos Methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimiphos-Ethyl	Tokuthion (Prothiofos)	10:2 Fluorotelomer sulfonic acid (10:2 FTS	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoacete	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoac	Perfluoro-1-octanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanesulfonic acid ammonium	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFD	Perfluoroheptanesulfonic acid (PFHpS)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.0004	0.0002	0.0005	0.0002	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.0004	0.0005	0.0004	< 0.0005	0.0002	0.0004	0.0002
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.01	0.2	2.2	0.2	< 1	< 1	< 1	< 1	< 1	< 1	0.0004	0.4	0.42	0.2	< 0.2	0.4	0.4	0.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001	0.0013	0.0625	0.0026	--	--	--	--	--	--	0.0004	0.0032	0.0133	0.0017	--	0.0041	0.0041	0.0018
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001	0.001	0.005	0.001	--	--	--	--	--	--	0.0004	0.001	0.0043	0.0005	--	0.001	0.001	0.0004
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	317	666	666	666	666	666	666	666	666	666	39	666	666	666	10	666	666	666
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	7	336	202	0	0	0	0	0	0	1	49	330	1	0	15	2	71
1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	45.7%	96.1%	96.1%	96.1%	96.1%	96.1%	96.1%	96.1%	96.1%	96.1%	5.6%	96.1%	96.1%	96.1%	1.4%	96.1%	96.1%	96.1%
																											1						
																											0						
					2	**10**		**4**	**5**	**7**	**4**	**7**	**70**	**0.5**																				
					0	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*																				
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.2	2.2	< 0.2	< 1	< 1	< 1	< 1	< 1	< 1	--	< 0.4	< 0.2	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0002	0.0022	< 0.0002	< 1	< 1	< 1	< 1	< 1	< 1	--	< 0.4	< 0.2	< 0.2	--	< 0.4	< 0.4	< 0.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0002	0.0031	< 0.0002	< 1	< 1	< 1	< 1	< 1	< 1	--	< 0.4	< 0.2	< 0.2	--	< 0.4	< 0.4	< 0.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0006	0.33	0.018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.014	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.33	0.016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.011	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.26	0.021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0057	< 0.0005	--	< 0.001	< 0.001	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0015	0.37	0.055	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.019	< 0.0005	--	0.003	< 0.001	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0014	0.37	0.056	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.02	< 0.0005	--	0.003	< 0.001	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0014	0.4	0.061	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.019	< 0.0005	--	0.003	< 0.001	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.27	0.016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0039	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.36	0.019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0078	< 0.0005	--	0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.33	0.015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0071	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.35	0.015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.012	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.25	0.009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.24	0.004	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.17	< 0.0005	--	< 0.001	< 0.001	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011	0.5	0.031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	< 0.0005	< 0.0005	--	0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001	0.48	0.054	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.013	< 0.0005	--	0.003	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0026	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.027	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.045	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0041	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0008	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0087	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.31	0.014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.091	< 0.0005	--	0.002	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.03	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.071	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.058	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.068	0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.052	0.0044	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.092	0.0022	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.0058	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.078	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0071	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.063	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.072	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0006	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0075	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0047	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.21	0.0061	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.01	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.015	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.083	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.034	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES (OP)																											
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.039	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0014	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.039	0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.04	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.049	0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.055	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.05	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	--	< 0.1	< 0.05	< 0.05	--	< 0.1	< 0.1	< 0.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.19	0.004	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0039	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0037	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.071	0.0027	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0027	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.094	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.028	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.055	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0032	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.054	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.074	0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0031	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.068	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.003	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.06	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0054	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0082	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0026	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0025	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.024	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.065	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.06	0.0012	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.26	0.009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0082	< 0.0005	--	< 0.001	< 0.001	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.17	0.0046	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.006	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0062	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.0024	0.0006	--	< 0.001	< 0.001	0.0009
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.15	0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.064	< 0.0005	--	< 0.001	< 0.001	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.031	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0036	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0009	0.31	0.0048	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0086	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.19	0.007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0047	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.035	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.03	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.044	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0066	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.058	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0064	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.35	0.011	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.002	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.25	0.006	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.25	0.005	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.3	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.19	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.002	0.24	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	< 0.001	< 0.25	0.016	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.15	< 0.005	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.1	0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.057	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.035	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.028	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.069	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.058	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.17	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.074	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.08	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.01	0.006	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES (OP)																												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.043	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.01	< 0.05	< 0.01	--	< 0.01	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.01	< 0.05	< 0.01	--	< 0.01	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	< 0.01	0.018	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.01	< 0.05	< 0.01	--	< 0.01	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.024	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.79	0.02	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.021	< 0.005	--	< 0.01	< 0.01	0.0034
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.98	0.017	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.025	< 0.005	--	< 0.01	< 0.01	0.0024
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.062	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.86	0.014	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.019	< 0.005	--	< 0.01	< 0.01	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.89	0.014	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.022	< 0.005	--	< 0.01	< 0.01	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0055	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	1.3	0.019	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.02	< 0.005	--	< 0.01	< 0.01	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	1.4	0.019	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.022	< 0.005	--	< 0.01	< 0.01	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.057	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0044	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.69	0.012	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.018	< 0.005	--	< 0.01	< 0.01	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.55	0.011	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.0092	< 0.005	--	< 0.01	< 0.01	0.0023
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.095	< 0.005	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.0093	< 0.005	--	< 0.01	< 0.01	0.0022
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.55	0.0089	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.01	< 0.005	--	< 0.01	< 0.01	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.41	0.0088	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.011	< 0.005	--	< 0.01	< 0.01	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.21	0.0069	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.024	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.095	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.011	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.22	0.0081	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0045	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.2	0.0095	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.048	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0047	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.66	0.0095	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.018	< 0.0025	--	< 0.005	< 0.005	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.41	0.0084	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.004	< 0.0025	--	< 0.005	< 0.005	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.3	0.0097	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.0052	< 0.0025	--	< 0.005	< 0.005	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.23	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0052	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.066	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0086	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.031	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.045	< 0.0005	--	< 0.001	< 0.001	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.052	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.011	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0064	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0023	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.059	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.018	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.043	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0054	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.063	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.021	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	0.052	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.004	0.017	< 0.002	--	< 0.004	< 0.004	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.049	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.07	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.023	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.028	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0031	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.029	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.04	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0052	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0062	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.054	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.012	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0026	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0027	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0069	< 0.0005	--	< 0.001	< 0.001	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0035	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0064	< 0.0005	--	< 0.001	< 0.001	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.052	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.015	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.035	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0025	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.028	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES (OP)																											
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES (OP)																												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.22	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.021	< 0.0005	--	< 0.001	< 0.001	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0029	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.045	< 0.0005	--	< 0.001	< 0.001	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0053	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.049	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0034	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.004	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.069	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0046	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.034	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0046	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0023	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.79	< 0.005	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	< 0.005	< 0.005	--	< 0.01	< 0.01	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.075	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0056	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.006	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.38	0.0044	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.012	< 0.0025	--	< 0.005	< 0.005	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.36	0.0028	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.011	< 0.0025	--	< 0.005	< 0.005	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.054	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0035	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0069	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.25	0.0058	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0074	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.27	0.0058	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.006	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.042	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0052	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0072	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.31	0.0074	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0087	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.28	0.0096	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0077	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0058	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.02	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.032	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0066	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0076	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0032	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0091	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.048	0.0035	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.067	0.0054	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0025	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.21	0.0037	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.02	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.029	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.008	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0053	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.003	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PESTICIDES (OP)																																
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.083	0.0031	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.011	< 0.0004	--	0.0005	< 0.0004	0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.12	0.0036	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.004	< 0.0004	--	0.0004	< 0.0004	0.0012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.068	0.0024	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.001	0.002	< 0.0004	--	0.0006	< 0.0004	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.064	0.0027	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0007	0.002	< 0.0004	--	0.0004	< 0.0004	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.053	0.0009	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.001	0.133	< 0.0004	--	0.0008	< 0.0004	0.0012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0005	< 0.001	0.13	0.0047	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.014	< 0.0004	--	0.0007	< 0.0004	0.0054
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0007	< 0.001	0.092	0.0051	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.011	0.007	< 0.0004	--	0.0008	< 0.0004	0.0044
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.003	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0007	0.009	< 0.0004	--	< 0.0002	< 0.0004	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.003	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.003	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.005	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.003	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0012	0.017	< 0.0004	--	< 0.0002	< 0.0004	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0014	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.009	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	0.001	0.012	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.012	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.01	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.01	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	0.001	0.01	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	0.001	0.009	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.011	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.08	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.01	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.05	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.052	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0032	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.035	0.0012	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0011	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0013	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0006	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.089	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.42	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.059	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.056	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0039	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.029	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.024	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0012	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.062	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.058	0.0043	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.012	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.042	0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.04	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0012	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0035	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.014	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.067	0.0012	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0051	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.068	0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.006	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.083	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0058	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.043	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0009	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.004	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0046	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0038	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.17	0.0065	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0047	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES (OP)																											
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.15	0.0055	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0059	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0051	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.021	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0066	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.014	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0031	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0038	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0071	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0031	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.012	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0045	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.001	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.004	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.041	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.041	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0063	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.041	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0039	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.028	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.003	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0037	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0038	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.075	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.028	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.019	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.043	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0046	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.011	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0033	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0013	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0006	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.026	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.026	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.001	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0012	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.018	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0023	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0033	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.063	0.0053	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.007	0.007	< 0.0005	--	< 0.001	< 0.001	0.0034
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.008	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.021	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0039	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0066	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0079	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.001	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0023	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0023	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.092	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0075	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.097	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0072	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.097	0.0022	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0075	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.047	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.042	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.046	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0027	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0008	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0031	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0013	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	< 0.001	0.06	0.008	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	0.0081	0.0064	< 0.0005	--	0.001	< 0.0005	0.0068
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.098	0.004	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.004	< 0.0005	--	0.0006	0.0089	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.08	0.002	< 0.001	< 0.004	< 0.0005	< 0.001	< 0.004	< 0.0005	--	0.0005	0.0055	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.047	< 0.001	< 0.001	< 0.004	< 0.0005	< 0.001	< 0.004	< 0.0005	--	0.0015	0.121	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.022	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	0.0041	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.016	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0068	< 0.0005	--	< 0.001	< 0.001	< 0.0002

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES (OP)																												
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0073	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0064	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0019	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0086	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0045	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0095	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.099	0.0032	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.078	0.0039	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.089	0.0022	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0041	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.086	0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.061	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0011	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.043	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.043	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.015	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0009	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.099	0.0045	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0011	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.14	0.0049	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.001	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.004	0.0017	< 0.0005	--	< 0.001	< 0.001	0.0012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.024	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.003	0.0016	< 0.0005	--	< 0.001	< 0.001	0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0025	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0025	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0018	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0054	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES (OP)																											
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

| | PFAS | | |

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																																	
0.0009	--	--	0.0005	0.0034	< 0.0005	< 0.001	< 0.002	--	0.0006	< 0.0005	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0011	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0007	--	--	0.0005	0.0024	< 0.0005	< 0.001	< 0.002	--	0.0008	< 0.0005	< 0.001	0.0017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0008	--	--	0.0004	0.0025	< 0.0005	< 0.001	< 0.002	--	0.0006	< 0.0005	< 0.001	0.0017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.001	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0012	--	--	0.0007	0.0037	< 0.0005	< 0.001	< 0.002	--	0.001	< 0.0005	< 0.001	0.0041	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0017	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	0.0007	0.0041	< 0.0005	< 0.001	< 0.002	--	0.001	< 0.0005	< 0.001	0.0039	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0017	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0012	--	--	0.0007	0.0041	< 0.0005	< 0.001	< 0.002	--	0.0007	< 0.0005	< 0.001	0.0032	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	0.001	0.0041	< 0.0005	< 0.001	< 0.002	--	0.0011	< 0.0005	< 0.001	0.0031	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0021	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.05	--	--	< 0.2	< 0.05	< 0.05	< 0.1	< 0.2	--	< 0.2	< 0.05	< 0.1	< 0.05	--	< 0.1	< 0.1	< 0.1	--	--	--	--	< 0.2	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0004	< 0.0005	< 0.0005	< 0.001	< 0.002	--	0.0009	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0006	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0006	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0032	--	--	0.003	0.017	< 0.0005	< 0.001	< 0.002	--	0.009	0.0013	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0032	--	--	0.0021	0.016	< 0.0005	< 0.001	< 0.002	--	0.0036	0.0013	< 0.001	0.0093	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0057	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0014	--	--	0.0034	0.0077	< 0.0005	< 0.001	< 0.002	--	0.0032	0.0012	< 0.001	0.0092	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0066	--	--	--	--	--	--	--	--	--	--	--	--	--
0.002	--	--	0.0029	0.01	< 0.0005	< 0.001	< 0.002	--	0.0042	0.0011	< 0.001	0.0092	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0071	--	--	--	--	--	--	--	--	--	--	--	--	--
0.056	--	--	0.0047	0.066	< 0.0005	0.001	< 0.002	--	0.034	0.0032	< 0.001	0.11	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.039	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0016	--	--	0.0007	0.0041	< 0.0005	< 0.001	< 0.002	--	0.0022	0.0007	< 0.001	0.0029	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0029	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0019	--	--	0.0009	0.0053	< 0.0005	< 0.001	< 0.002	--	0.002	0.0007	< 0.001	0.0063	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0029	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0019	--	--	0.0008	0.0047	< 0.0005	< 0.001	< 0.002	--	0.0032	0.0006	< 0.001	0.0046	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.004	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0019	--	--	0.0007	0.0041	< 0.0005	< 0.001	< 0.002	--	0.0014	0.0008	< 0.001	0.0048	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0021	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0017	--	--	0.0011	0.0043	< 0.0005	< 0.001	< 0.002	--	0.0014	0.0008	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0021	--	--	0.0045	0.015	< 0.0005	< 0.001	< 0.002	--	0.0094	0.0018	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.014	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0025	--	--	0.0053	0.012	< 0.0005	< 0.001	< 0.002	--	0.016	0.0023	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.022	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0058	0.0098	< 0.0005	< 0.001	< 0.002	--	0.0067	0.0017	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.013	--	--	--	--	--	--	--	--	--	--	--	--	--
0.047	--	--	0.0061	0.058	< 0.0005	0.002	< 0.002	--	0.023	0.0033	< 0.001	0.1	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.029	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0007	0.0037	< 0.0005	< 0.001	< 0.002	--	0.0018	0.0005	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0024	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0009	0.0044	< 0.0005	< 0.001	< 0.002	--	0.0018	0.0008	< 0.001	0.0054	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0027	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0061	--	--	0.0058	0.037	< 0.0005	< 0.001	< 0.002	--	0.021	0.0023	< 0.001	0.028	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.027	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0031	--	--	0.0057	0.025	< 0.0005	< 0.001	< 0.002	--	0.013	0.002	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0097	--	--	0.0061	0.022	0.001	< 0.001	< 0.002	--	0.014	0.0019	0.002	0.018	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--
0.098	--	--	0.011	0.14	< 0.0005	0.004	< 0.002	--	0.047	0.0054	0.001	0.24	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.058	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.0004	0.0035	< 0.0005	< 0.001	< 0.002	--	< 0.0002	0.0007	< 0.001	0.004	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0004	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0062	--	--	0.0015	0.035	< 0.0005	< 0.001	< 0.002	--	0.0054	0.0015	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0069	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.0027	0.0081	< 0.0005	< 0.001	< 0.002	--	0.0035	0.0009	< 0.001	0.0044	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0062	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0045	--	--	0.0022	0.019	< 0.0005	< 0.001	< 0.002	--	0.013	0.0011	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.015	--	--	--	--	--	--	--	--	--	--	--	--	--
0.045	--	--	0.0044	0.078	< 0.0005	0.001	< 0.002	--	0.026	0.0025	< 0.001	0.15	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--
0.002	--	--	0.0005	0.0045	< 0.0005	< 0.001	< 0.002	--	0.0013	0.001	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0018	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0016	--	--	0.0006	0.0047	< 0.0005	< 0.001	< 0.002	--	0.0019	0.0008	< 0.001	0.0052	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--
0.001	--	--	0.0004	0.0017	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.0034	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0004	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.01	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	--	< 0.01	< 0.05	--	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	0.0003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	0.005	0.05	< 0.001	< 0.01	< 0.05	--	0.023	< 0.01	< 0.001	0.05	< 0.001	< 0.01	< 0.01	< 0.01	0.031	< 0.35	--	--	0.028	0.026	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	0.005	0.04	< 0.001	< 0.01	< 0.05	--	0.023	< 0.01	< 0.001	0.05	< 0.001	< 0.01	< 0.01	< 0.01	0.03	< 0.25	--	--	0.028	0.025	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	0.003	0.03	< 0.001	< 0.01	< 0.05	--	0.021	< 0.01	< 0.001	0.03	< 0.001	< 0.01	< 0.01	< 0.01	0.026	< 0.25	--	--	0.024	0.023	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	0.005	0.05	< 0.001	< 0.01	< 0.05	--	0.034	< 0.01	< 0.001	0.06	< 0.001	< 0.01	< 0.01	< 0.01	0.041	< 0.3	--	--	0.039	0.036	--	--	--	--	--	--	--	--	--	--	--	--
0.28	--	--	0.019	0.39	< 0.001	< 0.01	< 0.05	--	0.093	0.01	0.002	1	< 0.001	< 0.01	< 0.01	< 0.01	0.125	2.247	--	--	0.112	0.106	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	0.004	0.04	< 0.001	< 0.01	< 0.05	--	0.018	< 0.01	< 0.001	0.03	< 0.001	< 0.01	< 0.01	< 0.01	0.025	< 0.25	--	--	0.022	0.021	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0007	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.0107	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0012	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0012	0.0072	--	--	0.0012	0.0012	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	0.002	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0042	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0082	0.0412	--	--	0.0062	0.0062	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0029	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0029	0.0189	--	--	0.0029	0.0029	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0082	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0082	0.0292	--	--	0.0082	0.0082	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0009	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.0249	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.001	< 0.005	--	--	0.001	0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	0.02	< 0.001	< 0.01	< 0.05	--	0.0028	< 0.01	< 0.001	0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0048	< 0.15	--	--	0.0028	0.0048	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	0.01	< 0.001	< 0.01	< 0.05	--	0.0016	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0026	< 0.1	--	--	0.0016	0.0026	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0031	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0031	0.0861	--	--	0.0031	0.0031	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	0.01	< 0.001	< 0.01	< 0.05	--	0.0026	< 0.01	< 0.001	0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0026	0.0706	--	--	0.0026	0.0026	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.0313	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0015	0.1015	--	--	< 0.001	0.0015	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0009	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.0889	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	0.002	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0052	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0092	0.2152	--	--	0.0072	0.0072	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0065	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0065	0.0895	--	--	0.0065	0.0065	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	0.001	0.01	< 0.001	< 0.01	< 0.05	--	0.0027	< 0.01	< 0.001	0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0057	0.1307	--	--	0.0037	0.0047	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.011	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.011	0.028	--	--	0.011	0.011	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																																	
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0023	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0023	< 0.005	--	--	0.0023	0.0023	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0018	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0038	0.0668	--	--	0.0018	0.0038	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	--	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.014	0.026	--	--	< 0.01	0.014	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	--	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.016	0.03	--	--	< 0.01	0.016	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	--	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.015	0.046	--	--	< 0.01	0.015	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.006	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0024	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0024	0.0314	--	--	0.0024	0.0024	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
0.013	--	--	0.038	0.065	< 0.005	< 0.01	< 0.02	--	0.36	0.0057	< 0.01	0.044	--	< 0.01	< 0.01	< 0.01	--	0.61	--	--	0.4	--	--	--	--	--	--	--	--	--	--	--	--
0.012	--	--	0.0095	0.068	< 0.005	< 0.01	< 0.02	--	0.069	< 0.005	< 0.01	0.055	--	< 0.01	< 0.01	< 0.01	--	0.65	--	--	0.079	--	--	--	--	--	--	--	--	--	--	--	--
0.006	--	--	0.0008	0.012	< 0.0005	< 0.001	< 0.002	--	0.0015	0.0016	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	< 0.13	--	--	0.0023	--	--	--	--	--	--	--	--	--	--	--	--
0.011	--	--	0.007	0.065	< 0.005	< 0.01	< 0.02	--	0.033	< 0.005	< 0.01	0.045	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.04	--	--	--	--	--	--	--	--	--	--	--	--
0.011	--	--	0.0065	0.066	< 0.005	< 0.01	< 0.02	--	0.043	< 0.005	< 0.01	0.057	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.05	--	--	--	--	--	--	--	--	--	--	--	--
0.0055	--	--	0.001	0.011	< 0.0005	< 0.001	< 0.002	--	0.0019	0.001	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0029	--	--	--	--	--	--	--	--	--	--	--	--
0.016	--	--	0.0073	0.081	< 0.005	< 0.01	< 0.02	--	0.017	< 0.005	< 0.01	0.099	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.025	--	--	--	--	--	--	--	--	--	--	--	--
0.015	--	--	0.0066	0.091	< 0.005	< 0.01	< 0.02	--	0.019	< 0.005	< 0.01	0.11	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.025	--	--	--	--	--	--	--	--	--	--	--	--
0.0036	--	--	< 0.0002	0.0094	< 0.0005	< 0.001	< 0.002	--	0.0009	0.0008	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0009	--	--	--	--	--	--	--	--	--	--	--	--
0.009	--	--	0.0043	0.041	< 0.005	< 0.01	< 0.02	--	0.031	< 0.005	< 0.01	0.034	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.036	--	--	--	--	--	--	--	--	--	--	--	--
0.0088	--	--	0.0074	0.04	< 0.005	< 0.01	< 0.02	--	0.033	< 0.005	< 0.01	0.033	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.04	--	--	--	--	--	--	--	--	--	--	--	--
0.0072	--	--	0.0078	0.014	< 0.005	< 0.01	< 0.02	--	0.018	< 0.005	< 0.01	0.032	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.026	--	--	--	--	--	--	--	--	--	--	--	--
0.0063	--	--	0.0066	0.035	< 0.005	< 0.01	< 0.02	--	0.024	< 0.005	< 0.01	0.033	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	--	--	0.006	0.025	< 0.005	< 0.01	< 0.02	--	0.016	< 0.005	< 0.01	0.022	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.022	--	--	--	--	--	--	--	--	--	--	--	--
0.0053	--	--	0.0052	0.024	< 0.0005	< 0.001	< 0.002	--	0.011	0.0026	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.017	--	--	--	--	--	--	--	--	--	--	--	--
0.0056	--	--	0.0005	0.016	< 0.0005	< 0.001	< 0.002	--	0.0009	0.0012	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--
0.0042	--	--	0.0044	0.017	< 0.0005	< 0.001	< 0.002	--	0.03	0.0021	< 0.001	0.021	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.034	--	--	--	--	--	--	--	--	--	--	--	--
0.0044	--	--	0.0052	0.017	< 0.0005	< 0.001	< 0.002	--	0.035	0.0023	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.04	--	--	--	--	--	--	--	--	--	--	--	--
0.0018	--	--	0.0007	0.0036	< 0.0005	< 0.001	< 0.002	--	0.0026	0.0005	< 0.001	0.0054	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0033	--	--	--	--	--	--	--	--	--	--	--	--
0.0049	--	--	0.0008	0.011	< 0.0005	< 0.001	< 0.002	--	0.0032	0.0009	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.004	--	--	--	--	--	--	--	--	--	--	--	--
0.0076	--	--	0.0089	0.04	< 0.0025	< 0.005	< 0.01	--	0.035	0.0043	< 0.005	0.017	--	< 0.005	< 0.005	< 0.005	--	--	--	--	0.044	--	--	--	--	--	--	--	--	--	--	--	--
0.0047	--	--	0.0078	0.026	< 0.0025	< 0.005	< 0.01	--	0.022	0.0028	< 0.005	0.011	--	< 0.005	< 0.005	< 0.005	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--
0.004	--	--	0.0082	0.02	< 0.0025	< 0.005	< 0.01	--	0.03	0.0025	< 0.005	0.012	--	< 0.005	< 0.005	< 0.005	--	--	--	--	0.038	--	--	--	--	--	--	--	--	--	--	--	--
0.0027	--	--	0.0017	0.011	< 0.0005	< 0.001	< 0.002	--	0.0042	0.0012	< 0.001	0.0072	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0059	--	--	--	--	--	--	--	--	--	--	--	--
0.0055	--	--	0.0007	0.015	< 0.0005	< 0.001	< 0.002	--	0.0026	0.0011	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0033	--	--	--	--	--	--	--	--	--	--	--	--
0.052	--	--	0.0098	0.063	< 0.0005	0.001	< 0.002	--	0.017	0.0038	< 0.001	0.13	--	< 0.001	< 0.001	< 0.001	--	0.42	--	--	0.027	--	--	--	--	--	--	--	--	--	--	--	--
0.072	--	--	0.015	0.095	< 0.0005	0.002	< 0.002	--	0.029	0.0064	0.001	0.13	--	< 0.001	< 0.001	< 0.001	--	0.5	--	--	0.044	--	--	--	--	--	--	--	--	--	--	--	--
0.017	--	--	0.0077	0.026	< 0.0005	< 0.001	< 0.002	--	0.012	0.003	< 0.001	0.034	--	< 0.001	< 0.001	< 0.001	--	0.16	--	--	0.019	--	--	--	--	--	--	--	--	--	--	--	--
0.0025	--	--	< 0.0002	0.0059	< 0.0005	< 0.001	< 0.002	--	0.0013	0.0005	< 0.001	0.0063	--	< 0.001	< 0.001	< 0.001	--	0.04	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--
0.0019	--	--	0.0061	0.007	< 0.0005	< 0.001	< 0.002	--	0.02	0.0013	< 0.001	0.0043	--	< 0.001	< 0.001	< 0.001	--	0.15	--	--	0.026	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.0043	0.0072	< 0.0005	< 0.001	< 0.002	--	0.005	0.0009	< 0.001	0.0049	--	< 0.001	< 0.001	< 0.001	--	0.092	--	--	0.0094	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	0.0027	0.0047	< 0.0005	< 0.001	< 0.002	--	0.011	0.0009	< 0.001	0.0023	--	< 0.001	< 0.001	< 0.001	--	0.063	--	--	0.013	--	--	--	--	--	--	--	--	--	--	--	--
0.024	--	--	0.007	0.033	< 0.0005	< 0.001	< 0.002	--	0.014	0.0025	< 0.001	0.051	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	0.021	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.0004	0.0024	< 0.0005	< 0.001	< 0.002	--	0.0008	< 0.0005	< 0.001	0.0028	--	< 0.001	< 0.001	< 0.001	--	0.033	--	--	0.0012	--	--	--	--	--	--	--	--	--	--	--	--
0.0027	--	--	0.0013	0.0071	< 0.0005	< 0.001	< 0.002	--	0.003	0.0008	< 0.001	0.0098	--	< 0.001	< 0.001	< 0.001	--	0.074	--	--	0.0043	--	--	--	--	--	--	--	--	--	--	--	--
0.036	--	--	0.0089	0.044	< 0.0005	0.002	< 0.002	--	0.014	0.004	< 0.001	0.07	--	< 0.001	< 0.001	< 0.001	--	0.26	--	--	0.022	--	--	--	--	--	--	--	--	--	--	--	--
0.023	--	--	0.005	0.028	< 0.002	< 0.004	< 0.008	--	0.014	0.003	< 0.004	0.043	--	< 0.004	< 0.004	< 0.004	--	0.19	--	--	0.019	--	--	--	--	--	--	--	--	--	--	--	--
0.0025	--	--	0.0006	0.0068	< 0.0005	< 0.001	< 0.002	--	0.0019	0.0008	< 0.001	0.007	--	< 0.001	< 0.001	< 0.001	--	0.073	--	--	0.0025	--	--	--	--	--	--	--	--	--	--	--	--
0.025	--	--	0.0073	0.035	< 0.0005	0.001	< 0.002	--	0.02	0.003	< 0.001	0.055	--	< 0.001	< 0.001	< 0.001	--	0.24	--	--	0.028	--	--	--	--	--	--	--	--	--	--	--	--
0.0022	--	--	0.0003	0.0063	< 0.0005	< 0.001	< 0.002	--	0.0013	< 0.0005	< 0.001	0.0065	--	< 0.001	< 0.001	< 0.001	--	0.05	--	--	0.0016	--	--	--	--	--	--	--	--	--	--	--	--
0.0016	--	--	0.0004	0.0041	< 0.0005	< 0.001	< 0.002	--	0.0016	< 0.0005	< 0.001	0.0041	--	< 0.001	< 0.001	< 0.001	--	0.035	--	--	0.0019	--	--	--	--	--	--	--	--	--	--	--	--
0.0051	--	--	0.0029	0.0086	< 0.0005	< 0.001	< 0.002	--	0.0056	0.0007	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.076	--	--	0.0085	--	--	--	--	--	--	--	--	--	--	--	--
0.0047	--	--	0.002	0.0074	< 0.0005	< 0.001	< 0.002	--	0.0057	0.0008	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.063	--	--	0.0077	--	--	--	--	--	--	--	--	--	--	--	--
0.0012	--	--	0.0002	0.0034	< 0.0005	< 0.001	< 0.002	--	0.0002	< 0.0005	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	0.033	--	--	0.0005	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0003	0.0032	< 0.0005	< 0.001	< 0.002	--	0.0009	< 0.0005	< 0.001	0.0042	--	< 0.001	< 0.001	< 0.001	--	0.03	--	--	0.0012	--	--	--	--	--	--	--	--	--	--	--	--
0.0077	--	--	0.003	0.011	< 0.0005	< 0.001	< 0.002	--	0.0099	0.0012	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.093	--	--	0.013	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0004	0.0041	< 0.0005	< 0.001	< 0.002	--	0.0008	< 0.0005	< 0.001	0.0036	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0011	--	--	--	--	--	--	--	--	--	--	--	--
0.0072	--	--	0.0023	0.011	< 0.0005	< 0.001	< 0.002	--	0.0049	0.0009	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0072	--	--	--	--	--	--	--	--	--	--	--	--
0.015	--	--	0.004	0.022	< 0.0005	0.001	< 0.002	--	0.019	0.0019	< 0.001	0.033	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.023	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	0.0004	0.0027	< 0.0005	< 0.001	< 0.002	--	0.0005	< 0.0005	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0009	--	--	--	--	--	--	--	--	--	--	--	--
0.0024	--	--	0.0063	0.013	< 0.0005	< 0.001	< 0.002	--	0.0066	0.0014	< 0.001	0.0054	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.013	--	--	--	--	--	--	--	--	--	--	--	--
0.0027	--	--	0.006	0.012	< 0.0005	< 0.001	< 0.002	--	0.006	0.0015	< 0.001	0.0068	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.019	--	--	0.0032	0.031	< 0.0005	< 0.001	< 0.002	--	0.011	0.002	< 0.001	0.052	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.014	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	0.0009	0.0028	< 0.0005	< 0.001	< 0.002	--	0.0021	0.0006	< 0.001	0.0024	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0031	--	--	--	--	--	--	--	--	--	--	--	--
0.002	--	--	0.0003	0.0045	< 0.0005	< 0.001	< 0.002	--	0.0006	< 0.0005	< 0.001	0.0061	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0008	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	0.0004	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	0.0003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	0.0003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																																	
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																																	
0.0028	--	--	0.0056	0.026	< 0.0005	< 0.001	< 0.002	--	0.013	< 0.0005	< 0.001	0.033	--	< 0.001	< 0.001	< 0.001	--	0.32	--	--	0.019	--	--	--	--	--	--	--	--	--	--	--	--
0.047	--	--	0.0095	0.088	< 0.0005	< 0.001	< 0.002	--	0.027	< 0.0005	< 0.001	0.18	--	< 0.001	< 0.001	< 0.001	--	0.52	--	--	0.037	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0011	0.0054	< 0.0005	< 0.001	< 0.002	--	0.0026	< 0.0005	< 0.001	0.0066	--	< 0.001	< 0.001	< 0.001	--	0.087	--	--	0.0037	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0006	0.0063	< 0.0005	< 0.001	< 0.002	--	0.0023	< 0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.074	--	--	0.0029	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0005	0.0038	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.0053	--	< 0.001	< 0.001	< 0.001	--	0.017	--	--	0.0005	--	--	--	--	--	--	--	--	--	--	--	--
0.0038	--	--	0.0013	0.011	< 0.0005	< 0.001	< 0.002	--	0.0025	0.0012	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0038	--	--	--	--	--	--	--	--	--	--	--	--
0.0033	--	--	0.0005	0.0069	< 0.0005	< 0.001	< 0.002	--	0.0019	< 0.0005	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	0.0024	--	--	--	--	--	--	--	--	--	--	--	--
0.0018	--	--	0.0003	0.0034	< 0.0005	< 0.001	< 0.002	--	0.0008	< 0.0005	< 0.001	0.005	--	< 0.001	< 0.001	< 0.001	--	0.019	--	--	0.0011	--	--	--	--	--	--	--	--	--	--	--	--
0.0059	--	--	0.0084	0.027	< 0.005	< 0.01	< 0.02	--	0.014	< 0.005	< 0.01	< 0.005	--	< 0.01	< 0.01	< 0.01	--	0.85	--	--	0.023	--	--	--	--	--	--	--	--	--	--	--	--
0.0046	--	--	0.0009	0.011	< 0.0005	< 0.001	< 0.002	--	0.0011	< 0.0005	< 0.001	0.023	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.002	--	--	--	--	--	--	--	--	--	--	--	--
0.0021	--	--	0.0004	0.0044	< 0.0005	< 0.001	< 0.002	--	0.001	< 0.0005	< 0.001	0.0041	--	< 0.001	< 0.001	< 0.001	--	0.02	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--
0.0086	--	--	0.0043	0.039	< 0.0025	< 0.005	< 0.01	--	0.0041	0.0031	< 0.005	0.25	--	< 0.005	< 0.005	< 0.005	--	0.71	--	--	0.0084	--	--	--	--	--	--	--	--	--	--	--	--
0.0071	--	--	0.0034	0.027	< 0.0025	< 0.005	< 0.01	--	0.0028	0.0043	< 0.005	0.25	--	< 0.005	< 0.005	< 0.005	--	0.67	--	--	0.0062	--	--	--	--	--	--	--	--	--	--	--	--
0.0066	--	--	0.0006	0.015	< 0.0005	< 0.001	< 0.002	--	0.0007	0.0011	< 0.001	0.031	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--
0.0031	--	--	0.0005	0.0046	< 0.0005	< 0.001	< 0.002	--	0.0009	0.0006	< 0.001	0.0068	--	< 0.001	< 0.001	< 0.001	--	0.023	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--
0.0045	--	--	0.0056	0.026	< 0.0005	< 0.001	< 0.002	--	0.007	0.0014	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	0.31	--	--	0.013	--	--	--	--	--	--	--	--	--	--	--	--
0.0046	--	--	0.0056	0.026	< 0.0005	< 0.001	< 0.002	--	0.0059	0.0017	< 0.001	0.0029	--	< 0.001	< 0.001	< 0.001	--	0.33	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.0071	--	--	0.0008	0.014	< 0.0005	< 0.001	< 0.002	--	0.0013	0.0009	< 0.001	0.03	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.0021	--	--	--	--	--	--	--	--	--	--	--	--
0.0023	--	--	0.0011	0.0052	< 0.0005	< 0.001	< 0.002	--	0.0016	< 0.0005	< 0.001	0.0077	--	< 0.001	< 0.001	< 0.001	--	0.027	--	--	0.0027	--	--	--	--	--	--	--	--	--	--	--	--
0.005	--	--	0.0078	0.028	< 0.0005	< 0.001	< 0.002	--	0.013	0.0022	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	0.4	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--
0.0047	--	--	0.0072	0.024	< 0.0005	< 0.001	< 0.002	--	0.013	0.0023	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.36	--	--	0.021	--	--	--	--	--	--	--	--	--	--	--	--
0.011	--	--	0.0017	0.05	< 0.0005	< 0.001	< 0.002	--	0.0039	0.0029	< 0.001	0.075	--	< 0.001	< 0.001	< 0.001	--	0.35	--	--	0.0055	--	--	--	--	--	--	--	--	--	--	--	--
0.0074	--	--	0.0006	0.017	< 0.0005	< 0.001	< 0.002	--	0.0016	0.0009	< 0.001	0.033	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.0022	--	--	--	--	--	--	--	--	--	--	--	--
0.0023	--	--	0.0003	0.0052	< 0.0005	< 0.001	< 0.002	--	0.0007	< 0.0005	< 0.001	0.0071	--	< 0.001	< 0.001	< 0.001	--	0.025	--	--	0.0009	--	--	--	--	--	--	--	--	--	--	--	--
0.0025	--	--	0.0039	0.0097	< 0.0005	< 0.001	< 0.002	--	0.0081	0.0015	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.0021	--	--	0.015	0.0086	< 0.0005	< 0.001	< 0.002	--	0.0061	0.003	0.002	0.011	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.021	--	--	--	--	--	--	--	--	--	--	--	--
0.0028	--	--	0.011	0.0094	< 0.0005	< 0.001	< 0.002	--	0.0083	0.0026	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.019	--	--	--	--	--	--	--	--	--	--	--	--
0.012	--	--	0.0018	0.041	< 0.0005	< 0.001	< 0.002	--	0.0045	0.0031	< 0.001	0.063	--	< 0.001	< 0.001	< 0.001	--	0.36	--	--	0.0064	--	--	--	--	--	--	--	--	--	--	--	--
0.0078	--	--	0.0006	0.013	< 0.0005	< 0.001	< 0.002	--	0.0015	0.0011	< 0.001	0.037	--	< 0.001	< 0.001	< 0.001	--	0.099	--	--	0.002	--	--	--	--	--	--	--	--	--	--	--	--
0.0017	--	--	0.0006	0.0037	< 0.0005	< 0.001	< 0.002	--	0.0015	< 0.0005	< 0.001	0.0052	--	< 0.001	< 0.001	< 0.001	--	0.021	--	--	0.0021	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0007	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0012	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0012	< 0.005	--	< 0.005	0.0012	0.0012	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0031	< 0.0005	< 0.001	< 0.002	--	< 0.0002	0.001	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0093	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0012	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0012	< 0.005	--	< 0.005	0.0012	0.0012	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0031	< 0.0005	< 0.001	< 0.002	--	< 0.0002	0.001	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0093	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0043	< 0.0005	< 0.001	< 0.002	--	< 0.0002	0.0008	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0073	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0019	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0007	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	0.0008	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	0.0008	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0055	--	--	0.0007	0.018	< 0.0005	< 0.001	< 0.002	--	0.0038	0.0007	< 0.001	0.032	--	< 0.001	< 0.001	< 0.001	--	0.086	--	--	0.0045	--	--	--	--	--	--	--	--	--	--	--	--
0.0057	--	--	0.0006	0.011	< 0.0005	< 0.001	< 0.002	--	0.0024	0.0009	< 0.001	0.024	--	< 0.001	< 0.001	< 0.001	--	0.079	--	--	0.003	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.0004	0.0003	--	< 0.0004	< 0.0004	--	0.0008	0.0007	< 0.0004	0.0005	--	< 0.0004	< 0.0004	< 0.0002	--	0.0046	--	0.0046	0.0012	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	0.0005	--	< 0.0004	< 0.0004	--	0.0006	0.0004	< 0.0004	0.0006	--	< 0.0004	< 0.0004	< 0.0002	--	0.0043	--	0.0043	0.0006	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0026	0.0049	< 0.0005	< 0.001	< 0.002	--	0.0074	0.0009	< 0.001	0.0046	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	0.0034	0.006	< 0.0005	< 0.001	< 0.002	--	0.0084	0.0011	< 0.001	0.0045	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0097	0.004	< 0.0005	< 0.001	< 0.002	--	0.028	0.0021	< 0.001	0.0058	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.038	--	--	--	--	--	--	--	--	--	--	--	--
0.19	--	--	0.015	0.3	< 0.0005	0.003	< 0.002	--	0.035	0.007	< 0.001	0.59	--	< 0.001	< 0.001	< 0.001	--	1.4	--	--	0.05	--	--	--	--	--	--	--	--	--	--	--	--
0.0023	--	--	0.0008	0.0047	< 0.0005	< 0.001	< 0.002	--	0.0036	0.0009	< 0.001	0.0065	--	< 0.001	< 0.001	< 0.001	--	0.081	--	--	0.0044	--	--	--	--	--	--	--	--	--	--	--	--
0.0044	--	--	0.0005	0.0096	< 0.0005	< 0.001	< 0.002	--	0.0015	0.001	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.07	--	--	0.002	--	--	--	--	--	--	--	--	--	--	--	--
0.0014	--	--	0.0003	0.0026	< 0.0005	< 0.001	< 0.002	--	0.0011	< 0.0005	< 0.001	0.0031	--	< 0.001	< 0.001	< 0.001	--	0.013	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.0007	< 0.0002	--	< 0.0004	< 0.0004	--	0.0013	0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	0.0038	--	0.0038	0.002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																																	
< 0.0008	--	--	0.0004	0.0003	--	< 0.0004	< 0.0004	--	0.0005	0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	0.0014	--	0.0014	0.0009	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.0006	< 0.0002	--	< 0.0004	< 0.0004	--	0.0004	0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	0.0012	--	0.0012	0.001	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.013	0.0075	--	0.0004	< 0.0004	--	0.014	0.0061	0.0006	0.0062	--	< 0.0004	< 0.0004	< 0.0002	--	0.15	--	0.14	0.028	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.012	0.0071	--	0.0004	< 0.0004	--	0.014	0.004	0.0005	0.0054	--	< 0.0004	< 0.0004	< 0.0002	--	0.17	--	0.18	0.025	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.016	0.0069	--	< 0.0004	< 0.0004	--	0.0089	0.004	0.0015	0.0039	--	< 0.0004	0.0007	0.0002	--	0.12	--	0.11	0.025	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.017	0.0061	--	0.0004	< 0.0004	--	0.0088	0.0039	0.0011	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	0.11	--	0.1	0.026	--	--	--	--	--	--	--	--	--	--	--	--
0.13	--	--	0.025	0.31	--	0.0033	< 0.0004	--	0.0311	0.014	0.0018	0.54	--	< 0.0004	< 0.0004	0.0014	--	0.52	--	0.51	0.041	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.02	0.013	--	0.0005	< 0.0004	--	0.019	0.01	0.001	0.01	--	< 0.0004	< 0.0004	< 0.0002	--	0.23	--	0.22	0.039	--	--	--	--	--	--	--	--	--	--	--	--
0.005	--	--	0.087	0.029	--	0.0005	< 0.0004	--	0.077	0.012	0.014	0.013	--	< 0.0004	< 0.0004	< 0.0002	--	0.36	--	0.34	0.16	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.0086	0.0099	--	0.0004	< 0.0004	--	0.0027	0.0014	0.0007	0.017	--	< 0.0004	< 0.0004	< 0.0002	--	0.044	--	0.043	0.011	--	--	--	--	--	--	--	--	--	--	--	--
0.0076	--	--	0.014	0.021	--	0.0008	< 0.0004	--	0.0055	0.0031	0.0012	0.033	--	< 0.0004	< 0.0004	< 0.0002	--	0.097	--	0.094	0.019	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.0078	0.0076	--	0.0004	< 0.0004	--	0.0023	0.0012	0.0006	0.013	--	< 0.0004	< 0.0004	< 0.0002	--	0.038	--	0.037	0.01	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	0.009	0.012	--	0.0004	< 0.0004	--	0.0031	0.0048	0.0008	0.022	--	< 0.0004	< 0.0004	< 0.0002	--	0.057	--	0.056	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.013	--	--	0.024	0.052	--	0.0015	< 0.0004	--	0.0087	0.0057	0.002	0.09	--	< 0.0004	< 0.0004	< 0.0002	--	0.22	--	0.21	0.033	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0008	--	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0012	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.008	--	--	0.007	0.018	--	< 0.001	< 0.005	--	0.007	0.001	0.001	0.041	< 0.001	< 0.001	< 0.001	< 0.001	--	--	0.105	--	0.014	0.008	--	--	--	--	--	--	--	--	--	--	--
0.01	--	--	< 0.001	< 0.01	--	< 0.01	< 0.05	--	0.0009	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	--	0.0289	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0	--	--	< 0.001	< 0.01	--	< 0.01	< 0.05	--	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	--	< 0.001	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
0.008	--	--	0.008	0.019	--	< 0.001	< 0.005	--	0.007	0.001	0.001	0.04	< 0.001	< 0.001	< 0.001	< 0.001	--	--	0.095	--	0.015	0.008	--	--	--	--	--	--	--	--	--	--	--
0.007	--	--	0.007	0.014	--	< 0.001	< 0.005	--	0.006	0.001	0.001	0.032	< 0.001	< 0.001	< 0.001	< 0.001	--	--	0.078	--	0.013	0.007	--	--	--	--	--	--	--	--	--	--	--
< 0.001	--	--	< 0.001	< 0.001	--	< 0.001	< 0.005	--	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.005	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.011	--	0.011	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0006	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
< 0.01	--	--	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	--	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--
0.0018	--	--	0.0044	0.01	< 0.0005	< 0.001	< 0.002	--	0.0045	0.0011	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0089	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	0.0023	0.0011	< 0.0005	< 0.001	< 0.002	--	0.0013	< 0.0005	< 0.001	0.0036	--	< 0.001	< 0.001	< 0.001	--	0.02	--	--	0.0036	--	--	--	--	--	--	--	--	--	--	--	--
0.0008	--	--	0.0015	0.0009	< 0.0005	< 0.001	< 0.002	--	0.0025	0.0007	< 0.001	0.0043	--	< 0.001	< 0.001	< 0.001	--	0.023	--	--	0.0039	--	--	--	--	--	--	--	--	--	--	--	--
0.052	--	--	0.0083	0.084	< 0.0005	0.002	< 0.002	--	0.015	0.0038	< 0.001	0.16	--	< 0.001	< 0.001	< 0.001	--	0.43	--	--	0.023	--	--	--	--	--	--	--	--	--	--	--	--
0.0034	--	--	0.0005	0.0053	< 0.0005	< 0.001	< 0.002	--	0.0009	0.0006	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.043	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--
0.0014	--	--	0.0012	0.0018	< 0.0005	< 0.001	< 0.002	--	0.0015	< 0.0005	< 0.001	0.003	--	< 0.001	< 0.001	< 0.001	--	0.046	--	--	0.0027	--	--	--	--	--	--	--	--	--	--	--	--
0.0019	--	--	0.0003	< 0.0005	< 0.0005	< 0.001	< 0.002	--	0.0014	< 0.0005	< 0.001	0.001	--	< 0.001	< 0.001	< 0.001	--	0.0072	--	--	0.0017	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	0.0008	< 0.0005	--	--	--	--	--	--	--	--	--	--	0.0008	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0014	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	< 0.0002	0.0014	< 0.0005	< 0.001	< 0.002	--	0.0031	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.51	--	--	0.0031	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	0.0017	0.0061	< 0.0005	< 0.001	< 0.002	--	0.002	0.0006	< 0.001	0.0044	--	< 0.001	< 0.001	< 0.001	--	0.081	--	--	0.0036	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.002	0.0071	< 0.0005	< 0.001	< 0.002	--	0.002	0.0005	< 0.001	0.0059	--	< 0.001	< 0.001	< 0.001	--	0.08	--	--	0.0039	--	--	--	--	--	--	--	--	--	--	--	--
0.0021	--	--	0.0019	0.0094	< 0.0005	< 0.001	< 0.002	--	0.0026	0.0007	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.072	--	--	0.0045	--	--	--	--	--	--	--	--	--	--	--	--
0.025	--	--	0.0057	0.047	< 0.0005	0.001	< 0.002	--	0.012	0.0021	< 0.001	0.099	--	< 0.001	< 0.001	< 0.001	--	0.24	--	--	0.018	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	< 0.0002	0.0022	< 0.0005	< 0.001	< 0.002	--	0.0007	< 0.0005	< 0.001	0.0029	--	< 0.001	< 0.001	< 0.001	--	0.025	--	--	0.0007	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0003	0.0041	< 0.0005	< 0.001	< 0.002	--	0.001	0.0005	< 0.001	0.0087	--	< 0.001	< 0.001	< 0.001	--	0.034	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	< 0.0002	0.0014	< 0.0005	< 0.001	< 0.002	--	0.0004	< 0.0005	< 0.001	0.0016	--	< 0.001	< 0.001	< 0.001	--	0.0063	--	--	0.0004	--	--	--	--	--	--	--	--	--	--	--	--
0.0008	--	--	0.0023	0.0042	< 0.0005	< 0.001	< 0.002	--	0.0032	0.0012	< 0.001	0.0038	--	< 0.001	< 0.001	< 0.001	--	0.083	--	--	0.0055	--	--	--	--	--	--	--	--	--	--	--	--
0.001	--	--	0.0048	0.0054	< 0.0005	< 0.001	< 0.002	--	0.018	0.0013	< 0.001	0.0046	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.023	--	--	--	--	--	--	--	--	--	--	--	--
0.0039	--	--	0.0047	0.01	< 0.0005	< 0.001	< 0.002	--	0.0059	0.0009	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.088	--	--	0.011	--	--	--	--	--	--	--	--	--	--	--	--
0.041	--	--	0.0057	0.071	< 0.0005	< 0.001	< 0.002	--	0.024	0.0035	< 0.001	0.14	--	< 0.001	< 0.001	< 0.001	--	0.37	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--
0.0019	--	--	0.0008	0.0033	< 0.0005	< 0.001	< 0.002	--	0.0031	0.0007	< 0.001	0.0022	--	< 0.001	< 0.001	< 0.001	--	0.052	--	--	0.0038	--	--	--	--	--	--	--	--	--	--	--	--
0.002	--	--	0.0003	0.0031	< 0.0005	< 0.001	< 0.002	--	0.0014	< 0.0005	< 0.001	0.0055	--	< 0.001	< 0.001	< 0.001	--	0.027	--	--	0.0016	--	--	--	--	--	--	--	--	--	--	--	--
0.0008	--	--	0.0003	0.0014	< 0.0005	< 0.001	< 0.002	--	0.0008	< 0.0005	< 0.001	0.0009	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0011	--	--	--	--	--	--	--	--	--	--	--	--
0.0007	--	--	0.0004	0.0018	< 0.0005	< 0.001	< 0.002	--	0.0029	< 0.0005	< 0.001	0.0017	--	< 0.001	< 0.001	< 0.001	--	0.023	--	--	0.0033	--	--	--	--	--	--	--	--	--	--	--	--
0.0008	--	--	0.0004	0.0017	< 0.0005	< 0.001	< 0.002	--	0.0027	< 0.0005	< 0.001	0.0013	--	< 0.001	< 0.001	< 0.001	--	0.022	--	--	0.0031	--	--	--	--	--	--	--	--	--	--	--	--
0.0012	--	--	0.002	0.0035	< 0.0005	< 0.001	< 0.002	--	0.0038	0.0006	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.085	--	--	0.0058	--	--	--	--	--	--	--	--	--	--	--	--
0.0014	--	--	0.0018	0.0031	< 0.0005	< 0.001	< 0.002	--	0.0044	0.001	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.087	--	--	0.0062	--	--	--	--	--	--	--	--	--	--	--	--
0.0016	--	--	0.0014	0.0041	< 0.0005	< 0.001	< 0.002	--	0.0033	0.0009	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.0046	--	--	--	--	--	--	--	--	--	--	--	--
0.052	--	--	0.0062	0.1	< 0.0005	< 0.001	< 0.002	--	0.016	0.0027	< 0.001	0.22	--	< 0.001	< 0.001	< 0.001	--	0.48	--	--	0.022	--	--	--	--	--	--	--	--	--	--	--	--
0.0021	--	--	< 0.0002	0.0023	< 0.0005	< 0.001	< 0.002	--	0.0013	0.0007	< 0.001	0.01	--	< 0.001	< 0.001	< 0.001	--	0.031	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0027	--	--	0.0041	0.011	< 0.0005	< 0.001	< 0.002	--	0.0019	0.0012	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.0061	--	--	--	--	--	--	--	--	--	--	--	--
0.0022	--	--	0.004	0.0092	< 0.0005	< 0.001	< 0.002	--	0.0033	0.0012	< 0.001	0.022	--	< 0.001	< 0.001	< 0.001	--	0.15	--	--	0.0073	--	--	--	--	--	--	--	--	--	--	--	--
0.0019	--	--	0.0003	0.0044	< 0.0005	0.001	< 0.002	--	0.0008	< 0.0005	< 0.001	0.0088	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.001	--	--	--	--	--	--	--	--	--	--	--	--
0.0005	--	--	< 0.0002	0.0014	< 0.0005	0.001	< 0.002	--	0.0003	< 0.0005	< 0.001	0.0018	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0003	--	--	--	--	--	--	--	--	--	--	--	--
0.0027	--	--	0.0036	0.016	< 0.0005	< 0.001	< 0.002	--	0.013	0.0016	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.22	--	--	0.017	--	--	--	--	--	--	--	--	--	--	--	--
0.0035	--	--	0.0039	0.015	< 0.0005	< 0.001	< 0.002	--	0.016	0.0012	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--
0.0034	--	--	0.0006	0.0071	< 0.0005	< 0.001	< 0.002	--	0.0007	< 0.0005	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.044	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																																
0.001	--	--	0.0004	0.0018	< 0.0005	< 0.001	< 0.002	--	0.0011	< 0.0005	< 0.001	0.0018	--	< 0.001	< 0.001	< 0.001	--	0.0084	--	--	0.0015	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0033	--	--	0.0015	0.015	< 0.0005	< 0.001	< 0.002	--	0.01	0.0018	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.19	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.0032	--	--	0.0003	0.0051	< 0.0005	< 0.001	< 0.002	--	0.0011	0.0008	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.035	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0006	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0065	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0039	--	--	0.002	0.012	< 0.0005	< 0.001	< 0.002	--	0.01	0.0016	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.0044	--	--	0.0015	0.0073	< 0.0005	< 0.001	< 0.002	--	0.0046	0.0028	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.048	--	--	0.0061	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0013	0.0044	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.0093	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0014	0.005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.03	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	0.002	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	< 0.0002	0.0066	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.029	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0025	--	--	< 0.0002	0.004	< 0.0005	0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.021	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0042	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.002	--	--	0.003	0.016	< 0.0005	< 0.001	< 0.002	--	0.004	0.0012	< 0.001	0.051	--	< 0.001	< 0.001	< 0.001	--	0.25	--	--	0.007	--	--	--	--	--	--	--	--	--	--	--	--
0.0047	--	--	0.0004	0.0074	< 0.0005	0.001	< 0.002	--	< 0.0002	0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.036	--	--	0.0004	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.0056	--	< 0.001	< 0.001	< 0.001	--	0.0066	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	0.0025	0.0058	< 0.0005	< 0.001	< 0.002	--	0.0033	0.001	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.068	--	--	0.0058	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	0.003	0.0063	< 0.0005	< 0.001	< 0.002	--	0.0031	0.0009	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	0.075	--	--	0.0061	--	--	--	--	--	--	--	--	--	--	--	--
0.0007	--	--	0.0033	0.0051	< 0.0005	< 0.001	< 0.002	--	0.0065	0.0009	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.078	--	--	0.0098	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	0.0007	0.0029	< 0.0005	< 0.001	< 0.002	--	0.0005	< 0.0005	< 0.001	0.005	--	< 0.001	< 0.001	< 0.001	--	0.026	--	--	0.0012	--	--	--	--	--	--	--	--	--	--	--	--
0.0008	--	--	0.0012	0.0028	< 0.0005	< 0.001	< 0.002	--	0.001	< 0.0005	< 0.001	0.0059	--	< 0.001	< 0.001	< 0.001	--	0.027	--	--	0.0022	--	--	--	--	--	--	--	--	--	--	--	--
0.002	--	--	0.0014	0.0055	< 0.0005	< 0.001	< 0.002	--	0.0035	0.001	< 0.001	0.0059	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	0.0049	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.0014	0.004	< 0.0005	< 0.001	< 0.002	--	0.003	0.0009	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	0.048	--	--	0.0044	--	--	--	--	--	--	--	--	--	--	--	--
0.0034	--	--	0.0005	0.0055	< 0.0005	< 0.001	< 0.002	--	0.0011	0.0006	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.03	--	--	0.0017	--	--	--	--	--	--	--	--	--	--	--	--
0.0039	--	--	0.0004	0.0058	< 0.0005	< 0.001	< 0.002	--	0.001	0.0005	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0052	0.0089	< 0.0005	< 0.001	< 0.002	--	0.016	0.0018	< 0.001	0.0095	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.021	--	--	--	--	--	--	--	--	--	--	--	--
0.017	--	--	0.0064	0.037	< 0.0005	0.001	< 0.002	--	0.012	0.0023	< 0.001	0.059	--	< 0.001	< 0.001	< 0.001	--	0.18	--	--	0.018	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0016	0.0048	< 0.0005	< 0.001	< 0.002	--	0.0031	0.0009	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.067	--	--	0.0047	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0005	0.0023	< 0.0005	< 0.001	< 0.002	--	0.003	< 0.0005	< 0.001	0.0036	--	< 0.001	< 0.001	< 0.001	--	0.029	--	--	0.0035	--	--	--	--	--	--	--	--	--	--	--	--
0.0022	--	--	0.0007	0.007	< 0.0005	0.001	< 0.002	--	0.0025	0.0013	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.047	--	--	0.0032	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0002	0.0013	< 0.0005	< 0.001	< 0.002	--	0.0016	< 0.0005	< 0.001	0.0024	--	< 0.001	< 0.001	< 0.001	--	0.0082	--	--	0.0018	--	--	--	--	--	--	--	--	--	--	--	--
0.0035	< 0.002	0.0057	--	0.0076	< 0.0005	< 0.001	< 0.002	0.0036	--	0.0007	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	--	0.035	--	0.0093	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	< 0.002	< 0.0002	--	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	--	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.006	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	< 0.002	< 0.0002	--	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	--	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.006	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.005	< 0.002	0.0066	--	0.0088	< 0.0005	< 0.001	< 0.002	0.0045	--	0.0008	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	0.043	--	0.011	--	--	--	--	--	--	--	--	--	--	--	--
0.0039	< 0.002	0.0072	--	0.007	< 0.0005	< 0.001	< 0.002	0.0035	--	0.0008	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	--	0.037	--	0.011	--	--	--	--	--	--	--	--	--	--	--	--
0.0024	< 0.002	0.0044	--	0.0047	< 0.0005	< 0.001	< 0.002	0.0025	--	0.0006	< 0.001	0.0077	--	< 0.001	< 0.001	< 0.001	--	--	0.024	--	0.0069	--	--	--	--	--	--	--	--	--	--	--	--
0.0024	< 0.002	0.0037	--	0.0038	< 0.0005	< 0.001	< 0.002	0.0021	--	< 0.0005	< 0.001	0.0059	--	< 0.001	< 0.001	< 0.001	--	--	0.019	--	0.0058	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	< 0.002	0.0004	--	< 0.0005	< 0.0005	< 0.001	< 0.002	0.0003	--	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.006	--	0.0007	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	< 0.002	0.0005	--	0.0008	< 0.0005	< 0.001	< 0.002	< 0.0002	--	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.006	--	0.0005	--	--	--	--	--	--	--	--	--	--	--	--
0.0016	--	--	0.0019	0.0096	< 0.0005	0.001	< 0.002	--	0.01	0.0005	< 0.001	0.0039	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.024	--	--	0.0081	0.052	< 0.0005	0.002	< 0.002	--	0.015	0.0024	< 0.001	0.082	--	< 0.001	< 0.001	< 0.001	--	0.24	--	--	0.023	--	--	--	--	--	--	--	--	--	--	--	--
0.0021	--	--	0.0013	0.0051	< 0.0005	0.001	< 0.002	--	0.0016	< 0.0005	< 0.001	0.0074	--	< 0.001	< 0.001	< 0.001	--	0.057	--	--	0.0029	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	< 0.0002	0.001	< 0.0005	0.002	< 0.002	--	0.0006	< 0.0005	< 0.001	0.0015	--	< 0.001	< 0.001	< 0.001	--	0.0077	--	--	0.0006	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.0016	0.0027	< 0.0005	0.001	< 0.002	--	0.0056	0.0007	< 0.001	0.0027	--	< 0.001	< 0.001	< 0.001	--	0.037	--	--	0.0071	--	--	--	--	--	--	--	--	--	--	--	--
0.0017	--	--	0.0004	0.0034	< 0.0005	0.002	< 0.002	--	0.001	< 0.0005	< 0.001	0.003	--	< 0.001	< 0.001	< 0.001	--	0.033	--	--	0.0014	--	--	--	--	--	--	--	--	--	--	--	--
0.0045	--	--	0.0005	0.0064	< 0.0005	0.002	< 0.002	--	0.0017	0.0007	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.044	--	--	0.0022	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	0.0004	0.0011	< 0.0005	0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0004	--	--	--	--	--	--	--	--	--	--	--	--
0.0057	--	--	0.0079	0.013	< 0.0005	0.001	< 0.002	--	0.0042	0.001	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	0.056	--	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.0033	--	--	0.0042	0.0055	< 0.0005	0.002	< 0.002	--	0.0021	0.0008	< 0.001	0.007	--	< 0.001	< 0.001	< 0.001	--	0.027	--	--	0.0063	--	--	--	--	--	--	--	--	--	--	--	--
0.0042	--	--	0.005	0.0071	< 0.0005	0.001	< 0.002	--	0.0025	0.0005	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.0075	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	0.0004	0.001	< 0.0005	0.002	< 0.002	--	0.0006	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.001	--	--	--	--	--	--	--	--	--	--	--	--
0.0049	--	--	0.0078	0.023	< 0.0005	0.002	< 0.002	--	0.053	0.0023	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.25	--	--	0.061	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.067	0.013	< 0.0005	0.001	< 0.002	--	0.18	0.0061	0.004	0.0069	--	< 0.001	< 0.001	< 0.001	--	0.37	--	--	0.25	--	--	--	--	--	--	--	--	--	--	--	--
0.0007	--	--	0.0003	0.0014	< 0.0005	< 0.001	< 0.002	--	0.001	< 0.0005	< 0.001	0.0015	--	< 0.001	< 0.001	< 0.001	--	0.015	--	--	0.0013	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	0.0003	0.0007	< 0.0005	0.001	< 0.002	--	0.0013	0.001	< 0.001	0.0007	--	< 0.001	< 0.001	< 0.001	--	0.031	--	--	0.0016	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	< 0.0002	0.0007	< 0.0005	0.001	< 0.002	--	0.0017	< 0.0005	< 0.001	0.001	--	< 0.001	< 0.001	< 0.001	--	0.012	--	--	0.0017	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	0.0002	0.0008	< 0.0005	0.001	< 0.002	--	0.0018	< 0.0005	< 0.001	0.0011	--	< 0.001	< 0.001	< 0.001	--	0.01	--	--	0.002	--	--	--	--	--	--	--	--	--	--	--	--
0.005	--	--	0.0009	0.0046	< 0.0005	0.002	< 0.002	--	0.005	0.0023	< 0.001	0.0075	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.0059	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	0.0003	0.0008	< 0.0005	0.002	< 0.002	--	0.004	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.011	--	--	0.0043	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0008	0.0019	< 0.0005	0.001	< 0.002	--	0.0078	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.012	--	--	0.0086	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0004	< 0.0005	< 0.0005	0.001	< 0.002	--	0.0018	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0021	--	--	--	--	--	--	--	--	--	--	--	--
0.0052	--	--	0.0068	0.018	< 0.0005	0.001	< 0.002	--	0.015	0.0023	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.022	--	--	--	--	--	--	--	--	--	--	--	--
0.0053	--	--	0.006	0.018	< 0.0005	0.001	< 0.002	--	0.022	0.0019	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.18	--	--	0.028	--	--	--	--	--	--	--	--	--	--	--	--
0.0048	--	--	0.0076	0.017	< 0.0005	0.001	< 0.002	--	0.026	0.0016	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.18	--	--	0.034	--	--	--	--	--	--	--	--	--	--	--	--
0.0022	--	--	0.0023	0.0067	< 0.0005	0.002	< 0.002	--	0.0052	0.0007	< 0.001	0.0079	--	< 0.001	< 0.001	< 0.001	--	0.076	--	--	0.0074	--	--	--	--	--	--	--	--	--	--	--	--
0.0026	--	--	0.0019	0.0061	< 0.0005	0.001	< 0.002	--	0.0018	0.0007	< 0.001	0.0075	--	< 0.001	< 0.001	< 0.001	--	0.066	--	--	0.0037	--	--	--	--	--	--	--	--	--	--	--	--
0.0022	--	--	0.0015	0.0064	< 0.0005	0.001	< 0.002	--	0.0028	0.0008	< 0.001	0.008	--	< 0.001	< 0.001	< 0.001	--	0.071	--	--	0.0043	--	--	--	--	--	--	--	--	--	--	--	--
0.0007	--	--	0.0003	0.0014	< 0.0005	0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.0007	--	< 0.001	< 0.001	< 0.001	--	0.0078	--	--	0.0003	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	0.0004	0.0014	< 0.0005	0.001	< 0.002	--	0.0016	< 0.0005	< 0.001	0.0009	--	< 0.001	< 0.001	< 0.001	--	0.01	--	--	0.002	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	< 0.0002	0.0014	< 0.0005	0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	0.0008	--	< 0.001	< 0.001	< 0.001	--	0.0069	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.0012	--	--	0.0514	0.0099	--	0.0007	< 0.0005	--	0.252	0.0049	0.0038	0.0077	--	< 0.004	< 0.0005	< 0.0005	--	0.424	--	0.41	0.303	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	0.0029	0.008	--	0.0008	< 0.0005	--	0.0289	0.0012	< 0.0005	0.0058	--	< 0.004	< 0.0005	< 0.0005	--	0.16	--	0.159	0.0318	--	--	--	--	--	--	--	--	--	--	--	--
0.0038	--	--	0.0035	0.0108	--	0.0008	< 0.0005	--	0.0298	0.0014	< 0.0005	0.0155	--	< 0.004	< 0.0005	< 0.0005	--	0.154	--	0.153	0.0333	--	--	--	--	--	--	--	--	--	--	--	--
0.11	--	--	0.0152	0.212	--	0.0035	< 0.0005	--	0.0388	0.006	0.002	0.426	--	< 0.0041	< 0.0005	< 0.0005	--	0.983	--	0.978	0.054	--	--	--	--	--	--	--	--	--	--	--	--
0.0011	--	--	< 0.0005	0.003	--	< 0.0005	< 0.0005	--	0.0053	< 0.0005	< 0.0005	0.004	--	< 0.0041	< 0.0005	< 0.0005	--	0.0395	--	0.0395	0.0053	--	--	--	--	--	--	--	--	--	--	--	--
0.0061	--	--	0.0012	0.0099	< 0.0005	0.001	< 0.002	--	0.0033	0.0009	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	0.0045	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																																		
0.0062	--	--	0.0014	0.011	< 0.0005	0.002	< 0.002	--	0.0069	0.0013	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.076	--	--	0.0082	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0057	--	--	0.0011	0.011	< 0.0005	0.002	< 0.002	--	0.004	0.0012	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.068	--	--	0.0051	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0006	--	--	< 0.0002	0.0007	< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.008	--	--	0.0024	0.023	< 0.0005	0.002	< 0.002	--	0.008	0.0009	< 0.001	0.034	--	< 0.001	< 0.001	< 0.001	--	0.088	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0064	--	--	0.0007	0.033	< 0.0005	0.002	< 0.002	--	0.0036	0.0009	< 0.001	0.038	--	< 0.001	< 0.001	< 0.001	--	0.099	--	--	0.0043	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	0.0044	0.0071	< 0.0005	0.001	< 0.002	--	0.014	0.0013	< 0.001	0.0076	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.019	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0009	--	--	0.005	0.0066	< 0.0005	0.001	< 0.002	--	0.012	0.0014	< 0.001	0.0076	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.017	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0007	--	--	0.0048	0.0089	< 0.0005	0.001	< 0.002	--	0.01	0.0017	< 0.001	0.008	--	< 0.001	< 0.001	< 0.001	--	0.13	--	--	0.015	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0008	--	--	0.005	0.0086	< 0.0005	0.001	< 0.002	--	0.025	0.0016	< 0.001	0.0086	--	< 0.001	< 0.001	< 0.001	--	0.16	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0008	--	--	0.0048	0.0072	< 0.0005	0.001	< 0.002	--	0.016	0.0015	< 0.001	0.0066	--	< 0.001	< 0.001	< 0.001	--	0.13	--	--	0.021	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0012	--	--	0.0055	0.0076	< 0.0005	0.001	< 0.002	--	0.014	0.0013	< 0.001	0.0076	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0017	--	--	0.0017	0.0059	< 0.0005	0.001	< 0.002	--	0.0039	0.0007	< 0.001	0.0067	--	< 0.001	< 0.001	< 0.001	--	0.067	--	--	0.0056	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0015	--	--	0.0019	0.0061	< 0.0005	0.002	< 0.002	--	0.0025	0.0006	< 0.001	0.0065	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	0.0045	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0014	0.002	< 0.0005	0.001	< 0.002	--	0.0074	0.0006	< 0.001	0.0025	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.0088	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0012	0.0018	< 0.0005	0.001	< 0.002	--	0.0017	0.0005	< 0.001	0.0016	--	< 0.001	< 0.001	< 0.001	--	0.019	--	--	0.0029	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.0081	0.01	< 0.0005	0.002	< 0.002	--	0.024	0.0023	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.032	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.0058	0.01	< 0.0005	0.002	< 0.002	--	0.033	0.0018	< 0.001	0.01	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	0.038	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	0.058	0.011	< 0.0005	0.001	< 0.002	--	0.042	0.0037	0.004	0.0061	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.035	0.0074	< 0.0005	0.002	< 0.002	--	0.038	0.0026	0.002	0.0043	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.072	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0022	0.0013	< 0.0005	0.001	< 0.002	--	0.018	< 0.0005	< 0.001	0.0005	--	< 0.001	< 0.001	< 0.001	--	0.026	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	0.0008	< 0.0005	0.001	< 0.002	--	0.0006	0.0006	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0006	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0002	< 0.0005	< 0.0005	0.001	< 0.002	--	0.0027	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0027	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0004	0.0006	< 0.0005	0.002	< 0.002	--	0.002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0062	--	--	0.0023	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	0.0003	0.0005	< 0.0005	0.001	< 0.002	--	0.0014	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0088	--	--	0.0017	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0153	--	--	0.0142	0.0291	--	0.0008	< 0.0005	--	0.0098	0.0021	0.0016	0.0485	--	< 0.0005	< 0.0005	< 0.0005	--	0.136	--	0.133	0.024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0057	--	--	0.0059	0.0108	--	0.0006	< 0.0005	--	0.0049	0.0009	0.0006	0.0133	--	< 0.002	< 0.0008	< 0.0005	--	0.0488	--	0.0476	0.0108	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.003	--	--	0.0033	0.0055	--	< 0.0005	< 0.0005	--	0.0022	< 0.0005	< 0.0005	0.0061	--	< 0.002	< 0.0005	< 0.0005	--	0.0229	--	0.0229	0.0055	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0028	--	--	0.0032	0.005	--	< 0.0005	< 0.0008	--	0.0031	< 0.0005	< 0.0005	0.006	--	< 0.002	< 0.0008	< 0.0008	--	0.0227	--	0.0227	0.0063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	0.0003	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0003	--	0.0003	0.0003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	0.0013	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0013	--	0.0013	0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0023	--	--	0.004	0.0038	< 0.0005	< 0.0005	< 0.0005	--	0.0022	< 0.0005	< 0.0005	0.0066	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0189	--	0.0189	0.0062	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0024	--	--	0.0042	0.0038	< 0.0005	< 0.0005	< 0.0005	--	0.0021	< 0.0005	< 0.0005	0.0065	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.019	--	0.019	0.0063	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																																	
0.0023	--	--	0.0042	0.0038	< 0.0005	< 0.0005	< 0.0005	--	0.002	< 0.0005	< 0.0005	0.0062	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0185	--	0.0185	0.0062	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--
0.005	--	--	0.0076	0.0084	< 0.0005	< 0.0005	< 0.0005	--	0.0044	0.0007	0.0007	0.0143	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0446	--	0.0439	0.012	--	--	--	--	--	--	--	--	--	--	--	--
0.0031	--	--	0.005	0.0051	< 0.0005	< 0.0005	< 0.0005	--	0.0031	0.0005	< 0.0005	0.0091	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0282	--	0.0282	0.0081	--	--	--	--	--	--	--	--	--	--	--	--
0.0027	--	--	0.0043	0.0044	< 0.0005	< 0.0005	< 0.0005	--	0.0024	< 0.0005	< 0.0005	0.0078	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0216	--	0.0216	0.0067	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0005	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	< 0.01	--	--	--	< 10	--	--	< 50	< 50

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
C15 - C28 Fraction	C29 - C36 Fraction	C6 - C9 Fraction	>C10 - C16 Fraction minus Naphthalene (F	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	C6-C10 Fraction (F1)	C6-C10 Fraction minus BTEX (F1)
T	T	T	T	T	T	T	T	T	T
< 100	< 50	< 20	< 50	< 100	< 50	100	< 100	< 20	< 20
< 100	< 50	< 20	< 100	< 100	< 100	200	< 100	< 20	< 20
--	--	--	--	--	--	106	--	--	--
--	--	--	--	--	--	100	--	--	--
11	11	11	17	17	17	17	17	17	17
0	0	0	0	0	0	1	0	0	0
1.6%	1.6%	1.6%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1a
Willowdale Surface Water Historical Dataset
Alcoa Water Resources Management Plant

TPH									
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1b
Willowdale Surface Water Historical Dataset
Source Surface Water Body
Alcoa Water Resources Management Plant

Analyte Type							PFAS																
Analyte							10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoacet	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoac	Perfluoro-1-octanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFD	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)
Fraction							T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																												
Minimum							0.0004	< 0.0005	0.0005	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0005	< 0.0004	< 0.0002	0.0004	< 0.0002	0.0005	0.0002	0.0002	< 0.0005	0.0004
Maximum							0.002	< 0.001	0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.0004	< 0.001	0.05	< 0.001	< 0.01	0.01	< 0.001	0.01	0.001	0.01	< 0.001	0.01
Mean							0.0009	--	0.0033	--	--	--	--	--	--	--	--	--	0.0122	--	--	0.0026	--	0.0026	0.0008	0.0025	--	0.0026
Median							0.001	--	0.005	--	--	--	--	--	--	--	--	--	0.005	--	--	0.001	--	0.001	0.001	0.001	--	0.001
Sample Count							50	57	57	57	57	57	57	57	57	57	6	57	57	57	57	57	57	57	57	57	50	57
Detect Count							1	0	2	0	0	0	0	0	0	0	0	0	3	0	0	1	0	1	3	4	0	1
Percentage of samples analysed							87.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	10.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	87.7%	100.0%
Screening Criteria																												
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																		**1**							**0.03**			
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																		*0*							*0*			
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																												
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																												
NHMRC ADWG 2015 Health																												
NHMRC ADWG 2015 Health Exceed Count																												
NHMRC ADWG 2015 Aesthetic																												
NHMRC ADWG 2015 Aesthetic Exceed Count																												
Unit							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																						
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD	HVD	1/12/2020	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	--	< 0.01
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD	HVD	1/12/2020	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD1	HVD1	9/09/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD2	HVD2	9/09/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD3	HVD3	9/09/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD1	HVD1	31/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD2	HVD2	31/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	HARVEYDAM	Source SW Body	Other	HVD3	HVD3	31/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	HARVEYDAM	Source SW Body	AREMP	HDC-SWB1	HDC-SWB1	25/09/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	HARVEYDAM	Source SW Body	AREMP	HDC-SWB2	HDC-SWB2	25/09/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	HARVEYDAM	Source SW Body	AREMP	HDC-SWB3	HDC-SWB3	25/09/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_01	LOGUE BK_01	24/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_02	LOGUE BK_02	24/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_03	LOGUE BK_03	24/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_01	LOGUE BK_01	31/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_02	LOGUE BK_02	31/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	Other	LOGUE BK_03	LOGUE BK_03	31/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	LOGUEBROOKDAM	Source SW Body	AREMP	LBDC-SWB2	LBDC-SWB2	24/09/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON CAUSEWAY	Samson Causeway	7/07/2020	--	< 0.0005	0.0016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.0005	< 0.0005	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON PUMP HOUSE	Samson Pump House	7/07/2020	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.0008	< 0.0005	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_01	SAMSON_01	25/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_02	SAMSON_02	25/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_03	SAMSON_03	25/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SMDCP	SMDCP	25/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SM20	SM20	26/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SM08	SM08	7/09/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_01	SAMSON_01	17/06/2022	< 0.0004	< 0.001	0.002	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	0.0007	< 0.0002	--	< 0.0004
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_02	SAMSON_02	17/06/2022	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_03	SAMSON_03	17/06/2022	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	0.0004	0.0003	--	< 0.0004
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SAMSON_04	SAMSON_04	17/06/2022	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	0.0006	< 0.0002	--	< 0.0004
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SM08	SM08	17/06/2022	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SMDCP	SMDCP	17/06/2022	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD	3/03/2023	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD	3/03/2023	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.002
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD Jetty	14/03/2023	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.001	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD Jetty	20/04/2023	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.001
WILLOWDALE	SAMSONBRKANDPIPE	Source SW Body	Other	SD JETTY	SD	18/05/2023	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0006	< 0.0002	0.0007	< 0.0005	< 0.001
WILLOWDALE	SAMSONBROOK	Source SW Body	AREMP	SDC-SWB1	SDC-SWB1	2/10/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	SAMSONBROOK	Source SW Body	AREMP	SDC-SWB2	SDC-SWB2	2/10/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	SAMSONBROOK	Source SW Body	AREMP	SDC-SWB3	SDC-SWB3	2/10/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	SAMSONBROOK	Source SW Body	AREMP	SDC-SWB4	SDC-SWB4	2/10/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	STIRLING	Source SW Body	Other	SD1	SD1	9/09/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	STIRLING	Source SW Body	Other	SD2	SD2	9/09/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	STIRLING	Source SW Body	Other	SD3	SD3	9/09/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	STIRLING	Source SW Body	Other	SD1	SD1	1/06/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	STIRLING	Source SW Body	Other	SD2	SD2	1/06/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	STIRLING	Source SW Body	Other	SD3	SD3	1/06/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01
WILLOWDALE	STIRLING	Source SW Body	AREMP	STDC-SWB1	STDC-SWB1	3/10/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

Appendix D
Table D1b
Willowdale Surface Water Historical Dataset
Source Surface Water Body
Alcoa Water Resources Management Plant

Analyte Type							PFAS																							
WILLOWDALE	STIRLING	Source SW Body	AREMP	STDC-SWB2	STDC-SWB2	3/10/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	STIRLING	Source SW Body	AREMP	STDC-SWB3	STDC-SWB3	3/10/2024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_01	WAROONA_01	26/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_02	WAROONA_02	26/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_03	WAROONA_03	26/08/2021	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	WAROONADAM	Source SW Body	Other	WRD	WRD	26/08/2021	0.002	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_01	WAROONA_01	26/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_02	WAROONA_02	26/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
WILLOWDALE	WAROONADAM	Source SW Body	Other	WAROONA_03	WAROONA_03	26/05/2022	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Appendix D
Table D1b
Willowdale Surface Water Historical Dataset
Source Surface Water Body
Alcoa Water Resources Management Plant

Perfluorooctanesulfonamide (FOSA or PFO	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFU	Sum of enHealth PFAS (PFHxS + PFOS + PF	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)
T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.0004	0.0001	0.0002	< 0.0004	0.0002	< 0.001	< 0.0004	< 0.0004	0.0002	0.001	0.0002	0.0002	0.0002	0.001
< 0.05	0.0013	0.01	< 0.001	0.01	< 0.002	< 0.01	< 0.01	0.01	0.0012	0.0066	0.005	0.002	0.0012
--	0.0003	0.0025	--	0.0026	--	--	--	0.0026	0.001	0.0038	0.0025	0.0007	0.001
--	0.0002	0.001	--	0.001	--	--	--	0.001	0.001	0.005	0.0013	0.001	0.001
57	57	57	57	57	44	57	57	57	14	55	30	57	33
0	24	3	0	1	0	0	0	1	1	8	6	7	1
100.0%	100.0%	100.0%	100.0%	100.0%	77.2%	100.0%	100.0%	100.0%	24.6%	96.5%	52.6%	100.0%	57.9%
	0.004	**0.2**											
	0	*0*											
		0.56										**0.07**	
		0										*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.001	< 0.001
< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.05	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.05	0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.0005	0.0004	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0004	0.0004	0.0004	--
< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002	< 0.0002	--
< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002	< 0.0002	--
< 0.005	0.0004	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	0.0003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	0.0003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.05	0.0007	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.05	0.0012	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0012	< 0.005	< 0.005	0.0012	0.0012
< 0.0005	0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0002	0.0002	0.0002	--
< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	< 0.0002	--
< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	< 0.0002	--
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.0004	0.0013	0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	0.0038	0.0038	0.002	--
< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002	< 0.0002	--
< 0.0004	0.0005	0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	0.0014	0.0014	0.0009	--
< 0.0004	0.0004	0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	0.0012	0.0012	0.001	--
< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002	< 0.0002	--
< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002	< 0.0002	--
< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	< 0.0002	--
< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	< 0.0002	--
< 0.002	< 0.0002	< 0.0005	< 0.001	0.0056	--	< 0.001	< 0.001	< 0.001	--	0.0066	--	< 0.0002	--
< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	< 0.0002	--
< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	< 0.0002	--
< 0.0005	0.0003	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0003	0.0003	0.0003	--
< 0.0005	< 0.0003	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0003	< 0.0003	< 0.0003	--
< 0.0005	< 0.0003	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0003	< 0.0003	< 0.0003	--
< 0.0005	< 0.0004	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0004	< 0.0004	< 0.0004	--
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.05	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002	< 0.0002	--

Appendix D
Table D1b
Willowdale Surface Water Historical Dataset
Source Surface Water Body
Alcoa Water Resources Management Plant

< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002	< 0.0002	--
< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002	< 0.0002	--
< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	--	0.006	--	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.005	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001
< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001

Appendix D
Table D1c
Willowdale Surface Water Historical Dataset
Background / Ambient
Alcoa Water Resources Management Plant

Analyte Type							FIELD					GENERAL CHEMISTRY							HERBICIDES											
Analyte							Dissolved Oxygen	DO %	Oxidation-Reduction Potential	pH (Field)	Temperature	Conductivity	Electrical Conductivity @ 25°C	Methylene Blue Active Substances	pH Value	Total Dissolved Solids (Residue, Filterable)	Total Suspended Solids	Turbidity	2,4 Db	2,4,5-T (Trichlorophenoxyacetic Acid)	2,4-D (Dichlorophenoxyacetic Acid)	2,4,6-T	2,6-D	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Dichloroprop	Fluroxypyr
Fraction							T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																													
Minimum							9.37	91	110	5.61	10.6	104.1	159	< 0.1	6.11	85	< 5	-0.33	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Maximum							10.97	105.6	254.9	8.03	16.1	227.6	253	< 0.1	6.28	204	< 5	6.65	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mean							10.36	98	181	6.89	12.8	164.8	184	--	6.17	125	--	1.15	--	--	--	--	--	--	--	--	--	--	--
Median							10.34	98	188	6.86	12.1	168.1	170	--	6.15	113	--	0.2	--	--	--	--	--	--	--	--	--	--	--
Sample Count							9	9	9	9	9	9	5	2	5	14	5	14	5	5	5	5	5	5	5	5	5	5	5
Detect Count							9	9	9	9	9	9	5	0	5	14	0	14	0	0	0	0	0	0	0	0	0	0	0
Percentage of samples analysed							18.0%	18.0%	18.0%	18.0%	18.0%	18.0%	10.0%	4.0%	10.0%	28.0%	10.0%	28.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Screening Criteria																													
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																													
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																													
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																													
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																													
NHMRC ADWG 2015 Health																				**100**	**30**				**2000**	**100**	**100**		
NHMRC ADWG 2015 Health Exceed Count																				*0*	*0*				*0*	*0*	*0*		
NHMRC ADWG 2015 Aesthetic							**85**			**6.5 - 8.5**					**6.5 - 8.5**	**600**		**5000**										
NHMRC ADWG 2015 Aesthetic Exceed Count							*0*			*3*					*5*	*0*		*0*										
Unit							mg/L	%	mV	SU	deg c	us/cm	us/cm	mg/L	SU	mg/L	mg/L	NTU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																							
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	AREMP	HDC-UAW1	HDC-UAW1	23/08/2023	10.49	98.4	188	6.86	12.4	201.9	--	--	--	173	--	6.65	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	WRMP	HDC-UAW2	HDC-UAW2	23/08/2023	10.11	93.7	254.9	6.61	11.9	130.3	--	--	--	113	--	-0.33	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	AREMP	HDC-UAW1	HDC-UAW1	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	WRMP	HDC-UAW2	HDC-UAW2	25/09/2024	--	--	--	--	--	--	177	--	6.17	99	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	AREMP	HDC-UAW3	HDC-UAW3	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	AREMP	HDC-UAW4	HDC-UAW4	25/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD01	LBD1	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD02	LBD2	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD03	LBD3	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD01	LBD01	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD02	LBD02	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD03	LBD03	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD04	LBD04	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD01	LBD01	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD02	LBD02	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD03	LBD03	31/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	Other	LBD04	LBD04	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-SWB1	LBDC-SWB1	21/08/2023	10.8	105.6	206.6	8.03	14.3	158.1	--	--	--	129	--	2.04	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-SWB3	LBDC-SWB3	21/08/2023	10.34	105.1	110	7.75	16.1	168.1	--	--	--	132	--	4.31	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW1	LBDC-UAW1	23/08/2023	9.98	92.8	212.4	5.84	12.1	123.2	--	--	--	106	--	0	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW2	LBDC-UAW2	23/08/2023	10.19	94.8	219.5	5.74	12.1	104.1	--	--	--	90	--	0	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	WRMP	LBD_ST1_SO2_1	LBD_ST1_SO2_1	24/09/2024	--	--	--	--	--	--	160	--	6.14	85	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	WRMP	LBD_ST2_SO1_3	LBD_ST2_SO1_3	24/09/2024	--	--	--	--	--	--	170	< 0.1	6.15	95	< 5	0.1	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-SWB1	LBDC-SWB1	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-SWB3	LBDC-SWB3	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW1	LBDC-UAW1	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW2	LBDC-UAW2	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	AREMP	LBDC-UAW3	LBDC-UAW3	24/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	ORB4	ORB4	7/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	WDL-BG12	BG12	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	ORB1	ORB1	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	ORB4	ORB4	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	WDL-SW13	SW13	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	WDL-BG12	BG12	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	AREMP	MRC-UAW1	MRC-UAW1	22/08/2023	10.97	98.7	168.2	7.65	10.6	227.6	--	--	--	204	--	0.12	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	AREMP	MRC-UAW2	MRC-UAW2	22/08/2023	10.97	100.6	119	7.91	11.4	195.5	--	--	--	172	--	0.19	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	AREMP	MRC-UAW1	MRC-UAW1	26/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	AREMP	MRC-UAW2	MRC-UAW2	27/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	Other	SDA	SDA	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	Other	SDA	SDA	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	Other	SDA	SDA	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	WRMP	STN_ST1_SO1_10	STN_ST1_SO1_10	26/09/2024	--	--	--	--	--	--	253	--	6.11	143	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	BKG/Ambient Location	WRMP	STN_ST1_SO1_18	STN_ST1_SO1_18	26/09/2024	--	--	--	--	--	--	159	< 0.1	6.28	97	< 5	0.5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	BKG/Ambient Location	AREMP	STDC-UAW1	STDC-UAW1	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	AREMP	STDC-UAW2	STDC-UAW2	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	BKG/Ambient Location	AREMP	STDC-UAW3	STDC-UAW3	2/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	BKG/Ambient Location	Other	ORB2	ORB2	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	BKG/Ambient Location	Other	ORB2	ORB2	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	BKG/Ambient Location	AREMP	WDC-UAW1	WDC-UAW1	22/08/2023	9.37	91	145.9	5.61	14	174.1	--	--	--	113	--	1.29	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	BKG/Ambient Location	AREMP	WDC-UAW1	WDC-UAW1	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1c
Willowdale Surface Water Historical Dataset
Background / Ambient
Alcoa Water Resources Management Plant

														MAJOR IONS																							
MCPA	MCPB	MCPP	Picloram	Silvex (2,4,5-TP)	Triclopyr	Benzene	Ethylbenzene	M,P-Xylene	O-Xylene (1,2-Dimethylbenzene)	Toluene	Total BTEX	Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total	Calcium	Cations Total	Chloride (As Cl)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)	Total Hardness	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	D	T	T	T	D	D	D	D	D	D	T	D	T	D	T	T	T
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.15	1	1	35	1.07	1	1	21	5	11	0.01	0.04	< 0.001	0.001	0.018	0.007	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	11	< 1	< 1	11	2.82	2	2.52	89	7.32	5	2	45	13	21	0.07	0.1	< 0.001	0.002	0.036	0.019	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	4	--	--	4	1.78	1	2	55	4.26	3	1	30	8	15	0.04	0.08	--	0.001	0.027	0.011	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.59	1	1	48	4.51	3	1	27	8	12	0.05	0.1	--	0.001	0.028	0.008	--
5	5	5	5	5	5	5	5	5	5	5	5	5	14	14	14	14	14	14	14	14	12	14	14	14	14	5	5	5	5	5	5	5	5	5
0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	14	5	14	14	12	14	13	14	14	5	5	5	0	2	5	5	0	0
10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	24.0%	28.0%	28.0%	28.0%	28.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
40			**300**	**10**	**20**	**1**	**300**			**800**		**600**																		**0.01**	**0.01**	**2**	**2**	**0.06**
0			*0*	*0*	*0*	*0*	*0*			*0*		*0*																		*0*	*0*	*0*	*0*	*0*
							3			**25**		**20**								**250**				**180**	**250**									
							0			*0*		*0*								*0*				*0*	*0*									
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	11	< 1	< 1	11	2.49	2	2.24	71	5.4	4	1	41	13	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4	< 1	< 1	4	1.42	< 1	1.36	41	2.12	2	1	27	9	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.47	2	1.58	42	3.62	4	1	26	12	21	0.07	0.1	< 0.001	< 0.001	0.021	0.011	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4	< 1	< 1	4	1.54	< 1	1.45	46	3.09	2	1	29	8	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4	< 1	< 1	4	1.64	< 1	1.45	50	5.98	2	1	29	7	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	2	< 1	< 1	2	1.35	< 1	1.32	42	1.07	2	1	26	6	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	< 1	< 1	3	1.15	< 1	1	35	7.25	1	< 1	21	5	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.72	< 1	1.36	55	--	3	1	25	6	12	0.05	0.1	< 0.001	< 0.001	0.028	0.008	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.88	< 1	1.4	61	--	3	1	26	6	12	0.03	0.04	< 0.001	< 0.001	0.032	0.008	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	5	< 1	< 1	5	2.82	2	2.52	89	5.6	5	2	45	10	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	< 1	< 1	3	2.23	< 1	1.92	71	7.32	3	1	38	8	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	2.55	2	2.26	81	6.01	4	2	41	10	21	0.06	0.1	< 0.001	0.002	0.036	0.019	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.26	1	1.33	39	2.44	2	1	25	5	11	0.01	0.06	< 0.001	0.002	0.018	0.007	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4	< 1	< 1	4	1.4	< 1	1.36	43	1.17	2	1	27	5	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1c
Willowdale Surface Water Historical Dataset
Background / Ambient
Alcoa Water Resources Management Plant

METALS																												MICROBIOLOGY					
Boron	Boron	Cadmium	Cadmium	Chromium (III)	Chromium, hexavalent	Chromium, total	Cobalt	Copper	Copper	Iron	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum	Nickel	Nickel	Phosphorus	Selenium	Selenium	Silver	Uranium	Vanadium	Zinc	Coliform,Thermotolerant	ENTEROCOCCI	Escherichia Coli (E. Coli)	Thermophilic Amoeba	Ammonia as N	Nitrate and Nitrite
D	T	D	T	D	D	D	D	D	T	D	D	T	D	T	D	T	D	T	D	T	T	D	T	D	T	D	D	T	T	T	T	T	T
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	0.001	< 0.001	< 0.001	0.05	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	0.001	< 0.001	0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.006	< 1	< 1	< 1	< 1	0.01	0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	0.001	< 0.001	< 0.001	0.25	< 0.001	< 0.001	0.005	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	0.002	< 0.001	0.02	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.028	< 1	< 1	< 1	< 1	0.11	0.04
--	--	--	--	--	--	--	0.001	--	--	0.09	--	--	0.002	0.003	--	--	--	--	0.001	--	0.01	--	--	--	--	--	0.018	--	--	--	--	0.04	0.02
--	--	--	--	--	--	--	0.001	--	--	0.05	--	--	0.002	0.003	--	--	--	--	0.001	--	0.01	--	--	--	--	--	0.022	--	--	--	--	0.03	0.01
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	2	2	2	2	5	5
0	0	0	0	0	0	0	1	0	0	1	0	0	5	4	0	0	0	0	1	0	1	0	0	0	0	0	5	0	0	0	0	3	2
10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	4.0%	4.0%	4.0%	4.0%	10.0%	10.0%
4	**4**	**0.002**	**0.002**		**0.05**			**2**	**2**		**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**	**0.02**	**0.02**		**0.01**	**0.01**	**0.1**	**0.017**								
0	*0*	*0*	*0*		*0*			*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*								
								1	**1**	**0.3**			**0.1**	**0.1**													**3**							
								0	*0*	*0*			*0*	*0*													*0*							
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	cfu/100ml	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1c
Willowdale Surface Water Historical Dataset
Background / Ambient
Alcoa Water Resources Management Plant

																													PESTICIDES												
Nitrate as N	Nitrite	Phosphate	Total Kjeldahl Nitrogen	Total Nitrogen, All Forms, Calculated	Acenaphthene	Acenaphthylene	Anthracene	Benzo[b+j]fluoranthene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[a]pyrene TEQ (zero)	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-C,D)Pyrene	Naphthalene	Naphthalene	Phenanthrene	Pyrene	Sum of Aldrin + Dieldrin	Sum of PAHs	Azinphos, Methyl (Guthion)	Bromophos-ethyl	Carbophenothion (Trithion)	Demeton-S-methyl	Endosulfan	Fenamiphos (Nemacur)	Monochrotophos	Oxychlordane	Parathion, Ethyl
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.01	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.04	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.02	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.01	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
	3										**0.01**													**0.3**		**30**	**10**	**0.5**			**20**	**0.5**				**20**
	0										*0*													*0*		*0*	*0*	*0*								*0*
mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1c
Willowdale Surface Water Historical Dataset
Background / Ambient
Alcoa Water Resources Management Plant

			PESTICIDES (OC)																				PESTICIDES (OP)										
Parathion, Methyl	Sum of DDD + DDE + DDT	SUM_CHLORDANE	Aldrin	alpha BHC (Alpha Hexachlorocyclohexane)	Alpha Endosulfan	beta BHC (Beta Hexachlorocyclohexane)	Beta Endosulfan	cis-Chlordane	delta BHC (Delta Hexachlorocyclohexane)	Dieldrin	Endosulfan sulfate	Endrin	Endrin Aldehyde	gamma BHC (Lindane)	Heptachlor	Heptachlor epoxide - isomer b	Hexachlorobenzene	Methoxychlor	P, P'-DDD	P, P'-DDE	P, P'-DDT	trans-Chlordane	Chlorofenvinphos	Chlorpyrifos	Chlorpyrifos Methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimiphos-Ethyl	Tokuthion (Prothiofos)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
0.7														**10**	**0.3**								**2**	**10**		**4**	**5**	**7**	**4**	**7**	**70**	**0.5**	
0														*0*	*0*								*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1c
Willowdale Surface Water Historical Dataset
Background / Ambient
Alcoa Water Resources Management Plant

PFAS																																		
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoethanol (N-EtFOSE)	N-ethyl perfluorooctanesulfonamide (N-EtFOSA)	N-Ethyl perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	N-Methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	N-methyl perfluorooctanesulfonamide (N-MeFOSA)	N-methyl perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	Perfluoro-1-octanesulfonamidoacetic acid (FOSAA)	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free acid)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFDoA)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PFOSA)	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFUnA)	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)	Sum of PFAS (sum 28 compounds, ALS AUS 7/2021)	Sum of PFAS (WA DER List)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0005	< 0.0004	< 0.0002	< 0.0005	< 0.0004	< 0.0004	0.0001	< 0.0002	< 0.0004	< 0.0002	< 0.001	< 0.0004	< 0.0004	< 0.0002	< 0.001	0.0002	0.0002
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.0004	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	0.0013	< 0.01	< 0.001	< 0.01	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	0.005	0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0002	--	--	--	--	--	--	--	--	--	0.0023	0.0011
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0002	--	--	--	--	--	--	--	--	--	0.0003	0.0002
50	50	50	50	50	50	50	50	50	50	1	50	50	50	50	50	50	50	50	50	50	40	50	50	50	50	50	50	40	50	50	50	12	50	35
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	4	4
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	2.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	80.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	80.0%	100.0%	100.0%	100.0%	24.0%	100.0%	70.0%
											1								**0.03**					**0.004**	**0.2**										
											0								*0*					*0*	*0*										
																									0.56										
																									0										

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	--	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	--	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.05	0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0003	0.0003
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0013	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0013	0.0013
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002

Appendix D
Table D1c
Willowdale Surface Water Historical Dataset
Background / Ambient
Alcoa Water Resources Management Plant

											TPH											
Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)	2-(2-Butoxyethoxy)Ethanol	Diethylene glycol	Endrin Ketone	Ethoxyethanol Acetate, 2-	Ethylene Glycol	Ethylene Glycol Mono Butyl Ether	Glyphosate	Propylene Glycol	Triethylene Glycol	C10 - C14 Fraction	C10 - C36 Fraction (sum)	C15 - C28 Fraction	C29 - C36 Fraction	C6 - C9 Fraction	>C10 - C16 Fraction minus Naphthalene (F2)	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	C6-C10 Fraction (F1)	C6-C10 Fraction minus BTEX (F1)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.0002	< 0.001	< 2	< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
0.0013	< 0.001	< 2	< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
0.0006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
50	21	2	2	5	2	2	2	5	2	2	5	5	5	5	5	5	5	5	5	5	5	5
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100.0%	42.0%	4.0%	4.0%	10.0%	4.0%	4.0%	4.0%	10.0%	4.0%	4.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
0.07																						
0																						
								1000														
								0														
ug/L	ug/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 0.0002	--	< 2	< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY							HERBICIDES									
Analyte				Dissolved Oxygen	DO %	Oxidation-Reduction Potential	pH (Field)	Temperature	Conductivity	Electrical Conductivity @ 25°C	Methylene Blue Active Substances	pH Value	Total Dissolved Solids (Residue, Filterable)	Total Suspended Solids	Turbidity	2,4 Db	2,4,5-T (Trichlorophenoxyacetic Acid)	2,4-D (Dichlorophenoxyacetic Acid)	2,4,6-T	2,6-D	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Dichloroprop	Fluroxypyr
Fraction				T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																									
Minimum				8.96	86.5	45.8	5.55	9.6	115.2	148	< 0.1	6.19	80	< 5	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Maximum				11.21	102	271.7	8.1	15.3	216.7	252	< 0.1	6.59	147	< 5	10.77	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mean				10.12	96	155.6	6.54	13	154.5	181	--	6.36	110	--	2	--	--	--	--	--	--	--	--	--	--
Median				10.21	96.9	137.4	6.57	13.3	146.2	169	--	6.34	107	--	0	--	--	--	--	--	--	--	--	--	--
Sample Count				15	15	15	15	15	15	6	1	6	21	6	21	6	6	6	6	6	6	6	6	6	6
Detect Count				15	15	15	15	15	15	6	0	6	21	0	21	0	0	0	0	0	0	0	0	0	0
Percentage of samples analysed				15.5%	15.5%	15.5%	15.5%	15.5%	15.5%	6.2%	1.0%	6.2%	21.6%	6.2%	21.6%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%
Screening Criteria																									
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																									
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																									
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																									
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																									
NHMRC ADWG 2015 Health																100	30				2000	100	100		
NHMRC ADWG 2015 Health Exceed Count																*0*	*0*				*0*	*0*	*0*		
NHMRC ADWG 2015 Aesthetic				85			6.5 - 8.5					6.5 - 8.5	600		5000										
NHMRC ADWG 2015 Aesthetic Exceed Count				*0*			*6*					*5*	*0*		*0*										
Unit				mg/L	%	mV	SU	deg c	us/cm	us/cm	mg/L	SU	mg/L	mg/L	NTU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	HV10	HV10	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM06	SM06	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	CHP4DA	CHP4DA	18/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	CHP4DB	CHP4DB	18/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	CHP4DC	CHP4DC	18/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	CHP4DD	CHP4DD	18/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM06	SM06	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	HV10	HV10	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD1	LRB1	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD2	LRB2	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDB	SDB	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDD_WDL	SDD	1/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	ORB3	ORB3	7/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WRB	WRB	7/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK08	DK08	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	MW450WB	MW450B	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	ND1	ND1	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW14	WDS14	10/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK08	DK08	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK10	DK10	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM06	SM06	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM59	SM59	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK07	DK07	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK12	DK12	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	HV10	HV10	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD1	LRB1	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD2	LRB2	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDB	SDB	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDC	SDC	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDD_WDL	SDD	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW10	SW10	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW14	SW14	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW01	SW01	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	WDL-SW03	SW03	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WRB	WRB	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW09	SW09	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	MW450WB	M450W	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	ORB3	ORB3	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW02	SW02	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	WDL-SW11	SW11	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW12	SW12	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDLSW13	SW13	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	WDL-SW05	SW05	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK07	DK07	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	WDL-SW05	SW05	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK12	DK12	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	MW450WB	M450B	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	ORB3	ORB3	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY												HERBICIDES									
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	WDL-SW03	SW03	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW12	SW12	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WRB	WRB	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	WDL-SW01	SW01	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	Other	DK08	DK08	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	HV10	HV10	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDB	SDB	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	SDD_WDL	SDD	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM06	SM06	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	Other	SM59	SM59	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW09	SW09	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	Other	WDL-SW10	SW10	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD1	LRBD1	12/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	Other	LRBD2	LRBD2	12/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW3	SDC-RW3	21/08/2023	9.99	97.2	142.5	5.87	14.1	156.6	--	--	--	102	--	0	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW1	STDC-RW1	21/08/2023	10.21	96.9	137.4	7.23	13	136.6	--	--	--	115	--	0.25	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW2	STDC-RW2	21/08/2023	9.65	94.5	131.4	6.57	14.4	115.2	--	--	--	94	--	1.25	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW3	STDC-RW3	21/08/2023	9.96	99.5	89.5	6.86	15.3	145.2	--	--	--	116	--	0.3	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW3	MRC-RW3	22/08/2023	10.78	97.4	102.6	7.27	10.8	118.9	--	--	--	106	--	6.05	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW4	MRC-RW4	22/08/2023	11.21	98.5	45.8	8.1	9.6	126.1	--	--	--	116	--	1.31	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-RW2	WDC-RW2	22/08/2023	10.14	96.9	204.2	5.82	13.3	163.8	--	--	--	107	--	0	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB1	WDC-SWB1	22/08/2023	10.26	99.6	117.8	6.86	14	216.7	--	--	--	141	--	10.59	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB2	WDC-SWB2	22/08/2023	10.33	98.1	183.3	6.94	13	215.1	--	--	--	140	--	6.28	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB3	WDC-SWB3	22/08/2023	10.25	95.1	202.2	6.74	12	214.7	--	--	--	140	--	6.38	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW1	MRC-RW1	23/08/2023	10.63	102	109.1	6.57	13.5	127.2	--	--	--	83	--	2.86	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW2	MRC-RW2	23/08/2023	9.24	89.3	123	5.89	13.8	130.1	--	--	--	85	--	0	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW1	SDC-RW1	23/08/2023	8.96	86.5	256.3	5.55	13.7	152.3	--	--	--	126	--	10.77	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW2	SDC-RW2	23/08/2023	10.22	94.4	217.6	5.81	11.8	153	--	--	--	134	--	0.04	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	AREMP	SDC-RW4	SDC-RW4	23/08/2023	9.95	94.6	271.7	6.01	13.1	146.2	--	--	--	123	--	0	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW1	MRC-RW1	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW2	MRC-RW2	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW3	MRC-RW3	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVAREAOUTCATC	Rec Env: Gen Mining	AREMP	MRC-RW4	MRC-RW4	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-RW1	WDC-RW1	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB1	WDC-SWB1	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB2	WDC-SWB2	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-SWB3	WDC-SWB3	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW1	SDC-RW1	19/09/2024	--	--	--	--	--	--	166	--	6.32	84	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW2	SDC-RW2	19/09/2024	--	--	--	--	--	--	189	--	6.35	100	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW3	SDC-RW3	19/09/2024	--	--	--	--	--	--	148	--	6.42	80	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO2_27	STN_ST1_SO2_27	19/09/2024	--	--	--	--	--	--	160	--	6.59	84	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	AREMP	SDC-RW4	SDC-RW4	19/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW3	STDC-RW3	19/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Rec Env: Gen Mining	AREMP	WDC-RW2	WDC-RW2	19/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW2	STDC-RW2	20/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	AREMP	STDC-RW1	STDC-RW1	26/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO2_30	STN_ST1_SO2_30	26/09/2024	--	--	--	--	--	--	252	< 0.1	6.19	147	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO3_16	STN_ST1_SO3_16	26/09/2024	--	--	--	--	--	--	171	--	6.29	95	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBROOK	Rec Env: Gen Mining	AREMP	SDC-RW7	SDC-RW7	27/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

														MAJOR IONS																						
MCPA	MCPB	MCPP	Picloram	Silvex (2,4,5-TP)	Triclopyr	Benzene	Ethylbenzene	M,P-Xylene	O-Xylene (1,2-Dimethylbenzene)	Toluene	Total BTEX	Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total	Calcium	Cations Total	Chloride (As Cl)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)	Total Hardness	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	D	T	T	T	D	D	D	D	D	D	T	D	T	D	T	T	
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.01	1	0.91	30	0.28	1	1	19	4	11	0.01	0.02	< 0.001	0.001	0.023	0.006	< 0.001	
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	8	< 1	< 1	8	2.42	2	2.13	77	11.8	4	2	38	7	21	0.05	0.08	< 0.001	0.001	0.036	0.014	< 0.001	
--	--	--	--	--	--	--	--	--	--	--	--	--	4	--	--	4	1.52	1	1.44	47	3.78	2	1	27	5	15	0.03	0.05	--	0.001	0.028	0.008	--	
--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.38	1	1.38	43	3.73	3	1	26	5	15	0.02	0.04	--	0.001	0.027	0.007	--	
6	6	6	6	6	6	6	6	6	6	6	6	6	21	21	21	21	21	21	21	21	21	21	21	21	21	6	6	6	6	6	6	6	6	
0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	21	21	11	21	21	21	21	14	21	21	6	4	6	0	1	6	6	0	
6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	21.6%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	
40			**300**	**10**	**20**	**1**	**300**			**800**		**600**																	**0.01**	**0.01**	**2**	**2**	**0.06**	
0			*0*	*0*	*0*	*0*	*0*			*0*		*0*																	*0*	*0*	*0*	*0*	*0*	
							3			**25**		**20**								**250**					**180**	**250**								
							0			*0*		*0*								*0*					*0*	*0*								
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

														MAJOR IONS																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

METALS																												MICROBIOLOGY					
Boron	Boron	Cadmium	Cadmium	Chromium (III)	Chromium, hexavalent	Chromium, total	Cobalt	Copper	Copper	Iron	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum	Nickel	Nickel	Phosphorus	Selenium	Selenium	Silver	Uranium	Vanadium	Zinc	Coliform,Thermotolerant	ENTEROCOCCI	Escherichia Coli (E. Coli)	Thermophilic Amoeba	Ammonia as N	Nitrate and Nitrite
D	T	D	T	D	D	D	D	D	T	D	D	T	D	T	D	T	D	T	D	T	T	D	T	D	T	D	D	T	T	T	T	T	T
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.05	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.007	< 1	< 1	< 1	< 1	0.01	0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.21	< 0.001	< 0.001	0.006	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.032	< 1	< 1	< 1	< 1	0.02	0.06
--	--	--	--	--	--	--	--	--	--	0.11	--	--	0.003	0.003	--	--	--	--	--	--	--	--	--	--	--	--	0.024	--	--	--	--	0.01	0.02
--	--	--	--	--	--	--	--	--	--	0.07	--	--	0.002	0.003	--	--	--	--	--	--	--	--	--	--	--	--	0.026	--	--	--	--	0.01	0.02
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	1	1	1	1	6	6
0	0	0	0	0	0	0	0	0	0	3	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	1	3
6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	1.0%	1.0%	1.0%	1.0%	6.2%	6.2%
4	**4**	**0.002**	**0.002**		**0.05**			**2**	**2**		**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**	**0.02**	**0.02**		**0.01**	**0.01**	**0.1**	**0.017**								
0	*0*	*0*	*0*		*0*			*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*							
								1	**1**	**0.3**			**0.1**	**0.1**												**3**							
								0	*0*	*0*			*0*	*0*												*0*							
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	cfu/100ml	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

METALS																											MICROBIOLOGY					
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

																											PESTICIDES								
Nitrate as N	Nitrite	Phosphate	Total Kjeldahl Nitrogen	Total Nitrogen, All Forms, Calculated	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b+j)fluoranthene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[a]pyrene TEQ (zero)	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-C,D)Pyrene	Naphthalene	Naphthalene	Phenanthrene	Pyrene	Sum of Aldrin + Dieldrin	Sum of PAHs	Azinphos, Methyl (Guthion)	Bromophos-ethyl	Carbophenothion (Trithion)	Demeton-S-methyl	Endosulfan	Fenamiphos (Nemacur)	Monochrotophos	Oxychlordane	Parathion, Ethyl
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.06	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%
	3									**0.01**													**0.3**		**30**	**10**	**0.5**		**20**	**0.5**			**20**
	0									*0*													*0*		*0*	*0*	*0*		*0*	*0*			*0*
mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

																								PESTICIDES								
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

			PESTICIDES (OC)																				PESTICIDES (OP)										
Parathion, Methyl	Sum of DDD + DDE + DDT	SUM_CHLORDANE	Aldrin	alpha BHC (Alpha Hexachlorocyclohexane	Alpha Endosulfan	beta BHC (Beta Hexachlorocyclohexane)	Beta Endosulfan	cis-Chlordane	delta BHC (Delta Hexachlorocyclohexane)	Dieldrin	Endosulfan sulfate	Endrin	Endrin Aldehyde	gamma BHC (Lindane)	Heptachlor	Heptachlor epoxide - isomer b	Hexachlorobenzene	Methoxychlor	P,P'-DDD	P,P'-DDE	P,P'-DDT	trans-Chlordane	Chlorofenvinphos	Chlorpyrifos	Chlorpyrifos Methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimiphos-Ethyl	Tokuthion (Prothiofos)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%
0.7														**10**	**0.3**								**2**	**10**		**4**	**5**	**7**	**4**	**7**	**70**	**0.5**	
0														*0*	*0*								*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

			PESTICIDES (OC)																				PESTICIDES (OP)										
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

PFAS																																		
10:2 Fluorotelomer sulfonic acid (10:2 FTS	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoacet	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoac	Perfluoro-1-octanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFL	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PF	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFL	Sum of enHealth PFAS (PFHxS + PFOS + PF	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFAS (WA DER List)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.0004	< 0.0005	0.0005	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	< 0.0005	< 0.0004	< 0.0002	0.0004	< 0.0002	0.0005	0.0002	0.0002	< 0.0005	< 0.0004	< 0.0004	0.0001	< 0.0002	< 0.0004	< 0.0002	< 0.001	< 0.0004	< 0.0004	< 0.0002	< 0.001	0.0002	0.0002
< 0.001	< 0.001	0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.0004	0.011	< 0.05	< 0.001	< 0.01	0.01	< 0.001	0.01	0.001	0.01	< 0.001	< 0.01	< 0.05	0.00094	< 0.01	< 0.001	< 0.01	< 0.002	< 0.01	< 0.01	< 0.01	< 0.001	0.011	0.011
--	--	0.0029	--	--	--	--	--	--	--	--	0.0009	--	--	--	0.0023	--	0.0023	0.0007	0.0022	--	--	--	0.0002	--	--	--	--	--	--	--	--	0.0028	0.0013
--	--	0.001	--	--	--	--	--	--	--	--	0.001	--	--	--	0.001	--	0.0008	0.0005	0.0009	--	--	--	0.0002	--	--	--	--	--	--	--	--	0.005	0.0002
91	97	97	97	97	97	97	97	97	97	8	97	97	97	97	97	97	97	97	97	74	97	97	97	97	97	97	64	97	97	97	23	91	54
0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	1	0	1	1	5	0	0	0	8	0	0	0	0	0	0	0	0	1	1
93.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	8.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	76.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	66.0%	100.0%	100.0%	100.0%	23.7%	93.8%	55.7%
											1							**0.03**						**0.004**	**0.2**									
											0							*0*						*0*	*0*									
																									0.56									
																									0									

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0007	< 0.0002	0.0007	< 0.0005	< 0.001	< 0.002	0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--
--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.0009	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--
--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	0.0004	< 0.0005	< 0.0005	< 0.001	< 0.002	0.0009	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--
--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.0006	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--
--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.0006	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--
--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--
--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	0.0003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--
< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002
< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

PFAS																															
< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002
< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002
< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002
< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002
< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004	< 0.0004	< 0.0008	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.011	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.011	0.011
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.005
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.0008	< 0.002	< 0.002	< 0.0008	--	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0008	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0008	< 0.0008	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.0008	< 0.002	< 0.002	< 0.0008	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0008	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0008	< 0.0008	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0008	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0002

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

											TPH												
Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)	2-(2-Butoxyethoxy)Ethanol	Diethylene glycol	Endrin Ketone	Ethoxyethanol Acetate, 2-	Ethylene Glycol	Ethylene Glycol Mono Butyl Ether	Glyphosate	Propylene Glycol	Triethylene Glycol	C10 - C14 Fraction	C10 - C36 Fraction (sum)	C15 - C28 Fraction	C29 - C36 Fraction	C6 - C9 Fraction	>C10 - C16 Fraction minus Naphthalene (F	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	C6-C10 Fraction (F1)	C6-C10 Fraction minus BTEX (F1)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.0002	< 0.001	< 2	< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
0.0013	< 0.001	< 2	< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
0.0006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
97	48	1	1	6	1	1	1	6	1	1	6	6	6	6	6	6	6	6	6	6	6	6
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100.0%	49.5%	1.0%	1.0%	6.2%	1.0%	1.0%	1.0%	6.2%	1.0%	1.0%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%	6.2%
0.07																							
0																							
								1000															
								0															
ug/L	ug/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1d
Willowdale Surface Water Historical Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

											TPH											
< 0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1e
Willowdale Surface Water Historical Dataset
Receiving Environment: Downstream from Source Areas
Alcoa Water Resources Management Plant

Analyte Type								GENERAL CHEMISTRY																	
Analyte						Dissolved Oxygen	DO %	Oxidation-Reduction Potential	pH (Field)	Temperature	Conductivity	Fluoride	pH Value	Total Dissolved Solids (Residue, Filterable)	Turbidity	Benzene	Ethylbenzene	M,P-Xylene	O-Xylene (1,2-Dimethylbenzene)	Toluene	Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total	Calcium
Fraction						T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	D
Summary Statistics																											
Minimum						7.6	93.7	79.9	5.71	11.9	120.1	< 0.1	5.87	102	-1.47	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	3	< 1	< 1	3	1.14	1
Maximum						10.43	105.2	211.9	6.82	16	196.9	< 0.1	6.27	128	2.51	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	6	< 1	< 1	6	1.53	1
Mean						9.6	98	134	6.19	13.5	155.2	--	6.06	115	0.28	--	--	--	--	--	--	4	--	--	4	1.37	1
Median						10	97.2	123.8	6.19	13.4	159.9	--	6.04	112	0	--	--	--	--	--	--	4	--	--	4	1.38	1
Sample Count						14	10	14	10	14	14	1	4	10	10	4	4	4	4	4	4	11	11	11	11	11	11
Detect Count						14	10	14	10	14	14	0	4	10	10	0	0	0	0	0	0	11	0	0	11	11	2
Percentage of samples analysed						20.6%	14.7%	20.6%	14.7%	20.6%	20.6%	1.5%	5.9%	14.7%	14.7%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	16.2%	16.2%	16.2%	16.2%	16.2%	16.2%
Screening Criteria																											
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																											
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																											
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																											
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																											
NHMRC ADWG 2015 Health												**1.5**				**0.001**	**0.3**			**0.8**	**0.6**						
NHMRC ADWG 2015 Health Exceed Count												*0*				*0*	*0*			*0*	*0*						
NHMRC ADWG 2015 Aesthetic						**85**			**6.5 - 8.5**				**6.5 - 8.5**	**600**	**5000**		**0.003**			**0.025**	**0.02**						
NHMRC ADWG 2015 Aesthetic Exceed Count						*0*			*8*				*4*	*0*	*0*		*0*			*0*	*0*						
Unit						mg/L	%	mV	SU	deg c	us/cm	mg/L	SU	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																					
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM29	SM29	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM33	SM33	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM38	SM38	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW04	SW04	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW07	SW07	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM29	SM29	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM33	SM33	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM34	SM34	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SM38	SM38	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW04	SW04	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW07	SW07	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	WDL-SW15	SW15	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	DISCHARGE	Discharge	5/07/2022	8.07	--	147.7	--	13.2	123.8	--	5.89	--	--	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	T2	T2	5/07/2022	8.75	--	122.5	--	13.3	122.5	--	5.87	--	--	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	T3	T3	5/07/2022	8.73	--	151.3	--	11.9	120.1	--	6.19	--	--	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	T4	T4	5/07/2022	7.6	--	153.3	--	12	163.3	--	6.27	--	--	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	QC2A	QC2A	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	QC3	QC3	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	QC4	QC4	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	W1	W1	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	W2	W2	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	W3	W3	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	ARUNDELAREA	Rec Env: PFAS Source	Other	W4	W4	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	MCKNOWS BROOK	McKnows brook	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	SCOUT CAMP	Scout Camp	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	Other	AR_SW17	AR_SW17	13/07/2023	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	3	< 1	< 1	3	1.34	< 1
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW4	AOA-RW4	21/08/2023	9.94	93.7	91.4	6.82	12.7	141.7	--	--	120	2.51	--	--	--	--	--	--	4	< 1	< 1	4	1.14	< 1
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W1-RW1	DWER-W1-RW1	21/08/2023	9.97	97.3	113.7	6.02	14.2	156.4	--	--	102	-1.47	--	--	--	--	--	--	4	< 1	< 1	4	1.25	< 1
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W3-RW3	DWER-W3-RW3	21/08/2023	9.98	97.1	171.2	6.14	14.1	166.6	--	--	108	0.38	--	--	--	--	--	--	6	< 1	< 1	6	1.32	< 1
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W4-RW4	DWER-W4-RW4	21/08/2023	10.2	97.8	125	6.26	13.4	169.8	--	--	110	0	--	--	--	--	--	--	5	< 1	< 1	5	1.4	< 1
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW1	AOA-RW1	23/08/2023	10.43	102.6	93	6.23	14.6	182.8	--	--	119	0	--	--	--	--	--	--	4	< 1	< 1	4	1.43	< 1
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW2	AOA-RW2	23/08/2023	10.33	100.1	79.9	6.25	13.9	191.1	--	--	124	0	--	--	--	--	--	--	3	< 1	< 1	3	1.49	< 1
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW3	AOA-RW3	23/08/2023	10.38	105.2	112.2	6.5	16	196.9	--	--	128	0.43	--	--	--	--	--	--	3	< 1	< 1	3	1.53	1
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW1	AOA-RW1	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW2	AOA-RW2	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW3	AOA-RW3	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW5	AOA-RW5	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W1-RW1	DWER-W1-RW1	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W2-RW2	DWER-W2-RW2	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W3-RW3	DWER-W3-RW3	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	DWER-W4-RW4	DWER-W4-RW4	18/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Rec Env: PFAS Source	AREMP	AOA-RW4	AOA-RW4	20/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM07	SM07	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM07_REGIONAL	SM07	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM03	SM03	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1e
Willowdale Surface Water Historical Dataset
Receiving Environment: Downstream from Source Areas
Alcoa Water Resources Management Plant

						Unit	mg/L	%	mV	SU	deg c	us/cm	mg/L	SU	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																						
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM46	SM46	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM53	SM53	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM01	SM01	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	WDL-SW06	SW06	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM01	SM01	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM03	SM03	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM53	SM53	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	WDL-SW06	SW06	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	WDL-SW17	SW17	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM46	SM46	17/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	W5	W5	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DWER	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	W6	W6	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	Other	SM04	SM04	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	DWER-W5-RW5	DWER-W5-RW5	23/08/2023	10.2	96.3	208.4	5.85	12.7	133.1	--	--	113	0	--	--	--	--	--	--	4	< 1	< 1	4	1.42	1
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	DWER-W6-RW6	DWER-W6-RW6	23/08/2023	9.69	94.1	211.9	5.71	14	135	--	--	111	0.95	--	--	--	--	--	--	3	< 1	< 1	3	1.38	< 1
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	SDC-RW8	SDC-RW8	23/08/2023	10.23	95.6	93.8	6.13	12.3	170.2	--	--	111	0	--	--	--	--	--	--	3	< 1	< 1	3	1.35	< 1
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	DWER-W5-RW5	DWER-W5-RW5	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	DWER-W6-RW6	DWER-W6-RW6	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: PFAS Source	AREMP	SDC-RW8	SDC-RW8	17/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1e
Willowdale Surface Water Historical Dataset
Receiving Environment: Downstream from Source Areas
Alcoa Water Resources Management Plant

MAJOR IONS							METALS																									
Cations Total	Chloride (As Cl)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium	Beryllium	Boron	Boron	Cadmium	Cadmium	Chromium, total	Chromium, total	Cobalt	Cobalt	Copper	Copper	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum	Nickel
T	T	T	D	D	D	D	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	D
1.08	34	0.33	1	1	21	5	0.05	0.05	< 0.001	< 0.001	0.01	0.01	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.005	0.005	< 0.0001	< 0.0001	0.001	0.001	0.001
1.58	44	7.11	3	1	29	12	0.12	0.25	< 0.001	< 0.001	0.01	0.02	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.06	0.084	< 0.0001	< 0.0001	0.002	0.003	0.003
1.33	41	2.54	2	1	26	7	0.07	0.16	--	--	0.01	0.02	--	--	--	--	--	--	--	--	--	0.001	--	--	--	--	0.019	0.025	--	--	0.001	0.002	0.002
1.32	42	2.38	2	1	27	6	0.05	0.17	--	--	0.01	0.02	--	--	--	--	--	--	--	--	--	0.001	--	--	--	--	0.005	0.005	--	--	0.001	0.002	0.001
11	11	11	11	11	11	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
11	11	11	11	9	11	11	1	3	0	0	2	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	3	1
16.2%	16.2%	16.2%	16.2%	16.2%	16.2%	16.2%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%
									0.01	**0.01**	**2**	**2**	**0.06**	**0.06**	**4**	**4**	**0.002**	**0.002**					**2**	**2**	**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**	**0.02**
									0	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*					*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	250				**180**	**250**																	**1**	**1**			**0.1**	**0.1**					
	0				*0*	*0*																	*0*	*0*			*0*	*0*					
meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	0.12	0.12	< 0.001	< 0.001	< 0.01	0.02	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.0001	< 0.0001	< 0.001	0.002	< 0.001
--	--	--	--	--	--	--	< 0.05	0.25	< 0.001	< 0.001	< 0.01	0.01	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.0001	< 0.0001	< 0.001	0.003	< 0.001
--	--	--	--	--	--	--	< 0.05	0.21	< 0.001	< 0.001	0.01	0.01	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.0001	< 0.0001	0.002	0.002	< 0.001
--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.001	< 0.001	0.01	0.02	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.06	0.084	< 0.0001	< 0.0001	< 0.001	< 0.001	0.003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.32	41	0.58	1	1	28	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.08	34	2.93	2	< 1	21	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.08	37	7.11	1	< 1	23	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.23	38	3.24	2	1	24	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.32	41	2.98	2	1	26	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.36	42	2.38	2	1	27	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.45	42	1.62	3	1	27	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.54	44	0.33	3	1	28	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1e
Willowdale Surface Water Historical Dataset
Receiving Environment: Downstream from Source Areas
Alcoa Water Resources Management Plant

meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1e
Willowdale Surface Water Historical Dataset
Receiving Environment: Downstream from Source Areas
Alcoa Water Resources Management Plant

												PFAS																							
Nickel	Selenium	Selenium	Titanium	Titanium	Uranium	Uranium	Vanadium	Vanadium	Zinc	Zinc	10:2 Fluorotelomer sulfonic acid (10:2 FTS	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoaceti	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoac	Perfluoro-1-octanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanesulfonic acid ammonium	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFD	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorohexanesulfonate	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)
T	D	T	D	T	D	T	D	T	D	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.000001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0004	< 0.0005	0.0005	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.0005	< 0.0004	< 0.0005	< 0.0002	< 0.0004	0.0002	0.0005	< 0.002	0.0002	0.0002	0.0002
0.003	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.000001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	0.009	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.0004	0.0012	0.05	< 0.001	< 0.0005	< 0.01	< 0.01	0.001	0.0153	< 0.002	0.0072	0.024	0.052
0.002	--	--	--	--	--	--	--	--	--	--	--	--	0.002	--	--	--	--	--	--	--	--	--	0.0007	0.0049	--	--	--	--	0.0006	0.0028	--	0.0032	0.0036	0.0056
0.001	--	--	--	--	--	--	--	--	--	--	--	--	0.001	--	--	--	--	--	--	--	--	--	0.0007	0.0023	--	--	--	--	0.0005	0.001	--	0.0037	0.001	0.0025
4	4	4	4	4	4	4	4	4	4	4	54	68	68	68	68	68	68	68	68	68	68	14	68	68	68	9	68	68	68	68	9	9	59	68
1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	9	26	0	0	0	0	4	30	0	7	28	37
5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	79.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	20.6%	100.0%	100.0%	100.0%	13.2%	100.0%	100.0%	100.0%	100.0%	13.2%	13.2%	86.8%	100.0%
																							1										**0.03**	
																							0										*0*	
0.02	**0.01**	**0.01**			**17**	**0.017**																												
0	*0*	*0*			*0*	*0*																												
									3	**3**																								
									0	*0*																								
mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	0.003	--	--	0.0043	0.005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	0.006	< 0.001	--	< 0.001	< 0.001	< 0.001	0.005	--	--	0.0071	0.01
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	0.003	--	--	0.0045	0.006
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	0.011	< 0.001	--	< 0.001	< 0.001	< 0.001	0.012	--	--	0.017	0.022
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.003	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	0.0086	0.0099
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0007	0.009	< 0.0004	--	< 0.0002	< 0.0004	0.0005	0.0076	--	--	0.014	0.021
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.003	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.003	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	0.0078	0.0076
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.005	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	0.009	0.012
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.003	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0012	0.017	< 0.0004	--	< 0.0002	< 0.0004	0.0008	0.013	--	--	0.024	0.052
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.000001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	0.009	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	0.001	0.012	< 0.001	--	< 0.001	< 0.001	< 0.001	0.008	--	--	0.007	0.018
< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.000001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	0.001	0.01	< 0.001	--	< 0.001	< 0.001	< 0.001	0.008	--	--	0.008	0.019
< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.000001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	0.001	0.009	< 0.001	--	< 0.001	< 0.001	< 0.001	0.007	--	--	0.007	0.014
0.003	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.000001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0035	< 0.002	0.0057	--	0.0076
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.002	< 0.0002	--	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.002	< 0.0002	--	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.005	< 0.002	0.0066	--	0.0088
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0033	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0039	< 0.002	0.0072	--	0.007
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0024	< 0.002	0.0044	--	0.0047
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0013	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0024	< 0.002	0.0037	--	0.0038
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0057	--	--	0.0079	0.013
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0042	--	--	0.005	0.0071
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	0.0011	0.0128	< 0.0005	--	< 0.0005	< 0.0005	0.0005	0.0153	--	--	0.0142	0.0291
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.0008	< 0.001	< 0.002	< 0.0005	--	0.0006	0.0055	< 0.0005	--	< 0.0005	< 0.0008	< 0.0005	0.0057	--	--	0.0059	0.0108
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	--	< 0.0005	0.0028	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.003	--	--	0.0033	0.0055
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.0008	< 0.002	< 0.002	< 0.0008	--	< 0.0005	0.0026	< 0.0005	--	< 0.0005	< 0.0008	< 0.0005	0.0028	--	--	0.0032	0.005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	0.0024	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0025	--	--	0.003	0.0043
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	0.0023	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0023	--	--	0.0031	0.0043
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0022	--	--	0.0027	0.0036
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0023	--	--	0.004	0.0038
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0024	--	--	0.0042	0.0038
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0023	--	--	0.0042	0.0038
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	0.0035	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.005	--	--	0.0076	0.0084
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	0.0023	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0031	--	--	0.005	0.0051
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0027	--	--	0.0043	0.0044
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0006	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	--	< 0.0002	0.0013
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	--	< 0.0002	0.0008
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	--	< 0.001	< 0.01
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	--	< 0.001	< 0.01
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.001	< 0.001

Appendix D
Table D1e
Willowdale Surface Water Historical Dataset
Receiving Environment: Downstream from Source Areas
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.001	0.001
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	--	< 0.0004	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0006	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.002	0.0004	--	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.002	0.0005	--	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	--	0.0004	0.001
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.0008	< 0.002	< 0.002	< 0.0008	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0008	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	< 0.002	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005

Appendix D
Table D1e
Willowdale Surface Water Historical Dataset
Receiving Environment: Downstream from Source Areas
Alcoa Water Resources Management Plant

Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PFO	Perfluorooctanesulfonate	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFU	Sum of enHealth PFAS (PFHxS + PFOS + PF	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFAS (sum 30 compounds, Eurofin	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)	>C10 - C16 Fraction minus Naphthalene (F	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	C6-C10 Fraction (F1)	C6-C10 Fraction minus BTEX (F1)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.0005	0.0004	< 0.0004	0.0002	0.0001	0.0002	0.0004	0.0002	< 0.001	< 0.0004	< 0.0004	< 0.0002	< 0.001	0.0002	0.005	0.0002	0.0002	0.001	< 50	< 100	< 50	< 100	< 100	< 20	< 20
< 0.001	0.01	< 0.05	0.0045	0.017	0.01	0.002	0.09	< 0.002	< 0.01	< 0.01	< 0.01	< 0.001	0.22	0.105	0.21	0.034	0.019	< 50	< 100	< 50	< 100	< 100	< 20	< 20
--	0.001	--	0.0019	0.0022	0.0011	0.0008	0.0091	--	--	--	--	--	0.0239	0.036	0.0236	0.0056	0.004	--	--	--	--	--	--	--
--	0.0007	--	0.0021	0.0005	0.0005	0.0009	0.0026	--	--	--	--	--	0.005	0.024	0.0002	0.001	0.001	--	--	--	--	--	--	--
39	68	68	9	59	68	68	68	28	68	68	68	2	53	13	37	68	17	4	4	4	4	4	4	4
0	10	0	6	31	19	12	34	0	0	0	0	0	25	8	18	35	7	0	0	0	0	0	0	0
57.4%	100.0%	100.0%	13.2%	86.8%	100.0%	100.0%	100.0%	41.2%	100.0%	100.0%	100.0%	2.9%	77.9%	19.1%	54.4%	100.0%	25.0%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%	5.9%
				0.004	**0.2**																			
				12	*0*																			
					0.56											**0.07**								
					0											*0*								
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.001	< 0.001	< 0.005	--	0.0037	< 0.001	< 0.001	0.011	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0267	--	--	0.0077	0.0037	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	0.0071	< 0.001	< 0.001	0.018	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0531	--	--	0.0141	0.0071	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	0.0041	< 0.001	< 0.001	0.011	< 0.001	< 0.001	< 0.001	< 0.001	--	0.029	--	--	0.009	0.0041	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	0.017	0.002	0.001	0.04	< 0.001	< 0.001	< 0.001	< 0.001	--	0.122	--	--	0.034	0.019	--	--	--	--	--	--	--
--	0.0004	< 0.0004	--	0.0027	0.0014	0.0007	0.017	--	< 0.0004	< 0.0004	< 0.0002	--	0.044	--	0.043	0.011	--	--	--	--	--	--	--	--
--	0.0008	< 0.0004	--	0.0055	0.0031	0.0012	0.033	--	< 0.0004	< 0.0004	< 0.0002	--	0.097	--	0.094	0.019	--	--	--	--	--	--	--	--
--	0.0004	< 0.0004	--	0.0023	0.0012	0.0006	0.013	--	< 0.0004	< 0.0004	< 0.0002	--	0.038	--	0.037	0.01	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	0.0004	< 0.0004	--	0.0031	0.0048	0.0008	0.022	--	< 0.0004	< 0.0004	< 0.0002	--	0.057	--	0.056	0.012	--	--	--	--	--	--	--	--
--	0.0015	< 0.0004	--	0.0087	0.0057	0.002	0.09	--	< 0.0004	< 0.0004	< 0.0002	--	0.22	--	0.21	0.033	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.001	< 0.005	--	0.007	0.001	0.001	0.041	< 0.001	< 0.001	< 0.001	< 0.001	--	--	0.105	--	0.014	0.008	< 50	< 100	< 50	< 100	< 100	< 20	< 20
--	< 0.001	< 0.005	--	0.007	0.001	0.001	0.04	< 0.001	< 0.001	< 0.001	< 0.001	--	--	0.095	--	0.015	0.008	< 50	< 100	< 50	< 100	< 100	< 20	< 20
--	< 0.001	< 0.005	--	0.006	0.001	0.001	0.032	< 0.001	< 0.001	< 0.001	< 0.001	--	--	0.078	--	0.013	0.007	< 50	< 100	< 50	< 100	< 100	< 20	< 20
--	< 0.001	< 0.005	--	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	--	< 0.005	--	< 0.001	< 0.001	< 50	< 100	< 50	< 100	< 100	< 20	< 20
< 0.0005	< 0.001	< 0.002	0.0036	--	0.0007	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	--	0.035	--	0.0093	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	< 0.0002	--	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.006	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	< 0.0002	--	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.006	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	0.0045	--	0.0008	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	0.043	--	0.011	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	0.0035	--	0.0008	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	--	0.037	--	0.011	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	0.0025	--	0.0006	< 0.001	0.0077	--	< 0.001	< 0.001	< 0.001	--	--	0.024	--	0.0069	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	0.0021	--	< 0.0005	< 0.001	0.0059	--	< 0.001	< 0.001	< 0.001	--	--	0.019	--	0.0058	--	--	--	--	--	--	--	--
< 0.0005	0.001	< 0.002	--	0.0042	0.001	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	0.056	--	--	0.012	--	--	--	--	--	--	--	--
< 0.0005	0.001	< 0.002	--	0.0025	0.0005	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.0075	--	--	--	--	--	--	--	--
--	0.0008	< 0.0005	--	0.0098	0.0021	0.0016	0.0485	--	< 0.0005	< 0.0005	< 0.0005	--	0.136	--	0.133	0.024	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	0.0006	< 0.0005	--	0.0049	0.0009	0.0006	0.0133	--	< 0.002	< 0.0008	< 0.0005	--	0.0488	--	0.0476	0.0108	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0022	< 0.0005	< 0.0005	0.0061	--	< 0.002	< 0.0005	< 0.0005	--	0.0229	--	0.0229	0.0055	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0008	--	0.0031	< 0.0005	< 0.0005	0.006	--	< 0.002	< 0.0008	< 0.0008	--	0.0227	--	0.0227	0.0063	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0021	< 0.0005	< 0.0005	0.0052	--	< 0.0021	< 0.0005	< 0.0005	--	0.0195	--	0.0195	0.0051	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0023	< 0.0005	< 0.0005	0.0053	--	< 0.002	< 0.0005	< 0.0005	--	0.0196	--	0.0196	0.0054	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0016	< 0.0005	< 0.0005	0.0042	--	< 0.002	< 0.0005	< 0.0005	--	0.0143	--	0.0143	0.0043	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	0.0022	< 0.0005	< 0.0005	0.0066	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0189	--	0.0189	0.0062	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	0.0021	< 0.0005	< 0.0005	0.0065	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.019	--	0.019	0.0063	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	0.002	< 0.0005	< 0.0005	0.0062	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0185	--	0.0185	0.0062	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	0.0044	0.0007	0.0007	0.0143	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0446	--	0.0439	0.012	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	0.0031	0.0005	< 0.0005	0.0091	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0282	--	0.0282	0.0081	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	0.0024	< 0.0005	< 0.0005	0.0078	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0216	--	0.0216	0.0067	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	--	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.001	< 0.01	< 0.05	--	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.01	< 0.05	--	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.01	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--

Appendix D
Table D1e
Willowdale Surface Water Historical Dataset
Receiving Environment: Downstream from Source Areas
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	0.0004	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.005	--	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0004	--	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	0.0003	--	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.006	--	0.0007	--	--	--	--	--	--	--	--
< 0.0005	< 0.001	< 0.002	< 0.0002	--	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.006	--	0.0005	--	--	--	--	--	--	--	--
< 0.0005	0.002	< 0.002	--	0.0006	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.001	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0008	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0008	< 0.0008	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0008	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

Analyte Type						GENERAL CHEMISTRY																				
Analyte						Dissolved Oxygen	Oxidation-Reduction Potential	pH (Field)	Temperature	Conductivity	Fluoride	Methylene Blue Active Substances	Oil & Grease, Total Rec	pH Value	Total Dissolved Solids (Residue, Filterable)	Total Suspended Solids	Benzene	Ethylbenzene	M,P-Xylene	O-Xylene (1,2-Dimethylbenzene)	Toluene	Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total
Fraction						T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																											
Minimum						7.24	36.9	5.5	12.1	80.8	< 0.1	0.05	1	6.8	47	5	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	1	< 1	< 1	1	0.19
Maximum						9.39	53.3	8.84	13.5	100.9	< 0.1	0.09	5	7.5	140	15	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	25	< 1	< 1	25	2.51
Mean						8.32	45.1	7.2	12.8	90.9	--	0.06	2	7.1	95	6	--	--	--	--	--	--	13	--	--	13	1.3
Median						8.32	45.1	7.2	12.8	90.9	--	0.05	1	7.1	89	5	--	--	--	--	--	--	13	--	--	13	1.32
Sample Count						2	2	19	2	2	5	26	26	28	26	26	2	2	2	2	2	2	5	5	5	5	5
Detect Count						2	2	19	2	2	0	12	8	28	26	3	0	0	0	0	0	0	4	0	0	4	5
Percentage of samples analysed						0.5%	0.5%	4.7%	0.5%	0.5%	1.2%	6.4%	6.4%	6.9%	6.4%	6.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	1.2%	1.2%	1.2%	1.2%	1.2%
Screening Criteria																											
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																											
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																											
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																											
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																											
NHMRC ADWG 2015 Health											**1.5**						**0.001**	**0.3**			**0.8**	**0.6**					
NHMRC ADWG 2015 Health Exceed Count											*0*						*0*	*0*			*0*	*0*					
NHMRC ADWG 2015 Aesthetic						**85**		**6.5 - 8.5**						**6.5 - 8.5**	**600**			**0.003**			**0.025**	**0.02**					
NHMRC ADWG 2015 Aesthetic Exceed Count						*0*		*4*						*0*	*0*			*0*			*0*	*0*					
Unit						mg/L	mV	SU	deg c	us/cm	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																					
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	LR SP	LR SP	22/11/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	LIZARD RD STANDPIPE	Lizard Rd standpipe	23/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	LIZARD RD STANDPIPE	Lizard Rd standpipe	23/01/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1 DUP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP DUP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASP	ASP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASP	ASP DUP	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	WORKSHOP DRAIN	Workshop Drain	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASP	ASP	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	1 LS1 SUMP	1 LS1 Sump	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	2 LS6 SUMP	2 LS6 Sump	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	6 LS12A SUMP	6 LS12A Sump	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	18/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	29/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS1	OS1	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	17/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	20/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	20/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	24/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	24/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	24/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	COPPERHEAD4_ORION	Copperhead 4	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	COPPERHEAD4_ORION	Copperhead 4	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2 DUP	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4 DUP	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																							
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	1/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	10/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	10/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	9/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	9/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	9/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	9/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	5/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	10/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	COPPERHEAD4_ORION	Copperhead 4	16/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP23	SMP23	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP24	SMP24	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP25	SMP25	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP26	SMP26	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP27	SMP27	2/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	BCD1	BCD1	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	BCD2	BCD2	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS1_HOTSPOT	OS1	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2_HOTSPOT	OS2	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3_HOTSPOT	OS3	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4_HOTSPOT	OS4	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP10	SMP10	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP11	SMP11	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP12	SMP12	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP13	SMP13	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP14	SMP14	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP15	SMP15	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP16	SMP16	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	SMP17	SMP17	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP18	SMP18	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	SMP19	SMP19	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP9	SMP9	4/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVEROUTAREA	Sump	Other	WDS3	WDS3	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	MURRAYRIVEROUTAREA	Sump	Other	WDS4	WDS4	8/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WD6 (WDS6)	WD6 (WDS6)	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WD7 (WDS7)	WD7 (WDS7)	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WD10 (WDS10)	WDS10	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	OUTSAMSONDAM	Sump	Other	WD8 (WDS8)	WDS8	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	OUTSAMSONDAM	Sump	Other	WD9 (WDS9)	WDS9	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS11	WDS11	10/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS12	WDS12	10/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS16	WDS16	11/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WDS19	WDS19	11/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	WDS20	WDS20	11/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	WDS21	WDS21	14/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	22/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	22/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	22/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	17/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	17/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	17/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	17/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	14/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																							
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	15/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	7/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	12/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	14/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	19/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	24/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ABS 3	ABS3	26/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	26/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	27/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	30/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	30/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	30/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	4/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	4/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	6/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	9/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	12/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2 DUP	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WDS6	WDS6	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	OUTSAMSONDAM	Sump	Other	WD9 (WDS9)	WDS9	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_1	LRGS_1	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_2	LRGS_2	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_3	LRGS_3	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_4	LRGS_4	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_5	LRGS_5	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_6	LRGS_6	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_7	LRGS_7	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LRGS_8	LRGS_8	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS18	WDS18	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	17/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	23/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	19/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	19/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	19/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	16/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	16/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	16/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	16/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	16/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																							
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	16/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	16/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	13/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS1	2/06/2022	--	--	--	--	--	--	0.09	< 1	7.1	87	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS1	3/06/2022	--	--	--	--	--	--	0.05	< 1	7.4	89	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS2	8/06/2022	--	--	7	--	--	--	< 0.05	< 5	7	89	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS3	8/06/2022	--	--	6.3	--	--	--	< 0.05	< 5	6.8	47	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	9/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WDS5	WDS5	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	WAROONADAM	Sump	Other	WDS6	WDS6	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	WDS18	WDS18	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW1	ASW1	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS1	23/06/2022	--	--	6.8	--	--	--	< 0.05	< 1	7.3	87	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	23/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	1/07/2022	--	--	--	--	--	--	0.08	< 1	7	85	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	1/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	1/07/2022	--	--	--	--	--	--	0.08	< 1	7.1	73	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	1/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PTD-001	PTD-001	5/07/2022	9.39	53.3	--	12.1	100.9	--	--	--	6.84	--	--	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PTD-002	PTD-002	5/07/2022	7.24	36.9	--	13.5	80.8	--	--	--	7.02	--	--	< 0.001	< 0.001	< 0.002	< 0.001	< 0.001	< 0.003	--	--	--	--	--	--
WILLOWDALE	OUTSAMSONDAM	Sump	Other	WD9 (WDS9)	WDS9	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS1	18/07/2022	--	--	--	--	--	--	0.08	< 1	7	84	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	18/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1 Retest	18/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS2	29/07/2022	--	--	--	--	--	--	< 0.05	< 1	7	73	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	10/08/2022	--	--	--	--	--	--	0.09	< 1	6.9	70	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump WA	15/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump WB	15/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	5/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																							
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	14/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	14/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	14/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	17/01/2023	--	--	6.98	--	--	--	< 0.05	< 1	7.2	96	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	17/01/2023	--	--	7.26	--	--	--	< 0.05	< 1	7.2	100	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	17/01/2023	--	--	7.46	--	--	--	< 0.05	1.7	7.3	120	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	31/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	31/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	8/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	20/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	20/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	3/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	3/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PFFWa	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PFFWb	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PPFW1a	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PPFW1b	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PPFW2a	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	PFFW	PPFW2b	4/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	12/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	14/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2 DUP	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1 DUP	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2 DUP	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	26/04/2023	--	--	6.77	--	--	--	0.05	< 1	6.9	140	15	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS4	OS4	3/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP5	AP5	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS2	OS2	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	372 SAMPSON BK	372 Sampson Bk:Culver	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SCARP RD	Scarp Rd	12/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW2	ASW2	15/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW1	ASW1	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS1	OS1	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP10	SMP10	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP11	SMP11	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP13	SMP13	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP16	SMP16	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBROOK	Sump	Other	SMP17	SMP17	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP23	SMP23	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	SMP9	SMP9	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4 DUP	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1 DUP	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2 DUP	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AR04_SW04	AR_SW04	18/05/2023	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	11	< 1	< 1	11	0.99
WILLOWDALE	ARUNDELAREA	Sump	Other	AR07_SW08	AR_SW08	18/05/2023	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	25	< 1	< 1	25	2.51
WILLOWDALE	ARUNDELAREA	Sump	Other	AR08_SW09	AR_SW09	18/05/2023	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	13	< 1	< 1	13	1.32
WILLOWDALE	ARUNDELAREA	Sump	Other	AR08_SW10	AR_SW10	18/05/2023	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	15	< 1	< 1	15	1.47
WILLOWDALE	ARUNDELAREA	Sump	Other	AR09_SD13_SW16	AR_SW16	18/05/2023	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	0.19
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Sump	Other	OS3	OS3 DUP	18/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	23/05/2023	--	--	5.5	--	--	--	0.08	3.9	7.3	130	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ABS 2	ABS 2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ABS 3	ABS 3	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP1	AP1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY																							
WILLOWDALE	ARUNDELAREA	Sump	Other	AP2	AP2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP3	AP3	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	AP4	AP4	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD1	APTD1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTD2	APTD2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	APTP	APTP	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASP	ASP	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW1	ASW1	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	ASW2	ASW2	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	HULLS SUMP	Hulls Sump	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP23	SMP23	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP24	SMP24	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP25	SMP25	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	ARUNDELAREA	Sump	Other	SMP26	SMP26	7/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	9/06/2023	--	--	7.3	--	--	--	0.08	1.7	7.1	130	9	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	9/06/2023	--	--	7	--	--	--	0.06	3.2	7.5	130	7	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	20/06/2023	--	--	7.1	--	--	--	0.06	< 1	7.4	110	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	13/07/2023	--	--	7.37	--	--	--	< 0.05	1.3	7.1	95	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	21/07/2023	--	--	7.34	--	--	--	< 0.05	1.4	7.3	91	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	3/08/2023	--	--	7.16	--	--	--	< 0.05	< 1	6.9	91	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	3/08/2023	--	--	7.22	--	--	--	< 0.05	< 1	7	79	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 1	LARDS 1	29/08/2023	--	--	8.84	--	--	--	< 0.05	1.7	6.8	84	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	29/08/2023	--	--	8.62	--	--	--	< 0.05	< 1	7	81	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 3	LARDS 3	13/09/2023	--	--	7.15	--	--	--	< 0.05	< 1	7	76	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	STIRLING	Sump	Other	LARDS 2	LARDS 2	21/11/2023	--	--	7.2	--	--	--	0.08	1.9	7.4	120	< 5	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

MAJOR IONS								METALS																					
Calcium	Cations Total	Chloride (As Cl)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium	Beryllium	Boron	Boron	Cadmium	Cadmium	Chromium, total	Chromium, total	Cobalt	Cobalt	Copper	Copper	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum
D	T	T	T	D	D	D	D	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T	D	T
1	0.17	6	0.78	1	1	4	1	0.05	0.36	< 0.001	< 0.001	< 0.02	< 0.02	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0002	< 0.0002	0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.0001	< 0.0001	0.005	0.005
4	2.55	30	14.6	1	2	51	56	0.07	0.4	< 0.001	< 0.001	< 0.02	< 0.02	< 0.001	< 0.001	< 0.05	< 0.05	< 0.0002	< 0.0002	0.002	0.05	< 0.001	< 0.001	< 0.001	< 0.005	< 0.001	< 0.001	< 0.005	< 0.005	< 0.0001	< 0.0001	0.005	0.007
2	1.21	21	5.5	1	1	25	22	0.06	0.38	--	--	--	--	--	--	--	--	--	--	0.002	0.006	--	--	--	--	--	--	--	--	--	--	0.005	0.006
2	1.23	22	4.14	1	1	26	17	0.06	0.38	--	--	--	--	--	--	--	--	--	--	0.002	0.005	--	--	--	--	--	--	--	--	--	--	0.005	0.006
5	5	5	5	5	5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	28	2	2	2	28	2	2	2	2	2	2	2	2
4	5	5	5	1	2	5	5	1	2	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	1
1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	6.9%	0.5%	0.5%	0.5%	6.9%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
										0.01	**0.01**	**2**	**2**	**0.06**	**0.06**	**4**	**4**	**0.002**	**0.002**					**2**	**2**	**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**
										0	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*					*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
		250				**180**	**250**																	**1**	**1**			**0.1**	**0.1**				
		0				*0*	*0*																	*0*	*0*			*0*	*0*				
mg/L	meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

MAJOR IONS								METALS																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

MAJOR IONS								METALS																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

MAJOR IONS								METALS																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

MAJOR IONS								METALS																							
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

MAJOR IONS																																			
METALS																																				
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

																																			PFAS		
Nickel	Nickel	Phosphorus	Selenium	Selenium	Titanium	Titanium	Uranium	Uranium	Vanadium	Vanadium	Zinc	Zinc	10:2 Fluorotelomer sulfonic acid (10:2 FTS	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoacet	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoac	Perfluoro-1-octanesulfonamidoacetic acid	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanesulfonic acid ammonium	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFL	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorohexanesulfonic acid (PFHxS)
D	T	T	D	T	D	T	D	T	D	T	D	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.001	< 0.001	0.01	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.000005	< 0.005	< 0.005	0.005	0.005	0.0004	0.0002	0.0005	0.0002	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.0004	0.0005	0.0004	< 0.2	0.0002	< 0.0004	0.0002	0	< 0.8	0.0002
< 0.001	< 0.001	0.04	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.000005	< 0.005	< 0.005	0.005	0.03	0.01	0.2	2.2	0.2	< 1	< 1	< 1	< 1	< 1	< 1	0.0004	0.4	0.24	0.2	< 0.2	0.4	< 0.4	0.2	0.3	< 0.8	0.2
--	--	0.01	--	--	--	--	--	--	--	--	0.005	0.018	0.0013	0.0014	0.1068	0.0038	--	--	--	--	--	--	0.0004	0.0046	0.0149	0.0024	--	0.0055	--	0.0021	0	--	0.0055
--	--	0.01	--	--	--	--	--	--	--	--	0.005	0.01	0.001	0.0005	0.048	0.001	--	--	--	--	--	--	0.0004	0.001	0.0047	0.0005	--	0.001	--	0.0002	0	--	0.0014
2	2	26	2	2	2	2	2	2	2	2	2	28	70	381	381	381	381	381	381	381	381	381	10	381	381	381	1	381	381	381	381	1	381
0	0	4	0	0	0	0	0	0	0	0	1	18	4	7	324	202	0	0	0	0	0	0	1	37	297	1	0	15	0	67	276	0	300
0.5%	0.5%	6.4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	6.9%	17.2%	93.4%	93.4%	93.4%	93.4%	93.4%	93.4%	93.4%	93.4%	93.4%	2.5%	93.4%	93.4%	93.4%	0.2%	93.4%	93.4%	93.4%	93.4%	0.2%	93.4%
																								1										**0.03**
																								0										*6*
0.02	**0.02**		**0.01**	**0.01**			**17**	**0.017**																										
0	*0*		*0*	*0*			*0*	*0*																										
											3	**3**																						
											0	*0*																						
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.2	2.2	< 0.2	< 1	< 1	< 1	< 1	< 1	< 1	--	< 0.4	< 0.2	< 0.2	< 0.2	< 0.4	< 0.4	< 0.2	< 0.2	< 0.8	< 0.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0002	0.0022	< 0.0002	< 1	< 1	< 1	< 1	< 1	< 1	--	< 0.4	< 0.2	< 0.2	--	< 0.4	< 0.4	< 0.2	< 0.2	--	< 0.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0002	0.0031	< 0.0002	< 1	< 1	< 1	< 1	< 1	< 1	--	< 0.4	< 0.2	< 0.2	--	< 0.4	< 0.4	< 0.2	0.29	--	< 0.2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0006	0.33	0.018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.014	< 0.0005	--	< 0.001	< 0.001	0.0004	< 0.0005	--	0.0035
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.33	0.016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.011	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0032
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.26	0.021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0057	< 0.0005	--	< 0.001	< 0.001	0.0007	< 0.0005	--	0.0023
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0015	0.37	0.055	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.019	< 0.0005	--	0.003	< 0.001	0.0005	< 0.0005	--	0.0039
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0014	0.37	0.056	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.02	< 0.0005	--	0.003	< 0.001	0.0006	< 0.0005	--	0.0048
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0014	0.4	0.061	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.019	< 0.0005	--	0.003	< 0.001	0.0008	< 0.0005	--	0.0051
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.27	0.016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0039	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.36	0.019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0078	< 0.0005	--	0.001	< 0.001	< 0.0002	0.0043	--	0.0026
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.33	0.015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0071	< 0.0005	--	< 0.001	< 0.001	0.0002	0.006	--	0.0025
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.35	0.015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.012	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0064	--	0.0027
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.25	0.009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0037	--	0.0033
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.24	0.004	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.17	< 0.0005	--	< 0.001	< 0.001	0.0005	0.3	--	0.015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0011	0.5	0.031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	< 0.0005	< 0.0005	--	0.001	< 0.001	< 0.0002	0.012	--	0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001	0.48	0.054	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.013	< 0.0005	--	0.003	< 0.001	0.0004	0.0091	--	0.0052
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0026	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0031	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.027	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0017	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0087	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	0.0005	0.0006	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.31	0.014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.091	< 0.0005	--	0.002	< 0.001	0.0003	0.13	--	0.0059
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.03	< 0.0005	--	< 0.001	< 0.001	0.0003	0.045	--	0.0043
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.071	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0018
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.058	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0014	--	0.0013
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.068	0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0019
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.052	0.0044	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0012	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.092	0.0022	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.0058	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0028	--	0.0045
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.078	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0071	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0026	--	0.0034
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.063	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0012	--	0.0016
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.072	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0016	--	0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0075	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.022	--	0.0033
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0047	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0022	--	0.0028
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.03	--	0.0034
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.21	0.0061	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.01	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0041	--	0.0041
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.015	< 0.0005	--	< 0.001	< 0.001	0.0004	0.025	--	0.0033
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.083	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	0.0004	0.0019	--	0.0015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.034	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.001	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.039	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0007	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0014	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0008	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.039	0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0012	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.04	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0011	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.049	0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0012	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.055	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0011	--	0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.19	0.004	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0039	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0032	--	0.003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0037	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0032	--	0.0021
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.071	0.0027	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0027	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0014	--	0.0034
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.094	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.002	--	0.0029
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.028	< 0.0005	--	< 0.001	< 0.001	0.0004	0.056	--	0.0047

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

																																			PFAS	
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.055	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0032	< 0.0005	--	< 0.001	< 0.001	0.0004	0.0016	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.054	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	0.0006	0.0019	--	0.0009
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.074	0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0031	< 0.0005	--	< 0.001	< 0.001	0.0004	0.0019	--	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.068	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.003	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0019	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.06	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0017	--	0.0011
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0054	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0021	--	0.0045
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0082	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0026	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0025	--	0.0053
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0025	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0058
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.024	< 0.0005	--	< 0.001	< 0.001	0.0002	0.047	--	0.0061
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.065	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.06	0.0012	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0009
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.26	0.009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0082	< 0.0005	--	< 0.001	< 0.001	0.0005	0.0061	--	0.0058
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.17	0.0046	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.006	< 0.0005	--	< 0.001	< 0.001	0.0003	0.0031	--	0.0057
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0062	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.0024	0.0006	--	< 0.001	< 0.001	0.0009	0.0097	--	0.0061
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.15	0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.064	< 0.0005	--	< 0.001	< 0.001	0.0005	0.098	--	0.011
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.031	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0036	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0009	0.31	0.0048	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0086	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0062	--	0.0015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.0027
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.19	0.007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0047	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0045	--	0.0022
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.035	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.03	< 0.0005	--	< 0.001	< 0.001	0.0003	0.045	--	0.0044
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.044	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0066	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.002	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.058	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0064	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0016	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.001	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.35	0.011	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.002	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.25	0.006	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.25	0.005	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	0.003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.3	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.19	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.002	0.24	< 0.001	--	< 0.01	< 0.01	< 0.001	0.28	--	0.019
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	< 0.001	< 0.25	0.016	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.014	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.016	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.016	0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.15	< 0.005	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.1	0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.057	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.035	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.028	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.069	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.058	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.17	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.074	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.08	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.01	0.006	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.043	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.01	< 0.05	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.01	< 0.05	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	< 0.01	0.018	< 0.01	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.01	< 0.05	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.024	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.79	0.02	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.021	< 0.005	--	< 0.01	< 0.01	0.0034	0.013	--	0.038
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.98	0.017	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.025	< 0.005	--	< 0.01	< 0.01	0.0024	0.012	--	0.0095
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.062	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.006	--	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.86	0.014	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.019	< 0.005	--	< 0.01	< 0.01	< 0.002	0.011	--	0.007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.89	0.014	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.022	< 0.005	--	< 0.01	< 0.01	< 0.002	0.011	--	0.0065
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0055	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0055	--	0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	1.3	0.019	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.02	< 0.005	--	< 0.01	< 0.01	< 0.002	0.016	--	0.0073
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	1.4	0.019	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.022	< 0.005	--	< 0.01	< 0.01	< 0.002	0.015	--	0.0066
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.057	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0044	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0036	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.69	0.012	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.018	< 0.005	--	< 0.01	< 0.01	< 0.002	0.009	--	0.0043
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.55	0.011	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.0092	< 0.005	--	< 0.01	< 0.01	0.0023	0.0088	--	0.0074
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.095	< 0.005	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.0093	< 0.005	--	< 0.01	< 0.01	0.0022	0.0072	--	0.0078
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.55	0.0089	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.01	< 0.005	--	< 0.01	< 0.01	< 0.002	0.0063	--	0.0066
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.41	0.0088	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	0.011	< 0.005	--	< 0.01	< 0.01	< 0.002	< 0.005	--	0.006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.21	0.0069	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.024	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0053	--	0.0052
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.095	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.011	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0056	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.22	0.0081	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0045	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0042	--	0.0044
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.2	0.0095	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	0.0004	0.0044	--	0.0052
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.048	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0018	--	0.0007

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

																																			PFAS	
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0047	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0049	--	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.66	0.0095	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.018	< 0.0025	--	< 0.005	< 0.005	< 0.001	0.0076	--	0.0089
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.41	0.0084	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.004	< 0.0025	--	< 0.005	< 0.005	< 0.001	0.0047	--	0.0078
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.3	0.0097	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.0052	< 0.0025	--	< 0.005	< 0.005	< 0.001	0.004	--	0.0082
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.23	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0052	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0027	--	0.0017
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.066	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0086	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0055	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.031	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.052	--	0.0098
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.045	< 0.0005	--	< 0.001	< 0.001	0.0005	0.072	--	0.015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.052	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.011	< 0.0005	--	< 0.001	< 0.001	0.0003	0.017	--	0.0077
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0025	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0064	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0019	--	0.0061
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0023	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.0043
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	0.0027
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.059	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.018	< 0.0005	--	< 0.001	< 0.001	0.0003	0.024	--	0.007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.043	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0054	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0027	--	0.0013
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.063	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.021	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.036	--	0.0089
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	0.052	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.004	0.017	< 0.002	--	< 0.004	< 0.004	< 0.002	0.023	--	0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.049	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0025	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.07	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.023	< 0.0005	--	< 0.001	< 0.001	0.0003	0.025	--	0.0073
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.028	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0022	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0031	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0016	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0051	--	0.0029
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.029	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0047	--	0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0012	--	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.04	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0052	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0077	--	0.003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0062	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0072	--	0.0023
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.054	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.012	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.015	--	0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.022	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0026	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0011	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0027	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0069	< 0.0005	--	< 0.001	< 0.001	0.0005	0.0024	--	0.0063
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0035	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0064	< 0.0005	--	< 0.001	< 0.001	0.0006	0.0027	--	0.006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.052	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.015	< 0.0005	--	< 0.001	< 0.001	0.0004	0.019	--	0.0032
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.035	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0025	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0011	--	0.0009
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.028	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	0.0002	0.002	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.074	0.0027	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0011	--	0.0037
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0079	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0045	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0017	--	0.0085
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.001	< 0.005	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.00125	0.28	0.0028	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.00625	--	< 0.0025	0.0072	< 0.00125	--	< 0.0025	< 0.0025	< 0.0005	0.0035	--	0.0059
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0027	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0045	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0021	--	0.0042
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0043	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0014	--	0.0043
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.058	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.013	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.023	--	0.0048
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.048	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.002	--	0.0012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.025	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.003	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0022	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0018	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.65	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.014	< 0.0005	--	< 0.001	< 0.001	0.0003	0.0032	--	0.021
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.48	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.013	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.31	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.011	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0029	--	0.0088
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.025	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.047	--	0.018
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.099	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0036	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0024	--	0.0022
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.048	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0038	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0047	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0026	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0018	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0042	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0051	< 0.0005	--	< 0.001	< 0.001	0.0005	< 0.0005	--	0.0045
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.17	0.0072	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0064	< 0.0005	--	< 0.001	< 0.001	0.0004	< 0.0005	--	0.0055
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.22	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.021	< 0.0005	--	< 0.001	< 0.001	0.0004	0.0028	--	0.0056
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0029	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.045	< 0.0005	--	< 0.001	< 0.001	0.0005	0.047	--	0.0095
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.064	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0053	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0011
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.049	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0034	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.004	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.069	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0046	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0038	--	0.0013
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.034	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0046	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0033	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0023	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0018	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005	0.79	< 0.005	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025	--	< 0.01	< 0.005	< 0.005	--	< 0.01	< 0.01	< 0.002	0.0059	--	0.0084
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.075	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0056	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0046	--	0.0009
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.006	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0021	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.38	0.0044	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.012	< 0.0025	--	< 0.005	< 0.005	< 0.001	0.0086	--	0.0043
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.36	0.0028	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	--	< 0.005	0.011	< 0.0025	--	< 0.005	< 0.005	< 0.001	0.0071	--	0.0034
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.054	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0035	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0066	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0069	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0031	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.25	0.0058	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0074	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0045	--	0.0056
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.27	0.0058	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.006	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0046	--	0.0056

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

																														PFAS	
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.042	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0052	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0071	--	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0072	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0023	--	0.0011
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.31	0.0074	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0087	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.005	--	0.0078
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.28	0.0096	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0077	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0047	--	0.0072
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0058	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.02	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.011	--	0.0017
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.032	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0066	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0074	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0076	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0023	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0032	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0091	< 0.0005	--	< 0.001	< 0.001	0.0003	0.0025	--	0.0039
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.048	0.0035	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	0.0003	0.0021	--	0.015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.067	0.0054	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.0025	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0028	--	0.011
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.21	0.0037	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.02	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.012	--	0.0018
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.029	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.008	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0078	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0053	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.003	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0017	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0025	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0011	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0011	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	0.01	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.027	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0083	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0057	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.002	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0006	0.002	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	--	< 0.0002	< 0.0004	< 0.0004	< 0.0008	--	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.076	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	0.0002	0.0015	--	0.0026
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.077	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0026	< 0.0005	--	< 0.001	< 0.001	0.0003	0.0011	--	0.0034
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.08	0.0064	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	0.0004	0.0015	--	0.0097
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.076	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.001	0.19	< 0.0005	--	< 0.001	< 0.001	0.0005	0.19	--	0.015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.056	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0023	--	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.027	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0055	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0044	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0036	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0014	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0014	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.083	0.0031	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.011	< 0.0004	--	0.0005	< 0.0004	0.001	< 0.0008	--	0.013
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.12	0.0036	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.004	< 0.0004	--	0.0004	< 0.0004	0.0012	< 0.0008	--	0.012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.068	0.0024	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	0.001	0.002	< 0.0004	--	0.0006	< 0.0004	0.0008	< 0.0008	--	0.016
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.064	0.0027	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0007	0.002	< 0.0004	--	0.0004	< 0.0004	0.0004	< 0.0008	--	0.017
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.053	0.0009	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.001	0.133	< 0.0004	--	0.0008	< 0.0004	0.0012	0.13	--	0.025
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0005	< 0.001	0.13	0.0047	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.014	< 0.0004	--	0.0007	< 0.0004	0.0054	< 0.0008	--	0.02
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0007	< 0.001	0.092	0.0051	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.011	0.007	< 0.0004	--	0.0008	< 0.0004	0.0044	0.005	--	0.087
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0014	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0014	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.000005	< 0.005	< 0.005	0.005	0.029	< 0.001	< 0.001	0.012	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.01	< 0.001	--	< 0.01	< 0.01	< 0.001	0.01	--	< 0.001
< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	< 0.000005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	< 0.001	< 0.01	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	--	0.001	< 0.05	< 0.001	--	< 0.01	< 0.01	< 0.001	< 0.01	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.08	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0018	--	0.0044
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.01	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	0.0023
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0008	--	0.0015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.05	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.052	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.052	--	0.0083
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0032	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0034	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.035	0.0012	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0011	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0014	--	0.0012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0013	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0019	--	0.0003
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0006	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.059	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0011	--	0.0017
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.056	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0039	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0021	--	0.0019
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.029	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.024	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.025	--	0.0057
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0012	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0006	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.062	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0008	--	0.0023
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.058	0.0043	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.012	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.001	--	0.0048
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.042	0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0039	--	0.0047
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.04	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.041	--	0.0057
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0012	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0019	--	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0035	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.002	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0008	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.014	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0007	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0022	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0008	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.067	0.0012	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0051	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0012	--	0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.068	0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.006	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0014	--	0.0018
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.083	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0058	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0016	--	0.0014
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.043	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.052	--	0.0062
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0021	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0009	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0006	--	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	0.004	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0027	--	0.0041

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

																																			PFAS	
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0046	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0038	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0022	--	0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0019	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.17	0.0065	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0027	--	0.0036
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0047	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0042	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0035	--	0.0039
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0034	--	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0015	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.001	--	0.0004
--	--	0.03	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	0.04	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	0.03	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.15	0.0055	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0033	--	0.0015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0032	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0059	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.0051	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.021	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0039	--	0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0066	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0044	--	0.0015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.014	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0031	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0013
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0038	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0014
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0071	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0031	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0025	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0042	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.012	< 0.0005	--	< 0.001	< 0.001	0.0003	0.002	--	0.003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0045	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0049	< 0.0005	--	< 0.001	< 0.001	0.0003	0.0047	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.004	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0011	--	0.0025
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.041	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0043	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	0.003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.041	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0063	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0007	--	0.0033
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0008	--	0.0012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.041	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0039	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.002	--	0.0014
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.028	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.003	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.0014
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0037	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0034	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0038	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0039	--	0.0004
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.075	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0052
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.028	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.019	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.017	--	0.0064
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.043	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0046	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0016
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.011	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0022	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0016	--	0.0019
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.011	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0048	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0022	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0034	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0016	--	0.0019
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.026	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.026	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.024	--	0.0081
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0021	--	0.0013
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.001	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0012	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0006	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.018	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.0016
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0023	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0017	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0045	--	0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0006	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0021	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0033	--	0.0042
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0033	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0049	--	0.0078
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.063	0.0053	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.007	0.007	< 0.0005	--	< 0.001	< 0.001	0.0034	0.0015	--	0.067
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.002	0.008	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0007	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.021	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0028	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0006	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0039	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0029	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0024	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0066	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0079	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.005	--	0.0009
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.001	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0023	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0006	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0023	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.092	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0075	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0052	--	0.0068
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.097	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0072	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0053	--	0.006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.097	0.0022	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0075	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0048	--	0.0076
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.047	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0018	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0022	--	0.0023
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.042	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0019	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0026	--	0.0019
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.046	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0022	--	0.0015
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0027	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0008	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0007	--	0.0003
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0031	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0013	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0006	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0017	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0006	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	< 0.001	0.06	0.008	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	0.0081	0.0064	< 0.0005	--	0.001	< 0.0005	0.0068	0.0012	--	0.0514
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.098	0.004	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.004	< 0.0005	--	0.0006	0.0089	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0011	--	0.0029
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.08	0.002	< 0.001	< 0.004	< 0.0005	< 0.001	< 0.004	< 0.0005	--	0.0005	0.0055	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0038	--	0.0035
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.047	< 0.001	< 0.001	< 0.004	< 0.0005	< 0.001	< 0.004	< 0.0005	--	0.0015	0.121	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.11	--	0.0152
--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.022	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	--	< 0.0005	0.0041	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	0.0011	--	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.016	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0068	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0061	--	0.0012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0073	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0062	--	0.0014
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0064	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0057	--	0.0011
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0019	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0086	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.008	--	0.0024
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0045	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0095	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0064	--	0.0007
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.099	0.0032	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	0.0044
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.078	0.0039	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0009	--	0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.089	0.0022	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0007	--	0.0048

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

																																				PFAS	
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0041	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0008	--	0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.086	0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0008	--	0.0048
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.061	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0011	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0012	--	0.0055
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.043	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.002	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0017	--	0.0017
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.043	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0016	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0015	--	0.0019
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.015	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0009	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0014
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0012
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.099	0.0045	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0011	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.0081
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.14	0.0049	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.001	< 0.0005	--	< 0.001	< 0.001	< 0.0002	0.0013	--	0.0058
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.036	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.004	0.0017	< 0.0005	--	< 0.001	< 0.001	0.0012	0.0013	--	0.058
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.024	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	0.003	0.0016	< 0.0005	--	< 0.001	< 0.001	0.001	< 0.0005	--	0.035
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0025	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0022
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	0.0025	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	< 0.0002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0018	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0054	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	< 0.001	< 0.0005	< 0.0005	--	< 0.001	< 0.001	< 0.0002	< 0.0005	--	0.0003
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PF	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFU	Sum of enHealth PFAS (PFHxS + PFOS + PF	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFAS (sum 30 compounds, Eurofin	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)	>C10 - C16 Fraction minus Naphthalene (F	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	(C6-C10 Fraction (F1)	(C6-C10 Fraction minus BTEX (F1)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.0002	0.0005	0.0004	< 0.0004	0.0001	0.0002	0.0004	0.0002	< 0.001	< 0.0004	0.0004	0.0002	0.001	0.0002	0.001	0.0002	0.0002	0.001	< 50	< 100	< 50	100	< 100	< 20	< 20
0.42	0.2	0.4	< 0.8	0.36	0.56	0.4	1	< 0.01	< 0.4	0.4	0.4	0.125	2.247	0.0289	0.978	0.4	0.106	< 50	< 100	< 50	200	< 100	< 20	< 20
0.0223	0.0025	0.0056	--	0.0124	0.0046	0.0046	0.0293	--	--	0.0055	0.0055	0.01	0.1289	0.015	0.2096	0.016	0.007	--	--	--	150	--	--	--
0.0086	0.0005	0.001	--	0.0031	0.001	0.001	0.0092	--	--	0.001	0.001	0.003	0.067	0.015	0.1465	0.0045	0.001	--	--	--	150	--	--	--
381	364	381	381	391	391	381	381	55	381	381	381	42	277	2	16	391	55	2	2	2	2	2	2	2
322	1	83	0	345	226	18	301	0	0	1	4	26	227	1	14	329	26	0	0	0	1	0	0	0
93.4%	89.2%	93.4%	93.4%	95.8%	95.8%	93.4%	93.4%	13.5%	93.4%	93.4%	93.4%	10.3%	67.9%	0.5%	3.9%	95.8%	13.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
				0.004	**0.2**																			
				166	*1*																			
					0.56											**0.07**								
					0											*10*								
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.2	< 0.2	< 0.4	< 0.8	< 0.2	< 0.1	< 0.4	< 0.2	--	< 0.4	< 0.4	< 0.4	--	--	--	--	< 0.2	--	--	--	--	--	--	--	--
< 0.2	< 0.2	< 0.4	< 0.8	< 0.2	< 0.1	< 0.4	< 0.2	--	< 0.4	< 0.4	< 0.4	--	--	--	--	< 0.2	--	--	--	--	--	--	--	--
< 0.2	< 0.2	< 0.4	< 0.8	< 0.2	0.56	< 0.4	< 0.2	--	< 0.4	< 0.4	< 0.4	--	--	--	--	< 0.2	--	--	--	--	--	--	--	--
0.072	< 0.0005	< 0.001	< 0.002	0.041	0.003	< 0.001	0.063	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.044	--	--	--	--	--	--	--	--
0.058	< 0.0005	< 0.001	< 0.002	0.036	0.0014	< 0.001	0.048	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.039	--	--	--	--	--	--	--	--
0.04	< 0.0005	< 0.001	< 0.002	0.048	0.0036	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.05	--	--	--	--	--	--	--	--
0.15	< 0.0005	< 0.001	< 0.002	0.065	0.013	< 0.001	0.033	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.069	--	--	--	--	--	--	--	--
0.14	< 0.0005	< 0.001	< 0.002	0.069	0.014	< 0.001	0.041	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.074	--	--	--	--	--	--	--	--
0.15	< 0.0005	< 0.001	< 0.002	0.077	0.015	< 0.001	0.04	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.082	--	--	--	--	--	--	--	--
0.035	< 0.0005	< 0.001	< 0.002	0.0022	0.0016	< 0.001	0.0084	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0027	--	--	--	--	--	--	--	--
0.05	< 0.0005	< 0.001	< 0.002	0.024	0.0058	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.026	--	--	--	--	--	--	--	--
0.05	< 0.0005	< 0.001	< 0.002	0.021	0.0053	< 0.001	0.029	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.024	--	--	--	--	--	--	--	--
0.048	< 0.0005	< 0.001	< 0.002	0.023	0.0053	< 0.001	0.03	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.026	--	--	--	--	--	--	--	--
0.023	< 0.0005	< 0.001	< 0.002	0.014	0.0029	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.017	--	--	--	--	--	--	--	--
0.42	< 0.0005	0.002	< 0.002	0.035	0.007	0.002	0.69	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.049	--	--	--	--	--	--	--	--
0.21	< 0.0005	< 0.001	< 0.002	0.0053	0.028	< 0.001	0.055	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.016	--	--	--	--	--	--	--	--
0.1	< 0.0005	< 0.001	< 0.002	0.063	0.015	< 0.001	0.04	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.068	--	--	--	--	--	--	--	--
0.0029	< 0.0005	< 0.001	< 0.002	0.0041	< 0.0005	< 0.001	0.0036	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0045	--	--	--	--	--	--	--	--
0.0029	< 0.0005	< 0.001	< 0.002	0.001	< 0.0005	< 0.001	0.0032	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0013	--	--	--	--	--	--	--	--
0.0012	< 0.0005	< 0.001	< 0.002	0.0003	< 0.0005	< 0.001	0.0012	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0003	--	--	--	--	--	--	--	--
0.22	< 0.0005	0.003	< 0.002	0.022	0.0072	< 0.001	0.3	--	< 0.001	< 0.001	0.001	--	--	--	--	0.028	--	--	--	--	--	--	--	--
0.054	< 0.0005	< 0.001	< 0.002	0.014	0.0026	< 0.001	0.1	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.018	--	--	--	--	--	--	--	--
0.0045	< 0.0005	< 0.001	< 0.002	0.0032	0.001	< 0.001	0.004	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.005	--	--	--	--	--	--	--	--
0.0047	< 0.0005	< 0.001	< 0.002	0.0015	< 0.0005	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0028	--	--	--	--	--	--	--	--
0.0043	< 0.0005	< 0.001	< 0.002	0.0022	< 0.0005	< 0.001	0.0041	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0041	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.0048	0.0007	< 0.001	0.0042	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0048	--	--	--	--	--	--	--	--
0.0077	< 0.0005	< 0.001	< 0.002	0.0062	0.0019	< 0.001	0.0063	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.011	--	--	--	--	--	--	--	--
0.0066	< 0.0005	< 0.001	< 0.002	0.0047	0.0016	< 0.001	0.0067	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0081	--	--	--	--	--	--	--	--
0.0044	< 0.0005	< 0.001	< 0.002	0.002	0.0005	< 0.001	0.0049	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0035	--	--	--	--	--	--	--	--
0.0051	< 0.0005	< 0.001	< 0.002	0.0017	0.0005	< 0.001	0.0057	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0027	--	--	--	--	--	--	--	--
0.021	< 0.0005	< 0.001	< 0.002	0.0069	0.0021	< 0.001	0.033	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.01	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0052	0.0012	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.008	--	--	--	--	--	--	--	--
0.038	< 0.0005	< 0.001	< 0.002	0.0098	0.0019	< 0.001	0.063	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.013	--	--	--	--	--	--	--	--
0.019	< 0.0005	< 0.001	< 0.002	0.0079	0.0016	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.012	--	--	--	--	--	--	--	--
0.034	< 0.0005	< 0.001	< 0.002	0.0069	0.0016	< 0.001	0.052	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.01	--	--	--	--	--	--	--	--
0.0053	< 0.0005	< 0.001	< 0.002	0.0022	0.0007	< 0.001	0.0048	--	< 0.001	< 0.001	0.003	--	--	--	--	0.0037	--	--	--	--	--	--	--	--
0.0032	< 0.0005	< 0.001	< 0.002	0.0008	< 0.0005	< 0.001	0.0034	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0013	--	--	--	--	--	--	--	--
0.0034	< 0.0005	< 0.001	< 0.002	0.0006	< 0.0005	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0011	--	--	--	--	--	--	--	--
0.0024	< 0.0005	< 0.001	< 0.002	0.0008	< 0.0005	< 0.001	0.0017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0013	--	--	--	--	--	--	--	--
0.0025	< 0.0005	< 0.001	< 0.002	0.0006	< 0.0005	< 0.001	0.0017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.001	--	--	--	--	--	--	--	--
0.0037	< 0.0005	< 0.001	< 0.002	0.001	< 0.0005	< 0.001	0.0041	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0017	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.001	< 0.0005	< 0.001	0.0039	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0017	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.0007	< 0.0005	< 0.001	0.0032	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0014	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.0011	< 0.0005	< 0.001	0.0031	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0021	--	--	--	--	--	--	--	--
0.017	< 0.0005	< 0.001	< 0.002	0.009	0.0013	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.012	--	--	--	--	--	--	--	--
0.016	< 0.0005	< 0.001	< 0.002	0.0036	0.0013	< 0.001	0.0093	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0057	--	--	--	--	--	--	--	--
0.0077	< 0.0005	< 0.001	< 0.002	0.0032	0.0012	< 0.001	0.0092	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0066	--	--	--	--	--	--	--	--
0.01	< 0.0005	< 0.001	< 0.002	0.0042	0.0011	< 0.001	0.0092	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0071	--	--	--	--	--	--	--	--
0.066	< 0.0005	0.001	< 0.002	0.034	0.0032	< 0.001	0.11	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.039	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

0.0041	< 0.0005	< 0.001	< 0.002	0.0022	0.0007	< 0.001	0.0029	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0029	--	--	--	--	--	--	--	--
0.0053	< 0.0005	< 0.001	< 0.002	0.002	0.0007	< 0.001	0.0063	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0029	--	--	--	--	--	--	--	--
0.0047	< 0.0005	< 0.001	< 0.002	0.0032	0.0006	< 0.001	0.0046	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.004	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.0014	0.0008	< 0.001	0.0048	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0021	--	--	--	--	--	--	--	--
0.0043	< 0.0005	< 0.001	< 0.002	0.0014	0.0008	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0025	--	--	--	--	--	--	--	--
0.015	< 0.0005	< 0.001	< 0.002	0.0094	0.0018	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.014	--	--	--	--	--	--	--	--
0.012	< 0.0005	< 0.001	< 0.002	0.016	0.0023	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.022	--	--	--	--	--	--	--	--
0.0098	< 0.0005	< 0.001	< 0.002	0.0067	0.0017	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.013	--	--	--	--	--	--	--	--
0.058	< 0.0005	0.002	< 0.002	0.023	0.0033	< 0.001	0.1	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.029	--	--	--	--	--	--	--	--
0.0037	< 0.0005	< 0.001	< 0.002	0.0018	0.0005	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0024	--	--	--	--	--	--	--	--
0.0044	< 0.0005	< 0.001	< 0.002	0.0018	0.0008	< 0.001	0.0054	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0027	--	--	--	--	--	--	--	--
0.037	< 0.0005	< 0.001	< 0.002	0.021	0.0023	< 0.001	0.028	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.027	--	--	--	--	--	--	--	--
0.025	< 0.0005	< 0.001	< 0.002	0.013	0.002	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.019	--	--	--	--	--	--	--	--
0.022	0.001	< 0.001	< 0.002	0.014	0.0019	0.002	0.018	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.02	--	--	--	--	--	--	--	--
0.14	< 0.0005	0.004	< 0.002	0.047	0.0054	0.001	0.24	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.058	--	--	--	--	--	--	--	--
0.0035	< 0.0005	< 0.001	< 0.002	< 0.0002	0.0007	< 0.001	0.004	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0004	--	--	--	--	--	--	--	--
0.035	< 0.0005	< 0.001	< 0.002	0.0054	0.0015	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0069	--	--	--	--	--	--	--	--
0.0081	< 0.0005	< 0.001	< 0.002	0.0035	0.0009	< 0.001	0.0044	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0062	--	--	--	--	--	--	--	--
0.019	< 0.0005	< 0.001	< 0.002	0.013	0.0011	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.015	--	--	--	--	--	--	--	--
0.078	< 0.0005	0.001	< 0.002	0.026	0.0025	< 0.001	0.15	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.03	--	--	--	--	--	--	--	--
0.0045	< 0.0005	< 0.001	< 0.002	0.0013	0.001	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0018	--	--	--	--	--	--	--	--
0.0047	< 0.0005	< 0.001	< 0.002	0.0019	0.0008	< 0.001	0.0052	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0025	--	--	--	--	--	--	--	--
0.0017	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0034	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0004	--	--	--	--	--	--	--	--
0.05	< 0.001	< 0.01	< 0.05	0.023	< 0.01	< 0.001	0.05	< 0.001	< 0.01	< 0.01	< 0.01	0.031	< 0.35	--	--	0.028	0.026	--	--	--	--	--	--	--
0.04	< 0.001	< 0.01	< 0.05	0.023	< 0.01	< 0.001	0.05	< 0.001	< 0.01	< 0.01	< 0.01	0.03	< 0.25	--	--	0.028	0.025	--	--	--	--	--	--	--
0.03	< 0.001	< 0.01	< 0.05	0.021	< 0.01	< 0.001	0.03	< 0.001	< 0.01	< 0.01	< 0.01	0.026	< 0.25	--	--	0.024	0.023	--	--	--	--	--	--	--
0.05	< 0.001	< 0.01	< 0.05	0.034	< 0.01	< 0.001	0.06	< 0.001	< 0.01	< 0.01	< 0.01	0.041	< 0.3	--	--	0.039	0.036	--	--	--	--	--	--	--
0.39	< 0.001	< 0.01	< 0.05	0.093	0.01	0.002	1	< 0.001	< 0.01	< 0.01	< 0.01	0.125	2.247	--	--	0.112	0.106	--	--	--	--	--	--	--
0.04	< 0.001	< 0.01	< 0.05	0.018	< 0.01	< 0.001	0.03	< 0.001	< 0.01	< 0.01	< 0.01	0.025	< 0.25	--	--	0.022	0.021	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0007	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.0107	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0012	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0012	0.0072	--	--	0.0012	0.0012	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0042	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0082	0.0412	--	--	0.0062	0.0062	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0029	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0029	0.0189	--	--	0.0029	0.0029	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0082	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0082	0.0292	--	--	0.0082	0.0082	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0009	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.0249	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.001	< 0.005	--	--	0.001	0.001	--	--	--	--	--	--	--
0.02	< 0.001	< 0.01	< 0.05	0.0028	< 0.01	< 0.001	0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0048	< 0.15	--	--	0.0028	0.0048	--	--	--	--	--	--	--
0.01	< 0.001	< 0.01	< 0.05	0.0016	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0026	< 0.1	--	--	0.0016	0.0026	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0031	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0031	0.0861	--	--	0.0031	0.0031	--	--	--	--	--	--	--
0.01	< 0.001	< 0.01	< 0.05	0.0026	< 0.01	< 0.001	0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0026	0.0706	--	--	0.0026	0.0026	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.0313	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0015	0.1015	--	--	< 0.001	0.0015	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0009	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.0889	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0052	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0092	0.2152	--	--	0.0072	0.0072	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0065	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0065	0.0895	--	--	0.0065	0.0065	--	--	--	--	--	--	--
0.01	< 0.001	< 0.01	< 0.05	0.0027	< 0.01	< 0.001	0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0057	0.1307	--	--	0.0037	0.0047	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.011	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.011	0.028	--	--	0.011	0.011	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0023	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0023	< 0.005	--	--	0.0023	0.0023	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0018	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0038	0.0668	--	--	0.0018	0.0038	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.014	0.026	--	--	< 0.01	0.014	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.016	0.03	--	--	< 0.01	0.016	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.015	0.046	--	--	< 0.01	0.015	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	0.006	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0024	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	0.0024	0.0314	--	--	0.0024	0.0024	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.01	< 0.05	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
0.065	< 0.005	< 0.01	< 0.02	0.36	0.0057	< 0.01	0.044	--	< 0.01	< 0.01	< 0.01	--	0.61	--	--	0.4	--	--	--	--	--	--	--	--
0.068	< 0.005	< 0.01	< 0.02	0.069	< 0.005	< 0.01	0.055	--	< 0.01	< 0.01	< 0.01	--	0.65	--	--	0.079	--	--	--	--	--	--	--	--
0.012	< 0.0005	< 0.001	< 0.002	0.0015	0.0016	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	< 0.13	--	--	0.0023	--	--	--	--	--	--	--	--
0.065	< 0.005	< 0.01	< 0.02	0.033	< 0.005	< 0.01	0.045	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.04	--	--	--	--	--	--	--	--
0.066	< 0.005	< 0.01	< 0.02	0.043	< 0.005	< 0.01	0.057	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.05	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0019	0.001	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0029	--	--	--	--	--	--	--	--
0.081	< 0.005	< 0.01	< 0.02	0.017	< 0.005	< 0.01	0.099	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.025	--	--	--	--	--	--	--	--
0.091	< 0.005	< 0.01	< 0.02	0.019	< 0.005	< 0.01	0.11	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.025	--	--	--	--	--	--	--	--
0.0094	< 0.0005	< 0.001	< 0.002	0.0009	0.0008	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0009	--	--	--	--	--	--	--	--
0.041	< 0.005	< 0.01	< 0.02	0.031	< 0.005	< 0.01	0.034	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.036	--	--	--	--	--	--	--	--
0.04	< 0.005	< 0.01	< 0.02	0.033	< 0.005	< 0.01	0.033	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.04	--	--	--	--	--	--	--	--
0.014	< 0.005	< 0.01	< 0.02	0.018	< 0.005	< 0.01	0.032	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.026	--	--	--	--	--	--	--	--
0.035	< 0.005	< 0.01	< 0.02	0.024	< 0.005	< 0.01	0.033	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.03	--	--	--	--	--	--	--	--
0.025	< 0.005	< 0.01	< 0.02	0.016	< 0.005	< 0.01	0.022	--	< 0.01	< 0.01	< 0.01	--	--	--	--	0.022	--	--	--	--	--	--	--	--
0.024	< 0.0005	< 0.001	< 0.002	0.011	0.0026	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.017	--	--	--	--	--	--	--	--
0.016	< 0.0005	< 0.001	< 0.002	0.0009	0.0012	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0014	--	--	--	--	--	--	--	--
0.017	< 0.0005	< 0.001	< 0.002	0.03	0.0021	< 0.001	0.021	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.034	--	--	--	--	--	--	--	--
0.017	< 0.0005	< 0.001	< 0.002	0.035	0.0023	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.04	--	--	--	--	--	--	--	--
0.0036	< 0.0005	< 0.001	< 0.002	0.0026	0.0005	< 0.001	0.0054	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0033	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

0.011	< 0.0005	< 0.001	< 0.002	0.0032	0.0009	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.004	--	--	--	--	--	--	--	--
0.04	< 0.0025	< 0.005	< 0.01	0.035	0.0043	< 0.005	0.017	--	< 0.005	< 0.005	< 0.005	--	--	--	--	0.044	--	--	--	--	--	--	--	--
0.026	< 0.0025	< 0.005	< 0.01	0.022	0.0028	< 0.005	0.011	--	< 0.005	< 0.005	< 0.005	--	--	--	--	0.03	--	--	--	--	--	--	--	--
0.02	< 0.0025	< 0.005	< 0.01	0.03	0.0025	< 0.005	0.012	--	< 0.005	< 0.005	< 0.005	--	--	--	--	0.038	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0042	0.0012	< 0.001	0.0072	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0059	--	--	--	--	--	--	--	--
0.015	< 0.0005	< 0.001	< 0.002	0.0026	0.0011	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0033	--	--	--	--	--	--	--	--
0.063	< 0.0005	0.001	< 0.002	0.017	0.0038	< 0.001	0.13	--	< 0.001	< 0.001	< 0.001	--	0.42	--	--	0.027	--	--	--	--	--	--	--	--
0.095	< 0.0005	0.002	< 0.002	0.029	0.0064	0.001	0.13	--	< 0.001	< 0.001	< 0.001	--	0.5	--	--	0.044	--	--	--	--	--	--	--	--
0.026	< 0.0005	< 0.001	< 0.002	0.012	0.003	< 0.001	0.034	--	< 0.001	< 0.001	< 0.001	--	0.16	--	--	0.019	--	--	--	--	--	--	--	--
0.0059	< 0.0005	< 0.001	< 0.002	0.0013	0.0005	< 0.001	0.0063	--	< 0.001	< 0.001	< 0.001	--	0.04	--	--	0.0013	--	--	--	--	--	--	--	--
0.007	< 0.0005	< 0.001	< 0.002	0.02	0.0013	< 0.001	0.0043	--	< 0.001	< 0.001	< 0.001	--	0.15	--	--	0.026	--	--	--	--	--	--	--	--
0.0072	< 0.0005	< 0.001	< 0.002	0.005	0.0009	< 0.001	0.0049	--	< 0.001	< 0.001	< 0.001	--	0.092	--	--	0.0094	--	--	--	--	--	--	--	--
0.0047	< 0.0005	< 0.001	< 0.002	0.011	0.0009	< 0.001	0.0023	--	< 0.001	< 0.001	< 0.001	--	0.063	--	--	0.013	--	--	--	--	--	--	--	--
0.033	< 0.0005	< 0.001	< 0.002	0.014	0.0025	< 0.001	0.051	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	0.021	--	--	--	--	--	--	--	--
0.0024	< 0.0005	< 0.001	< 0.002	0.0008	< 0.0005	< 0.001	0.0028	--	< 0.001	< 0.001	< 0.001	--	0.033	--	--	0.0012	--	--	--	--	--	--	--	--
0.0071	< 0.0005	< 0.001	< 0.002	0.003	0.0008	< 0.001	0.0098	--	< 0.001	< 0.001	< 0.001	--	0.074	--	--	0.0043	--	--	--	--	--	--	--	--
0.044	< 0.0005	0.002	< 0.002	0.014	0.004	< 0.001	0.07	--	< 0.001	< 0.001	< 0.001	--	0.26	--	--	0.022	--	--	--	--	--	--	--	--
0.028	< 0.002	< 0.004	< 0.008	0.014	0.003	< 0.004	0.043	--	< 0.004	< 0.004	< 0.004	--	0.19	--	--	0.019	--	--	--	--	--	--	--	--
0.0068	< 0.0005	< 0.001	< 0.002	0.0019	0.0008	< 0.001	0.007	--	< 0.001	< 0.001	< 0.001	--	0.073	--	--	0.0025	--	--	--	--	--	--	--	--
0.035	< 0.0005	0.001	< 0.002	0.02	0.003	< 0.001	0.055	--	< 0.001	< 0.001	< 0.001	--	0.24	--	--	0.028	--	--	--	--	--	--	--	--
0.0063	< 0.0005	< 0.001	< 0.002	0.0013	< 0.0005	< 0.001	0.0065	--	< 0.001	< 0.001	< 0.001	--	0.05	--	--	0.0016	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.0016	< 0.0005	< 0.001	0.0041	--	< 0.001	< 0.001	< 0.001	--	0.035	--	--	0.0019	--	--	--	--	--	--	--	--
0.0086	< 0.0005	< 0.001	< 0.002	0.0056	0.0007	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.076	--	--	0.0085	--	--	--	--	--	--	--	--
0.0074	< 0.0005	< 0.001	< 0.002	0.0057	0.0008	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.063	--	--	0.0077	--	--	--	--	--	--	--	--
0.0034	< 0.0005	< 0.001	< 0.002	0.0002	< 0.0005	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	0.033	--	--	0.0005	--	--	--	--	--	--	--	--
0.0032	< 0.0005	< 0.001	< 0.002	0.0009	< 0.0005	< 0.001	0.0042	--	< 0.001	< 0.001	< 0.001	--	0.03	--	--	0.0012	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0099	0.0012	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.093	--	--	0.013	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.0008	< 0.0005	< 0.001	0.0036	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0011	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0049	0.0009	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0072	--	--	--	--	--	--	--	--
0.022	< 0.0005	0.001	< 0.002	0.019	0.0019	< 0.001	0.033	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.023	--	--	--	--	--	--	--	--
0.0027	< 0.0005	< 0.001	< 0.002	0.0005	< 0.0005	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0009	--	--	--	--	--	--	--	--
0.013	< 0.0005	< 0.001	< 0.002	0.0066	0.0014	< 0.001	0.0054	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.013	--	--	--	--	--	--	--	--
0.012	< 0.0005	< 0.001	< 0.002	0.006	0.0015	< 0.001	0.0068	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.012	--	--	--	--	--	--	--	--
0.031	< 0.0005	< 0.001	< 0.002	0.011	0.002	< 0.001	0.052	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.014	--	--	--	--	--	--	--	--
0.0028	< 0.0005	< 0.001	< 0.002	0.0021	0.0006	< 0.001	0.0024	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0031	--	--	--	--	--	--	--	--
0.0045	< 0.0005	< 0.001	< 0.002	0.0006	< 0.0005	< 0.001	0.0061	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0008	--	--	--	--	--	--	--	--
0.0082	< 0.0005	< 0.001	< 0.002	0.0096	0.001	< 0.001	0.0033	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.013	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.033	0.0016	< 0.001	0.0048	--	< 0.001	< 0.001	< 0.001	--	0.18	--	--	0.042	--	--	--	--	--	--	--	--
0.0033	< 0.0005	< 0.001	< 0.002	0.0005	< 0.0005	< 0.001	0.0033	--	< 0.001	< 0.001	< 0.001	--	0.028	--	--	0.0008	--	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.0006	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00043	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00045	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00059	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00031	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00024	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
< 0.001	< 0.001	< 0.001	< 0.005	0.00021	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--
0.018	< 0.00125	< 0.0025	< 0.005	0.011	0.0014	< 0.0025	0.01	--	< 0.0025	< 0.0025	< 0.0025	--	0.34	--	--	0.017	--	--	--	--	--	--	--	--
0.014	< 0.0005	< 0.001	< 0.002	0.0056	0.001	< 0.001	0.0077	--	< 0.001	< 0.001	< 0.001	--	0.22	--	--	0.0098	--	--	--	--	--	--	--	--
0.0076	< 0.0005	< 0.001	< 0.002	0.0055	0.001	< 0.001	0.0043	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.0097	--	--	--	--	--	--	--	--
0.033	< 0.0005	< 0.001	< 0.002	0.015	0.0018	< 0.001	0.054	--	< 0.001	< 0.001	< 0.001	--	0.2	--	--	0.02	--	--	--	--	--	--	--	--
0.0043	< 0.0005	< 0.001	< 0.002	0.004	0.0008	< 0.001	0.0028	--	< 0.001	< 0.001	< 0.001	--	0.068	--	--	0.0052	--	--	--	--	--	--	--	--
0.0051	< 0.0005	< 0.001	< 0.002	0.0025	0.0006	< 0.001	0.0065	--	< 0.001	< 0.001	< 0.001	--	0.046	--	--	0.003	--	--	--	--	--	--	--	--
0.004	< 0.0005	< 0.001	< 0.002	0.0007	< 0.0005	< 0.001	0.0038	--	< 0.001	< 0.001	< 0.001	--	0.025	--	--	0.0007	--	--	--	--	--	--	--	--
0.042	< 0.0005	< 0.001	< 0.002	0.027	< 0.0005	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	0.78	--	--	0.049	--	--	--	--	--	--	--	--
0.028	< 0.0005	< 0.001	< 0.002	0.016	0.0006	< 0.001	0.0097	--	< 0.001	< 0.001	< 0.001	--	0.56	--	--	0.028	--	--	--	--	--	--	--	--
0.022	< 0.0005	< 0.001	< 0.002	0.017	0.0008	< 0.001	0.0078	--	< 0.001	< 0.001	< 0.001	--	0.38	--	--	0.026	--	--	--	--	--	--	--	--
0.087	< 0.0005	0.002	< 0.002	0.048	0.0037	< 0.001	0.16	--	< 0.001	< 0.001	< 0.001	--	0.57	--	--	0.066	--	--	--	--	--	--	--	--
0.0071	< 0.0005	< 0.001	< 0.002	0.0039	0.0011	< 0.001	0.0063	--	< 0.001	< 0.001	< 0.001	--	0.13	--	--	0.0061	--	--	--	--	--	--	--	--
0.01	< 0.0005	< 0.001	< 0.002	0.0024	0.001	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	0.086	--	--	0.003	--	--	--	--	--	--	--	--
0.0059	< 0.0005	< 0.001	< 0.002	0.0019	< 0.0005	< 0.001	0.0066	--	< 0.001	< 0.001	< 0.001	--	0.04	--	--	0.0025	--	--	--	--	--	--	--	--
0.023	< 0.0005	< 0.001	< 0.002	0.0075	< 0.0005	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.22	--	--	0.012	--	--	--	--	--	--	--	--
0.022	< 0.0005	< 0.001	< 0.002	0.011	< 0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.23	--	--	0.016	--	--	--	--	--	--	--	--
0.026	< 0.0005	< 0.001	< 0.002	0.013	< 0.0005	< 0.001	0.033	--	< 0.001	< 0.001	< 0.001	--	0.32	--	--	0.019	--	--	--	--	--	--	--	--
0.088	< 0.0005	< 0.001	< 0.002	0.027	< 0.0005	< 0.001	0.18	--	< 0.001	< 0.001	< 0.001	--	0.52	--	--	0.037	--	--	--	--	--	--	--	--
0.0054	< 0.0005	< 0.001	< 0.002	0.0026	< 0.0005	< 0.001	0.0066	--	< 0.001	< 0.001	< 0.001	--	0.087	--	--	0.0037	--	--	--	--	--	--	--	--
0.0063	< 0.0005	< 0.001	< 0.002	0.0023	< 0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.074	--	--	0.0029	--	--	--	--	--	--	--	--
0.0038	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0053	--	< 0.001	< 0.001	< 0.001	--	0.017	--	--	0.0005	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0025	0.0012	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0038	--	--	--	--	--	--	--	--
0.0069	< 0.0005	< 0.001	< 0.002	0.0019	< 0.0005	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	0.0024	--	--	--	--	--	--	--	--
0.0034	< 0.0005	< 0.001	< 0.002	0.0008	< 0.0005	< 0.001	0.005	--	< 0.001	< 0.001	< 0.001	--	0.019	--	--	0.0011	--	--	--	--	--	--	--	--
0.027	< 0.005	< 0.01	< 0.02	0.014	< 0.005	< 0.01	< 0.005	--	< 0.01	< 0.01	< 0.01	--	0.85	--	--	0.023	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0011	< 0.0005	< 0.001	0.023	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.002	--	--	--	--	--	--	--	--
0.0044	< 0.0005	< 0.001	< 0.002	0.001	< 0.0005	< 0.001	0.0041	--	< 0.001	< 0.001	< 0.001	--	0.02	--	--	0.0014	--	--	--	--	--	--	--	--
0.039	< 0.0025	< 0.005	< 0.01	0.0041	0.0031	< 0.005	0.25	--	< 0.005	< 0.005	< 0.005	--	0.71	--	--	0.0084	--	--	--	--	--	--	--	--
0.027	< 0.0025	< 0.005	< 0.01	0.0028	0.0043	< 0.005	0.25	--	< 0.005	< 0.005	< 0.005	--	0.67	--	--	0.0062	--	--	--	--	--	--	--	--
0.015	< 0.0005	< 0.001	< 0.002	0.0007	0.0011	< 0.001	0.031	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0013	--	--	--	--	--	--	--	--
0.0046	< 0.0005	< 0.001	< 0.002	0.0009	0.0006	< 0.001	0.0068	--	< 0.001	< 0.001	< 0.001	--	0.023	--	--	0.0014	--	--	--	--	--	--	--	--
0.026	< 0.0005	< 0.001	< 0.002	0.007	0.0014	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	0.31	--	--	0.013	--	--	--	--	--	--	--	--
0.026	< 0.0005	< 0.001	< 0.002	0.0059	0.0017	< 0.001	0.0029	--	< 0.001	< 0.001	< 0.001	--	0.33	--	--	0.012	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

0.014	< 0.0005	< 0.001	< 0.002	0.0013	0.0009	< 0.001	0.03	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.0021	--	--	--	--	--	--	--	--
0.0052	< 0.0005	< 0.001	< 0.002	0.0016	< 0.0005	< 0.001	0.0077	--	< 0.001	< 0.001	< 0.001	--	0.027	--	--	0.0027	--	--	--	--	--	--	--	--
0.028	< 0.0005	< 0.001	< 0.002	0.013	0.0022	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	0.4	--	--	0.02	--	--	--	--	--	--	--	--
0.024	< 0.0005	< 0.001	< 0.002	0.013	0.0023	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.36	--	--	0.021	--	--	--	--	--	--	--	--
0.05	< 0.0005	< 0.001	< 0.002	0.0039	0.0029	< 0.001	0.075	--	< 0.001	< 0.001	< 0.001	--	0.35	--	--	0.0055	--	--	--	--	--	--	--	--
0.017	< 0.0005	< 0.001	< 0.002	0.0016	0.0009	< 0.001	0.033	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.0022	--	--	--	--	--	--	--	--
0.0052	< 0.0005	< 0.001	< 0.002	0.0007	< 0.0005	< 0.001	0.0071	--	< 0.001	< 0.001	< 0.001	--	0.025	--	--	0.0009	--	--	--	--	--	--	--	--
0.0097	< 0.0005	< 0.001	< 0.002	0.0081	0.0015	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.012	--	--	--	--	--	--	--	--
0.0086	< 0.0005	< 0.001	< 0.002	0.0061	0.003	0.002	0.011	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.021	--	--	--	--	--	--	--	--
0.0094	< 0.0005	< 0.001	< 0.002	0.0083	0.0026	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.019	--	--	--	--	--	--	--	--
0.041	< 0.0005	< 0.001	< 0.002	0.0045	0.0031	< 0.001	0.063	--	< 0.001	< 0.001	< 0.001	--	0.36	--	--	0.0064	--	--	--	--	--	--	--	--
0.013	< 0.0005	< 0.001	< 0.002	0.0015	0.0011	< 0.001	0.037	--	< 0.001	< 0.001	< 0.001	--	0.099	--	--	0.002	--	--	--	--	--	--	--	--
0.0037	< 0.0005	< 0.001	< 0.002	0.0015	< 0.0005	< 0.001	0.0052	--	< 0.001	< 0.001	< 0.001	--	0.021	--	--	0.0021	--	--	--	--	--	--	--	--
0.0031	< 0.0005	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0093	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.0043	< 0.0005	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0073	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.0019	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.0007	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	0.0008	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	0.0008	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0024	0.0009	< 0.001	0.024	--	< 0.001	< 0.001	< 0.001	--	0.079	--	--	0.003	--	--	--	--	--	--	--	--
0.0003	--	< 0.0004	< 0.0004	0.0008	0.0007	< 0.0004	0.0005	--	< 0.0004	< 0.0004	< 0.0002	--	0.0046	--	0.0046	0.0012	--	--	--	--	--	--	--	--
0.0005	--	< 0.0004	< 0.0004	0.0006	0.0004	< 0.0004	0.0006	--	< 0.0004	< 0.0004	< 0.0002	--	0.0043	--	0.0043	0.0006	--	--	--	--	--	--	--	--
< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--
0.0049	< 0.0005	< 0.001	< 0.002	0.0074	0.0009	< 0.001	0.0046	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.01	--	--	--	--	--	--	--	--
0.006	< 0.0005	< 0.001	< 0.002	0.0084	0.0011	< 0.001	0.0045	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.012	--	--	--	--	--	--	--	--
0.004	< 0.0005	< 0.001	< 0.002	0.028	0.0021	< 0.001	0.0058	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.038	--	--	--	--	--	--	--	--
0.3	< 0.0005	0.003	< 0.002	0.035	0.007	< 0.001	0.59	--	< 0.001	< 0.001	< 0.001	--	1.4	--	--	0.05	--	--	--	--	--	--	--	--
0.0047	< 0.0005	< 0.001	< 0.002	0.0036	0.0009	< 0.001	0.0065	--	< 0.001	< 0.001	< 0.001	--	0.081	--	--	0.0044	--	--	--	--	--	--	--	--
0.0096	< 0.0005	< 0.001	< 0.002	0.0015	0.001	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.07	--	--	0.002	--	--	--	--	--	--	--	--
0.0026	< 0.0005	< 0.001	< 0.002	0.0011	< 0.0005	< 0.001	0.0031	--	< 0.001	< 0.001	< 0.001	--	0.013	--	--	0.0013	--	--	--	--	--	--	--	--
0.0075	--	0.0004	< 0.0004	0.014	0.0061	0.0006	0.0062	--	< 0.0004	< 0.0004	< 0.0002	--	0.15	--	0.14	0.028	--	--	--	--	--	--	--	--
0.0071	--	0.0004	< 0.0004	0.014	0.004	0.0005	0.0054	--	< 0.0004	< 0.0004	< 0.0002	--	0.17	--	0.18	0.025	--	--	--	--	--	--	--	--
0.0069	--	< 0.0004	< 0.0004	0.0089	0.004	0.0015	0.0039	--	< 0.0004	0.0007	0.0002	--	0.12	--	0.11	0.025	--	--	--	--	--	--	--	--
0.0061	--	0.0004	< 0.0004	0.0088	0.0039	0.0011	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	0.11	--	0.1	0.026	--	--	--	--	--	--	--	--
0.31	--	0.0033	< 0.0004	0.0311	0.014	0.0018	0.54	--	< 0.0004	< 0.0004	0.0014	--	0.52	--	0.51	0.041	--	--	--	--	--	--	--	--
0.013	--	0.0005	< 0.0004	0.019	0.01	0.001	0.01	--	< 0.0004	< 0.0004	< 0.0002	--	0.23	--	0.22	0.039	--	--	--	--	--	--	--	--
0.029	--	0.0005	< 0.0004	0.077	0.012	0.014	0.013	--	< 0.0004	< 0.0004	< 0.0002	--	0.36	--	0.34	0.16	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.0012	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.01	--	< 0.01	< 0.05	0.0009	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	--	0.0289	--	< 0.001	< 0.001	< 50	< 100	< 50	200	< 100	< 20	< 20
< 0.01	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	--	< 0.001	--	< 0.001	< 0.001	< 50	< 100	< 50	< 100	< 100	< 20	< 20
< 0.01	< 0.001	< 0.01	< 0.05	0.0006	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	--	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--
0.01	< 0.0005	< 0.001	< 0.002	0.0045	0.0011	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0089	--	--	--	--	--	--	--	--
0.0011	< 0.0005	< 0.001	< 0.002	0.0013	< 0.0005	< 0.001	0.0036	--	< 0.001	< 0.001	< 0.001	--	0.02	--	--	0.0036	--	--	--	--	--	--	--	--
0.0009	< 0.0005	< 0.001	< 0.002	0.0025	0.0007	< 0.001	0.0043	--	< 0.001	< 0.001	< 0.001	--	0.023	--	--	0.0039	--	--	--	--	--	--	--	--
0.084	< 0.0005	0.002	< 0.002	0.015	0.0038	< 0.001	0.16	--	< 0.001	< 0.001	< 0.001	--	0.43	--	--	0.023	--	--	--	--	--	--	--	--
0.0053	< 0.0005	< 0.001	< 0.002	0.0009	0.0006	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.043	--	--	0.0014	--	--	--	--	--	--	--	--
0.0018	< 0.0005	< 0.001	< 0.002	0.0015	< 0.0005	< 0.001	0.003	--	< 0.001	< 0.001	< 0.001	--	0.046	--	--	0.0027	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.001	< 0.002	0.0014	< 0.0005	< 0.001	0.001	--	< 0.001	< 0.001	< 0.001	--	0.0072	--	--	0.0017	--	--	--	--	--	--	--	--
--	--	--	--	0.0008	< 0.0005	--	--	--	--	--	--	--	--	--	--	0.0008	--	--	--	--	--	--	--	--
0.0014	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	< 0.0002	< 0.0005	--	--	--	--	--	--	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0061	< 0.0005	< 0.001	< 0.002	0.002	0.0006	< 0.001	0.0044	--	< 0.001	< 0.001	< 0.001	--	0.081	--	--	0.0036	--	--	--	--	--	--	--	--
0.0071	< 0.0005	< 0.001	< 0.002	0.002	0.0005	< 0.001	0.0059	--	< 0.001	< 0.001	< 0.001	--	0.08	--	--	0.0039	--	--	--	--	--	--	--	--
0.0094	< 0.0005	< 0.001	< 0.002	0.0026	0.0007	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.072	--	--	0.0045	--	--	--	--	--	--	--	--
0.047	< 0.0005	0.001	< 0.002	0.012	0.0021	< 0.001	0.099	--	< 0.001	< 0.001	< 0.001	--	0.24	--	--	0.018	--	--	--	--	--	--	--	--
0.0022	< 0.0005	< 0.001	< 0.002	0.0007	< 0.0005	< 0.001	0.0029	--	< 0.001	< 0.001	< 0.001	--	0.025	--	--	0.0007	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.001	0.0005	< 0.001	0.0087	--	< 0.001	< 0.001	< 0.001	--	0.034	--	--	0.0013	--	--	--	--	--	--	--	--
0.0014	< 0.0005	< 0.001	< 0.002	0.0004	< 0.0005	< 0.001	0.0016	--	< 0.001	< 0.001	< 0.001	--	0.0063	--	--	0.0004	--	--	--	--	--	--	--	--
0.0042	< 0.0005	< 0.001	< 0.002	0.0032	0.0012	< 0.001	0.0038	--	< 0.001	< 0.001	< 0.001	--	0.083	--	--	0.0055	--	--	--	--	--	--	--	--
0.0054	< 0.0005	< 0.001	< 0.002	0.018	0.0013	< 0.001	0.0046	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.023	--	--	--	--	--	--	--	--
0.01	< 0.0005	< 0.001	< 0.002	0.0059	0.0009	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.088	--	--	0.011	--	--	--	--	--	--	--	--
0.071	< 0.0005	< 0.001	< 0.002	0.024	0.0035	< 0.001	0.14	--	< 0.001	< 0.001	< 0.001	--	0.37	--	--	0.03	--	--	--	--	--	--	--	--
0.0033	< 0.0005	< 0.001	< 0.002	0.0031	0.0007	< 0.001	0.0022	--	< 0.001	< 0.001	< 0.001	--	0.052	--	--	0.0038	--	--	--	--	--	--	--	--
0.0031	< 0.0005	< 0.001	< 0.002	0.0014	< 0.0005	< 0.001	0.0055	--	< 0.001	< 0.001	< 0.001	--	0.027	--	--	0.0016	--	--	--	--	--	--	--	--
0.0014	< 0.0005	< 0.001	< 0.002	0.0008	< 0.0005	< 0.001	0.0009	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0011	--	--	--	--	--	--	--	--
0.0018	< 0.0005	< 0.001	< 0.002	0.0029	< 0.0005	< 0.001	0.0017	--	< 0.001	< 0.001	< 0.001	--	0.023	--	--	0.0033	--	--	--	--	--	--	--	--
0.0017	< 0.0005	< 0.001	< 0.002	0.0027	< 0.0005	< 0.001	0.0013	--	< 0.001	< 0.001	< 0.001	--	0.022	--	--	0.0031	--	--	--	--	--	--	--	--
0.0035	< 0.0005	< 0.001	< 0.002	0.0038	0.0006	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.085	--	--	0.0058	--	--	--	--	--	--	--	--
0.0031	< 0.0005	< 0.001	< 0.002	0.0044	0.001	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.087	--	--	0.0062	--	--	--	--	--	--	--	--
0.0041	< 0.0005	< 0.001	< 0.002	0.0033	0.0009	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.0046	--	--	--	--	--	--	--	--
0.1	< 0.0005	< 0.001	< 0.002	0.016	0.0027	< 0.001	0.22	--	< 0.001	< 0.001	< 0.001	--	0.48	--	--	0.022	--	--	--	--	--	--	--	--
0.0023	< 0.0005	< 0.001	< 0.002	0.0013	0.0007	< 0.001	0.01	--	< 0.001	< 0.001	< 0.001	--	0.031	--	--	0.0013	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0002	--	--	--	--	--	--	--	--
0.011	< 0.0005	< 0.001	< 0.002	0.0019	0.0012	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.0061	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

0.0092	< 0.0005	< 0.001	< 0.002	0.0033	0.0012	< 0.001	0.022	--	< 0.001	< 0.001	< 0.001	--	0.15	--	--	0.0073	--	--	--	--	--	--	--	--
0.0044	< 0.0005	0.001	< 0.002	0.0008	< 0.0005	< 0.001	0.0088	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.001	--	--	--	--	--	--	--	--
0.0014	< 0.0005	0.001	< 0.002	0.0003	< 0.0005	< 0.001	0.0018	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0003	--	--	--	--	--	--	--	--
0.016	< 0.0005	< 0.001	< 0.002	0.013	0.0016	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.22	--	--	0.017	--	--	--	--	--	--	--	--
0.015	< 0.0005	< 0.001	< 0.002	0.016	0.0012	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	0.02	--	--	--	--	--	--	--	--
0.0071	< 0.0005	< 0.001	< 0.002	0.0007	< 0.0005	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.044	--	--	0.0013	--	--	--	--	--	--	--	--
0.0018	< 0.0005	< 0.001	< 0.002	0.0011	< 0.0005	< 0.001	0.0018	--	< 0.001	< 0.001	< 0.001	--	0.0084	--	--	0.0015	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.015	< 0.0005	< 0.001	< 0.002	0.01	0.0018	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.19	--	--	0.012	--	--	--	--	--	--	--	--
0.0051	< 0.0005	< 0.001	< 0.002	0.0011	0.0008	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.035	--	--	0.0014	--	--	--	--	--	--	--	--
0.0006	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0065	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.012	< 0.0005	< 0.001	< 0.002	0.01	0.0016	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.012	--	--	--	--	--	--	--	--
0.0073	< 0.0005	< 0.001	< 0.002	0.0046	0.0028	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.048	--	--	0.0061	--	--	--	--	--	--	--	--
0.0044	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0093	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.0013	--	--	--	--	--	--	--	--
0.005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.03	--	--	0.0014	--	--	--	--	--	--	--	--
0.0066	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.029	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.004	< 0.0005	0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.021	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.016	< 0.0005	< 0.001	< 0.002	0.004	0.0012	< 0.001	0.051	--	< 0.001	< 0.001	< 0.001	--	0.25	--	--	0.007	--	--	--	--	--	--	--	--
0.0074	< 0.0005	0.001	< 0.002	< 0.0002	0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.036	--	--	0.0004	--	--	--	--	--	--	--	--
0.0058	< 0.0005	< 0.001	< 0.002	0.0033	0.001	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.068	--	--	0.0058	--	--	--	--	--	--	--	--
0.0063	< 0.0005	< 0.001	< 0.002	0.0031	0.0009	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	0.075	--	--	0.0061	--	--	--	--	--	--	--	--
0.0051	< 0.0005	< 0.001	< 0.002	0.0065	0.0009	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.078	--	--	0.0098	--	--	--	--	--	--	--	--
0.0029	< 0.0005	< 0.001	< 0.002	0.0005	< 0.0005	< 0.001	0.005	--	< 0.001	< 0.001	< 0.001	--	0.026	--	--	0.0012	--	--	--	--	--	--	--	--
0.0028	< 0.0005	< 0.001	< 0.002	0.001	< 0.0005	< 0.001	0.0059	--	< 0.001	< 0.001	< 0.001	--	0.027	--	--	0.0022	--	--	--	--	--	--	--	--
0.0055	< 0.0005	< 0.001	< 0.002	0.0035	0.001	< 0.001	0.0059	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	0.0049	--	--	--	--	--	--	--	--
0.004	< 0.0005	< 0.001	< 0.002	0.003	0.0009	< 0.001	0.0051	--	< 0.001	< 0.001	< 0.001	--	0.048	--	--	0.0044	--	--	--	--	--	--	--	--
0.0055	< 0.0005	< 0.001	< 0.002	0.0011	0.0006	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.03	--	--	0.0017	--	--	--	--	--	--	--	--
0.0058	< 0.0005	< 0.001	< 0.002	0.001	0.0005	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.0014	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.0089	< 0.0005	< 0.001	< 0.002	0.016	0.0018	< 0.001	0.0095	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.021	--	--	--	--	--	--	--	--
0.037	< 0.0005	0.001	< 0.002	0.012	0.0023	< 0.001	0.059	--	< 0.001	< 0.001	< 0.001	--	0.18	--	--	0.018	--	--	--	--	--	--	--	--
0.0048	< 0.0005	< 0.001	< 0.002	0.0031	0.0009	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.067	--	--	0.0047	--	--	--	--	--	--	--	--
0.0023	< 0.0005	< 0.001	< 0.002	0.003	< 0.0005	< 0.001	0.0036	--	< 0.001	< 0.001	< 0.001	--	0.029	--	--	0.0035	--	--	--	--	--	--	--	--
0.007	< 0.0005	0.001	< 0.002	0.0025	0.0013	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.047	--	--	0.0032	--	--	--	--	--	--	--	--
0.0013	< 0.0005	< 0.001	< 0.002	0.0016	< 0.0005	< 0.001	0.0024	--	< 0.001	< 0.001	< 0.001	--	0.0082	--	--	0.0018	--	--	--	--	--	--	--	--
0.0096	< 0.0005	0.001	< 0.002	0.01	0.0005	< 0.001	0.0039	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.012	--	--	--	--	--	--	--	--
0.052	< 0.0005	0.002	< 0.002	0.015	0.0024	< 0.001	0.082	--	< 0.001	< 0.001	< 0.001	--	0.24	--	--	0.023	--	--	--	--	--	--	--	--
0.0051	< 0.0005	0.001	< 0.002	0.0016	< 0.0005	< 0.001	0.0074	--	< 0.001	< 0.001	< 0.001	--	0.057	--	--	0.0029	--	--	--	--	--	--	--	--
0.001	< 0.0005	0.002	< 0.002	0.0006	< 0.0005	< 0.001	0.0015	--	< 0.001	< 0.001	< 0.001	--	0.0077	--	--	0.0006	--	--	--	--	--	--	--	--
0.0027	< 0.0005	0.001	< 0.002	0.0056	0.0007	< 0.001	0.0027	--	< 0.001	< 0.001	< 0.001	--	0.037	--	--	0.0071	--	--	--	--	--	--	--	--
0.0034	< 0.0005	0.002	< 0.002	0.001	< 0.0005	< 0.001	0.003	--	< 0.001	< 0.001	< 0.001	--	0.033	--	--	0.0014	--	--	--	--	--	--	--	--
0.0064	< 0.0005	0.002	< 0.002	0.0017	0.0007	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.044	--	--	0.0022	--	--	--	--	--	--	--	--
0.0011	< 0.0005	0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0004	--	--	--	--	--	--	--	--
0.0055	< 0.0005	0.002	< 0.002	0.0021	0.0008	< 0.001	0.007	--	< 0.001	< 0.001	< 0.001	--	0.027	--	--	0.0063	--	--	--	--	--	--	--	--
0.023	< 0.0005	0.002	< 0.002	0.053	0.0023	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.25	--	--	0.061	--	--	--	--	--	--	--	--
0.013	< 0.0005	0.001	< 0.002	0.18	0.0061	0.004	0.0069	--	< 0.001	< 0.001	< 0.001	--	0.37	--	--	0.25	--	--	--	--	--	--	--	--
0.0014	< 0.0005	< 0.001	< 0.002	0.001	< 0.0005	< 0.001	0.0015	--	< 0.001	< 0.001	< 0.001	--	0.015	--	--	0.0013	--	--	--	--	--	--	--	--
0.0007	< 0.0005	0.001	< 0.002	0.0013	0.001	< 0.001	0.0007	--	< 0.001	< 0.001	< 0.001	--	0.031	--	--	0.0016	--	--	--	--	--	--	--	--
0.0007	< 0.0005	0.001	< 0.002	0.0017	< 0.0005	< 0.001	0.001	--	< 0.001	< 0.001	< 0.001	--	0.012	--	--	0.0017	--	--	--	--	--	--	--	--
0.0008	< 0.0005	0.001	< 0.002	0.0018	< 0.0005	< 0.001	0.0011	--	< 0.001	< 0.001	< 0.001	--	0.01	--	--	0.002	--	--	--	--	--	--	--	--
0.0046	< 0.0005	0.002	< 0.002	0.005	0.0023	< 0.001	0.0075	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.0059	--	--	--	--	--	--	--	--
0.0008	< 0.0005	0.002	< 0.002	0.004	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.011	--	--	0.0043	--	--	--	--	--	--	--	--
0.0019	< 0.0005	0.001	< 0.002	0.0078	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.012	--	--	0.0086	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	0.001	< 0.002	0.0018	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0021	--	--	--	--	--	--	--	--
0.018	< 0.0005	0.001	< 0.002	0.015	0.0023	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.022	--	--	--	--	--	--	--	--
0.018	< 0.0005	0.001	< 0.002	0.022	0.0019	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.18	--	--	0.028	--	--	--	--	--	--	--	--
0.017	< 0.0005	0.001	< 0.002	0.026	0.0016	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.18	--	--	0.034	--	--	--	--	--	--	--	--
0.0067	< 0.0005	0.002	< 0.002	0.0052	0.0007	< 0.001	0.0079	--	< 0.001	< 0.001	< 0.001	--	0.076	--	--	0.0074	--	--	--	--	--	--	--	--
0.0061	< 0.0005	0.001	< 0.002	0.0018	0.0007	< 0.001	0.0075	--	< 0.001	< 0.001	< 0.001	--	0.066	--	--	0.0037	--	--	--	--	--	--	--	--
0.0064	< 0.0005	0.001	< 0.002	0.0028	0.0008	< 0.001	0.008	--	< 0.001	< 0.001	< 0.001	--	0.071	--	--	0.0043	--	--	--	--	--	--	--	--
0.0014	< 0.0005	0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0007	--	< 0.001	< 0.001	< 0.001	--	0.0078	--	--	0.0003	--	--	--	--	--	--	--	--
0.0014	< 0.0005	0.001	< 0.002	0.0016	< 0.0005	< 0.001	0.0009	--	< 0.001	< 0.001	< 0.001	--	0.01	--	--	0.002	--	--	--	--	--	--	--	--
0.0014	< 0.0005	0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0008	--	< 0.001	< 0.001	< 0.001	--	0.0069	--	--	< 0.0002	--	--	--	--	--	--	--	--
0.0099	--	0.0007	< 0.0005	0.252	0.0049	0.0038	0.0077	--	< 0.004	< 0.0005	< 0.0005	--	0.424	--	0.41	0.303	--	--	--	--	--	--	--	--
0.008	--	0.0008	< 0.0005	0.0289	0.0012	< 0.0005	0.0058	--	< 0.004	< 0.0005	< 0.0005	--	0.16	--	0.159	0.0318	--	--	--	--	--	--	--	--
0.0108	--	0.0008	< 0.0005	0.0298	0.0014	< 0.0005	0.0155	--	< 0.004	< 0.0005	< 0.0005	--	0.154	--	0.153	0.0333	--	--	--	--	--	--	--	--
0.212	--	0.0035	< 0.0005	0.0388	0.006	0.002	0.426	--	< 0.0041	< 0.0005	< 0.0005	--	0.983	--	0.978	0.054	--	--	--	--	--	--	--	--
0.003	--	< 0.0005	< 0.0005	0.0053	< 0.0005	< 0.0005	0.004	--	< 0.0041	< 0.0005	< 0.0005	--	0.0395	--	0.0395	0.0053	--	--	--	--	--	--	--	--
0.0099	< 0.0005	0.001	< 0.002	0.0033	0.0009	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	0.0045	--	--	--	--	--	--	--	--
0.011	< 0.0005	0.002	< 0.002	0.0069	0.0013	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.076	--	--	0.0082	--	--	--	--	--	--	--	--
0.011	< 0.0005	0.002	< 0.002	0.004	0.0012	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.068	--	--	0.0051	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.023	< 0.0005	0.002	< 0.002	0.008	0.0009	< 0.001	0.034	--	< 0.001	< 0.001	< 0.001	--	0.088	--	--	0.01	--	--	--	--	--	--	--	--
0.033	< 0.0005	0.002	< 0.002	0.0036	0.0009	< 0.001	0.038	--	< 0.001	< 0.001	< 0.001	--	0.099	--	--	0.0043	--	--	--	--	--	--	--	--
0.0071	< 0.0005	0.001	< 0.002	0.014	0.0013	< 0.001	0.0076	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	0.019	--	--	--	--	--	--	--	--
0.0066	< 0.0005	0.001	< 0.002	0.012	0.0014	< 0.001	0.0076	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.017	--	--	--	--	--	--	--	--
0.0089	< 0.0005	0.001	< 0.002	0.01	0.0017	< 0.001	0.008	--	< 0.001	< 0.001	< 0.001	--	0.13	--	--	0.015	--	--	--	--	--	--	--	--

Appendix D
Table D1f
Willowdale Surface Water Historical Dataset
Sumps and On-Operational Areas
Alcoa Water Resources Management Plant

0.0086	< 0.0005	0.001	< 0.002	0.025	0.0016	< 0.001	0.0086	--	< 0.001	< 0.001	< 0.001	--	0.16	--	--	0.03	--	--	--	--	--	--	--	--
0.0072	< 0.0005	0.001	< 0.002	0.016	0.0015	< 0.001	0.0066	--	< 0.001	< 0.001	< 0.001	--	0.13	--	--	0.021	--	--	--	--	--	--	--	--
0.0076	< 0.0005	0.001	< 0.002	0.014	0.0013	< 0.001	0.0076	--	< 0.001	< 0.001	< 0.001	--	0.1	--	--	0.02	--	--	--	--	--	--	--	--
0.0059	< 0.0005	0.001	< 0.002	0.0039	0.0007	< 0.001	0.0067	--	< 0.001	< 0.001	< 0.001	--	0.067	--	--	0.0056	--	--	--	--	--	--	--	--
0.0061	< 0.0005	0.002	< 0.002	0.0025	0.0006	< 0.001	0.0065	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	0.0045	--	--	--	--	--	--	--	--
0.002	< 0.0005	0.001	< 0.002	0.0074	0.0006	< 0.001	0.0025	--	< 0.001	< 0.001	< 0.001	--	0.032	--	--	0.0088	--	--	--	--	--	--	--	--
0.0018	< 0.0005	0.001	< 0.002	0.0017	0.0005	< 0.001	0.0016	--	< 0.001	< 0.001	< 0.001	--	0.019	--	--	0.0029	--	--	--	--	--	--	--	--
0.01	< 0.0005	0.002	< 0.002	0.024	0.0023	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.032	--	--	--	--	--	--	--	--
0.01	< 0.0005	0.002	< 0.002	0.033	0.0018	< 0.001	0.01	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	0.038	--	--	--	--	--	--	--	--
0.011	< 0.0005	0.001	< 0.002	0.042	0.0037	0.004	0.0061	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	0.1	--	--	--	--	--	--	--	--
0.0074	< 0.0005	0.002	< 0.002	0.038	0.0026	0.002	0.0043	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.072	--	--	--	--	--	--	--	--
0.0013	< 0.0005	0.001	< 0.002	0.018	< 0.0005	< 0.001	0.0005	--	< 0.001	< 0.001	< 0.001	--	0.026	--	--	0.02	--	--	--	--	--	--	--	--
0.0008	< 0.0005	0.001	< 0.002	0.0006	0.0006	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0006	--	--	--	--	--	--	--	--
< 0.0005	< 0.0005	0.001	< 0.002	0.0027	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0027	--	--	--	--	--	--	--	--
0.0006	< 0.0005	0.002	< 0.002	0.002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0062	--	--	0.0023	--	--	--	--	--	--	--	--
0.0005	< 0.0005	0.001	< 0.002	0.0014	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0088	--	--	0.0017	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D1g
Willowdale Surface Water Historical Dataset
Unknown Location Purpose
Alcoa Water Resources Management Plant

Analyte Type							PFAS																	
Analyte							10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoaceti	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoace	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFD	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PFC
Fraction							T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																												
Minimum							< 0.001	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0005	0.0002	0.0005	< 0.0005	< 0.001	< 0.002
Maximum							< 0.001	< 0.05	0.089	< 0.05	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	0.42	< 0.05	< 0.1	< 0.1	< 0.2	0.05	0.2	0.05	< 0.05	< 0.1	< 0.2
Mean							--	--	0.0167	--	--	--	--	--	--	--	--	0.0451	--	--	--	--	0.0063	0.0157	0.0076	--	--	--
Median							--	--	0.0041	--	--	--	--	--	--	--	--	0.0008	--	--	--	--	0.0012	0.0002	0.0014	--	--	--
Sample Count							2	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Detect Count							0	0	5	0	0	0	0	0	0	0	0	4	0	0	0	0	4	1	7	0	0	0
Percentage of samples analysed							15.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Screening Criteria																												
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																	**1**							**0.03**				
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																	*0*							*0*				
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																												
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																												
NHMRC ADWG 2015 Health																												
NHMRC ADWG 2015 Health Exceed Count																												
NHMRC ADWG 2015 Aesthetic																												
NHMRC ADWG 2015 Aesthetic Exceed Count																												
Unit							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																						
WILLOWDALE	Unknown	Unknown	Other	3 LS6 INFLOW	3 LS6 Inflow	17/06/2020	--	< 0.0005	0.045	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0024	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0012	< 0.0002	0.0022	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	5 LS12A INFLOW	5 LS12A Inflow	17/06/2020	--	< 0.0005	0.0041	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0008	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.001	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	GH DI WATER	GH DI Water	7/07/2020	--	< 0.0005	0.0009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	GH TAP	GH Tap	7/07/2020	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.0012	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	GH WATER BOTTLE	GH Water Bottle	7/07/2020	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0012	< 0.0002	0.003	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	ORION RAW WATER	Orion Raw water	7/07/2020	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	GHB	GHB	14/07/2020	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	0.001	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	GREENHOUSE B INSITU	Greenhouse B Insitu	14/08/2020	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001	< 0.0002	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	WORKSHOP DET	Workshop Det	14/08/2020	--	< 0.05	< 0.05	< 0.05	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	< 0.05	< 0.05	< 0.1	< 0.1	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.1	< 0.2
WILLOWDALE	Unknown	Unknown	Other	SM05	SM05	30/11/2020	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05
WILLOWDALE	Unknown	Unknown	Other	SAMSON	SAMSON	2/12/2020	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.05
WILLOWDALE	Unknown	Unknown	Other	BONEYARD SUMP	Boneyard sump	9/06/2022	--	< 0.0005	0.016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0098	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0055	0.0007	0.018	< 0.0005	< 0.001	< 0.002
WILLOWDALE	Unknown	Unknown	Other	LAREGO OFFTAKE	Larego Offtake	1/08/2022	--	< 0.0005	0.089	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.42	< 0.0005	< 0.001	< 0.001	< 0.0002	0.0015	< 0.0002	0.0014	< 0.0005	< 0.001	< 0.002

Appendix D
Table D1g
Willowdale Surface Water Historical Dataset
Unknown Location Purpose
Alcoa Water Resources Management Plant

Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFU	Sum of enHealth PFAS (PFHxS + PFOS + PF	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)
T	T	T	T	T	T	T	T	T	T	T	T
0.0001	0.0005	< 0.001	0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.005	0.0002	< 0.001
0.2	0.05	< 0.1	0.05	< 0.001	< 0.1	< 0.1	< 0.1	< 0.001	0.51	0.2	< 0.001
0.0161	0.0058	--	0.0084	--	--	--	--	--	0.152	0.0163	--
0.0002	0.0005	--	0.0007	--	--	--	--	--	0.046	0.0002	--
13	13	13	13	2	13	13	13	2	4	13	2
4	1	0	4	0	0	0	0	0	2	4	0
100.0%	100.0%	100.0%	100.0%	15.4%	100.0%	100.0%	100.0%	15.4%	30.8%	100.0%	15.4%
0.004	**0.2**										
0	*0*										
	0.56									**0.07**	
	0									*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
0.0005	< 0.0005	< 0.001	0.002	--	< 0.001	< 0.001	< 0.001	--	--	0.0005	--
0.0002	< 0.0005	< 0.001	0.0007	--	< 0.001	< 0.001	< 0.001	--	--	0.0002	--
< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.0002	--
< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.0002	--
< 0.0002	< 0.0005	< 0.001	0.0013	--	< 0.001	< 0.001	< 0.001	--	--	< 0.0002	--
< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.0002	--
< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.0002	--
< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	< 0.0002	--
< 0.2	< 0.05	< 0.1	< 0.05	--	< 0.1	< 0.1	< 0.1	--	--	< 0.2	--
< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.001	< 0.001
< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.005	< 0.001	< 0.001
0.0038	0.0007	< 0.001	0.032	--	< 0.001	< 0.001	< 0.001	--	0.086	0.0045	--
0.0031	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.51	0.0031	--

Appendix D
Table D2a
Willowdale Round 1 WRMP Dataset
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY							HERBICIDES									
Analyte							Dissolved Oxygen	DO %	Oxidation-Reduction Potential	pH (Field)	Temperature	Conductivity	Electrical Conductivity @ 25°C	Methylene Blue Active Substances	pH Value	Total Dissolved Solids (Residue, Filterable)	Total Suspended Solids	Turbidity	2,4 Db	2,4,5-T (Trichlorophenoxyacetic Acid)	2,4-D (Dichlorophenoxyacetic Acid)	2,4,6-T	2,6-D	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Dichloroprop	Fluroxypyr
Fraction							T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																											
Minimum							8.96	86.5	142.5	5.55	11.8	130.3	148	< 0.1	6.11	80	< 5	-0.33	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Maximum							10.22	97.2	256.3	6.61	14.1	156.6	253	< 0.1	6.59	147	< 5	10.77	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mean							9.82	93	217.8	5.96	12.9	148.1	182	--	6.27	106	--	0.98	--	--	--	--	--	--	--	--	--	--
Median							10.05	94.1	236.3	5.84	12.8	152.7	170	--	6.28	99	--	0.2	--	--	--	--	--	--	--	--	--	--
Sample Count							4	4	4	4	4	4	11	3	11	15	11	15	11	11	11	11	11	11	11	11	11	11
Detect Count							4	4	4	4	4	4	11	0	11	15	0	15	0	0	0	0	0	0	0	0	0	0
Percentage of samples analysed							26.7%	26.7%	26.7%	26.7%	26.7%	26.7%	73.3%	20.0%	73.3%	100.0%	73.3%	100.0%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%
Screening Criteria																												
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																												
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																												
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																												
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																												
NHMRC ADWG 2015 Health																			100	30				2000	100	100		
NHMRC ADWG 2015 Health Exceed Count																			*0*	*0*				*0*	*0*	*0*		
NHMRC ADWG 2015 Aesthetic							**85**			**6.5 - 8.5**					**6.5 - 8.5**	**600**		**5000**									
NHMRC ADWG 2015 Aesthetic Exceed Count							*0*			*3*					*10*	*0*		*0*										
Unit							mg/L	%	mV	SU	deg c	us/cm	us/cm	mg/L	SU	mg/L	mg/L	NTU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																						
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	WRMP	HDC-UAW2	HDC-UAW2	23/08/2023	10.11	93.7	254.9	6.61	11.9	130.3	--	--	--	113	--	-0.33	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	WRMP	LBD_ST1_SO2_1	LBD_ST1_SO2_1	24/09/2024	--	--	--	--	--	--	160	--	6.14	85	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	WRMP	LBD_ST2_SO1_3	LBD_ST2_SO1_3	24/09/2024	--	--	--	--	--	--	170	< 0.1	6.15	95	< 5	0.1	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	WRMP	HDC-UAW2	HDC-UAW2	25/09/2024	--	--	--	--	--	--	177	--	6.17	99	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	BKG/Ambient Location	WRMP	STN_ST1_SO1_10	STN_ST1_SO1_10	26/09/2024	--	--	--	--	--	--	253	--	6.11	143	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	BKG/Ambient Location	WRMP	STN_ST1_SO1_18	STN_ST1_SO1_18	26/09/2024	--	--	--	--	--	--	159	< 0.1	6.28	97	< 5	0.5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW3	SDC-RW3	21/08/2023	9.99	97.2	142.5	5.87	14.1	156.6	--	--	--	102	--	0	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW1	SDC-RW1	23/08/2023	8.96	86.5	256.3	5.55	13.7	152.3	--	--	--	126	--	10.77	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW2	SDC-RW2	23/08/2023	10.22	94.4	217.6	5.81	11.8	153	--	--	--	134	--	0.04	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW1	SDC-RW1	19/09/2024	--	--	--	--	--	--	166	--	6.32	84	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW2	SDC-RW2	19/09/2024	--	--	--	--	--	--	189	--	6.35	100	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW3	SDC-RW3	19/09/2024	--	--	--	--	--	--	148	--	6.42	80	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO2_27	STN_ST1_SO2_27	19/09/2024	--	--	--	--	--	--	160	--	6.59	84	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO2_30	STN_ST1_SO2_30	26/09/2024	--	--	--	--	--	--	252	< 0.1	6.19	147	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO3_16	STN_ST1_SO3_16	26/09/2024	--	--	--	--	--	--	171	--	6.29	95	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Appendix D
Table D2a
Willowdale Round 1 WRMP Dataset
Alcoa Water Resources Management Plant

													MAJOR IONS																			
MCPA	MCPB	MCPP	Picloram	Silvex (2,4,5-TP)	Triclopyr	Benzene	Ethylbenzene	M,P-Xylene	O-Xylene (1,2-Dimethylbenzene)	Toluene	Total BTEX	Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total	Calcium	Cations Total	Chloride (As Cl)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)	Total Hardness	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	D	T	T	T	D	D	D	D	D	D	T	D	T	D	T	T
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.26	1	1.21	39	0.28	2	1	22	4	11	0.01	0.02	< 0.001	0.001	0.018	0.006	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	5	< 1	< 1	5	2.55	2	2.26	81	11.8	4	2	41	12	21	0.07	0.1	< 0.001	0.002	0.036	0.019	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.67	1	1.54	52	3.65	3	1	28	6	15	0.03	0.06	--	0.001	0.027	0.009	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.62	1	1.4	51	3.62	3	1	26	6	15	0.03	0.06	--	0.001	0.027	0.008	--
11	11	11	11	11	11	11	11	11	11	11	11	11	15	15	15	15	15	15	15	15	13	15	15	15	15	11	11	11	11	11	11	11	11
0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	15	9	15	15	13	15	13	15	15	11	9	11	0	3	11	11	0
73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	86.7%	100.0%	100.0%	100.0%	100.0%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%
40			**300**	**10**	**20**	**1**	**300**			**800**		**600**																	**0.01**	**0.01**	**2**	**2**	**0.06**
0			*0*	*0*	*0*	*0*	*0*			*0*		*0*																	*0*	*0*	*0*	*0*	*0*
							3			**25**		**20**							**250**					**180**	**250**								
							0			*0*		*0*							*0*					*0*	*0*								
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	4	< 1	< 1	4	1.42	< 1	1.36	41	2.12	2	1	27	9	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.72	< 1	1.36	55	--	3	1	25	6	12	0.05	0.1	< 0.001	< 0.001	0.028	0.008	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.88	< 1	1.4	61	--	3	1	26	6	12	0.03	0.04	< 0.001	< 0.001	0.032	0.008	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.47	2	1.58	42	3.62	4	1	26	12	21	0.07	0.1	< 0.001	< 0.001	0.021	0.011	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	2.55	2	2.26	81	6.01	4	2	41	10	21	0.06	0.1	< 0.001	0.002	0.036	0.019	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.26	1	1.33	39	2.44	2	1	25	5	11	0.01	0.06	< 0.001	0.002	0.018	0.007	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	3	< 1	< 1	3	1.32	< 1	1.21	41	4.43	2	< 1	24	5	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	< 1	< 1	3	1.8	< 1	1.66	58	3.92	3	1	32	5	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	< 1	< 1	3	1.82	< 1	1.69	58	3.73	3	2	32	6	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.46	1	1.45	46	0.28	3	1	26	5	15	< 0.01	0.02	< 0.001	< 0.001	0.027	0.007	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.62	1	1.61	51	0.44	3	2	29	6	15	0.05	0.08	< 0.001	< 0.001	0.023	0.009	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.32	1	1.28	41	1.59	3	1	22	5	15	0.02	0.08	< 0.001	< 0.001	0.027	0.006	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	4	< 1	< 1	4	1.32	1	1.34	41	0.79	3	< 1	24	4	15	0.04	0.05	< 0.001	< 0.001	0.025	0.006	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	5	< 1	< 1	5	2.42	2	2.13	77	6.26	4	2	38	7	21	< 0.01	0.02	< 0.001	< 0.001	0.036	0.014	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.74	1	1.37	55	11.8	2	1	26	6	11	0.02	0.03	< 0.001	0.001	0.028	0.007	< 0.001

Appendix D
Table D2a
Willowdale Round 1 WRMP Dataset
Alcoa Water Resources Management Plant

METALS																											MICROBIOLOGY					
Boron	Boron	Cadmium	Cadmium	Chromium (III)	Chromium, hexavalent	Chromium, total	Cobalt	Copper	Copper	Iron	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum	Nickel	Nickel	Phosphorus	Selenium	Selenium	Silver	Uranium	Vanadium	Zinc	Coliform,Thermotolerant	ENTEROCOCCI	Escherichia Coli (E. Coli)	Thermophilic Amoeba	Ammonia as N	Nitrate and Nitrite
D	T	D	T	D	D	D	D	D	T	D	D	T	D	T	D	T	D	T	D	T	T	D	T	D	T	D	D	T	T	T	T	T	T
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	0.001	< 0.001	< 0.001	0.05	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	0.001	< 0.001	0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.006	< 1	< 1	< 1	< 1	0.01	0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	0.001	< 0.001	< 0.001	0.25	< 0.001	< 0.001	0.006	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	0.002	< 0.001	0.02	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.032	< 1	< 1	< 1	< 1	0.11	0.06
--	--	--	--	--	--	--	0.001	--	--	0.1	--	--	0.003	0.003	--	--	--	--	0.001	--	0.01	--	--	--	--	--	0.021	--	--	--	--	0.02	0.02
--	--	--	--	--	--	--	0.001	--	--	0.05	--	--	0.002	0.003	--	--	--	--	0.001	--	0.01	--	--	--	--	--	0.024	--	--	--	--	0.01	0.01
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	3	3	3	3	11	11
0	0	0	0	0	0	0	1	0	0	4	0	0	11	10	0	0	0	0	1	0	1	0	0	0	0	0	11	0	0	0	0	4	5
73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	20.0%	20.0%	20.0%	20.0%	73.3%	73.3%
4	**4**	**0.002**	**0.002**		**0.05**			**2**	**2**		**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**	**0.02**	**0.02**		**0.01**	**0.01**	**0.1**	**0.017**								
0	*0*	*0*	*0*		*0*			*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*								
								1	**1**	**0.3**			**0.1**	**0.1**													**3**							
								0	*0*	*0*			*0*	*0*													*0*							
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	cfu/100ml	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.001	0.004	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.028	--	--	--	--	< 0.01	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.001	< 0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.027	< 1	< 1	< 1	< 1	0.03	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	0.001	< 0.001	< 0.001	0.25	< 0.001	< 0.001	0.005	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	0.002	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.006	--	--	--	--	< 0.01	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.022	--	--	--	--	0.11	0.04
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.008	< 1	< 1	< 1	< 1	0.03	0.03
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.028	--	--	--	--	0.02	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.007	--	--	--	--	< 0.01	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.18	< 0.001	< 0.001	0.004	0.004	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.023	--	--	--	--	< 0.01	0.02
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.09	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.024	--	--	--	--	< 0.01	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.21	< 0.001	< 0.001	0.006	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.032	< 1	< 1	< 1	< 1	< 0.01	0.02
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.03	--	--	--	--	< 0.01	0.06

Appendix D
Table D2a
Willowdale Round 1 WRMP Dataset
Alcoa Water Resources Management Plant

																										PESTICIDES											
Nitrate as N	Nitrite	Phosphate	Total Kjeldahl Nitrogen	Total Nitrogen, All Forms, Calculated	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b+j)fluoranthene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[a]pyrene TEQ (zero)	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-C,D)Pyrene	Naphthalene	Naphthalene	Phenanthrene	Pyrene	Sum of Aldrin + Dieldrin	Sum of PAHs	Azinphos, Methyl (Guthion)	Bromophos-ethyl	Carbophenothion (Trithion)	Demeton-S-methyl	Endosulfan	Fenamiphos (Nemacur)	Monochrotophos	Oxychlordane	Parathion, Ethyl
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.01	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
0.06	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
0.02	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
0.01	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		
5	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%		
	3									0.01													0.3		30	10	0.5		20	0.5			20		
	0									*0*													*0*		*0*	*0*	*0*		*0*	*0*			*0*		
mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L		
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
< 0.01	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
0.04	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
0.03	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
0.02	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
0.02	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		
0.06	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2		

Appendix D
Table D2a
Willowdale Round 1 WRMP Dataset
Alcoa Water Resources Management Plant

			PESTICIDES (OC)																				PESTICIDES (OP)										
Parathion, Methyl	Sum of DDD + DDE + DDT	SUM_CHLORDANE	Aldrin	alpha BHC (Alpha Hexachlorocyclohexane	Alpha Endosulfan	beta BHC (Beta Hexachlorocyclohexane)	Beta Endosulfan	cis-Chlordane	delta BHC (Delta Hexachlorocyclohexane)	Dieldrin	Endosulfan sulfate	Endrin	Endrin Aldehyde	gamma BHC (Lindane)	Heptachlor	Heptachlor epoxide - isomer b	Hexachlorobenzene	Methoxychlor	P,P'-DDD	P,P'-DDE	P,P'-DDT	trans-Chlordane	Chlorofenvinphos	Chlorpyrifos	Chlorpyrifos Methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimiphos-Ethyl	Tokuthion (Prothiofos)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%
0.7														**10**	**0.3**								**2**	**10**		**4**	**5**	**7**	**4**	**7**	**70**	**0.5**	
0														*0*	*0*								*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Appendix D
Table D2a
Willowdale Round 1 WRMP Dataset
Alcoa Water Resources Management Plant

PFAS																																				
10:2 Fluorotelomer sulfonic acid (10:2 FTS	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoacet	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoac	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFL	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PF	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFL	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	2-(2-Butoxyethoxy)Ethanol
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.0008	< 0.0002	< 0.0002	< 0.0002	< 2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	11	15	15	15	15	15	15	11	15	15	15	15	15	15	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	73.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	73.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	20.0%
										1							**0.03**						**0.004**	**0.2**										
										0							*0*						*0*	*0*										
																								0.56									**0.07**	
																								0									*0*	

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0008	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--

Appendix D
Table D2a
Willowdale Round 1 WRMP Dataset
Alcoa Water Resources Management Plant

								TPH											
Diethylene glycol	Endrin Ketone	Ethoxyethanol Acetate, 2-	Ethylene Glycol	Ethylene Glycol Mono Butyl Ether	Glyphosate	Propylene Glycol	Triethylene Glycol	C10 - C14 Fraction	C10 - C36 Fraction (sum)	C15 - C28 Fraction	C29 - C36 Fraction	C6 - C9 Fraction	>C10 - C16 Fraction minus Naphthalene (F	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	C6-C10 Fraction (F1)	C6-C10 Fraction minus BTEX (F1)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	11	3	3	3	11	3	3	11	11	11	11	11	11	11	11	11	11	11	11
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20.0%	73.3%	20.0%	20.0%	20.0%	73.3%	20.0%	20.0%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%	73.3%
					1000														
					0														
mg/L	ug/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20

Appendix D
Table D2b
Willowdale Round 1 WRMP Dataset
Background / Ambient
Alcoa Water Resources Management Plant

Analyte Type														HERBICIDES									
Analyte						Dissolved Oxygen	DO %	Oxidation-Reduction Potential	pH (Field)	Temperature	Conductivity	Electrical Conductivity @ 25°C	Methylene Blue Active Substances	pH Value	Total Dissolved Solids (Residue, Filterable)	Total Suspended Solids	Turbidity	2,4 Db	2,4,5-T (Trichlorophenoxyacetic Acid)	2,4-D (Dichlorophenoxyacetic Acid)	2,4,6-T	2,6-D	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Dichloroprop	Fluroxypyr
Fraction						T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																											
Minimum						10.11	93.7	254.9	6.61	11.9	130.3	159	< 0.1	6.11	85	< 5	-0.33	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Maximum						10.11	93.7	254.9	6.61	11.9	130.3	253	< 0.1	6.28	143	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mean						10.11	93.7	254.9	6.61	11.9	130.3	184	--	6.17	105	--	0.25	--	--	--	--	--	--	--	--	--	--
Median						10.11	93.7	254.9	6.61	11.9	130.3	170	--	6.15	98	--	0.2	--	--	--	--	--	--	--	--	--	--
Sample Count						1	1	1	1	1	1	5	2	5	6	5	6	5	5	5	5	5	5	5	5	5	5
Detect Count						1	1	1	1	1	1	5	0	5	6	0	6	0	0	0	0	0	0	0	0	0	0
Percentage of samples analysed						16.7%	16.7%	16.7%	16.7%	16.7%	16.7%	83.3%	33.3%	83.3%	100.0%	83.3%	100.0%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%
Screening Criteria																											
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																											
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																											
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																											
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																											
NHMRC ADWG 2015 Health																			**100**	**30**				**2000**	**100**	**100**	
NHMRC ADWG 2015 Health Exceed Count																			*0*	*0*				*0*	*0*	*0*	
NHMRC ADWG 2015 Aesthetic						**85**			**6.5 - 8.5**					**6.5 - 8.5**	**600**		**5000**										
NHMRC ADWG 2015 Aesthetic Exceed Count						*0*			*0*					*5*	*0*		*0*										
Unit						mg/L	%	mV	SU	deg c	us/cm	us/cm	mg/L	SU	mg/L	mg/L	NTU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																					
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	WRMP	HDC-UAW2	HDC-UAW2	23/08/2023	10.11	93.7	254.9	6.61	11.9	130.3	--	--	--	113	--	-0.33	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	WRMP	LBD_ST1_SO2_1	LBD_ST1_SO2_1	24/09/2024	--	--	--	--	--	--	160	--	6.14	85	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	LOGUEBROOKDAM	BKG/Ambient Location	WRMP	LBD_ST2_SO1_3	LBD_ST2_SO1_3	24/09/2024	--	--	--	--	--	--	170	< 0.1	6.15	95	< 5	0.1	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	HARVEYDAM	BKG/Ambient Location	WRMP	HDC-UAW2	HDC-UAW2	25/09/2024	--	--	--	--	--	--	177	--	6.17	99	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	BKG/Ambient Location	WRMP	STN_ST1_SO1_10	STN_ST1_SO1_10	26/09/2024	--	--	--	--	--	--	253	--	6.11	143	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	BKG/Ambient Location	WRMP	STN_ST1_SO1_18	STN_ST1_SO1_18	26/09/2024	--	--	--	--	--	--	159	< 0.1	6.28	97	< 5	0.5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Appendix D
Table D2b
Willowdale Round 1 WRMP Dataset
Background / Ambient
Alcoa Water Resources Management Plant

													MAJOR IONS																		
MCPA	MCPB	MCPP	Picloram	Silvex (2,4,5-TP)	Triclopyr	Benzene	Ethylbenzene	M,P-Xylene	O-Xylene (1,2-Dimethylbenzene)	Toluene	Total BTEX	Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total	Calcium	Cations Total	Chloride (As Cl)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)	Total Hardness	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	D	T	T	T	D	D	D	D	D	D	T	D	T	D	T	T
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.26	1	1.33	39	2.12	2	1	25	5	11	0.01	0.04	< 0.001	0.001	0.018	0.007	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	4	< 1	< 1	4	2.55	2	2.26	81	6.01	4	2	41	12	21	0.07	0.1	< 0.001	0.002	0.036	0.019	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.72	1	1.55	53	3.55	3	1	28	8	15	0.04	0.08	--	0.001	0.027	0.011	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.6	1	1.38	49	3.03	3	1	26	8	12	0.05	0.1	--	0.001	0.028	0.008	--
5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	4	6	6	6	6	5	5	5	5	5	5	5	5
0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	6	3	6	6	4	6	6	6	6	5	5	5	0	2	5	5	0
83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	66.7%	100.0%	100.0%	100.0%	100.0%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%
40			**300**	**10**	**20**	**1**	**300**			**800**		**600**																	**0.01**	**0.01**	**2**	**2**	**0.06**
0			*0*	*0*	*0*	*0*	*0*			*0*		*0*																	*0*	*0*	*0*	*0*	*0*
							3			**25**		**20**							**250**					**180**	**250**								
							0			*0*		*0*							*0*					*0*	*0*								
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	4	< 1	< 1	4	1.42	< 1	1.36	41	2.12	2	1	27	9	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.72	< 1	1.36	55	--	3	1	25	6	12	0.05	0.1	< 0.001	< 0.001	0.028	0.008	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.88	< 1	1.4	61	--	3	1	26	6	12	0.03	0.04	< 0.001	< 0.001	0.032	0.008	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	2	< 1	< 1	2	1.47	2	1.58	42	3.62	4	1	26	12	21	0.07	0.1	< 0.001	< 0.001	0.021	0.011	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	2.55	2	2.26	81	6.01	4	2	41	10	21	0.06	0.1	< 0.001	0.002	0.036	0.019	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.26	1	1.33	39	2.44	2	1	25	5	11	0.01	0.06	< 0.001	0.002	0.018	0.007	< 0.001

Appendix D
Table D2b
Willowdale Round 1 WRMP Dataset
Background / Ambient
Alcoa Water Resources Management Plant

METALS																											MICROBIOLOGY					
Boron	Boron	Cadmium	Cadmium	Chromium (III)	Chromium, hexavalent	Chromium, total	Cobalt	Copper	Copper	Iron	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum	Nickel	Nickel	Phosphorus	Selenium	Selenium	Silver	Uranium	Vanadium	Zinc	Coliform,Thermotolerant	ENTEROCOCCI	Escherichia Coli (E. Coli)	Thermophilic Amoeba	Ammonia as N	Nitrate and Nitrite
D	T	D	T	D	D	D	D	D	T	D	D	T	D	T	D	T	D	T	D	T	T	D	T	D	T	D	D	T	T	T	T	T	T
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	0.001	< 0.001	< 0.001	0.05	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	0.001	< 0.001	0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.006	< 1	< 1	< 1	< 1	0.01	0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	0.001	< 0.001	< 0.001	0.25	< 0.001	< 0.001	0.005	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	0.002	< 0.001	0.02	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.028	< 1	< 1	< 1	< 1	0.11	0.04
--	--	--	--	--	--	--	0.001	--	--	0.09	--	--	0.002	0.003	--	--	--	--	0.001	--	0.01	--	--	--	--	--	0.018	--	--	--	--	0.04	0.02
--	--	--	--	--	--	--	0.001	--	--	0.05	--	--	0.002	0.003	--	--	--	--	0.001	--	0.01	--	--	--	--	--	0.022	--	--	--	--	0.03	0.01
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	2	2	2	2	5	5
0	0	0	0	0	0	0	1	0	0	1	0	0	5	4	0	0	0	0	1	0	1	0	0	0	0	0	5	0	0	0	0	3	2
83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	33.3%	33.3%	33.3%	33.3%	83.3%	83.3%
4	**4**	**0.002**	**0.002**		**0.05**			**2**	**2**		**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**	**0.02**	**0.02**		**0.01**	**0.01**	**0.1**	**0.017**								
0	*0*	*0*	*0*		*0*			*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*								
								1	**1**	**0.3**			**0.1**	**0.1**													**3**							
								0	*0*	*0*			*0*	*0*													*0*							
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	cfu/100ml	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.001	0.004	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.028	--	--	--	--	< 0.01	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.001	< 0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.027	< 1	< 1	< 1	< 1	0.03	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	0.001	< 0.001	< 0.001	0.25	< 0.001	< 0.001	0.005	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	0.002	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.006	--	--	--	--	< 0.01	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.022	--	--	--	--	0.11	0.04
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.008	< 1	< 1	< 1	< 1	0.03	0.03

Appendix D
Table D2b
Willowdale Round 1 WRMP Dataset
Background / Ambient
Alcoa Water Resources Management Plant

																										PESTICIDES										
Nitrate as N	Nitrite	Phosphate	Total Kjeldahl Nitrogen	Total Nitrogen, All Forms, Calculated	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b+j)fluoranthene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[a]pyrene TEQ (zero)	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-C,D)Pyrene	Naphthalene	Naphthalene	Phenanthrene	Pyrene	Sum of Aldrin + Dieldrin	Sum of PAHs	Azinphos, Methyl (Guthion)	Bromophos-ethyl	Carbophenothion (Trithion)	Demeton-S-methyl	Endosulfan	Fenamiphos (Nemacur)	Monochrotophos	Oxychlordane	Parathion, Ethyl
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.01	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.04	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.02	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.01	--	--	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%
	3									**0.01**													**0.3**		**30**	**10**	**0.5**		**20**	**0.5**			**20**
	0									*0*													*0*		*0*	*0*	*0*		*0*	*0*			*0*
mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.04	< 0.01	< 0.01	0.1	0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.03	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2

Appendix D
Table D2b
Willowdale Round 1 WRMP Dataset
Background / Ambient
Alcoa Water Resources Management Plant

			PESTICIDES (OC)																				PESTICIDES (OP)										
Parathion, Methyl	Sum of DDD + DDE + DDT	SUM_CHLORDANE	Aldrin	alpha BHC (Alpha Hexachlorocyclohexane	Alpha Endosulfan	beta BHC (Beta Hexachlorocyclohexane)	Beta Endosulfan	cis-Chlordane	delta BHC (Delta Hexachlorocyclohexane)	Dieldrin	Endosulfan sulfate	Endrin	Endrin Aldehyde	gamma BHC (Lindane)	Heptachlor	Heptachlor epoxide - isomer b	Hexachlorobenzene	Methoxychlor	P,P'-DDD	P,P'-DDE	P,P'-DDT	trans-Chlordane	Chlorofenvinphos	Chlorpyrifos	Chlorpyrifos Methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimiphos-Ethyl	Tokuthion (Prothiofos)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%
0.7														**10**	**0.3**								**2**	**10**		**4**	**5**	**7**	**4**	**7**	**70**	**0.5**	
0														*0*	*0*								*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Appendix D
Table D2b
Willowdale Round 1 WRMP Dataset
Background / Ambient
Alcoa Water Resources Management Plant

PFAS																																				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoacet	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoac	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFL	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PF	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFL	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	2-(2-Butoxyethoxy)Ethanol
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.002	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	6	6	6	6	6	6	5	6	6	6	6	6	6	6	2
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	83.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	83.3%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	33.3%
										1							**0.03**						**0.004**	**0.2**											
										0							*0*						*0*	*0*											
																								0.56											
																								0											
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.0005	< 0.001	< 0.002	< 0.0005	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.002	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2

Appendix D
Table D2b
Willowdale Round 1 WRMP Dataset
Background / Ambient
Alcoa Water Resources Management Plant

								TPH											
Diethylene glycol	Endrin Ketone	Ethoxyethanol Acetate, 2-	Ethylene Glycol	Ethylene Glycol Mono Butyl Ether	Glyphosate	Propylene Glycol	Triethylene Glycol	C10 - C14 Fraction	C10 - C36 Fraction (sum)	C15 - C28 Fraction	C29 - C36 Fraction	C6 - C9 Fraction	>C10 - C16 Fraction minus Naphthalene (	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	C6-C10 Fraction (F1)	C6-C10 Fraction minus BTEX (F1)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2	5	2	2	2	5	2	2	5	5	5	5	5	5	5	5	5	5	5	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33.3%	83.3%	33.3%	33.3%	33.3%	83.3%	33.3%	33.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%	83.3%
					1000														
					0														
mg/L	ug/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20

Appendix D
Table D2c
Willowdale Round 1 WRMP Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

Analyte Type							GENERAL CHEMISTRY							HERBICIDES									
Analyte							Dissolved Oxygen	DO %	Oxidation-Reduction Potential	pH (Field)	Temperature	Conductivity	Electrical Conductivity @ 25°C	Methylene Blue Active Substances	pH Value	Total Dissolved Solids (Residue, Filterable)	Total Suspended Solids	Turbidity	2,4 Db	2,4,5-T (Trichlorophenoxyacetic Acid)	2,4-D (Dichlorophenoxyacetic Acid)	2,4,6-T	2,6-D	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Dichloroprop	Fluroxypyr
Fraction							T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																												
Minimum							8.96	86.5	142.5	5.55	11.8	152.3	148	< 0.1	6.19	80	< 5	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Maximum							10.22	97.2	256.3	5.87	14.1	156.6	252	< 0.1	6.59	147	< 5	10.77	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mean							9.72	92.7	205.5	5.74	13.2	154	181	--	6.36	106	--	1	--	--	--	--	--	--	--	--	--	--	--
Median							9.99	94.4	217.6	5.81	13.7	153	169	--	6.34	100	--	0	--	--	--	--	--	--	--	--	--	--	--
Sample Count							3	3	3	3	3	3	6	1	6	9	6	9	6	6	6	6	6	6	6	6	6	6	6
Detect Count							3	3	3	3	3	3	6	0	6	9	0	9	0	0	0	0	0	0	0	0	0	0	0
Percentage of samples analysed							33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	66.7%	11.1%	66.7%	100.0%	66.7%	100.0%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%
Screening Criteria																													
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																													
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																													
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																													
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																													
NHMRC ADWG 2015 Health																				**100**	**30**				**2000**	**100**	**100**		
NHMRC ADWG 2015 Health Exceed Count																				*0*	*0*				*0*	*0*	*0*		
NHMRC ADWG 2015 Aesthetic							**85**			**6.5 - 8.5**					**6.5 - 8.5**	**600**		**5000**										
NHMRC ADWG 2015 Aesthetic Exceed Count							*0*			*3*					*5*	*0*		*0*										
Unit							mg/L	%	mV	SU	deg c	us/cm	us/cm	mg/L	SU	mg/L	mg/L	NTU	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																							
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW3	SDC-RW3	21/08/2023	9.99	97.2	142.5	5.87	14.1	156.6	--	--	--	102	--	0	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW1	SDC-RW1	23/08/2023	8.96	86.5	256.3	5.55	13.7	152.3	--	--	--	126	--	10.77	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW2	SDC-RW2	23/08/2023	10.22	94.4	217.6	5.81	11.8	153	--	--	--	134	--	0.04	--	--	--	--	--	--	--	--	--	--	--
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW1	SDC-RW1	19/09/2024	--	--	--	--	--	--	166	--	6.32	84	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW2	SDC-RW2	19/09/2024	--	--	--	--	--	--	189	--	6.35	100	< 5	0.2	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	SAMSONBRKANDPIPE	Rec Env: Gen Mining	WRMP	SDC-RW3	SDC-RW3	19/09/2024	--	--	--	--	--	--	148	--	6.42	80	< 5	0.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO2_27	STN_ST1_SO2_27	19/09/2024	--	--	--	--	--	--	160	--	6.59	84	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO2_30	STN_ST1_SO2_30	26/09/2024	--	--	--	--	--	--	252	< 0.1	6.19	147	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
WILLOWDALE	STIRLING	Rec Env: Gen Mining	WRMP	STN_ST1_SO3_16	STN_ST1_SO3_16	26/09/2024	--	--	--	--	--	--	171	--	6.29	95	< 5	0.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Appendix D
Table D2c
Willowdale Round 1 WRMP Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

														MAJOR IONS																				
MCPA	MCPB	MCPP	Picloram	Silvex (2,4,5-TP)	Triclopyr	Benzene	Ethylbenzene	M,P-Xylene	O-Xylene (1,2-Dimethylbenzene)	Toluene	Total BTEX	Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total	Calcium	Cations Total	Chloride (As Cl)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)	Total Hardness	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	D	T	T	T	D	D	D	D	D	D	T	D	T	D	T	T
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.32	1	1.21	41	0.28	2	1	22	4	11	0.01	0.02	< 0.001	0.001	0.023	0.006	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	5	< 1	< 1	5	2.42	2	2.13	77	11.8	4	2	38	7	21	0.05	0.08	< 0.001	0.001	0.036	0.014	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.65	1	1.53	52	3.69	3	1	28	5	15	0.03	0.05	--	0.001	0.028	0.008	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	3	1.62	1	1.45	51	3.73	3	1	26	5	15	0.02	0.04	--	0.001	0.027	0.007	--
6	6	6	6	6	6	6	6	6	6	6	6	6	9	9	9	9	9	9	9	9	9	9	9	9	9	6	6	6	6	6	6	6	6
0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	9	6	9	9	9	9	7	9	9	6	4	6	0	1	6	6	0
66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%
40			**300**	**10**	**20**	**1**	**300**			**800**		**600**																	**0.01**	**0.01**	**2**	**2**	**0.06**
0			*0*	*0*	*0*	*0*	*0*			*0*		*0*																	*0*	*0*	*0*	*0*	*0*
							3			**25**		**20**								**250**				**180**	**250**								
							0			*0*		*0*								*0*				*0*	*0*								
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	3	< 1	< 1	3	1.32	< 1	1.21	41	4.43	2	< 1	24	5	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	< 1	< 1	3	1.8	< 1	1.66	58	3.92	3	1	32	5	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3	< 1	< 1	3	1.82	< 1	1.69	58	3.73	3	2	32	6	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.46	1	1.45	46	0.28	3	1	26	5	15	< 0.01	0.02	< 0.001	< 0.001	0.027	0.007	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.62	1	1.61	51	0.44	3	2	29	6	15	0.05	0.08	< 0.001	< 0.001	0.023	0.009	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.32	1	1.28	41	1.59	3	1	22	5	15	0.02	0.08	< 0.001	< 0.001	0.027	0.006	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	4	< 1	< 1	4	1.32	1	1.34	41	0.79	3	< 1	24	4	15	0.04	0.05	< 0.001	< 0.001	0.025	0.006	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	5	< 1	< 1	5	2.42	2	2.13	77	6.26	4	2	38	7	21	< 0.01	0.02	< 0.001	< 0.001	0.036	0.014	< 0.001
< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 2	< 2	< 2	< 2	< 1	< 2	3	< 1	< 1	3	1.74	1	1.37	55	11.8	2	1	26	6	11	0.02	0.03	< 0.001	0.001	0.028	0.007	< 0.001

Appendix D
Table D2c
Willowdale Round 1 WRMP Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

METALS																											MICROBIOLOGY					
Boron	Boron	Cadmium	Cadmium	Chromium (III)	Chromium, hexavalent	Chromium, total	Cobalt	Copper	Copper	Iron	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum	Nickel	Nickel	Phosphorus	Selenium	Selenium	Silver	Uranium	Vanadium	Zinc	Coliform,Thermotolerant	ENTEROCOCCI	Escherichia Coli (E. Coli)	Thermophilic Amoeba	Ammonia as N	Nitrate and Nitrite
D	T	D	T	D	D	D	D	D	T	D	D	T	D	T	D	T	D	T	D	T	T	D	T	D	T	D	D	T	T	T	T	T	T
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.05	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.007	< 1	< 1	< 1	< 1	0.01	0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.21	< 0.001	< 0.001	0.006	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.032	< 1	< 1	< 1	< 1	0.02	0.06
--	--	--	--	--	--	--	--	--	--	0.11	--	--	0.003	0.003	--	--	--	--	--	--	--	--	--	--	--	--	0.024	--	--	--	--	0.01	0.02
--	--	--	--	--	--	--	--	--	--	0.07	--	--	0.002	0.003	--	--	--	--	--	--	--	--	--	--	--	--	0.026	--	--	--	--	0.01	0.02
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	1	1	1	1	6	6
0	0	0	0	0	0	0	0	0	0	3	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	1	3
66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	11.1%	11.1%	11.1%	11.1%	66.7%	66.7%
4	**4**	**0.002**	**0.002**		**0.05**			**2**	**2**		**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**	**0.02**	**0.02**		**0.01**	**0.01**	**0.1**	**0.017**								
0	*0*	*0*	*0*		*0*			*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*	*0*							
								1	**1**	**0.3**			**0.1**	**0.1**												**3**							
								0	*0*	*0*			*0*	*0*												*0*							
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	cfu/100ml	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.028	--	--	--	--	0.02	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.007	--	--	--	--	< 0.01	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.18	< 0.001	< 0.001	0.004	0.004	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.023	--	--	--	--	< 0.01	0.02
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.09	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.024	--	--	--	--	< 0.01	< 0.01
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.21	< 0.001	< 0.001	0.006	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.032	< 1	< 1	< 1	< 1	< 0.01	0.02
< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	< 0.001	< 0.01	0.03	--	--	--	--	< 0.01	0.06

Appendix D
Table D2c
Willowdale Round 1 WRMP Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

																																							PESTICIDES		
Nitrate as N	Nitrite	Phosphate	Total Kjeldahl Nitrogen	Total Nitrogen, All Forms, Calculated	Acenaphthene	Acenaphthylene	Anthracene	Benzo(b+j)fluoranthene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[a]pyrene TEQ (zero)	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-C,D)Pyrene	Naphthalene	Naphthalene	Phenanthrene	Pyrene	Sum of Aldrin + Dieldrin	Sum of PAHs	Azinphos, Methyl (Guthion)	Bromophos-ethyl	Carbophenothion (Trithion)	Demeton-S-methyl	Endosulfan	Fenamiphos (Nemacur)	Monochrotophos	Oxychlordane	Parathion, Ethyl
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.06	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%
	3									0.01													0.3		30	10	0.5		20	0.5			20	
	0									*0*													*0*		*0*	*0*	*0*		*0*	*0*			*0*	
mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.02	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
< 0.01	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.02	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2
0.06	< 0.01	< 0.01	< 0.1	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.005	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	< 0.02	< 0.02	< 0.01	< 0.005	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2

Appendix D
Table D2c
Willowdale Round 1 WRMP Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

			PESTICIDES (OC)																				PESTICIDES (OP)										
Parathion, Methyl	Sum of DDD + DDE + DDT	SUM_CHLORDANE	Aldrin	alpha BHC (Alpha Hexachlorocyclohexane)	Alpha Endosulfan	beta BHC (Beta Hexachlorocyclohexane)	Beta Endosulfan	cis-Chlordane	delta BHC (Delta Hexachlorocyclohexane)	Dieldrin	Endosulfan sulfate	Endrin	Endrin Aldehyde	gamma BHC (Lindane)	Heptachlor	Heptachlor epoxide - isomer b	Hexachlorobenzene	Methoxychlor	P,P'-DDD	P,P'-DDE	P,P'-DDT	trans-Chlordane	Chlorofenvinphos	Chlorpyrifos	Chlorpyrifos Methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimiphos-Ethyl	Tokuthion (Prothiofos)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%
0.7														**10**	**0.3**								**2**	**10**		**4**	**5**	**7**	**4**	**7**	**70**	**0.5**	
0														*0*	*0*								*0*	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Appendix D
Table D2c
Willowdale Round 1 WRMP Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

PFAS																																				
10:2 Fluorotelomer sulfonic acid (10:2 FTS	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoaceti	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoace	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFL	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PFO	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFL	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	2-(2-Butoxyethoxy)Ethanol
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0008	< 0.0002	< 0.0002	< 0.0002	< 2
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	6	9	9	9	9	9	9	6	9	9	9	9	9	9	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	66.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	66.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	11.1%
										1							**0.03**						**0.004**	**0.2**											
										0							*0*						*0*	*0*											
																								0.56											
																								0											
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0008	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	< 2
< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0002	< 0.0002	--

Appendix D
Table D2c
Willowdale Round 1 WRMP Dataset
Receiving Environment: General Mining
Alcoa Water Resources Management Plant

								TPH												
Diethylene glycol	Endrin Ketone	Ethoxyethanol Acetate, 2-	Ethylene Glycol	Ethylene Glycol Mono Butyl Ether	Glyphosate	Propylene Glycol	Triethylene Glycol	C10 - C14 Fraction	C10 - C36 Fraction (sum)	C15 - C28 Fraction	C29 - C36 Fraction	C6 - C9 Fraction	>C10 - C16 Fraction minus Naphthalene (F	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	C6-C10 Fraction (F1)	C6-C10 Fraction minus BTEX (F1)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1	6	1	1	1	6	1	1	6	6	6	6	6	6	6	6	6	6	6	6
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.1%	66.7%	11.1%	11.1%	11.1%	66.7%	11.1%	11.1%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%	66.7%
					1000															
					0															
mg/L	ug/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
< 2	< 0.01	< 2	< 2	< 2	< 10	< 2	< 2	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20
--	< 0.01	--	--	--	< 10	--	--	< 50	< 50	< 100	< 50	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 20

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

Analyte Type							CHLORINATED HC												
Analyte							1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Carbon Tetrachloride	cis-1,2-Dichloroethene	Dibromodichloromethane
Fraction							T	T	T	T	T	T	T	T	T	T	T	T	T
Summary Statistics																			
Minimum							< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Maximum							< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Mean							--	--	--	--	--	--	--	--	--	--	--	--	--
Median							--	--	--	--	--	--	--	--	--	--	--	--	--
Sample Count							39	39	39	39	39	39	39	39	39	39	39	39	39
Detect Count							0	0	0	0	0	0	0	0	0	0	0	0	0
Percentage of samples analysed							1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Screening Criteria																			
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																			
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																			
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																			
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																			
NHMRC ADWG 2015 Health											**30**		**1500**	**3**		**40**	**3**		
NHMRC ADWG 2015 Health Exceed Count											*0*		*0*	*0*		*0*	*0*		
NHMRC ADWG 2015 Aesthetic													**1**		**20**	**0.3**			
NHMRC ADWG 2015 Aesthetic Exceed Count													*0*		*0*	*0*			
Unit							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**													
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/12/2004	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	30/12/2004	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/01/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/01/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/01/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	1/02/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	11/02/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	11/02/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	24/02/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/02/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/03/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/03/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	23/03/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/03/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/04/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/05/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/05/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/05/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	25/05/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/05/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/05/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/05/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/06/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/06/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/06/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/07/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/07/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	25/07/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	3/08/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/08/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/08/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/08/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/09/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/09/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/09/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/10/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/11/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	22/11/2005	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	6/01/2006	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/01/2006	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/04/2006	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	1/05/2006	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/05/2006	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/06/2006	--	--	--	--	--	--	--	--	--	--	--	--	--

Analyte Type							CHLORINATED HC												
Analyte							Hexachlorobutadiene	Tetrachloroethylene	trans-1,2-Dichloroethene	Trichloroethylene	1,3-Dinitrobenzene	2,4,6-Trinitrotoluene							
Fraction							T	T	T	T	T	T							
Summary Statistics																			
Minimum							< 5	< 5	< 5	< 5	< 1	< 1							
Maximum							< 5	< 5	< 5	< 5	< 1	< 1							
Mean							--	--	--	--	--	--							
Median							--	--	--	--	--	--							
Sample Count							39	39	39	39	116	116							
Detect Count							0	0	0	0	0	0							
Percentage of samples analysed							1.6%	1.6%	1.6%	1.6%	4.8%	4.8%							
Screening Criteria																			
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS)																			
NHMRC Australian Drinking Water 2024 Draft fact sheet on Per- and poly-fluoroalkyl substances (PFAS) Exceed Count																			
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value																			
NEMP 2020 PFAS - Human Health Drinking Water Quality Guideline Value Exceed Count																			
NHMRC ADWG 2015 Health							**0.7**	**50**											
NHMRC ADWG 2015 Health Exceed Count							*0*	*0*											
NHMRC ADWG 2015 Aesthetic																			
NHMRC ADWG 2015 Aesthetic Exceed Count																			
Unit							ug/L	ug/L	ug/L	ug/L	ug/L	ug/L							
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**													
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/12/2004	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	30/12/2004	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/01/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/01/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/01/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	1/02/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	11/02/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	11/02/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	24/02/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/02/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/03/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/03/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	23/03/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/03/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/04/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/05/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/05/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/05/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	25/05/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/05/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/05/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/05/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/06/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/06/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/06/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/07/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/07/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	25/07/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	3/08/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/08/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/08/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/08/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/09/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/09/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/09/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/10/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/11/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	22/11/2005	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	6/01/2006	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/01/2006	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/04/2006	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	1/05/2006	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/05/2006	--	--	--	--	--	--							
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/06/2006	--	--	--	--	--	--							

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/07/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/07/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/07/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	11/08/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	17/08/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/08/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/08/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/08/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/09/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	6/10/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/10/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/10/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/12/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	4/01/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/01/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	29/01/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	6/02/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	23/02/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/03/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/04/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/04/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/04/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/05/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	8/05/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	16/05/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/05/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	6/06/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/06/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	26/06/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	9/07/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/07/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/08/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	7/08/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	13/08/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/08/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/08/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/08/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	10/09/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/09/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	29/10/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/11/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/12/2007	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	16/01/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/02/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	15/02/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/02/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/02/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/02/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/03/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	25/03/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/04/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/04/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/04/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2 resample	11/04/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	14/04/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	15/04/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/04/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/04/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	6/05/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	13/05/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/05/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	20/05/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	21/05/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/05/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	29/05/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/06/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	4/06/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	11/06/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/06/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/06/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	23/06/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/06/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/07/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/07/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	10/07/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/07/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	29/07/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/08/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/08/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/09/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/10/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	7/10/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/10/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/10/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	31/10/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	14/11/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/11/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/12/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	24/12/2008	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/02/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/02/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MCCOY_STORMWATER	Stormwater	26/02/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	10/03/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	16/03/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/04/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	17/04/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	17/04/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	1/05/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/05/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/05/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/05/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/05/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/05/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/06/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	10/06/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/06/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	16/06/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/06/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/06/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	2/07/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/07/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	13/07/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	14/07/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/07/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/07/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	31/07/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/08/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/08/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	17/08/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/08/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	25/08/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/08/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/09/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	4/09/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	11/09/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	14/09/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	21/09/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/09/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	29/09/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/10/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/10/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/10/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/10/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/11/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	10/12/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	10/12/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/12/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	16/12/2009	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/01/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/01/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	27/01/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/01/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/02/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	23/02/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/04/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/05/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/06/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/06/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	29/06/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/07/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/07/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/08/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/08/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	14/10/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	29/10/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	29/11/2010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	12/01/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/01/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	9/02/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/03/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/04/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/04/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/05/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	17/05/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/05/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MC1A	MC1A	27/05/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MC1B	MC1B	27/05/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MC1A	MC1A	8/06/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MC1B	MC1B	8/06/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/06/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	29/06/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/07/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	13/07/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/07/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/07/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	5/08/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	9/08/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/08/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/08/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	26/08/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/08/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/09/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	29/09/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	11/10/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/11/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/11/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/12/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	4/01/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/01/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/01/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/02/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/02/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/02/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	9/03/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	16/03/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	21/03/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	13/04/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNKNOWN/OTHER	Unknown	Unknown	Other	DB W/DOWN SUMP	DB W/down sump	23/04/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/05/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/05/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/05/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/06/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNKNOWN/OTHER	Unknown	Unknown	Other	HYDROCARBON SUMP	Hydrocarbon Sump	15/06/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/06/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/06/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/06/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	10/07/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	24/07/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/08/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/08/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	22/08/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/09/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/09/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/09/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/10/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/10/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/10/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/10/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/11/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/12/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/01/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNKNOWN/OTHER	Unknown	Unknown	Other	1 STAGE BOAB EAST	1 Stage Boab East	15/01/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNKNOWN/OTHER	Unknown	Unknown	Other	3 STAGE BOAB EAST	3 Stage Boab East	15/01/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/01/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	26/02/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/03/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/04/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	8/04/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/04/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	14/05/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	21/05/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	31/05/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/06/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/06/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/07/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	16/07/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/07/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/07/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/08/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/08/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	16/08/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	26/08/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	9/09/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	17/09/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/09/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	25/09/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/10/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/10/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/10/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/11/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/12/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/12/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	10/01/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/02/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/03/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/04/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/05/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	27/05/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	30/05/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	6/06/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/06/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/06/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	23/06/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/07/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	2/07/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/07/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	14/07/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/07/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/07/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/08/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/08/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/09/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/09/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/10/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	14/10/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	5/11/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	25/11/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/12/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	29/01/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/02/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/03/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/04/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/04/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/04/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	6/05/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/05/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	25/05/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	4/06/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	16/06/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	24/06/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/06/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/07/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	15/07/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/08/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/08/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	20/08/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/08/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/09/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	22/09/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	29/09/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/10/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	15/10/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	22/10/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/11/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	27/11/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/12/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	14/12/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/12/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/12/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	13/01/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/01/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/01/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1 re-test	20/01/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	11/02/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	17/02/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/02/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	4/03/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/03/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/03/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/04/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/04/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/04/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/04/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/05/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/05/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/05/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/05/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	8/06/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/06/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/06/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/06/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/06/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	4/07/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	6/07/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	15/07/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/07/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	20/07/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/07/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/08/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/08/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/08/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/08/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	24/08/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/09/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/09/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	9/09/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/09/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/09/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	29/09/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/10/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/10/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/10/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/10/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/11/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	9/11/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	23/11/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/11/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/12/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	14/12/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/12/2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	3/01/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/01/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/01/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/02/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/03/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/03/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/03/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/03/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/03/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/04/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/04/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/04/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	5/05/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/05/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	17/05/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/05/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	30/05/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	14/06/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/06/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	29/06/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/07/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/07/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/07/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	25/07/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/07/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/08/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/08/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	10/08/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/08/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	21/08/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	29/08/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/09/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/09/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/09/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/10/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/10/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/10/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/11/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	5/12/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	13/12/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/12/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/12/2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/01/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/01/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/01/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	5/02/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/02/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/02/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/02/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/03/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	14/03/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	20/03/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/04/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/04/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	1/05/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/05/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/05/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	7/06/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/06/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/06/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/06/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	3/07/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/07/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/07/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/07/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/07/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	6/08/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	14/08/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/08/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/08/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	3/09/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	4/09/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/09/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/09/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/09/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/09/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	10/10/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/10/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/10/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	30/10/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	6/11/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	21/11/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/12/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/12/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/01/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	14/01/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	25/01/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/01/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/02/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/02/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/03/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S03	S03	2/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S04	S04	2/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S05	S05	2/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S06	S06	2/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S07	S07	2/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S08	S08	2/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S01	S01	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S02	S02	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S09	S09	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S10	S10	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S11	S11	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S13	S13	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
PERTH METRO	Perth Metro	Perth Metro	Other	S15	S15	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S16	S16	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S17	S17	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S18	S18	3/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S27	S27	5/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S28	S28	5/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S29	S29	5/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S30	S30	5/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S31	S31	5/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S32	S32	5/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S33	S33	5/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S34	S34	5/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S19	S19	8/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S20	S20	8/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S24	S24	8/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S25	S25	8/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S39	S39	8/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S40	S40	8/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S35	S35	10/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S36	S36	10/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S38	S38	10/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S41	S41	10/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S42	S42	10/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S22	S22	11/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S23	S23	11/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S26	S26	11/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	23/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	24/04/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	2/05/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	13/05/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S21	S21	22/05/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/05/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	6/06/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/06/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/06/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/06/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	1/07/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/07/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	10/07/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	10/07/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/07/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/07/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	26/07/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/08/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/08/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	14/08/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/08/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	22/08/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/08/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	3/09/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	5/09/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/09/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	2/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S01	S01	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S02	S02	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S03	S03	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S04	S04	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S05	S05	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S06	S06	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S07	S07	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S08	S08	15/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S09	S09	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S10	S10	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S11	S11	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S12	S12	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S13	S13	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S14	S14	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S15	S15	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S16	S16	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S17	S17	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S18	S18	16/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S27	S27	17/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S28	S28	17/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S29	S29	17/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S30	S30	17/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
PERTH METRO	Perth Metro	Perth Metro	Other	S31	S31	17/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S32	S32	17/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S33	S33	17/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S34	S34	17/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S19	S19	18/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S20	S20	18/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S21	S21	18/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S23	S23	18/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S25	S25	18/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S39	S39	18/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S40	S40	18/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S22	S22	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S24	S24	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S26	S26	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S35	S35	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S36	S36	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S37	S37	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S38	S38	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S41	S41	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PERTH METRO	Perth Metro	Perth Metro	Other	S42	S42	22/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	30/10/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	6/11/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/11/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/11/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	4/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	19/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR2	19/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR3	19/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR DUP	19/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	30/12/2019	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	15/01/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/01/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/01/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/02/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/02/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	6/03/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	6/03/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/03/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	24/03/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/03/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/04/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/04/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	29/04/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	14/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 12/1	Manning 12/1	27/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 12	Marshall 12	27/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RHODES 3	Rhodes 3	27/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 15	Roberts 15	27/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	BLACKLOCK 9	Blacklock 9	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 15	Downes 15	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 11	Kisler 11	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	STONE 3/1	Stone 3/1	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WITTWER 9	Wittwer 10	29/05/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 1	Kisler 1	17/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	23/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	24/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 12	Manning 12	24/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 16	Marshall 16	24/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 16	Marshall 16 DUP	24/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	24/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	26/06/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	BD	BD1	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	BD	BD2	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	BD	BD3	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	BD	BD DUP	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR2	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR3	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR DUP	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR2	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR3	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR DUP	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SDD_HUN	SDD1	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SDD_HUN	SDD2	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SDD_HUN	SDD3	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SDD_HUN	SDD DUP	3/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	CRUSHER SUMP_UNSUMP2	Crusher sump	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR OVERFLOW	MYR overflow	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW1_MCWS02	SW1	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	7/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	10/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR2	10/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	14/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	17/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	20/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	21/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW1_MCWS02	SW1	21/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	21/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	23/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	27/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	COCIVERA 4	Cocivera 4	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Unknown	Other	DUP	DUP	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 5	Kisler 5	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 9	Manning 9	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 31	McCarthy 31	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 5	McCarthy 5	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCOY ACCESS 19	McCoy Access 19	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 16	Roberts 16	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WILDE 17	Wilde 17	29/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/07/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	3/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW07	SW07	3/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN01	SN01	4/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	4/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	4/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	4/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW02	SW02	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	5/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	6/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	7/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	7/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW07	SW07	7/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	10/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 20	Kisler 20	11/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 8/1	Kisler 8/1	11/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	11/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005	13/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	13/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05	13/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	HSW02	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	14/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	17/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141352	6141352	17/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	BF20	BF20	17/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	17/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW04	HSW04	17/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	21/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	21/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	27/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 12	Ingpen 12	28/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 11	Marshall 11	28/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	28/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	28/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	RHODES 23	Rhodes 23	28/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SIMPSON 6	Simpson 6	28/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 29/1	Downes 29/1	31/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	DELPARK	Sump	Other	DP1	DP1	31/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	DELPARK	Sump	Other	DP1	DP1	31/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCOY ACCESS 18	McCoy Access 18	31/08/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	4/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	4/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	7/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	9/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	9/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	16/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	18/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	18/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	18/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	18/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	18/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN04	SN04	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW07	SW07	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN01	TN01	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG42	WG42	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	WG54	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG03	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG04	21/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141121	6141121	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN01	SN01	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW02	SW02	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW03	SW03	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW04	SW04	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW08	SW08	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	22/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	SERPENTINE	Sump	Other	BLACKLOCK 10/1	Blacklock 10/1	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	CABLE 1	Cable 1	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 19	Downes 19	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 19	Downes 19 DUP	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 19	McCarthy 19	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 30	McCarthy 30	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	PELITE 1	Pelite 1	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RHODES 2/4	Rhodes 2/4	25/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	BF20	BF20	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV04	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	HSW02	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW04	HSW04	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	SD31	SD31	28/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	30/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	30/09/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	8/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	8/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN01	SN01	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN04	SN04	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW02	SW02	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG42	WG42	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG03	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG04	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN 14	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	12/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW03	SW03	13/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	13/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	13/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	13/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW08	SW08	14/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	16/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	16/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	16/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	19/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	19/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	21/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	21/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	23/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	23/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	29/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	29/10/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	3/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	3/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	4/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN04	SN04	4/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW03	SW03	4/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	4/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	4/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	4/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	6/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	6/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	13/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	13/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	18/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	18/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Unknown	Other	POP COM COMISSIONING	Comp Comissioning Sa	19/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MYR	MYR1	24/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR1	25/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	30/11/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	3/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	7/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	9/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS27	HDS27	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS28	HDS28	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS29	HDS29	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	HDS30	HDS30	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS31	HDS31	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS37	HDS37	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS38	HDS38	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS39	HDS39	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS40	HDS40	15/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	HDS02	HDS02	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS16	HDS16	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS18	HDS18	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS21	HDS21	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	HDS25	HDS25	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS26	HDS26	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS3	HDS3	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS44	HDS44	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS45	HDS45	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HDS49	HDS49	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HDS50	HDS50	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HDS57	HDS57	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HDS59	HDS59	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Unknown	Other	HDS6	HDS6	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS8	HDS8	16/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HDS24	HDS24	17/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS32	HDS32	17/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Sump	Other	HDS33	HDS33	17/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS34	HDS34	17/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	HDS36	HDS36	17/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	19/12/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	5/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	SP-BDL1	SP-BDL1	5/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	BKG/Ambient Location	Other	SP-BG03	SP-BG03	5/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	SP-BOR1	SP-BOR1	5/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTHDANDALUPPIPEHEAI	Rec Env: PFAS Source	Other	SP-PS1	SP-PS1	5/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SP-SDD01	SP-SDD01	5/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	HC01	HC01	6/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	WRHS1	WRHS1	6/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	WTP	WTP	6/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	6/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	DAFMC02	DAFMC02	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	DAFMC03	DAFMC03	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HC1SW01	HC1SW01	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HULLS01	HULLS01	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCSRW01	MCSRW01	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCSW01	MCSW01	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCWS02	MCWS02	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCWS03	MCWS03	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SIM1W	SIM1W	7/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	FBHSW01	FBHSW01	8/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HC2SW01	HC2SW01	8/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HVTMPW01	HVTMPW01	8/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HYDSB01	HYDSB01	8/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCLV01	MCLV01	8/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCLV03	MCLV03	8/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SMP11-MCCOY	SMP11	8/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	11/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	CWS01	CWS01	11/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HSC01	HSC01	11/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MRSW01	MRSW01	11/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	UNSMPW1	UNSMPW1	11/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	UNSMPW2	UNSMPW2	11/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	BKG/Ambient Location	Other	SP-BG04	SP-BG04	12/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	CP01	CP01	13/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 7	DOWNES7	13/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 9	DOWNES9	13/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RHODES 4	RHODES4	13/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	14/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	18/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	18/01/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	19/01/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	25/01/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	28/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/01/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	29/01/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	31/01/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	8/02/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	8/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	10/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	10/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	13/02/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	16/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	22/02/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/02/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	25/02/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	2/03/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	9/03/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Unknown	Other	WEIR 1	Weir 1	9/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Unknown	Other	WEIR 2	Weir 2	9/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	9/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	9/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	11/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	11/03/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Unknown	Other	WEIR 1	Weir 1	12/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Unknown	Other	WEIR 2	Weir 2 (potable water)	12/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	15/03/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	19/03/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	24/03/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	29/03/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	31/03/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	6/04/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	9/04/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	12/04/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	12/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	12/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	12/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	19/04/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1 SGS	21/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3 Resample SGS	21/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3 Resample SGS	21/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1 ALS	22/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3 Resample ALS	22/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2 SGS	28/04/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	29/04/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	3/05/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	3/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	3/05/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	4/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-1048	275-1048	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-1228	275-1228	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-1241	275-1241	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-485	275-485	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-542	275-542	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-571	275-571	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-623	275-623	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-654	275-654	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-703	275-703	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-922	275-922	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-960	275-960	14/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	15/05/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	17/05/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	17/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	274-278	274-278	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	274-33	274-33	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	274-516	274-516	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	274-622	274-622	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	274-769	274-769	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	274-895	274-895	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	275-196	275-196	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Unknown	Other	275-21	275-21	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	275-225	275-225	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	275-255	275-255	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-353	275-353	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-443	275-443	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	275-83	275-83	18/05/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	24/05/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	29/05/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	2/06/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	7/06/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCOY EMP CARPARK	/cCoy employee carpar	10/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	11/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	14/06/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	17/06/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	29/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	29/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/06/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	4/07/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	8/07/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	8/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	CRUSHER SUMP_UNSUMP2	rusher sump_UNSUMF	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch_CP01	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	HC01	HC01	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HC1_HC1SW1	HC1_HC1SW1	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	HDS02	HDS02	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HSC_HSC01	HSC_HSC01	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HULLS01	HULLS01	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 31	McCarthy 31	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 31	McCarthy 31	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 31	McCarthy 31	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 31	McCarthy 31 DUP	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR_MCSRW01	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCSWR5	MCSWR5	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SIM1W	SIM1W	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SMP11-MCCOY	SMP11	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW1_MCWS02	SW1_MCWS02	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2_MCWSO3	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3_MCSW01	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	TAILENDSUMP_UNSUMP1	ail end sump_UNSUMP	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well_CWS01	9/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 9_HAUL	Downes 9	13/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 9_HAUL	Downes 9	13/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	13/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	13/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	14/07/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	20/07/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	BD	BD1	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	BD	BD DUP	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCSWR5	MCSWR5	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCSWR5	MCSWR5 DUP	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	RHWTP1	RHWTP1	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	RHWTP1	RHWTP1 DUP	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SDD_HUN	SDD1	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SDD_HUN	SDD DUP	21/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	27/07/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/07/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	2/08/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 3	Ingpen 3	2/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 3	Ingpen 3	2/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 3	Ingpen 3 DUP	2/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RANCE 3	Rance 3	2/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RANCE 9	Rance 9	2/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	3/08/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	9/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	10/08/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	--	--
HUNTLY	SERPENTINE	Sump	Other	29A	29A	13/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	29B	29B	13/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	29C	29C	13/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	13/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	13/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	16/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	16/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 23	Downes 23	16/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 25	Downes 25	16/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 27	Downes 27	16/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 30	Downes 30	16/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 34	Downes 34	16/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	SD09	SD09	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	SP-BDL1	SP-BDL1	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	Other	SP-BG01	SP-BG01	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	Other	SP-BG02	SP-BG02	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	SP-BOR1	SP-BOR1	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTHDANDALUPPIPEHEAI	Rec Env: PFAS Source	Other	SP-PS1	SP-PS1	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SP-SDD01	SP-SDD01	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SP-SDD02	SP-SDD02	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SP-SDD03	SP-SDD03	20/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW04	HSW05	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	Other	BF51	BF51	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SE35	SE35	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	Other	SE40	SE40	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SE41	SE41	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	Other	SP-BG09	SP-BG09	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	Other	SP-BG10	SP-BG10	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	Other	HUN-SW01	SW01	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: PFAS Source	Other	HUN-SW05	SW05	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	Rec Env: PFAS Source	Other	SE21	SE21	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	Rec Env: PFAS Source	Other	SE34	SE34	23/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Rec Env: Gen Mining	Other	LD484	LD484	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	Other	ND04	ND04	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	Other	ND06	ND06	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: PFAS Source	Other	ND14	ND14	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	BKG/Ambient Location	Other	SP-BG03	SP-BG03	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	BKG/Ambient Location	Other	SP-BG04	SP-BG04	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	BKG/Ambient Location	Other	SP-BG05	SP-BG05	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	Other	HUN-SW07	SW07	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: PFAS Source	Other	HUN-SW16	SW16	24/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	BG11	BG11	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	HUN-BG12	BG12	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	BG13	BG13	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	BG14	BG14	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	SP-BG06	SP-BG06	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	SP-BG07	SP-BG07	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	SP-BG08	SP-BG08	25/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS39	HDS39	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SE52_SED	SE52	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW02	SW02	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW04	SW04	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW12	SW12	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW13	SW13	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	Other	HUN-SW14	SW14	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW18	SW18	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	Other	SW21	SW21	26/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 7	DOWNES7	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RHODES 4	RHODES4	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Source SW Body	Other	SE10	SE10	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SE48	SE48	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW03	SW03	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW10	SW10	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW11	SW11	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW17	SW17	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW19	SW19	27/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141006	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	BF20	BF20	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	BF20	BF21	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW06	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	CRUSHER SUMP_UNSUMP2	rusher sump_UNSUMP	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	DELPARK	Sump	Other	DP1	DP1	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	HC01	HC01	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	HC1_HC1SW1	HC1_HC1SW1	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HSC_HSC01	HSC_HSC01	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HSC_HSC01	HSC_HSC01	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HSC_HSC01	HSC_HSC01 DUP	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HULLS01	HULLS01	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MCR_MCSRW01	MCR_MCSRW01	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SIM1W	SIM1W	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SMP11-MCCOY	SMP11	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SMP11-MCCOY	SMP11	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SMP11-HAUL RD	SMP11 DUP	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Rec Env: Gen Mining	Other	HUN-SW06	SW06	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW1_MCWS02	SW1_MCWS02	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW15	SW15	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2_MCWSO3	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SW20	SW20	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3_MCSW01	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	TAILENDSUMP_UNSUMP1	ail end sump_UNSUMP	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	30/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV04	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV05	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	HSW02	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW04	HSW04	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	SD31	SD31	31/08/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	SERPENTINE	Sump	Other	29C	29C	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	6141035_A	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW07	SW07	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14_A	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG42	WG42	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	WG54	1/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	6141035_B	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	6141035_C	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	6141035_D	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN01	SN01	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN04	SN04	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14_B	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14_C	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14_D	2/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141121	6141121	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG03	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW02	SW02	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW03	SW03	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW08	SW08	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN01	TN01	3/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW04	SW04	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	6/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	SERPENTINE	Sump	Other	29C	29C	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	7/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	614031	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	614035	9/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	13/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	29C	29C	13/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	13/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	13/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	13/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	13/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	13/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	15/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037_A	16/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037_B	16/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037_C	16/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037_D	16/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037_E	16/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037_F	16/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037_G	16/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037_H	16/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	29C	29C	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG03	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW03	SW03	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW04	SW04	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG42	WG42	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	WG54	20/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	21/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN01	SN01	21/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	Sn02	21/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW02	SW02	21/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW08	SW08	21/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN01	TN01	21/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	21/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	21/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141006	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141350	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV04	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV05	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	HSW03	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	MSW02	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	SD31	SD31	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	SD31	SD32	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141121	6141121	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW07	SW07	22/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	23/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	23/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW02	23/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW04	HSW04	23/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05	23/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	28/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	29C	29C	28/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	28/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	28/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	28/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	28/09/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	1/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	29C	29C	4/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	4/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	4/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	4/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	4/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	5/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	11/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	11/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	11/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	11/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	11/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005_a	12/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005_b	12/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05_a	12/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05_b	12/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	614035	12/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614037	614037	12/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG03	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN01	SN01	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW04	SW04	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW07	SW07	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN01	TN01	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	18/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	614035_A	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	614035_B	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	614035_C	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141121	6141121	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW02	SW02	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW08	SW08	20/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	21/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	614035	614035_D	21/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG42	WG42	21/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	WG54	21/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	25/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	25/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	25/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	25/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	25/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	25/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	27/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	27/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	27/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	27/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005_A	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141006	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW02	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05_A	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW06	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW03	SW03	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14_A	28/10/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	1/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	1/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	1/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	1/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV04	5/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV05	5/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	HSW02	5/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	HSW03	5/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	8/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	8/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	8/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	8/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	10/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	15/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	15/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	15/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	15/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG03	16/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	16/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	16/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	16/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	W654	16/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	WG54	16/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	17/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	22/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	22/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	22/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	22/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	275-83	275-83	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	COCIVERA 4	Cocivera 4	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DEMARTE 4	Demarte 4	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	HDS30	HDS30	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 3	Ingpen 3	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 12	Manning 12	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 8	Manning 8	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 31	McCarthy 31	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 5	McCarthy 5	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	RHODES 11	Rhodes 11	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RHODES 3	Rhodes 3	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 16	Roberts 16	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SIMPSON 6	Simpson 6	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WITTWER 9	Wittwer 9	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WITTWER 9	Wittwer 9	29/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	COCIVERA 4	Cocivera 4	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 19	Downes 19	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 7_HAUL	Downes 7	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 9_HAUL	Downes 9	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 12	Ingpen 12	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 1	Kisler 1	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 10	Kisler 10	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 5	Kisler 5	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 9	Manning 9	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 12	Marshall 12	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 16	Marshall 16	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 19	McCarthy 19	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 30	McCarthy 30	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	PELITE 1	Pelite 1	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	RHODES 23	Rhodes 23	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Unknown	Other	RHODES 4/1	Rhodes 4/1	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 16	Roberts 16	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SIMPSON 6	Simpson 6	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	STONE 3/1	Stone 3/1	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WILDE 53	wilde 53	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WITTWER 1	Wittwer 1	30/11/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	275-83	275-83	3/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 12	Manning 12	3/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	274-278	274-278	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	274-895	274-895	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-1228	275-1228	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-1241	275-1241	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Unknown	Other	275-21	275-21	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	275-225	275-225	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-443	275-443	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-571	275-571	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	275-623	275-623	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	275-83	275-83	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	DELPARK	Sump	Other	DP1	DP1	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 12	Manning 12	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCOY ACCESS 18	McCoy Access Rd 18	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCOY ACCESS 19	McCoy Access Rd 19	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WILDE 17	Wilde 17	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WILDE 3	Wilde 3	6/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	13/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	13/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	13/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW08	SW08	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	16/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	20/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	20/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	20/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	21/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	21/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	29/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	29/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	29/12/2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	4/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	6/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	7/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	7/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	7/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	10/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	13/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	13/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	13/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	14/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	17/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	17/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	17/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	17/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	21/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	24/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	24/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	24/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	27/01/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	1/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	4/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	7/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	11/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1 DUP	11/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	14/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	15/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	17/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	25/02/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	26/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	31/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	31/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	31/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	31/03/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	1/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	4/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	5/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	26/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	27/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/04/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	3/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	9/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	10/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	13/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	17/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	17/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	24/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	DELPARK	Sump	Other	BORONIA	BORONIA	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	DELPARK	Sump	Other	DP01	DP01	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	DELPARK	Sump	Other	DP18	DP18	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	SD09	SD09	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	SP-BDL1	SP-BDL1	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTHDANDALUPPIPEHEAI	Rec Env: PFAS Source	Other	SP-PS1	SP-PS1	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SP-SDD01	SP-SDD01	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SP-SDD02	SP-SDD02	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	Other	SP-SDD03	SP-SDD03	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	Other	HUN-SW01	SW01	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: PFAS Source	Other	HUN-SW16	SW16	25/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 9_HAUL	Downes 9	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 6	Ingpen 6	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 7	Ingpen 7	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 10	Kisler 10	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 19	Kisler 19	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 36	Kisler 36	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 7	Kisler 7	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 8	Manning 8	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 12	Marshall 12	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 16	Marshall 16	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 25	Marshall 25	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 31	McCarthy 31	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 7	McCarthy 7	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 14	Roberts 14	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 15	Roberts 15	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 4	Roberts 4	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SIMPSON 7	Simpson 7	26/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	HDS39	HDS39	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	Other	ND06	ND06	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: PFAS Source	Other	ND14	ND14	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Source SW Body	Other	SE10	SE10	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SE48	SE48	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	SE59	SE59	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW04	SW04	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	Other	HUN-SW07	SW07	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW17	SW17	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW19	SW19	27/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	30/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	30/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	30/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	30/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	30/05/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	DELLA 2	Della 2	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	DELLA 6	Della 6	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	DELLA 8	Della 8	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 1	Kisler 1	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Sump	Other	KISLER 5	Kisler 5	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MABBOTT 1 PIT	Mabbott 1 pit	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 8	Manning 8	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	MARSHALL 42	Marshall 42	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SIMPSON 6	Simpson 6	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	SUMP DELLA/ELLAR RD	np opp corner Della/Ella	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	BKG/Ambient Location	Other	WARBURTON CROSSING	Warburton crossing	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WITTWER 9	Wittwer 9	1/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	3/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	7/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	7/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	7/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	13/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	14/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	Other	BF51	BF51	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	Other	SP-BG01	SP-BG01	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	BKG/Ambient Location	Other	SP-BG04	SP-BG04	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	BKG/Ambient Location	Other	SP-BG05	SP-BG05	15/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	CABLE 2	Cable 2	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 14	Downes 14	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 15	Downes 15	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 16	Downes 16	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 27	Downes 27	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 7	DOWNES7	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 11	Ingpen 11	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 12	Ingpen 12	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 19	Kisler 19	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	KISLER 5	Kisler 5	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 16	Marshall 16	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 23	Marshall 23	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 25	Marshall 25	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 13	McCarthy 13	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 14	McCarthy 14	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 5	McCarthy 5	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 7	McCarthy 7	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RHODES 4	RHODES4	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RHODES 5	Rhodes 5	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	RHODES 6	Rhodes 6	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 15	Roberts 15	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 16	Roberts 16	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 17	Roberts 17	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 4	Roberts 4	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW10	SW10	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW11	SW11	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SW20	SW20	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WILDE 53	Wilde 53	16/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	20/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	20/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	27/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	DELLA 4 PIT NORTH	Della 4 Pit North Sump	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	DELLA 4 PIT SOUTH	Della 4 Pit South Sump	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 19	Downes 19	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 50	Downes 50	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	LLOYD 11	Lloyd 11	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MABBOTT 1 PIT	Mabbott 1 pit	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 5	Manning 5	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 31	McCarthy 31	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	30/06/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	7/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	7/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	7/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	8/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	14/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	BLACKLOCK 12	Blacklock 12	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	BLACKLOCK 14	Blacklock 14	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	BLACKLOCK 7	Blacklock 7	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	DELLA 11	Della 11	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis Ditch	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 41	Downes 41	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 50	Downes 50	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 59	Downes 59	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES-MARSHALL 3	Downes-Marshall 3	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 3	Ingpen 3	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 6	Ingpen 6	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MANNING 2	Manning 2	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Sump	Other	MANNING 9	Manning 9	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 11	Marshall 11	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 16	Marshall 16	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 25	Marshall 25	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MARSHALL 27	Marshall 27	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	MARSHALL 40	Marshall 40	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	MARSHALL 42	Marshall 42	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1 DUP	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MCCARTHY 3	McCarthy 3	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 15	Roberts 15	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	ROBERTS 21	Roberts 21	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 4	Roberts 4	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 7	Roberts 7	19/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	BG13	BG13	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	BG14	BG14	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Rec Env: Gen Mining	Other	LD484	LD484	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	Other	ND04	ND04	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	SD06	SD06	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SE35	SE35	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	Other	SE40	SE40	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SE41	SE41	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SE52_SED	SE52	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	SP-BG06	SP-BG06	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	SP-BG07	SP-BG07	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: PFAS Source	Other	HUN-SW05	SW05	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW12	SW12	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW13	SW13	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	Other	HUN-SW14	SW14	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW18	SW18	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	Rec Env: PFAS Source	Other	SE21	SE21	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	Rec Env: PFAS Source	Other	SE34	SE34	20/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW02	SW02	21/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	614043	614043	27/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW06	HSW06	27/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	27/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW13	HSW13	27/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW14	HSW14	27/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	28/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE WEST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW07	HSW07	28/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE WEST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW11	HSW11	28/07/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	2/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	2/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3	2/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	2/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	4/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	5/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	5/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	8/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	8/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	11/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	11/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3	11/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	11/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	Other	SP-BG02	SP-BG02	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN01	SN01	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW02	SW02	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW04	SW04	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN01	TN01	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG42	WG42	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	WG54	15/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	BG11	BG11	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	Other	HUN-BG12	BG12	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	BKG/Ambient Location	Other	SP-BG03	SP-BG03	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	Other	SP-BG09	SP-BG09	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW03	SW03	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	ARLINGSCARPMYARABROO	Rec Env: Gen Mining	Other	HUN-SW06	SW06	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	Other	HUN-SW09	SW09	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	HUN-SW15	SW15	16/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	17/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 15	Roberts 15	17/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	17/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3	17/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	17/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141121	6141121	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG03	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN04	SN04	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW03	SW03	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW04	SW04	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW07	SW07	18/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	19/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	19/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141005	6141005	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV04	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	HSW02	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	SD31	SD31	22/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	23/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DOWNES 28/1	Downes 28/1	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	WITTWER 5	Wittwer 5	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	614043	614043	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW06	HSW06	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW12	HSW12	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW14	HSW14	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	SD34	SD34	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	TF13	TF13	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	TF18	TF18	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE WEST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW07	HSW07	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE WEST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW09	HSW09	25/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE WEST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW11	HSW11	26/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	29/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	29/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	29/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	29/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	29/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	29/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	29/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	29/08/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	DELLA 11	Della 11	1/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 3	Ingpen 3	1/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	INGPEN 6	Ingpen 6	1/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 4	Robert 4	1/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	2/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	2/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3	2/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	2/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	5/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	5/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	5/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	5/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	5/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Sump	Other	DELLA 11	Della 11	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	SW2_MCWSO3	SW2	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	9/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	12/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	12/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	12/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	12/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	12/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	16/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	16/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	16/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	16/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	16/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	SW3_MCSW01	SW3	16/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	16/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	19/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	19/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	19/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	19/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	19/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	19/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	614043	614043	20/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW06	HSW06	20/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW12	HSW12	20/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW14	HSW14	20/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	SD34	SD34	20/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE EAST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	TF13	TF13	20/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	21/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	21/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	ROBERTS 4	Roberts 4	21/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE WEST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW07	HSW07	21/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HOLYOAKE WEST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW11	HSW11	21/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	27/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	27/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	27/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	27/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	27/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC05	SC05	27/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	29/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	30/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	30/09/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	3/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	3/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	3/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	3/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	6/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	6/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	7/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	7/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	10/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	10/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	10/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	10/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	12/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	13/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	13/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	18/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	18/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	18/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	18/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	19/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	19/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	24/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	24/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	24/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	24/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	27/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	27/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	27/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	27/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	31/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	31/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	31/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	31/10/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	2/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	2/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	7/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	7/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	7/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	7/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	7/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW03	SW03	9/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	9/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	WG54	9/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	10/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	10/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC01	SC01	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	14/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	21/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	21/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	21/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	21/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	21/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	21/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	28/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	28/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	28/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	29/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	29/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	29/11/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	1/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	1/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	5/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	5/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	5/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	5/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	8/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	8/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	8/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	8/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	12/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	12/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	12/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	12/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	12/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	20/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	20/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	20/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	21/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	21/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	21/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	21/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	DIMASIS DITCH	Dimasis ditch	22/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	VERGONES WELL_CWS01	Vergones well	22/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	29/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	29/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	29/12/2022	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	3/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	3/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	3/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	9/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	10/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC02	SC02	11/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC03	SC03	11/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	SC04	SC04	11/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	12/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	16/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	16/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	17/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	17/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	17/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3 DUP	17/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	23/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	25/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	27/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	30/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	31/01/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	2/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	6/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	6/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	10/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	13/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	14/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	20/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	24/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	27/02/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	7/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	9/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	20/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	22/03/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	6/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	6/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	11/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	11/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	19/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	21/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	24/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	24/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	26/04/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	4/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	8/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	10/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Sump	Other	MY01_SW01	MY_SW01	15/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MY08_SW02	MY_SW02	15/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC06_06	MC_SW06	16/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC06_07	MC_SW07	16/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: PFAS Source	Other	MC06_08	MC_SW08	16/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC08_15	MC_SW15	16/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	Sump	Other	DP03_01	DP_SW01	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	Rec Env: PFAS Source	Other	DP03_02	DP_SW02	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	Sump	Other	DP03_04	DP_SW04	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	Rec Env: PFAS Source	Other	DP03_05	DP_SW04	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	HC02_01	HC_SW01	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	WR02_SD_SW	WR_SW02	17/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	22/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	23/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	25/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	29/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	30/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	31/05/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Sump	Other	MC03_04	MC_SW04	2/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	3/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	6/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	9/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW06	HSW06	14/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW12	HSW12	14/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	16/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	17/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	19/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	21/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	26/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	26/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	29/06/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	5/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	7/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	10/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	11/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	Rec Env: PFAS Source	Other	DP03_05	DP_SW05	14/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	HC02_01	HC_SW01	14/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Sump	Other	HC02_02	HC_SW02	14/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	Other	MY08_SW03	MY_SW03	14/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC4	MC4	17/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	17/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	17/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	18/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	20/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	24/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	26/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	26/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	31/07/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	2/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	7/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	8/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	9/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	10/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	11/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	BF04	BF04	13/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	14/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	GG03	GG03	14/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN01	SN01	14/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	SW06	SW06	14/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN01	TN01	14/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN14	TN14	14/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG42	WG42	14/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	WUNGONG	BKG/Ambient Location	Other	WG54	WG54	14/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SOUTHDANDALUP	BKG/Ambient Location	Other	6141125	6141125	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	BF04	BF04	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN02	SN02	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SN04	SN04	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW01	SW01	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW02	SW02	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINEPIPEHEAD	BKG/Ambient Location	Other	SW05	SW05	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	SW07	SW07	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MYARA NORTH	SERPENTINE	BKG/Ambient Location	Other	TN34	TN34	15/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW01	HSW01	16/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW04	HSW04	16/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	SD31	SD31	16/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	614043	614043	16/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW06	HSW06	16/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW14	HSW14	16/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141349	6141349	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	BF20	BF20	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	DV04	DV04	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW02	HSW02	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW12	HSW12	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW13	HSW13	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE WEST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW07	HSW07	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE WEST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	HSW11	HSW11	17/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	6141333	6141333	18/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HOLYOAKE	SOUTHDANDALUP	BKG/Ambient Location	Other	HSW05	HSW05	18/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	SOUTHDANDALUP	BKG/Ambient Location	Other	SD34	SD34	18/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	TF13	TF13	18/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HOLYOAKE EAST	MURRAYRIVAREAOUTCATC	BKG/Ambient Location	Other	TF18	TF18	18/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	21/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	BKG/Ambient Location	Other	MCRA_SW02	MCRA_SW02	22/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	BKG/Ambient Location	Other	MCRA_SW07	MCRA_SW07	22/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	BKG/Ambient Location	Other	OESW02	OESW02	23/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	BKG/Ambient Location	Other	SE01	SE01	23/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	BKG/Ambient Location	Other	SE02	SE02	23/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	BKG/Ambient Location	Other	SE03	SE03	23/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	BKG/Ambient Location	Other	SE16	SE16	23/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	Rec Env: PFAS Source	Other	SE34	SE34	23/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	BKG/Ambient Location	Other	MCRA_SW06	MCRA_SW06	24/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ONEIL EAST	SERPENTINE	Rec Env: PFAS Source	Other	SE21	SE21	24/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	29/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	29/08/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	1/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	5/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	5/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	6/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	8/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	10/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	12/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	21/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	22/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	26/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	28/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	29/09/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	2/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	3/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	5/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	6/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	9/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	10/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	11/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	16/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	16/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	17/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	18/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	19/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	23/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	25/10/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	3/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	9/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	13/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	13/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	th Treated Water Pond	20/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	20/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	22/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	27/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	27/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	29/11/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	1/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	4/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	5/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	6/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	15/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	18/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	22/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	28/12/2023	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	2/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	2/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	3/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	5/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	11/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	15/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	15/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	19/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	22/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	23/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	25/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	29/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	30/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	30/01/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	5/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	7/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	14/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	14/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	19/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	21/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	22/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	23/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	26/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	28/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	29/02/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	5/03/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	11/03/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	13/03/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	18/03/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	18/03/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	22/03/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	27/03/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	28/03/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	2/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	2/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	2/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	4/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	8/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	9/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	11/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	16/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	17/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	29/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	29/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	30/04/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	2/05/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	15/05/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	21/05/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	23/05/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	23/05/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	27/05/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	28/05/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	30/05/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	4/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	10/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	11/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	11/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	14/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	17/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	20/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	21/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	24/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	24/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	25/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	28/06/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	1/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	1/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	4/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	4/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	8/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	8/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	8/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU W POND 3	West Treated Water P	12/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU N POND 1	North Treated Water P	15/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	Unknown	Sump	Other	MYARA PTU S POND 2	South Treated Water P	15/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	15/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	22/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/07/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	6/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	12/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	OEMEA-UAW1	OEMEA-UAW1	13/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	OOA-UAW3	OOA-UAW3	13/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	OOA-UAW8	OOA-UAW8	13/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	OEMEA-UAW3	OEMEA-UAW3	14/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	OEMEA-UAW4	OEMEA-UAW4	14/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	OOA-UAW1	OOA-UAW1	14/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW7	MOA-RW7	15/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	OOA-UAW2	OOA-UAW2	15/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW4	SDC-UAW4	15/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW10	SDC-UAW10	19/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW13	SDC-UAW13	19/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	AREMP	SDC-UAW2	SDC-UAW2	19/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW8	SDC-UAW8	19/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW9	SDC-UAW9	19/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	WUNGONG	BKG/Ambient Location	AREMP	WC-UAW1	WC-UAW1	19/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	WUNGONG	BKG/Ambient Location	WRMP	WGG_ST1_SO1_5	WGG_ST1_S01_5	19/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CANNING	BKG/Ambient Location	WRMP	CNG_ST1_SO1_61	CNG_ST1_S01_61	20/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CANNING	BKG/Ambient Location	WRMP	CNG_ST1_SO2_15	CNG_ST1_S02_15	20/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW8	MOA-RW-8	20/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW14	SDC-UAW14	20/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW15	SDC-UAW15	20/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNKNOWN/OTHER	Unknown	Ambient Rain Water	AREMP	RAINWATER1	Rainwater 1	21/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	AREMP	NDC-RW1	NDC-RW1	21/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	AREMP	NDC-RW2	NDC-RW2	21/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	AREMP	NDC-RW8	NDC-RW8	21/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	BKG/Ambient Location	AREMP	NDC-UAW1	NDC-UAW1	21/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	BKG/Ambient Location	AREMP	NDC-UAW2	NDC-UAW2	21/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	WRMP	NDP_ST1_SO2_8	NDP_ST1_SO2_8	21/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	22/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	AREMP	MCCOA-RW2	MCCOA-RW2	22/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	AREMP	MOA-RW10	MOA-RW10	22/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW9	MOA-RW9	22/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	OOA-UAW5	OOA-UAW5	22/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE_ST5_SO2_1	SE_ST5_S02_1	22/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE51	SE51	22/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE52	SE52	22/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	OOA-UAW10	OOA-UAW10	23/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE_ST1_SO1_22	SE_ST1_S01_22	23/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE_ST5_SO1_3	SE_ST5_S01_3	23/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	26/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW2	MOA-RW2	26/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW3	MOA-RW3	26/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW4	MOA-RW4	26/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW5	MOA-RW5	26/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW6	MOA-RW6	26/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE_ST1_SO3_1	SE_ST1_SO3_1	26/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNKNOWN/OTHER	Unknown	Ambient Rain Water	AREMP	RAINWATER2	Rainwater 2	27/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MCCOA-RW1	MCCOA-RW1	27/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	OOA-UAW4	OOA-UAW4	27/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	OOA-UAW6	OOA-UAW6	27/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	OOA-UAW9	OOA-UAW9	27/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CHURCHMANBROOK	BKG/Ambient Location	AREMP	CBC-UAW1	CBC-UAW1	28/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Rec Env: Gen Mining	AREMP	SPHC-RW1	SPHC-RW1	28/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Rec Env: Gen Mining	AREMP	SPHC-RW2	SPHC-RW2	28/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINEPIPEHEAD	Source SW Body	AREMP	SPHC-SWB1	SPHC-SWB1	28/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	WUNGONG	Source SW Body	AREMP	WC-SWB1	WC-SWB1	28/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	WUNGONG	BKG/Ambient Location	AREMP	WC-UAW2	WC-UAW2	28/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW1	SDC-UAW1	29/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW11	SDC-UAW11	29/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW12	SDC-UAW12	29/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: PFAS Source	AREMP	SDC-UAW3	SDC-UAW3	29/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW5	SDC-UAW5	29/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	SDC-UAW6	SDC-UAW6	29/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	SDC-UAW7	SDC-UAW7	29/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	SE_ST1_SO1_19	SE_ST1_S01_19	29/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	OEMEA-UAW2	OEMEA-UAW2	30/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE_ST1_SO2_31	SE_ST1_SO2_31	30/08/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	2/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW17	MOA-RW17	2/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW18	MOA-RW18	2/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDENORTHDANDALUP	Rec Env: Gen Mining	WRMP	ONDC-RW1	ONDC-RW1	2/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	AREMP	MOA-RW16	MOA-RW16	3/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	AREMP	NDC-RW3	NDC-RW3	3/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	WRMP	NDC-RW5	NDC-RW5	3/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	WRMP	NDC-RW6	NDC-RW6	3/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	WRMP	NDC-RW7	NDC-RW7	3/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Source SW Body	WRMP	NDP_ST3_SO1_1	NDP_ST3_SO1_1	3/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	NEW14	NEW14	3/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	NEW15	NEW15	3/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC3	MC3	4/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	OOA-UAW7	00A-UAW7	4/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	AREMP	DMEA-UAW1	DMEA-UAW1	4/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	NEW01	New01	4/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW1	SDDC-UAW1	4/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE_ST20_SO1_1	SE_ST20_SO1_1	4/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	SE_ST27_SO1_1	SE_ST27_SO1_1	4/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW11	MOA-RW11	5/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Mine Area	**Catchment**	**Location Purpose**	**Scope of Work**	**Location**	**Sample ID**	**Sample Date**																			
HUNTLY	SERPENTINE	Rec Env: Gen Mining	WRMP	MOA-RW12	MOA-RW12	5/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	AREMP	MOA-RW13	MOA-RW13	5/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	AREMP	MOA-RW14	MOA-RW14	5/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	AREMP	MOA-RW15	MOA-RW15	5/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC1	MC1	9/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	CONJURUNUP	Rec Env: Gen Mining	AREMP	CCPDC-RW1	CCPDC-RW1	9/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	Rec Env: Gen Mining	AREMP	DPOA-RW1	DPOA-RW1	9/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	Rec Env: Gen Mining	AREMP	DPOA-RW2	DPOA-RW2	9/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	AREMP	HMEA-UAW3	HMEA-UAW3	9/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	AREMP	HWMEA-UAW1	HWMEA-UAW1	9/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	AREMP	HWMEA-UAW2	HWMEA-UAW2	9/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	AREMP	HWMEA-UAW3	HWMEA-UAW3	9/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	AREMP	HEMEA-UAW1	HEMEA-UAW1	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	AREMP	HEMEA-UAW2	HEMEA-UAW2	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	AREMP	HMEA-UAW1	HMEA-UAW1	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTSIDESOUTHDANDALUP	BKG/Ambient Location	AREMP	HMEA-UAW2	HMEA-UAW2	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW2	SDDC-UAW2	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW3	SDDC-UAW3	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW4	SDDC-UAW4	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW5	SDDC-UAW5	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW6	SDDC-UAW6	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW7	SDDC-UAW7	10/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Rec Env: Gen Mining	AREMP	HWMEA-RW1	HWMEA-RW1	11/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	AREMP	HWMEA-SWB1	HWMEA-SWB1	11/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	AREMP	HWMEA-SWB3	HWMEA-SWB3	11/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	AREMP	HWMEA-SWB4	HWMEA-SWB4	11/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	AREMP	NDC-RW4	NDC-RW4	11/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Source SW Body	AREMP	NDC-SWB1	NDC-SWB1	11/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	OUTHDANDALUPPIPEHEAI	Rec Env: Gen Mining	AREMP	SDPDC-RW1	SDPDC-RW1	11/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	Source SW Body	AREMP	HWMEA-SWB2	HWMEA-SWB2	12/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW10	SDDC-UAW10	12/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW12	SDDC-UAW12	12/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW13	SDDC-UAW13	12/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW8	SDDC-UAW8	12/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SOUTHDANDALUP	BKG/Ambient Location	AREMP	SDDC-UAW9	SDDC-UAW9	12/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Sump	Other	MC2	MC2	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	Rec Env: Gen Mining	AREMP	MOA-RW1	MOA-RW1	16/09/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	SERPENTINE	BKG/Ambient Location	WRMP	MCCOA-UAW1	MCCOA-UAW1	1/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HUNTLY	NORTHDANDALUP	Rec Env: Gen Mining	WRMP	NDP_ST1_SO2_8	NDP_ST1_SO2_8	1/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
UNKNOWN/OTHER	Unknown	Ambient Rain Water	AREMP	RAINWATER3	Rainwater 3	3/10/2024	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ENERGETICS														GENERAL CHEMISTRY																				
2,4-Dinitrotoluene	2,4-DNT/2,6-DNT	2-Amino-4,6-Dinitrotoluene	2-Nitrotoluene	3-Nitrotoluene	4-Am-DNT/2-Am-DNT	4-Amino-2,6-Dinitrotoluene	4-Nitrotoluene	Cyclonite	Nitroglycerin	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetr	Pentaerythritol Tetranitrate	Tetryl	Dissolved Oxygen	DO %	Oxidation-Reduction Potential	pH (Field)	Specific Conductance	Temperature	Conductivity	Electrical Conductivity @ 25°C	Fluoride	Methylene Blue Active Substances	Methylene Blue Active Substances	Oil & Grease, Total Rec	pH Value	Salinity	Salinity	Total Dissolved Solids (Residue, Filterable)	Total Suspended Solids	Turbidity	2,4 Db
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	0.3	4	-113	4.4	110.2	7.7	9.8	96	< 0.1	0.01	100	1	1.77	0.04	0.09	1.29	1	-30	< 10
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	168.7	955	713.1	8.27	1801	31.8	45614	2800	< 0.1	25	1400	54	10.52	1.58	2	4200	308	90	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	9.4	84	171	6.4	223.5	16.5	1050	235	--	0.43	123	3	7.28	0.12	0.27	268.18	6	2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.7	85	164	6.4	187.3	15	238.6	207	--	0.21	100	3	7.2	0.11	0.11	250	5	1	--
116	116	116	116	116	116	116	116	116	116	116	116	116	238	263	264	272	57	351	293	267	16	1076	151	1072	1415	221	12	1287	362	359	46
0	0	0	0	0	0	0	0	0	0	0	0	0	238	263	264	272	57	351	293	267	0	874	25	471	1415	221	12	1287	84	358	0
4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	9.8%	10.9%	10.9%	11.2%	2.4%	14.5%	12.1%	11.0%	0.7%	44.3%	6.2%	44.2%	58.3%	9.1%	0.5%	53.1%	14.9%	14.8%	1.9%
																					1.5												
																					0												
													85			**6.5 - 8.5**														**600**		**5000**	
													2			*159*														*25*		*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	< 1	7.9	--	--	170	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	6.9	--	--	95	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.75	--	< 1	7.5	--	--	310	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.2	--	--	260	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.9	--	--	270	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	--	< 1	7.7	--	--	340	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	5	7.2	--	--	260	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	7	7	--	--	250	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6	--	< 1	7.3	--	--	310	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.2	--	--	270	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	--	< 1	7.7	--	--	290	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.3	--	--	280	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.6	--	--	280	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	< 1	7.2	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 1	8.1	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 1	7.7	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	9.2	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	< 1	9.5	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	9.7	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	6	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 1	7.3	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	6.8	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.2	--	< 1	8.5	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 1	7.3	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.75	--	< 1	7.4	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	< 1	7.1	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	1	7.1	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.65	--	< 1	8.1	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.85	--	< 1	7.8	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	--	2	7.5	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	< 1	7.8	--	--	200	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8	--	< 1	7.6	--	--	190	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.85	--	< 1	7.5	--	--	200	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	2	8	--	--	210	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	< 1	7.7	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.2	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	< 1	7	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8	--	< 1	7.9	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.85	--	< 1	8.1	--	--	590	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.8	--	1	8.1	--	--	550	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3	--	3	7.9	--	--	690	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.2	--	2	7.2	--	--	690	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.4	--	3	6.9	--	--	590	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	--	3	7.7	--	--	420	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	--	< 5	7.2	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.59	--	< 5	8.1	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.61	--	2	8.6	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	< 5	7.4	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	6	7.8	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	1	6.4	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	4	7.8	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.2	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.54	--	1	7.1	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.51	--	< 5	7.6	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.93	--	1	6.3	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	2	7.8	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.78	--	< 5	7.8	--	--	610	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	< 5	7.7	--	--	480	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3	--	7	7.5	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.92	--	< 1	8	--	--	580	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.77	--	< 5	8.2	--	--	540	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.87	--	1	7.5	--	--	510	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8	--	3	7.5	--	--	510	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.61	--	< 1	9.1	--	--	570	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5	--	< 1	7.7	--	--	560	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.89	--	< 1	8.9	--	--	580	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3	--	4	7.7	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7	--	6	7.8	--	--	490	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.62	--	3	7.7	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.97	--	< 1	10	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.75	--	2	8.2	--	--	520	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 1	8.2	--	--	480	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.64	--	< 5	8.9	--	--	480	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	--	1	7.4	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	2	7.7	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	3	7.5	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.34	--	< 5	7.6	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.1	--	3	8.4	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 1	8	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.49	--	4	8	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	--	5	7.5	--	--	490	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.69	--	5	7.4	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.62	--	3	7.7	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	5	7.3	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3	--	3	7.7	--	--	310	26	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	--	2	7.4	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.4	--	2	7.8	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.9	--	7	8.8	--	--	650	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.9	--	8	8.7	--	--	850	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8	--	< 1	7.9	--	--	880	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.1	--	2	8.5	--	--	1200	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.3	--	4	9	--	--	1100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3	--	3	8.1	--	--	1200	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.4	--	3	7.9	--	--	920	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3	--	1	8.3	--	--	930	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	--	3	8.3	--	--	940	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.97	--	< 1	8.2	--	--	860	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.8	--	1	8.2	--	--	860	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 2	7.9	--	--	680	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.7	--	2	7.75	--	--	900	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6	--	< 2	8.15	--	--	540	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.2	--	< 2	8.1	--	--	990	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8	--	< 2	7.05	--	--	540	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	2	7.6	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	3	7.45	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	3	8	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 2	8.15	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.75	--	3	8	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 2	8.55	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8	--	< 2	7.9	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	< 2	7.85	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	--	4	7.85	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	--	5	7.75	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 2	8.05	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	--	< 2	8.5	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.9	--	< 2	8.8	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	4	8.15	--	--	430	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	--	2	7.05	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	2	8.5	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 2	7.7	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.9	--	4	8.1	--	--	395	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	< 2	8.6	--	--	320	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	2	8.8	--	--	265	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	5	8.45	--	--	210	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5	--	< 2	6.8	--	--	275	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5	--	4	6.8	--	--	200	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7	--	< 2	6.7	--	--	210	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.6	--	< 2	7.35	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.1	--	5	8.8	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	6	--	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.8	--	3	7.75	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.8	--	5	8.8	--	--	510	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.5	--	< 2	6.8	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.2	--	< 2	8.55	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	--	4	8.1	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	2	8	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.9	--	3	7.35	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.4	--	3	7.35	--	--	300	3	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7	--	10	8.4	--	--	380	< 1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 2	8.55	--	--	310	2	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	3	7.35	--	--	300	4	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	3	7.45	--	--	240	< 1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	4	7.45	--	--	310	< 1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	2	7.45	--	--	260	< 1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 2	7.2	--	--	270	2	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	3	7.85	--	--	380	2	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	8	7.8	--	--	340	2	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	5	7.75	--	--	180	3	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	7	7.45	--	--	170	4	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	6	7.05	--	--	210	< 1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	12	6.65	--	--	310	5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	4	6.55	--	--	260	3	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	3	7.15	--	--	200	< 1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 2	7.3	--	--	270	< 1	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.38	--	< 1	7.3	--	--	260	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	--	1	7.1	--	--	240	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	1	7.6	--	--	280	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	1	7.2	--	--	230	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	10	8	--	--	270	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	< 1	8.5	--	--	250	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	1	7.2	--	--	230	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	10	8	--	--	270	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	< 1	8.5	--	--	250	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	4	7.8	--	--	220	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	4	8.1	--	--	200	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	--	< 1	7.7	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	< 1	7.7	--	--	270	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 1	8.4	--	--	220	10	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	2	8	--	--	260	6	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	12	6.8	--	--	300	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	7	7.3	--	--	260	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.38	--	9	7	--	--	270	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 1	7.3	--	--	230	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 1	7.1	--	--	190	36	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 1	7.8	--	--	230	7	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	2	7.5	--	--	210	7	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	< 1	7.4	--	--	670	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	< 1	7.5	--	--	330	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	< 5	7.9	--	--	270	7	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	54	7.9	--	--	240	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.27	--	3	8	--	--	260	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.27	--	6	8.2	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.64	--	15	8.4	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	--	15	7.9	--	--	200	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.42	--	< 5	8	--	--	220	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.56	--	3.5	8.1	--	--	290	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.51	--	2	8	--	--	430	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	4	8.3	--	--	390	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	--	4	8	--	--	410	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.29	--	4.6	8	--	--	420	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	2	8.3	--	--	480	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 1	8.1	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.53	--	1	7.9	--	--	490	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.87	--	< 1	8	--	--	450	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.66	--	< 1	8	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.54	--	2	7.5	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47	--	3	7.9	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.63	--	< 1	8.1	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.34	--	< 1	7.6	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	1	6.6	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	2	7.3	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.52	--	2.8	7.9	--	--	330	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.34	--	4.2	7.6	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.84	--	< 1	7.7	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	< 5	8.7	--	--	560	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.9	--	< 5	8.7	--	--	556	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.2	--	1	7.7	--	--	580	< 5	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.82	--	2	8.6	--	--	550	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5	--	6	7.8	--	--	480	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3	--	< 5	7.8	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8	--	6	7.5	--	--	536	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.88	--	5	7.5	--	--	560	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3	--	9	7.8	--	--	474	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.88	--	5.4	7.8	--	--	418	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.9	--	5.2	7.7	--	--	436	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.51	--	4	8	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8	--	< 5	7.7	--	--	550	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.34	--	4.8	7.7	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	4.5	7.9	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 1	7.4	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	3	7.6	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	< 1	7	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	< 1	7.6	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	8	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	3	7.5	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 1	7.5	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	< 1	7.4	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 1	7.4	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	4	7.3	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	7.4	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 1	7.2	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	< 1	8.1	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	< 1	7.4	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	< 1	7.4	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	3	7.9	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.63	--	< 1	7.7	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	3	7.9	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	4.4	7.9	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.53	--	3	7.6	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.42	--	< 1	7.6	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 1	7.8	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	1	7.8	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 1	7.6	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	< 1	7.8	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47	--	< 1	7.8	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 1	7.5	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	< 1	7.8	--	--	312	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.77	--	< 1	8.1	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	< 1	8.1	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.61	--	2	8	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5	--	3	8	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	8.1	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	1	9	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	< 1	8.8	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	< 1	7.6	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47	--	< 1	8	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.53	--	< 1	7.6	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	< 1	7.6	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	--	< 1	7.8	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	1	7.2	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	2	7.5	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.34	--	< 1	8	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	--	< 1	7.6	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	< 1	7.4	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 1	7.9	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	1	7.9	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	< 1	8	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.77	--	< 1	7.8	--	--	430	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.63	--	< 1	8	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 1	6.9	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	--	< 1	7	--	--	200	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.66	--	3	7.8	--	--	540	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	< 1	8.1	--	--	530	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	1	8.3	--	--	536	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32	--	< 1	7.3	--	--	93	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	< 1	8.1	--	--	550	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	< 1	8.3	--	--	480	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.53	--	< 1	7.7	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.54	--	< 1	7.9	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	< 1	7.7	--	--	390	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	1	7.9	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	< 1	7.9	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	< 1	8.2	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	< 1	8.1	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	3	8	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 1	8	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	< 1	7.8	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	< 1	7.1	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	2	7.8	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	1	7.8	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	< 1	7.7	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	1	7.8	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	< 1	7.9	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 1	8.4	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	< 1	7.9	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	2	8.3	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	2	7.6	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.74	--	2	7.9	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	2	7.9	--	--	450	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.4	--	2	8.1	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	--	< 1	8.2	--	--	580	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.59	--	1	8.2	--	--	580	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6	--	< 1	8.2	--	--	640	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.68	--	1	8.2	--	--	540	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3	--	3	9	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	3	9.7	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	--	2	9.3	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	< 1	8.2	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	< 1	8.7	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.52	--	1	8.8	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.53	--	< 1	9.2	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.61	--	< 1	8.5	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.72	--	< 1	8.5	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 1	7.7	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	< 1	7.8	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8	--	1	7.4	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	< 1	8	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	--	< 1	8	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	7.7	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.54	--	< 1	7.9	--	--	210	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.64	--	1	7.6	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.6	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.61	--	< 1	7.5	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.56	--	< 1	8.8	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.8	--	3	8	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.99	--	< 1	7.8	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.2	--	2	8	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3	--	< 1	8.1	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6	--	< 1	8	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.2	--	1	7.9	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	7.9	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.92	--	1	7.7	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	--	2	7.7	--	--	450	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	1	7.7	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47	--	< 1	7.8	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	< 1	7.5	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	2	7.7	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	< 1	7.6	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	< 1	7.6	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47	--	1	7.5	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	--	1	7.5	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	--	2	7.4	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	--	2	7.4	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.44	--	3	7.5	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.58	--	3	7.4	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.27	--	2	7.7	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	2	7.4	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	2	7.3	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	3	7.5	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	1	7.4	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.2	--	< 1	7.6	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.51	--	< 1	7.7	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	1	7.8	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	< 1	7.7	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	< 1	7.6	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.64	--	1	7.7	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.63	--	1	7.3	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.47	--	< 1	7.7	--	--	380	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.49	--	< 1	7.8	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25	--	< 1	7.7	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.59	--	< 1	7.7	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.9	--	< 1	7.4	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 1	7.3	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.81	--	< 1	7.6	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.51	--	< 1	7.5	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	--	< 1	7.7	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.8	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	2	7.5	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 1	7.7	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.63	--	1	7.7	--	--	450	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	1	8.5	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	8.1	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	8.1	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.9	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.9	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.7	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	< 1	7.6	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	8	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.9	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	< 1	7.9	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	8.8	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.8	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	< 1	7.7	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	7.5	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	8.8	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	8.6	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.9	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	7.3	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.3	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.2	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.5	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.38	--	2	7.4	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.3	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.3	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	6.9	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	3	7.2	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2	7.3	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	1	7.5	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	1	7.5	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.1	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	7.1	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.5	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2	7.7	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2	7	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	2	7.2	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2	7.1	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	5	7.2	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	3	7.4	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	3	7.1	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	3	7.3	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	7.2	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	6.9	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	6.9	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	3	7.2	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2	7	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	3	7.4	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	3	7.4	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	3	7.1	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.2	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.3	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.5	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	4	7.1	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2	7.3	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2	7.4	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2	7.3	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	7	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	6.9	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	6.6	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	6.7	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	6.9	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	< 1	7.3	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	6.8	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	6.6	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	6.3	--	--	290	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	6.3	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	4	6.4	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 1	6.6	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	6.5	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	6.5	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	--	2	6.3	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 1	6.2	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	1	6.3	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	< 1	6.5	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	7	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 1	7	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	3	7.1	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 1	7	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.42	--	2	7	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	2	7.2	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.41	--	2	7.4	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 1	7.3	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 1	7.3	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.38	--	< 1	7.5	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.62	--	< 1	7.4	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	< 1	7.4	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	1	7.2	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.73	--	2	7.1	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	--	< 1	7.3	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	1	7.4	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	2	7.1	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	< 1	6.9	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.84	--	< 1	7.1	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.82	--	3	7.2	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.7	--	3	7.3	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.52	--	4.9	7.4	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.52	--	< 1	7.5	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	3	7.1	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	< 1	7.2	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	2	6.9	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	2	7.7	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	1	7	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	1	6.9	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	1	7	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	1	7	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 1	7	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32	--	3	6.8	--	--	210	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32	--	< 1	7.2	--	--	200	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	< 1	7	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.44	--	< 1	7.1	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.41	--	< 1	7.1	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	2	7.1	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	7.1	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	7.4	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 1	7.3	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 1	7.1	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	1	7.2	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	2	7.2	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	6.9	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	< 1	7	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	< 1	7	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.62	--	4	7.1	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	2	7.2	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	2	7.3	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	2	8.1	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.05	--	< 1	7.2	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.51	--	4	7.4	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.49	--	2	7.4	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	2	8	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	3	7.7	--	--	450	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.54	--	3	7.4	--	--	430	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25.7	1423	--	--	--	--	--	1.77	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25.4	1587	--	--	--	--	--	9.47	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24.5	826	--	--	--	--	--	8.23	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26.5	649	--	--	--	--	--	8.12	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.1	1033	--	--	--	--	--	7.81	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.8	657	--	--	--	--	--	9.71	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27.8	3172	--	--	--	--	--	9.01	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25.7	4272	--	--	--	--	--	9.15	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.5	1120	--	--	--	--	--	8	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.1	1813	--	--	--	--	--	8.28	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22	2285	--	--	--	--	--	8.53	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24.3	1594	--	--	--	--	--	7.53	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.7	911	--	--	--	--	--	8.45	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.7	1234	--	--	--	--	--	8.1	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.3	2613	--	--	--	--	--	7.72	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.2	45614	--	--	--	--	--	8.84	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.7	1831	--	--	--	--	--	7.45	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.8	876	--	--	--	--	--	7.87	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18.5	2957	--	--	--	--	--	8.04	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.9	20830	--	--	--	--	--	8.48	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.7	41392	--	--	--	--	--	8.33	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24.7	1400	--	--	--	--	--	9.48	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28.2	3043	--	--	--	--	--	8.02	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.9	638	--	--	--	--	--	7.8	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.3	1250	--	--	--	--	--	8.71	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.9	638	--	--	--	--	--	7.8	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26	516	--	--	--	--	--	8.43	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.4	814	--	--	--	--	--	8.79	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.1	858	--	--	--	--	--	7.64	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.3	604	--	--	--	--	--	7.99	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	31.4	26420	--	--	--	--	--	7.26	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.6	15821	--	--	--	--	--	8.89	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.5	1020	--	--	--	--	--	8.72	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.2	592	--	--	--	--	--	7.44	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.2	303.9	--	--	--	--	--	7.86	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.6	2385	--	--	--	--	--	8.04	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.5	1610	--	--	--	--	--	9.25	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.8	1269	--	--	--	--	--	7.87	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.63	--	4.6	7.3	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.4	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	3	7.4	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.54	--	3	7.5	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14.5	1514	--	--	--	--	--	7.06	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	3	7.4	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	--	4	7.3	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	3	7.1	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	2	7	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	2	7.2	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	< 1	7.1	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	< 1	7.1	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 1	7	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 1	7	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	< 1	7.1	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 1	6.9	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 1	6.9	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 1	6.7	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	< 1	7.1	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.38	--	1	6.9	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67	--	< 1	7.2	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	< 1	6.8	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	< 1	7.2	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	< 1	7.1	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	1	6.8	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 1	6.9	--	--	210	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	< 1	7.2	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 1	7.2	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	1	7.4	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 1	7.6	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.1	1902	--	--	--	--	--	7.25	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	1845	--	--	--	--	--	8.29	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.1	1205	--	--	--	--	--	7.64	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	1114	--	--	--	--	--	8.34	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.4	555	--	--	--	--	--	8	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	426	--	--	--	--	--	7.24	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.2	825	--	--	--	--	--	7.59	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.2	602	--	--	--	--	--	7.94	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.6	584	--	--	--	--	--	8.44	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	1227	--	--	--	--	--	8.08	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.7	1061	--	--	--	--	--	8.81	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24.7	1116	--	--	--	--	--	6.97	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.8	1105	--	--	--	--	--	7.32	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.5	126	--	--	--	--	--	6.83	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18.3	511	--	--	--	--	--	7.58	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.3	418	--	--	--	--	--	7.64	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.3	1148	--	--	--	--	--	7.52	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18.9	5720	--	--	--	--	--	8.82	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.9	915	--	--	--	--	--	8.25	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.1	517	--	--	--	--	--	8.72	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.7	1542	--	--	--	--	--	8.42	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.3	1001	--	--	--	--	--	9.28	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.6	2794	--	--	--	--	--	8.63	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.5	1217	--	--	--	--	--	8.37	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.5	1320	--	--	--	--	--	7.67	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.3	596	--	--	--	--	--	7.51	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.8	883	--	--	--	--	--	8.35	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.8	847	--	--	--	--	--	8.05	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.1	798	--	--	--	--	--	7.71	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24.2	935	--	--	--	--	--	9.2	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	22.3	386	--	--	--	--	--	10.52	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.1	830	--	--	--	--	--	7.74	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21.3	592	--	--	--	--	--	8.19	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25.9	1230	--	--	--	--	--	8.39	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28.2	533	--	--	--	--	--	7.91	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.9	799	--	--	--	--	--	7.57	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.8	3049	--	--	--	--	--	8.89	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.5	15032	--	--	--	--	--	8.98	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.6	1086	--	--	--	--	--	8.59	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.6	478	--	--	--	--	--	7.93	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	386	--	--	--	--	--	8.22	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.3	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	< 1	7.2	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	2	7.2	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	1	7.1	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	3	7.1	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	2	7.3	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.29	--	3	7.3	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 1	6.9	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	3	7.4	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	4	7.1	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	3	7.6	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	2	7.7	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.56	--	4.8	7.8	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.43	--	1	7.4	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.62	--	17	7.4	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.61	--	4	7.3	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	3	7.4	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	3	7.1	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	3	7.1	--	--	450	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.99	--	4	7.2	--	--	490	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	2	7.1	--	--	10	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	5	7	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.27	--	3	6.8	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.58	--	3	7.2	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	2	6.9	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	--	3	7.1	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	3	6.9	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	--	4	7.5	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	2	7.3	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	2	7	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	2	7.1	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	6.17	58.3	109.4	6.6	--	12.8	147.6	136	--	--	< 100	--	6.95	0.05	--	--	< 5	1	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	6.48	58.7	85.2	6.22	--	11.2	121.7	109	--	--	< 100	--	6.54	0.04	--	--	< 5	1.1	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	8.14	77.7	92.1	6.42	--	12	128.3	115	--	--	< 100	--	6.84	0.04	--	--	< 5	2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	6.66	63.4	112.5	6.69	--	13.1	146.1	133	--	--	< 100	--	6.95	0.05	--	--	< 5	0.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	3	7	--	--	230	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	1	7.6	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	2	7.2	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	3	7.1	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	6	7.4	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	2	7.3	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	4	7.4	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	3	7.2	--	--	210	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	3	7.1	--	--	220	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.71	78.5	178.8	5.62	--	15.4	175.9	162	--	--	< 100	--	6.39	0.09	--	--	< 5	2.3	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	8.89	85.1	220	5.8	--	12.4	212.3	193	--	--	< 100	--	6.77	0.1	--	--	< 5	0.8	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.51	71.5	211.2	5.79	--	12.2	216.1	197	--	--	< 100	--	6.67	0.11	--	--	< 5	0.8	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.83	97.8	178.2	6.63	--	14.2	238.3	218	--	--	< 100	--	6.98	0.12	--	--	< 5	0.6	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.75	95.6	151.7	5.88	--	13.6	237.7	218	--	--	< 100	--	6.65	0.12	--	--	< 5	0.5	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.38	100	175	6.71	--	17.2	257	239	--	--	< 100	--	6.96	0.13	--	--	< 5	0.9	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.91	77.4	208.6	5.47	--	13.4	239.7	219	--	--	< 100	--	6.53	0.12	--	--	< 5	0.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	6.18	63.4	194.8	5.67	--	15.5	284.6	263	--	--	< 100	--	6.59	0.14	--	--	6	0.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	--	--	--	--	--	--	240	--	--	< 100	--	6.68	0.13	--	--	< 5	0.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.05	76.6	240.7	5.13	--	12.2	261.1	--	--	--	--	--	--	--	--	--	--	-0.6	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	5.22	99.2	186.2	5.81	--	12	176.4	164	--	--	< 100	--	6.69	0.09	--	--	< 5	0.3	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.18	93	147.6	6.43	--	15	188.5	176	--	--	< 100	--	7.05	0.09	--	--	< 5	1.7	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.22	98	153.4	6.37	--	17.3	265.8	254	--	--	< 100	--	6.79	0.14	--	--	< 5	1.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.5	97.9	135.5	6.35	--	15.9	205	192	--	--	< 100	--	6.96	0.1	--	--	< 5	0.3	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	8.9	84.1	185.2	6.18	--	12.1	236.1	220	--	--	< 100	--	6.8	0.12	--	--	< 5	0.4	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.77	77.4	187.2	5.8	--	11.7	174.2	163	--	--	< 100	--	6.46	0.09	--	--	< 5	1.5	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.38	92.8	194.5	5.53	--	14.2	322.5	305	--	--	< 100	--	6.68	0.16	--	--	< 5	0.3	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.04	68.8	193.1	5.52	--	13.2	239.9	228	--	--	< 100	--	6.44	0.12	--	--	< 5	0.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.74	94.4	132.3	6.28	--	13.2	285	266	--	--	< 100	--	6.82	0.14	--	--	< 5	0.7	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.91	99.4	174.9	6.54	--	14.8	238.6	222	--	--	< 100	--	6.97	0.12	--	--	< 5	0.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	10.04	102.4	145.4	6.42	--	15.1	197.6	186	--	--	< 100	--	7.14	0.1	0.09	--	< 5	4.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	8.59	83.7	151	6.02	--	13	202.9	190	--	--	< 100	--	6.86	0.1	0.1	--	< 5	1.7	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	12.22	126.3	119.4	6.87	--	14.4	191.1	187	--	--	< 100	--	7.28	0.1	0.09	--	21	19.3	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	5.14	54.1	143.3	5.81	--	16.5	182.9	176	--	--	< 100	--	6.5	0.09	2	--	< 5	1.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	5.17	50.1	178.3	5.57	--	13.1	384.4	368	--	--	< 100	--	6.63	0.2	0.18	--	< 5	1	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.19	99.3	160.9	6.15	--	17.5	214.7	204	--	--	< 100	--	6.89	0.11	0.1	--	< 5	2.1	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	2.63	27.6	189.6	5.71	--	16.2	312.7	295	--	--	< 100	--	6.72	0.16	0.15	--	< 5	0.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	3.9	42.6	148.7	5.95	--	18.2	212.2	194	--	--	< 100	--	6.83	0.1	0.1	--	< 5	0.4	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.21	90.6	168.3	5.97	--	13.4	193.9	183	--	--	< 100	--	6.98	0.1	0.09	--	< 5	5.3	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	4.44	47.3	167.7	6.01	--	16.7	322.3	306	--	--	< 100	--	6.79	0.16	0.15	--	< 5	0.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	1	7.2	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	3.93	43.9	218.6	5.56	--	19.6	344.5	292	--	--	< 100	--	6.68	0.16	--	--	< 5	1.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.06	89.1	91.5	6.06	--	25.7	236.3	217	--	--	< 100	--	6.92	0.14	--	--	< 5	4.6	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.37	88.3	182.1	5.86	--	23.1	587	641	--	--	< 100	--	6.2	0.35	--	--	< 5	4	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	6.86	77.7	175.1	5.53	--	20.3	216.8	197	--	--	< 100	--	6.29	0.11	--	--	< 5	2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	8.7	115.2	203.6	6.34	--	28.7	268.6	225	--	--	< 100	--	7.01	0.12	--	--	< 5	0.5	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.69	76.8	211.5	5.69	--	14.2	252.6	233	--	--	< 100	--	6.65	0.12	--	--	< 5	0.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	--	--	--	--	--	--	259	--	--	< 100	--	6.6	0.14	--	--	< 5	0.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4.92	48.6	227.3	5.43	--	13.8	282.7	--	--	--	--	--	--	--	--	--	--	-21.6	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	--	--	--	--	--	--	348	--	--	< 100	--	6.31	0.19	--	--	< 5	1.4	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	--	--	--	--	--	--	284	--	--	< 100	--	7.01	0.15	--	--	< 5	0.4	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	5.3	53	184.1	5.96	--	14.4	277.4	252	--	--	< 100	--	6.89	0.13	--	--	< 5	1.6	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.1	92.7	159.5	5.83	--	15.2	316.3	292	--	--	< 100	--	6.61	0.16	--	--	8	2.3	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	4.92	58.7	170.3	5.73	--	22.2	316.9	290	--	--	< 100	--	6.54	0.15	--	--	< 5	0.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.37	105.3	145.1	5.75	--	25.7	380.9	--	--	--	--	--	--	--	--	--	--	-29.2	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	7.34	75.9	119.6	5.94	--	15.8	337.4	315	--	--	< 100	--	6.91	0.17	--	--	< 5	1.9	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	4	6.9	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	1	6.9	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.01	107.8	134.4	6.63	--	26	230.7	201	--	--	--	--	7.14	0.11	0.11	--	25	22.9	--
< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	9.8	138.6	130.5	6.91	--	31.8	268.3	232	--	--	< 100	--	7.01	0.12	0.13	--	< 5	2.7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 100	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.98	11.5	178.8	6.78	--	19.3	310.7	--	--	--	--	--	--	--	--	--	--	-30	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	3	6.8	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.51	--	23.8	327	299	--	--	--	--	6.75	0.14	--	--	< 5	7.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.64	--	25.5	262	244	--	--	--	--	7.19	0.11	--	--	< 5	2.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.9	--	19.5	2790	2800	--	--	--	--	6.81	1.58	--	--	< 5	5.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.23	--	22.7	208	203	--	--	--	--	7.09	0.09	--	--	< 5	1.9	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.1	--	13.8	272	266	--	--	--	--	7.08	0.13	--	--	< 5	0.8	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.68	--	14.1	302	288	--	--	--	--	6.75	0.14	--	--	< 5	0.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.4	--	14.2	336	329	--	--	--	--	6.68	0.16	--	--	< 5	0.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.64	--	--	41	400	--	--	--	--	6.65	0.2	--	--	< 5	1.7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.4	--	--	149	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	2	7.3	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	263	--	--	--	--	6.6	0.14	--	--	< 5	< 0.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.6	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.5	--	--	100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	--	6	7.5	--	--	450	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.31	--	--	124	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	--	6	7.5	--	--	450	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.91	--	--	133	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	6.62	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	7	7.4	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	7	7.3	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.16	--	--	122	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.16	--	--	133	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	6.3	--	--	148	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.34	--	9	7.9	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	7	7.9	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	10	7.9	--	--	480	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	6.23	--	--	136	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.24	--	--	141	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	12	7.3	--	--	510	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.24	--	--	152	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.24	--	--	134	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.28	--	--	119	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	19	8.3	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.05	--	10	7.4	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	--	13	7.3	--	--	500	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	--	19	7.3	--	--	490	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	12	7.3	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	174	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 5	7.89	--	--	276	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	6.85	--	--	88	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	< 5	7.37	--	--	435	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	< 5	7.27	--	--	422	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 5	7.34	--	--	341	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.28	--	--	126	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.27	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.2	--	--	144	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	--	4.9	7.8	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.2	--	--	141	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32	--	4.9	7.9	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.15	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.36	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.36	--	--	138	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.74	--	22	7	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.35	--	--	148	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35	--	4.6	7.9	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.9	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	< 5	7.6	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	--	6	7.6	--	--	289	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	< 5	7.5	--	--	306	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.38	--	6.5	7.8	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.4	--	--	138	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.4	--	--	133	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.48	--	--	146	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32	--	3.3	7.6	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.31	--	2.7	7.8	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.29	--	7.4	7.8	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	< 5	7.2	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	< 1	7	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.3	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	94.2	176.7	6.58	--	15.4	159	146	--	--	100	--	6.76	0.08	--	--	2	2.4	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	84.7	217	5.57	--	15.4	289	270	--	--	< 100	--	6.19	0.14	--	--	19	1.6	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	44.2	182	6.19	--	13.9	202	190	--	--	< 100	--	6.64	0.1	--	--	4	3.2	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	95.6	156	6.51	--	14.1	191.9	179	--	--	< 100	--	6.5	0.1	--	--	< 1	0.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.1	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	85.2	231	5.38	--	14.3	213.8	197	--	--	200	--	6.34	0.11	--	--	< 1	1	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	--	--	--	--	--	--	165	--	--	< 100	--	6.61	0.09	--	--	4	1.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.3	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	95.7	164.8	6.61	--	15	248.7	137	--	--	< 100	--	6.93	0.07	--	--	< 1	2.4	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	83.4	178.9	6.26	--	12.3	151	136	--	--	200	--	6.8	0.07	--	--	< 1	2.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.2	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	82.3	167.4	6.51	--	10.5	149.5	140	--	--	< 100	--	6.76	0.08	--	--	< 1	0.7	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	93.8	200.8	6.53	--	10.2	238.1	171	--	--	< 100	--	6.93	0.09	--	--	< 1	1.4	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	90.1	179.5	6.4	--	12.3	219.7	211	--	--	100	--	5.84	0.11	--	--	< 1	1.2	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	101.3	149.8	6.6	--	10.6	168.2	159	--	--	< 100	--	6.93	0.09	--	--	4	1.2	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	99	175	6.61	--	11.8	187.3	176	--	--	< 100	--	6.85	0.09	--	--	< 1	0.7	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	93.8	200.8	6.53	--	10.2	238	224	--	--	< 100	--	6.79	0.12	--	--	< 1	1.5	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	101.1	161.4	6.71	--	11.4	198	187	--	--	< 100	--	6.97	0.1	--	--	< 1	1.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	1.3	7.3	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	97.2	146.5	6.66	--	13.5	256	240	--	--	200	--	6.95	0.13	--	--	13	4.2	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	92	171.5	6.14	--	11.9	166.9	157	--	--	200	--	6.81	0.08	--	--	< 1	1.1	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	98.3	144.3	6.16	--	16	109.7	189	--	--	300	--	6.56	0.1	--	--	< 1	0.2	--
< 1	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 5	< 1	--	106.2	161.6	6.79	--	16.8	230	216	--	--	100	--	7.12	0.12	--	--	3	0.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	0.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	< 5	7	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	7.2	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.8	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	< 5	7.1	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1.6	7.1	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.32	80.7	222.6	7.47	--	13.9	223.4	221	--	--	< 100	--	6.78	0.12	--	145	< 1	1.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.37	88.9	233.6	7.63	--	13	202.4	199	--	--	< 100	--	6.95	0.11	--	132	< 1	1.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9	85.3	257.7	7.25	--	12.9	157.4	154	--	--	< 100	--	6.49	0.08	--	102	2	2.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.05	89.8	228.8	6.79	--	15	282.9	284	--	--	< 100	--	6.38	0.15	--	184	2	1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.02	89.7	236.1	6.78	--	15.2	193.2	191	--	--	< 100	--	6.43	0.1	--	126	< 1	0.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.91	78.4	233.8	5.49	--	14.9	259.7	201	--	--	< 100	--	6.38	0.11	--	169	< 1	0.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.39	93.9	231.6	5.64	--	15.3	274.1	176	--	--	< 100	--	6.69	0.09	--	177	< 1	0.7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.81	95.4	252.6	7.88	--	14.1	201.8	198	--	--	100	--	7.05	0.11	--	131	< 1	1.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.51	96.4	196.2	7.8	--	21.5	171.2	169	--	--	< 100	--	7.02	0.09	--	111	6	4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.95	90.7	276	7.79	--	11.3	206.8	208	--	--	< 100	--	6.97	0.11	--	134	1	2.8	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.06	93.4	261.9	7.85	--	12	185.2	183	--	--	< 100	--	7.02	0.1	--	120	< 1	0.7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.52	88.9	262	7.77	--	12.2	235.2	237	--	--	< 100	--	6.94	0.13	--	153	< 1	1.7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.25	92.8	136.4	7.91	--	15.5	234.2	235	--	--	< 100	--	7.02	0.13	--	152	2	1.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.62	97.8	178	7.86	--	16.2	207.3	206	--	--	< 100	--	6.99	0.11	--	135	< 1	0.9	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.59	95.6	156.3	8.05	--	20.6	234.3	229	--	--	< 100	--	7.04	0.12	--	152	< 1	1.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	163	--	--	< 100	--	7.14	0.09	--	--	41	15	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.85	98.4	223.3	8.27	--	15.4	166	--	--	--	--	--	--	--	--	108	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	162	--	--	< 100	--	6.92	0.09	--	--	308	90	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.36	102.6	169	7.96	--	14.8	163.5	--	--	--	--	--	--	--	--	106	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	229	--	--	< 100	--	6.89	0.12	--	--	7	5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.33	73.9	209.9	7.51	--	12.8	231.1	--	--	--	--	--	--	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	67.9	68.5	179	7.52	--	18.8	254.7	--	--	--	--	--	--	--	--	166	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	252	--	--	< 100	--	7.01	0.13	--	--	3	2.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	253	--	--	< 100	--	7.14	0.13	--	--	2	1.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	6.55	67.5	200.9	7.79	--	16.8	259.2	--	--	--	--	--	--	--	--	168	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	< 1	7.2	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	5.88	53	208	7.4	--	12.1	171.5	165	--	--	< 100	--	6.77	0.09	--	111	< 1	1.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.88	8.13	215.6	7.8	--	11.5	254.1	250	--	--	< 100	--	6.95	0.13	--	165	6	2.7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.24	83	233.1	7.76	--	10.4	208.1	207	--	--	< 100	--	6.81	0.11	--	135	< 1	1.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.85	85.6	241.3	7.84	--	13.9	134.5	174	--	--	< 100	--	7.05	0.09	--	87	4	5.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	176	--	--	< 100	--	7.11	0.09	--	--	< 1	2.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.14	97.8	210.5	8	--	18.6	174.5	--	--	--	--	--	--	--	--	113	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	168	--	--	< 100	--	6.91	0.09	--	--	< 1	0.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.34	83.7	245.6	7.98	--	10.4	174.3	171	--	--	< 100	--	7.15	0.09	--	113	< 1	7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1.9	6.8	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.3	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	< 5	7.3	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.2	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	1.2	7	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	< 5	6.9	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	2.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	2.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	2.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	6.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	6.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	0.8	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.11	88.6	365	6.32	--	18	209	240	--	--	< 100	--	7.08	0.13	--	158	< 1	0.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.61	87.3	344	6.62	--	20.4	213	228	--	--	200	--	7.51	0.12	--	152	1	4.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.52	85.4	325.3	6.85	--	19.9	583	655	--	--	< 100	--	7.06	0.36	--	419	1	3.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.72	90.1	293.5	7.33	--	20.9	314	334	--	--	< 100	--	7.06	0.18	--	220	7	2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	61.09	61.8	423	5.64	--	14.7	185	199	--	--	100	--	6.87	0.11	--	150	10	2.8	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.57	93.7	359	6	--	18.2	240.9	272	--	--	< 100	--	6.7	0.15	--	180	< 1	0.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.53	102	304	7.61	--	22.3	219	222	--	--	< 100	--	6.73	0.12	--	150	< 1	0.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.06	78	331.3	6.87	--	18.3	215.7	237	--	--	< 100	--	6.93	0.13	--	152	< 1	1.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	3.44	37.1	384.4	5.55	--	17.4	243	267	--	--	200	--	6.88	0.14	--	186	< 1	0.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.18	104.6	319	7.74	--	26	277	264	--	--	< 100	--	6.95	0.14	--	177	< 1	0.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	2.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.8	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.5	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.06	82.2	387.5	6.1	--	15	118.2	140	--	--	< 100	--	6.84	0.07	--	95	< 1	3.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.55	99.8	323.9	6.6	--	16.1	154.1	179	--	--	100	--	7.04	0.09	--	121	1	2.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.34	101.1	293.8	7.04	--	17.8	144.7	164	--	--	< 100	--	7.1	0.08	--	109	< 1	1.7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.32	94.7	310	6.96	--	14.8	212.4	250	--	--	< 100	--	6.96	0.12	--	171	< 1	1.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	2.3	7	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	1.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.74	79.6	321.9	6.1	--	15.4	175.8	203	--	--	< 100	--	6.65	0.1	--	140	< 1	0.3	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	250	--	--	< 100	--	6.9	0.12	--	--	< 1	0.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.05	--	< 5	7.2	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	7.1	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	2.1	6.7	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	3.3	6.9	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	1	7	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	6	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	2.6	7	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	< 5	7.7	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.5	--	--	142	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.42	--	6.2	6.9	--	--	580	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	2.3	7.2	--	--	560	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.5	--	--	142	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	6.3	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	3.2	7	--	--	550	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	6.3	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	7.3	7	--	--	560	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	--	7.9	7.1	--	--	610	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	2.9	7.2	--	--	430	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	< 5	6.4	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 10	7.1	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	< 10	7.1	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	7.4	7.1	--	--	530	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	7.6	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	< 5	7.5	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	--	4.8	7.1	--	--	580	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.7	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.7	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	1.6	6.6	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	1.3	6.8	--	--	340	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.1	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.1	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	2.2	7.2	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.4	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.4	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.41	--	3.4	6.4	--	--	530	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	5.55	66.3	72.2	6.31	1801	24	--	1630	--	--	--	--	6.94	0.82	--	1171	6	16	--
--	--	--	--	--	--	--	--	--	--	--	--	--	5.82	62.2	126.6	6.2	308.1	18.5	--	276	--	--	--	--	6.86	0.13	--	200	< 5	0.8	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.73	93.3	84.9	5.94	298.1	18.5	--	269	--	--	--	--	6.64	0.13	--	194	< 5	0.2	--
--	--	--	--	--	--	--	--	--	--	--	--	--	2.31	25.4	21.9	6.03	367.2	20	--	266	--	--	--	--	6.81	0.12	--	264	< 5	2.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 5	7.2	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 5	7.2	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 5	7.2	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	1.2	6.7	--	--	550	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	< 5	7.8	--	--	94	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.7	--	--	110	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.7	--	--	110	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	1.4	7	--	--	540	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.2	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.2	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	2	9.4	--	--	590	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.3	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.3	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.3	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.3	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	2.3	7.9	--	--	590	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	7.8	--	--	95	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	7.8	--	--	95	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 5	6.6	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 5	6.6	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	3.8	7.8	--	--	610	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	3.6	7.7	--	--	610	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.4	--	--	110	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	< 5	6.4	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	< 5	6.4	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	< 5	6.7	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2.5	7.4	--	--	600	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	< 5	6.6	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	< 5	6.6	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	< 5	6.6	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.8	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.8	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.8	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 5	6.7	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	< 5	7	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	< 5	7	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	--	2.6	7.3	--	--	760	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.5	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.5	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.5	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.2	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.45	--	5.5	7.4	--	--	580	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	< 5	6.2	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	6.5	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.42	--	4.7	7.2	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	< 5	6.6	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	< 5	6.4	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	--	2.2	7	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	--	4.5	7.7	--	--	490	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	14.2	7.2	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	< 5	6.4	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	6.2	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	< 5	6.7	--	--	190	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	< 5	6.7	--	--	190	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.27	--	3.1	7.4	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.4	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	3.6	7.1	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	< 5	6.4	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	2.4	7.2	--	--	350	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.12	95.2	102.1	6.75	--	17.3	164	--	< 0.1	--	--	--	--	--	--	--	106.6	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.27	72.9	98.6	6.51	--	15.5	139.7	--	< 0.1	--	--	--	--	--	--	--	91	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.01	71.7	113.6	6.53	--	16.2	63.4	--	< 0.1	--	--	--	--	--	--	--	41	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.81	80.3	125	6.62	--	16.5	49.9	--	< 0.1	--	--	--	--	--	--	--	32.5	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.01	77.5	168.2	5.7	--	13.8	213.6	--	< 0.1	--	--	--	--	--	--	--	139.1	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.02	67.9	143.7	6.31	--	14.5	9.8	--	< 0.1	--	--	--	--	--	--	--	6.5	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	6.54	71.9	161.9	6.76	--	19.6	71.4	--	< 0.1	--	--	--	--	--	--	--	46.2	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.45	85.3	207.1	6.12	--	15.6	164.4	--	< 0.1	--	--	--	--	--	--	--	100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.06	67.7	222.3	6.1	--	13.3	330.2	--	--	--	--	--	--	--	--	--	214.5	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4.42	45.7	214.9	6.76	--	16.9	171.9	--	< 0.1	--	--	--	--	--	--	--	111.8	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	6.24	70.4	147.6	7.35	--	21.2	51.9	--	< 0.1	--	--	--	--	--	--	--	33.8	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 5	8	--	--	130	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	1.9	7.3	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	4.6	7.3	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	< 5	6.2	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 5	6.4	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	< 5	6.4	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	6.9	--	--	390	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 5	6.3	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 5	6.7	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.27	--	1.3	6.9	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	7.5	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	1.5	6.9	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	96	--	--	--	--	6.71	0.04	--	--	< 5	7.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	--	--	--	--	6.68	0.04	--	--	< 5	7.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	1.4	6.9	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	< 5	7.6	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	< 5	7.6	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	2.6	6.9	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	< 5	6.3	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 5	6.4	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	< 1	6.9	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 5	6.4	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	< 5	6.7	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	< 5	6.7	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	3.2	6.9	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	--	1.7	6.8	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	< 5	8.1	--	--	110	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	5.26	49.6	-44.1	6.22	--	12.6	240.5	--	< 0.1	--	--	--	--	--	--	156.3	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4.47	41.8	-51.3	6.3	--	12.3	143.1	--	< 0.1	--	--	--	--	--	--	93	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	6.5	60.2	-52.5	6.92	--	11.9	89.4	--	< 0.1	--	--	--	--	--	--	58.1	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	5.44	51.3	-51.9	5.85	--	12.7	209.8	--	< 0.1	--	--	--	--	--	--	136.4	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	1.3	7	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	< 5	6.7	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	2.3	7.2	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	< 5	6.7	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	< 5	6.4	--	--	100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	3.7	7.2	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.42	--	--	94	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.08	--	--	93	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	3.9	6.9	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.42	--	--	94	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.15	--	--	104	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.33	--	--	113	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	3.1	6.8	--	--	260	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.33	--	--	113	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	< 1	7	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.21	--	--	109	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.78	90.6	179.9	6.33	--	11.8	208	--	--	--	--	--	--	--	--	181	--	0.46	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.21	--	--	109	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.37	74.5	176.1	6.07	--	10.11	283	--	--	--	--	--	--	--	--	148.4	--	0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.39	92.6	147.5	6.77	--	14.7	161.7	--	--	--	--	--	--	--	--	105	--	0.6	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.4	73.8	170.3	5.8	--	15.2	246.9	--	--	--	--	--	--	--	--	160	--	0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.51	80.3	165	6.29	--	12.7	232.7	--	--	--	--	--	--	--	--	151	--	4.4	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.35	81.8	167	5.58	--	14.4	310.9	--	--	--	--	--	--	--	--	202	--	0.11	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.07	83.5	151	6.06	--	11.5	246	--	--	--	--	--	--	--	--	160	--	0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.49	87.3	122.9	6.33	--	11.6	269.7	--	--	--	--	--	--	--	--	175	--	0.14	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.16	--	--	102	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	2.7	7.1	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.14	97.3	140.9	6.59	--	13.4	162.3	--	--	--	--	--	--	--	--	106	--	0.45	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.78	94.6	154.5	6.57	--	13.8	161.4	--	--	--	--	--	--	--	--	107	--	1.17	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.78	94.8	154.5	6.57	--	13.8	164.1	--	--	--	--	--	--	--	--	107	--	1.17	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.53	89.7	168.7	6.34	--	12.4	139	--	--	--	--	--	--	--	--	90	--	0.84	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.5	94	128.7	6.42	--	14.7	155.7	--	--	--	--	--	--	--	--	101	--	0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.9	92	146	6.2	--	14	305	--	--	--	--	--	--	--	--	200	--	0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.72	92.8	157.2	6.54	--	13.3	200.6	--	--	--	--	--	--	--	--	130	--	0.22	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.48	99.7	162	6.5	--	13.1	249	--	--	--	--	--	--	--	--	162	--	0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.95	89	160.9	6.27	--	16.4	128	--	--	--	--	--	--	--	--	83	--	1.83	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.76	85.7	133.2	6.32	--	14	949.2	--	--	--	--	--	--	--	--	97	--	1.39	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.03	84.1	161	6.53	--	12.1	203	--	--	--	--	--	--	--	--	132	--	1.48	--
--	--	--	--	--	--	--	--	--	--	--	--	--	6.43	61.4	158.9	6.24	--	13.2	232	--	--	--	--	--	--	--	--	155	--	0.76	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.4	84.6	152	6.41	--	10.7	90	--	--	--	--	--	--	--	--	59	--	2.78	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.95	89	160.9	6.27	--	10.4	128	--	--	--	--	--	--	--	--	83	--	1.83	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.17	88.6	322.2	6.48	--	9.3	150.6	--	--	--	--	--	--	--	--	98	--	4.9	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.2	96.6	362.3	6.6	--	12.9	105.2	--	--	--	--	--	--	--	--	68	--	3.18	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.19	80	358.9	6.22	--	14.3	108.8	--	--	--	--	--	--	--	--	70	--	1.48	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.9	82	331.1	6.33	--	11.5	176.4	--	--	--	--	--	--	--	--	113	--	10.73	--
--	--	--	--	--	--	--	--	--	--	--	--	--	6.76	64.5	220.8	6.24	--	13.9	166.9	--	--	--	--	--	--	--	--	109	--	0	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.59	86.9	206.2	6.57	--	15.9	78.2	--	--	--	--	--	--	--	--	51	--	49.27	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.81	74.4	249	6.43	--	12.7	217.1	--	--	--	--	--	--	--	--	141	--	3.71	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4.61	42.3	302.5	6.02	--	11.5	107.7	--	--	--	--	--	--	--	--	70	--	0.84	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.01	93.7	310.4	6.72	--	12.4	189.2	--	--	--	--	--	--	--	--	123	--	1.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	7.76	91.2	315	6.53	--	8.7	145.8	--	--	--	--	--	--	--	--	95	--	6.65	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.56	76.6	371.2	6.45	--	10.4	138.2	--	--	--	--	--	--	--	--	90.7	--	15.17	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.97	97.2	339.2	6.65	--	14.2	204	--	--	--	--	--	--	--	--	167	--	10.74	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.11	89.6	362.8	6.56	--	14.6	160.5	--	--	--	--	--	--	--	--	104	--	1.19	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	3.6	6.9	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.56	83.5	134.8	6.01	--	9.3	408.1	--	--	--	--	--	--	--	--	263	--	3.56	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.56	105.6	60.1	7.12	--	15.4	139	--	--	--	--	--	--	--	--	90	--	2.23	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.45	64.8	85.7	6.47	--	9.2	145.6	--	--	--	--	--	--	--	--	95	--	7	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.35	66.4	115.5	6.51	--	10.8	215.2	--	--	--	--	--	--	--	--	140	--	3.08	--
--	--	--	--	--	--	--	--	--	--	--	--	--	8.77	83.9	60.6	6.49	--	13.3	196	--	--	--	--	--	--	--	--	128	--	0.99	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.59	87.5	79.7	6.53	--	11.2	528	--	--	--	--	--	--	--	--	343	--	0.8	--
--	--	--	--	--	--	--	--	--	--	--	--	--	9.15	89.4	52	6.69	--	14.3	172	--	--	--	--	--	--	--	--	112	--	1.45	--
--	--	--	--	--	--	--	--	--	--	--	--	--	7.36	69.3	61.9	6.34	--	12.6	154	--	--	--	--	--	--	--	--	100	--	3.05	--
--	--	--	--	--	--	--	--	--	--	--	--	--	6.78	64.7	101.5	6.47	--	13.2	206.9	--	--	--	--	--	--	--	--	135	--	2.99	--
--	--	--	--	--	--	--	--	--	--	--	--	--	10.35	98.7	70.9	6.63	--	13.2	467.8	--	--	--	--	--	--	--	--	304	--	1.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	4.8	6.8	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	6.97	--	--	97	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	6.97	--	--	97	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.04	--	--	109	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.11	--	--	109	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	1.7	7.3	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	105	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	105	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.2	--	--	100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	1.7	7	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	2.8	7.1	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	1.1	7	--	--	270	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.2	--	--	100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.2	--	--	100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	1.7	7	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.14	--	--	102	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.14	--	--	102	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.14	--	--	102	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	2.4	7.3	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 5	7.48	--	--	97	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.37	--	--	108	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.27	--	--	97	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	--	2.9	7.1	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.34	--	--	105	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	--	2.3	7.1	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.22	--	--	100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	2.5	7	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.22	--	--	100	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	6	7.32	--	--	101	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	4	7.4	--	--	360	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.27	--	--	126	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 5	7.27	--	--	127	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 5	7.27	--	--	127	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	--	< 5	7.27	--	--	127	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.29	--	--	126	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	--	5	7.2	--	--	430	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	2.1	7.1	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.05	--	--	121	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.1	--	--	113	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.1	--	--	113	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	3.3	7	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.26	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.26	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	120	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	4.3	7.3	--	--	390	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.47	--	--	126	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.47	--	--	126	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.26	--	--	226	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	2	7.6	--	--	410	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.13	--	--	118	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.13	--	--	118	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	1.7	7.6	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.13	--	--	118	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.23	--	--	129	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	2.5	7.5	--	--	400	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.27	--	--	124	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.27	--	--	124	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.39	--	--	112	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.39	--	--	112	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.22	--	--	125	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 1	7.9	--	--	370	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.28	--	--	134	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.29	--	--	137	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	7.8	--	--	380	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.29	--	--	137	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.18	--	--	127	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.3	--	--	140	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	1.4	7.2	--	--	4200	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	148	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	3	7.3	--	--	420	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	< 5	7.24	--	--	143	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.26	--	--	132	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.26	--	--	132	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	4	7.5	--	--	500	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.19	--	--	151	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.24	--	--	150	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	6.98	--	--	145	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.13	--	--	133	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.11	--	--	139	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.27	--	--	149	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 5	7.24	--	--	143	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.27	--	--	151	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.27	--	--	151	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.24	--	--	138	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.58	--	--	164	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	4.1	7.5	--	--	490	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	1.8	7.2	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.58	--	--	164	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.58	--	--	164	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.29	--	--	170	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	< 1	7.2	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	166	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	1.6	7.4	--	--	460	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	2.3	7.5	--	--	500	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	4.1	7.4	--	--	470	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	3.2	7.7	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.22	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	1.2	7.3	--	--	440	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.22	--	--	180	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.22	--	--	182	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.37	--	--	172	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	4	7.4	--	--	430	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.5	--	--	166	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.43	--	--	160	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.09	--	2.9	7.3	--	--	300	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	3.3	6.9	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.34	--	--	167	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	1.3	7.1	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	< 5	7.36	--	--	134	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	< 5	7.36	--	--	134	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	< 5	7.36	--	--	134	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	--	< 1	6.6	--	--	310	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.29	--	--	145	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.29	--	--	145	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.07	--	2.7	6.9	--	--	320	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	1.2	6.6	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.22	--	--	145	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	3.9	7.1	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.14	--	--	1.36	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.14	--	--	136	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	--	3.1	7.4	--	--	330	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	138	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.15	--	--	135	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	< 5	7.32	--	--	138	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	--	1.9	7	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	1.1	7	--	--	280	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--	2.4	7	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	1.5	7	--	--	240	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	2.6	7.4	--	--	250	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	131	--	--	--	--	6.89	--	--	83	< 5	2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	323	--	--	--	--	6.72	--	--	194	< 5	1.4	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	259	--	--	--	--	6.72	--	--	162	< 5	1.7	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	200	--	--	--	--	6.86	--	--	140	< 5	2.9	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.08	--	4	7.5	--	--	260	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	314	--	--	--	6.2	--	--	180	< 5	0.4	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	132	--	--	--	6.64	--	--	80	< 5	2.6	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	134	--	--	--	6.88	--	--	88	< 5	2.2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	155	--	--	--	6.8	--	--	95	< 5	1.3	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	274	--	--	--	6.74	--	--	144	< 5	0.6	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	--	5.3	6.7	--	--	260	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	345	--	--	--	6.64	--	--	169	< 5	1.1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	335	--	--	--	6.9	--	--	173	< 5	1.6	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	433	--	--	--	6.66	--	--	223	< 5	3.3	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	334	--	--	--	6.86	--	--	170	< 5	1.1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	598	--	--	--	6.39	--	--	330	< 5	1.1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	122	--	--	--	6.66	--	--	78	< 5	5	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	284	--	--	--	6.53	--	--	159	6	1.6	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	--	2.3	7	--	--	260	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	428	--	--	--	--	6.75	--	--	237	< 5	0.7	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	290	--	--	--	--	6.18	--	--	163	8	3.4	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	208	--	--	--	--	6.86	--	--	115	< 5	0.8	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	285	--	--	--	--	6.77	--	--	156	< 5	0.4	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	164	--	--	--	--	6.92	--	--	105	< 5	2.6	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	174	--	--	--	--	6.82	--	--	111	< 5	2.2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	139	--	--	--	--	6.92	--	--	96	19	6.8	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	150	--	--	--	--	6.78	--	--	95	< 5	2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	135	--	--	--	--	6.72	--	--	86	< 5	1.4	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	402	--	--	--	--	6.72	--	--	222	< 5	0.4	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	157	--	--	--	7.02	--	--	81	< 5	0.8	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	248	--	--	--	6.91	--	--	129	< 5	1.2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	304	--	--	--	7.07	--	--	170	< 5	4.3	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	--	1.7	6.6	--	--	270	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	198	--	--	--	--	6.12	--	--	111	16	11	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	208	--	< 0.1	--	--	6.26	--	--	118	< 5	2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	244	--	--	--	--	7.01	--	--	138	< 5	2.8	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	191	--	--	--	--	6.4	--	--	95	8	3.2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	242	--	--	--	--	6.15	--	--	116	< 5	0.3	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	288	--	--	--	--	6.35	--	--	137	< 5	0.2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	266	--	< 0.1	--	--	6.43	--	--	128	< 5	0.3	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	254	--	--	--	--	6.34	--	--	124	< 5	0.3	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	219	--	--	--	--	6.29	--	--	111	6	0.5	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	145	--	--	--	--	6.4	--	--	72	< 5	1.3	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.05	--	3.7	7	--	--	290	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	289	--	--	--	--	6.82	--	--	159	21	6.5	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	283	--	< 0.1	--	--	6.3	--	--	156	84	30	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	270	--	< 0.1	--	--	6.53	--	--	151	19	0.8	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	185	--	--	--	--	6.58	--	--	104	26	6	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	257	--	< 0.1	--	--	6.49	--	--	143	< 5	0.4	< 10

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	%	mV	SU	us/cm	deg c	us/cm	us/cm	mg/L	mg/L	ug/L	mg/L	SU	g/kg	PSU	mg/L	mg/L	NTU	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	321	--	--	--	--	6.72	--	--	178	14	3.7	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	2	6.9	--	--	290	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

HERBICIDES																MAHs															
2,4,5-T (Trichlorophenoxyacetic Acid)	2,4-D (Dichlorophenoxyacetic Acid)	2,4,6-T	2,6-D	4-Chlorophenoxy acetic acid	Clopyralid	Dicamba	Dichloroprop	Fluroxypyr	MCPA	MCPB	MCPP	Metsulfuron Methyl	Picloram	Silvex (2,4,5-TP)	Triclopyr	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene (Mesitylene)	Benzene	BTEX	Ethylbenzene	Isopropylbenzene (Cumene)	M,P-Xylene	N-Butylbenzene	N-Propylbenzene	O-Xylene (1,2-Dimethylbenzene)	p-Cymene (p-Isopropyltoluene)	Sec-Butylbenzene	Styrene	T-Butylbenzene	Toluene	Total BTEX
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 5	< 10	< 10	< 10	< 5	< 5	< 1	< 1	< 1	< 5	< 2	< 5	< 5	< 1	< 5	< 5	< 5	< 5	< 1	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 5	< 10	< 10	< 10	< 5	< 5	< 1	< 1	< 2	< 5	< 2	< 5	< 5	< 2	< 5	< 5	< 5	< 5	< 2	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
46	46	46	46	46	46	46	46	46	46	46	46	54	46	46	46	39	39	443	116	443	39	443	39	39	443	39	39	39	39	443	327
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	2.2%	1.9%	1.9%	1.9%	1.6%	1.6%	18.3%	4.8%	18.3%	1.6%	18.3%	1.6%	1.6%	18.3%	1.6%	1.6%	1.6%	1.6%	18.3%	13.5%
100	**30**				**2000**	**100**	**100**		**40**			**40**	**300**	**10**	**20**			**1**		**300**									**30**		**800**	
0	*0*				*0*	*0*	*0*		*0*			*0*	*0*	*0*	*0*			*0*		*0*									*0*		*0*	
																				3									**4**		**25**	
																				0									*0*		*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 2	--	< 2	--	--	< 2	--	--	--	< 2	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	< 5	--	--	--	--	--	< 1	< 1	< 2	--	< 2	--	--	< 2	--	--	--	--	< 2	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5	< 5	< 1	--	< 2	< 5	< 2	< 5	< 5	< 2	< 5	< 5	< 5	< 5	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 5	< 5	< 1	--	< 2	< 5	< 2	< 5	< 5	< 2	< 5	< 5	< 5	< 5	< 2	< 1

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	< 1	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 5	--	--	--	--	--	< 1	< 1	< 2	--	< 2	--	--	< 2	--	--	--	--	< 2

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 3
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 1	--	< 2	--	--	< 1	--	--	--	--	< 1	< 10
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	--	--	< 2	< 1

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	< 2	< 1

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	--	< 10	< 10	< 10	--	--	< 1	--	< 2	--	< 2	--	--	< 2	--	--	--	--	< 2	< 1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

	MAJOR IONS																														
Xylenes	Alkalinity, Bicarbonate (As CaCO3)	Alkalinity, Carbonate (As CaCO3)	Alkalinity, Hydroxide (As CaCO3)	Alkalinity, Total (As CaCO3)	Anions Total	Calcium	Cations Total	Chloride (As Cl)	Hardness (As CaCO3)	Ionic Balance	Magnesium	Potassium	Sodium	Sulfate (As SO4)	Total Hardness	Aluminium	Aluminium	Arsenic	Arsenic	Barium	Barium	Beryllium	Beryllium	Boron	Boron	Cadmium	Cadmium	Chromium (III)	Chromium, hexavalent	Chromium, total	Chromium, total
T	T	T	T	T	T	D	T	T	D	T	D	D	D	D	D	D	T	D	T	D	T	D	T	D	T	D	T	D	D	D	T
< 2	1	< 1	< 1	1	0.3	1	0.17	7	1	0.02	1	1	4	1	11	0.01	0.02	< 0.0002	< 0.001	0.001	0.003	< 0.0001	< 0.001	0.005	0.05	0.00005	< 0.0001	< 0.01	< 0.01	0.0002	0.001
< 3	76	< 1	< 1	76	23.6	40	24.4	789	363	82.1	64	7	390	517	54	0.17	0.82	< 0.001	< 0.001	0.084	0.069	< 0.001	< 0.001	0.1	0.13	0.0002	< 0.0001	< 0.01	< 0.01	0.001	0.05
--	9	--	--	9	2.1	2	2.02	58	24	4.14	4	2	35	11	23	0.04	0.22	--	--	0.019	0.016	--	--	0.041	0.05	0.00009	--	--	--	0.0008	0.006
--	8	--	--	8	1.8	2	1.82	50	21	3.12	4	2	31	8	21	0.02	0.16	--	--	0.013	0.016	--	--	0.05	0.05	0.0001	--	--	--	0.001	0.005
443	298	298	298	298	298	298	298	298	236	286	298	298	298	298	46	46	46	255	46	255	46	209	46	255	46	255	46	46	72	255	1066
0	297	0	0	297	298	287	298	298	235	286	289	284	298	291	46	42	46	0	0	255	46	0	0	31	5	1	0	0	0	3	13
18.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	12.3%	9.7%	11.8%	12.3%	12.3%	12.3%	12.3%	1.9%	1.9%	1.9%	10.5%	1.9%	10.5%	1.9%	8.6%	1.9%	10.5%	1.9%	10.5%	1.9%	1.9%	3.0%	10.5%	43.9%
600																		**0.01**	**0.01**	**2**	**2**	**0.06**	**0.06**	**4**	**4**	**0.002**	**0.002**		**0.05**		
0																		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*		
20								**250**	**200**				**180**	**250**																	
0								*1*	*1*				*1*	*1*																	
ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
< 2	8	< 1	< 1	8	1.18	2	1.31	28	17	--	3	2	21	11	--	--	--	< 0.001	--	0.002	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	7	< 1	< 1	7	0.79	2	1.08	23	13	--	2	3	17	< 1	--	--	--	< 0.001	--	0.001	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	10	< 1	< 1	10	1	2	1.14	24	13	--	2	2	19	6	--	--	--	< 0.001	--	0.001	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	7	< 1	< 1	7	1.17	2	1.23	29	13	--	2	2	21	10	--	--	--	< 0.001	--	0.002	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
< 2	5	< 1	< 1	5	6.51	9	5.46	205	76	8.76	13	1	90	30	--	--	--	< 0.001	--	0.017	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	8	< 1	< 1	8	1.83	2	1.63	54	17	5.64	3	1	29	7	--	--	--	< 0.001	--	0.006	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	12	< 1	< 1	12	2.21	3	1.9	64	24	7.67	4	1	32	8	--	--	--	< 0.001	--	0.01	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	6	< 1	< 1	6	2.25	2	1.98	71	21	6.4	4	1	35	6	--	--	--	< 0.001	--	0.012	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	11	< 1	< 1	11	2.51	5	2.32	70	37	3.94	6	2	35	15	--	--	--	< 0.001	--	0.013	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	6	< 1	< 1	6	3.43	4	3.01	102	43	6.5	8	1	49	21	--	--	--	< 0.001	--	0.024	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	8	< 1	< 1	8	2.77	2	2.47	83	30	5.72	6	2	42	13	--	--	--	< 0.001	--	0.014	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	12	< 1	< 1	12	2.48	3	2.35	70	32	2.84	6	2	38	13	--	--	--	< 0.001	--	0.013	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	7	< 1	< 1	7	2.82	3	2.54	90	28	5.22	5	1	45	7	--	--	--	< 0.001	--	0.024	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	7	< 1	< 1	7	2.77	2	2.56	88	30	3.93	6	2	44	7	--	--	--	< 0.001	--	0.023	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	10	< 1	< 1	10	2.84	4	2.74	87	35	1.72	6	2	46	9	--	--	--	< 0.001	--	0.014	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	17	< 1	< 1	17	1.64	3	1.9	46	24	--	4	3	31	< 1	--	--	--	< 0.001	--	0.084	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	10	< 1	< 1	10	2.01	3	2.14	62	24	3.09	4	2	37	3	--	--	--	< 0.001	--	0.002	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	6	< 1	< 1	6	1.41	2	1.42	39	17	0.31	3	1	24	9	--	--	--	< 0.001	--	0.044	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	5	< 1	< 1	5	2.47	1	2.14	79	19	7.14	4	1	40	7	--	--	--	< 0.001	--	0.057	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	6	< 1	< 1	6	1.81	2	1.83	51	21	0.56	4	2	31	12	--	--	--	< 0.001	--	0.006	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	5	< 1	< 1	5	1.65	2	1.72	46	21	2.04	4	1	29	12	--	--	--	< 0.001	--	0.041	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	5	< 1	< 1	5	1.82	2	1.86	56	21	1.06	4	< 1	33	7	--	--	--	< 0.001	--	0.047	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	5	< 1	< 1	5	1.43	< 1	1.3	39	8	4.9	2	< 1	26	11	--	--	--	< 0.001	--	0.036	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	8	< 1	< 1	8	1.3	2	1.33	36	17	1.1	3	1	22	6	--	--	--	< 0.001	--	0.034	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	10	< 1	< 1	10	1.28	2	1.31	34	17	1.06	3	2	21	6	--	--	--	< 0.001	--	0.039	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	8	< 1	< 1	8	1.21	2	1.31	32	17	4.09	3	2	21	7	--	--	--	< 0.001	--	0.047	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	8	< 1	< 1	8	1.45	2	1.63	40	21	5.65	4	1	27	8	--	--	--	< 0.001	--	0.037	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	2	< 1	< 1	2	1.65	4	2.01	46	30	9.86	5	2	31	15	--	--	--	< 0.001	--	0.046	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	8	< 1	< 1	8	1.33	2	1.46	37	17	4.71	3	1	25	6	--	--	--	< 0.001	--	0.039	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	7	< 1	< 1	7	1.48	2	1.67	41	21	5.98	4	1	28	9	--	--	--	< 0.001	--	0.043	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	6	< 1	< 1	6	1.84	2	2.02	55	21	4.73	4	1	36	8	--	--	--	< 0.001	--	0.044	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 2	8	< 1	< 1	8	1.56	2	1.72	43	21	4.76	4	1	29	9	--	--	--	< 0.001	--	0.043	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	10	< 1	< 1	10	1.49	2	1.48	42	17	0.11	3	2	25	5	--	--	--	< 0.0002	--	0.0033	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	10	< 1	< 1	10	2.12	2	1.93	54	21	4.57	4	1	34	19	--	--	--	< 0.0002	--	0.027	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	18	< 1	< 1	18	2.21	2	2.16	56	21	1.18	4	3	38	13	--	--	--	< 0.0002	--	0.013	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	20	< 1	< 1	20	2.26	3	2.13	52	28	2.89	5	2	35	19	--	--	--	< 0.0002	--	0.0184	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	10	< 1	< 1	10	1.52	2	1.48	41	21	1.41	4	2	23	8	--	--	--	< 0.0002	--	0.0085	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	9	< 1	< 1	9	2.18	2	2.05	65	21	3.17	4	2	36	8	--	--	--	< 0.0002	--	0.0065	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	6	< 1	< 1	6	1.84	1	1.63	52	15	6.04	3	1	30	12	--	--	--	< 0.0002	--	0.0052	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	10	< 1	< 1	10	1.52	1	1.48	41	15	1.47	3	2	26	8	--	--	--	< 0.0002	--	0.0117	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	10	< 1	< 1	10	1.51	2	1.53	42	17	0.64	3	2	26	6	--	--	--	< 0.0002	--	0.003	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	13	< 1	< 1	13	1.5	2	1.4	36	17	3.65	3	2	23	11	--	--	--	< 0.0002	--	0.0036	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	12	< 1	< 1	12	1.54	1	1.44	41	15	3.58	3	2	25	7	--	--	--	< 0.0002	--	0.0103	--	< 0.0001	--	< 0.005	--	< 5e-005	--	--	--	< 0.0002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.003	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.004	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.005	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.008	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.011	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.006	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.009	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.013	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.008	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.004	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.005	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.01	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.003	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.005	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.006	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.013	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.004	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.004	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.006	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.003	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.009	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.003	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.024	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.003	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.011	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.007	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	0.013	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	--	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	12	< 1	< 1	12	1.96	2	2.18	49	30	5.55	6	1	36	16	--	--	--	< 0.001	--	0.007	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	7	< 1	< 1	7	1.52	3	1.64	43	24	3.68	4	1	26	8	--	--	--	< 0.001	--	0.003	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	13	< 1	< 1	13	1.2	2	1.27	29	17	2.63	3	2	20	6	--	--	--	< 0.001	--	0.004	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	10	< 1	< 1	10	1.54	2	1.57	40	21	1.01	4	2	25	10	--	--	--	< 0.001	--	0.009	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	12	< 1	< 1	12	1.45	2	1.55	34	21	3.37	4	3	24	12	--	--	--	< 0.001	--	0.005	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	10	< 1	< 1	10	2.27	2	2.34	63	26	1.68	5	2	41	14	--	--	--	< 0.001	--	0.004	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	11	< 1	< 1	11	1.5	3	1.62	38	24	3.77	4	2	25	10	--	--	--	< 0.001	--	0.003	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	12	< 1	< 1	12	1.28	3	1.44	34	24	5.92	4	2	21	4	--	--	--	< 0.001	--	0.021	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	2	< 1	< 1	2	1.56	3	1.6	39	24	1.36	4	3	24	20	--	--	--	< 0.001	--	0.018	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 2	10	< 1	< 1	10	1.7	4	1.8	43	26	2.67	4	2	28	14	--	--	--	< 0.001	--	0.015	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	3	< 1	< 1	3	1.22	2	1.15	38	--	2.69	< 1	2	23	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	2	< 1	< 1	2	0.9	< 1	0.81	29	--	5.33	< 1	1	18	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	4	< 1	< 1	4	0.3	< 1	0.17	8	--	27.4	< 1	< 1	4	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	5	< 1	< 1	5	0.4	< 1	0.22	9	--	29	< 1	< 1	5	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	4	< 1	< 1	4	3.41	2	3.38	110	--	0.39	6	2	63	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	6	< 1	< 1	6	0.6	< 1	0.39	15	--	21.5	< 1	< 1	9	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	7	< 1	< 1	7	0.53	1	0.38	11	--	16.8	< 1	1	7	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	5	< 1	< 1	5	2.32	2	2.49	75	--	3.63	5	1	45	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	4	< 1	< 1	4	2.55	2	2.82	83	--	5.1	6	2	50	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	76	< 1	< 1	76	1.86	8	1.05	12	--	27.7	1	7	9	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	2	< 1	< 1	2	0.36	< 1	0.22	10	--	25.2	< 1	< 1	5	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	5	< 1	< 1	5	1.14	< 1	0.89	34	--	12.4	1	1	18	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	9	< 1	< 1	9	0.86	< 1	0.83	24	4	1.63	1	2	16	< 2	--	--	--	< 0.001	--	0.003	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
--	8	< 1	< 1	8	0.8	1	0.81	19	7	0.64	1	1	15	5	--	--	--	< 0.001	--	0.004	--	< 0.001	--	< 0.05	--	< 0.0001	--	--	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.003
--	5	< 1	< 1	5	1.89	< 1	1.75	59	--	3.78	3	1	34	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	47	< 1	< 1	47	1.23	9	1.01	9	--	10.1	1	5	8	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	18	< 1	< 1	18	0.64	3	0.39	7	--	24	< 1	1	5	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	2	< 1	< 1	2	1.74	2	1.64	53	--	3.1	2	1	31	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	8	< 1	< 1	8	2.36	4	2.35	69	35	0.04	6	2	37	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	9	< 1	< 1	9	1.28	2	1.35	33	17	2.66	3	< 1	23	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	5	< 1	< 1	5	2.42	1	2.13	78	19	6.56	4	2	39	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	9	< 1	< 1	9	2.19	2	2.06	64	21	3.04	4	1	37	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	6	< 1	< 1	6	3.02	3	3.06	91	36	0.6	7	1	53	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	5	< 1	< 1	5	2.16	1	2.06	70	19	2.38	4	1	38	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	6	< 1	< 1	6	2.46	2	2.43	77	26	0.52	5	2	43	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	9	< 1	< 1	9	1.39	2	1.42	37	17	0.93	3	1	24	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	8	< 1	< 1	8	2.56	3	2.41	80	28	2.99	5	1	42	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 1	< 1	< 1	< 1	11.7	< 1	1.15	34	4	82.1	1	1	24	517	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	8	< 1	< 1	8	1.19	2	1.31	32	17	4.96	3	2	21	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	9	< 1	< 1	9	1.19	2	1.25	30	13	2.22	2	1	22	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	8	< 1	< 1	8	1.28	2	1.35	34	17	2.34	3	< 1	23	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	6	< 1	< 1	6	2.83	2	2.54	91	26	5.49	5	1	46	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	7	< 1	< 1	7	1.66	2	1.8	45	21	4.16	4	1	31	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	6	< 1	< 1	6	2.23	2	2.15	69	26	1.98	5	1	37	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	7	< 1	< 1	7	1.09	2	1.18	27	17	4.05	3	2	18	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	8	< 1	< 1	8	1.27	1	1.32	32	15	2.01	3	1	23	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	11	< 1	< 1	11	1.66	2	1.78	40	21	3.62	4	2	30	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	13	< 1	< 1	13	2.27	2	2.1	61	26	3.87	5	1	36	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	8	< 1	< 1	8	0.67	< 1	0.59	18	< 1	6.08	< 1	1	13	< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	7	< 1	< 1	7	1.05	2	1.18	25	17	5.71	3	2	18	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	9	< 1	< 1	9	0.86	2	1.07	22	13	10.8	2	1	18	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	11	< 1	< 1	11	0.94	1	1.05	19	11	5.3	2	2	18	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	10	< 1	< 1	10	1.52	2	1.65	35	17	4.14	3	< 1	30	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	10	< 1	< 1	10	1.4	2	1.48	36	17	2.86	3	2	25	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	11	< 1	< 1	11	0.7	1	0.7	14	7	0.02	1	< 1	13	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	17	< 1	< 1	17	1.92	3	1.92	45	24	0.02	4	2	32	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	10	< 1	< 1	10	0.93	2	0.9	23	13	1.8	2	1	14	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	9	< 1	< 1	9	1.64	3	1.72	40	24	2.41	4	1	28	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	8	< 1	< 1	8	1.22	1	1.37	33	15	5.84	3	1	24	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	12	< 1	< 1	12	1.27	2	1.37	32	17	3.99	3	1	23	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	13	< 1	< 1	13	1.13	2	1.35	25	17	8.98	3	2	22	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	10	< 1	< 1	10	2.09	2	2.31	59	21	4.86	4	2	42	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	11	< 1	< 1	11	1.32	2	1.4	34	17	2.7	3	2	23	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	16	< 1	< 1	16	3.49	4	3.14	105	35	5.32	6	2	55	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	10	< 1	< 1	10	1.16	2	1.25	29	13	3.46	2	1	22	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	18	< 1	< 1	18	1.26	2	1.23	29	13	1.28	2	2	21	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	16	< 1	< 1	16	1.74	2	1.87	46	21	3.59	4	2	32	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	12	< 1	< 1	12	1.62	2	1.7	43	17	2.51	3	2	30	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	9	< 1	< 1	9	4.75	4	4.51	154	51	2.62	10	2	79	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	13	< 1	< 1	13	1.44	2	1.46	36	13	0.78	2	1	27	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	11	< 1	< 1	11	1.24	2	1.36	31	13	4.6	2	2	24	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	13	< 1	< 1	13	1.73	3	1.8	47	20	1.84	3	2	31	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	8	< 1	< 1	8	4.26	4	4.04	138	43	2.65	8	2	72	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.006
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.006
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.006
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
< 2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	11	< 1	< 1	11	1.22	1	1.24	29	--	0.62	2	1	23	9	11	0.06	0.24	< 0.001	< 0.001	0.029	0.003	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	7	< 1	< 1	7	2.67	3	3.13	81	--	7.85	6	2	56	12	32	0.02	0.14	< 0.001	< 0.001	0.044	0.009	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	8	< 1	< 1	8	2.18	2	2.31	65	--	2.81	4	2	42	9	21	0.07	0.26	< 0.001	< 0.001	0.033	0.007	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	10	< 1	< 1	10	1.73	2	1.83	49	--	2.83	4	2	31	7	21	0.14	0.57	< 0.001	< 0.001	0.031	0.003	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	2	< 1	< 1	2	2.65	2	2.84	80	--	3.41	6	1	51	17	30	0.02	0.04	< 0.001	< 0.001	0.04	0.02	--	< 0.001	< 0.05	0.08	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	11	< 1	< 1	11	1.2	2	1.35	29	--	5.88	3	2	22	8	17	0.1	0.41	< 0.001	< 0.001	0.027	0.003	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	13	< 1	< 1	13	1.21	2	1.27	27	--	2.38	3	2	20	9	17	0.08	0.29	< 0.001	< 0.001	0.034	0.005	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	7	< 1	< 1	7	1.33	2	1.46	37	--	4.68	3	1	25	7	17	0.06	0.23	< 0.001	< 0.001	0.03	0.004	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	6	< 1	< 1	6	2.5	2	2.31	77	--	4.02	4	2	42	10	21	0.01	0.09	< 0.001	< 0.001	0.039	0.016	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	4	< 1	< 1	4	3	2	2.82	96	--	2.95	5	2	52	10	26	0.01	0.11	< 0.001	< 0.001	0.028	0.03	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	8	< 1	< 1	8	2.92	3	2.83	89	--	1.56	5	2	51	12	28	0.02	0.1	< 0.001	< 0.001	0.026	0.017	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	4	< 1	< 1	4	3.66	3	3.73	118	--	1.03	7	2	68	12	36	0.02	0.17	< 0.001	< 0.001	0.044	0.049	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	8	< 1	< 1	8	2.78	3	2.83	84	--	0.92	5	2	51	12	28	0.02	0.1	< 0.001	< 0.001	0.038	0.017	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	2	< 1	< 1	2	5.57	5	5.19	182	--	3.48	10	3	93	19	54	0.01	0.05	< 0.001	< 0.001	0.064	0.069	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	8	< 1	< 1	8	1.13	2	1.1	27	--	1.4	2	2	18	10	13	0.17	0.56	< 0.001	< 0.001	0.02	0.003	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	7	< 1	< 1	7	2.5	2	2.39	77	--	2.15	4	2	44	9	21	0.01	0.13	< 0.001	< 0.001	0.028	0.017	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	4	< 1	< 1	4	3.89	3	3.9	127	--	0.16	8	2	70	11	40	< 0.01	0.1	< 0.001	< 0.001	0.046	0.034	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	2	< 1	< 1	2	2.49	2	2.65	81	--	3.09	5	2	48	8	26	0.03	0.25	< 0.001	< 0.001	0.035	0.029	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	7	< 1	< 1	7	1.76	1	1.88	53	--	3.4	4	1	34	6	19	0.02	0.07	< 0.001	< 0.001	0.023	0.011	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	6	< 1	< 1	6	2.47	1	2.53	76	--	1.19	5	1	47	10	23	0.04	0.04	< 0.001	< 0.001	0.01	0.012	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	10	< 1	< 1	10	1.31	1	1.48	35	--	5.98	3	2	26	6	15	0.16	0.36	< 0.001	< 0.001	0.023	0.007	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	8	< 1	< 1	8	1.47	2	1.62	42	--	4.74	3	2	28	6	17	0.13	0.3	< 0.001	< 0.001	0.021	0.009	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	11	< 1	< 1	11	1.25	2	1.27	29	--	1.05	2	2	22	10	13	0.02	0.35	< 0.001	< 0.001	0.036	0.009	--	< 0.001	0.07	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	9	< 1	< 1	9	1.37	1	1.4	34	--	1.04	2	2	26	11	11	0.07	0.25	< 0.001	< 0.001	0.034	0.006	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	9	< 1	< 1	9	1.23	1	1.31	30	--	2.96	2	2	24	10	11	0.08	0.19	< 0.001	< 0.001	0.031	0.004	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	6	< 1	< 1	6	3.94	3	3.82	126	--	1.64	8	2	68	13	40	< 0.01	0.03	< 0.001	< 0.001	0.024	0.018	--	< 0.001	< 0.05	0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	8	< 1	< 1	8	1.3	1	1.32	33	--	0.91	3	1	23	10	15	0.02	0.11	< 0.001	< 0.001	0.019	0.006	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	6	< 1	< 1	6	2.22	1	2.01	68	--	4.98	4	1	37	9	19	0.1	0.19	< 0.001	< 0.001	0.023	0.01	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	11	< 1	< 1	11	2.91	3	2.66	88	--	4.56	5	2	47	10	28	0.08	0.44	< 0.001	< 0.001	0.037	0.007	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	10	< 1	< 1	10	1.54	2	1.68	44	--	4.1	3	1	30	5	17	0.03	0.82	< 0.001	< 0.001	0.052	0.018	--	< 0.001	< 0.05	0.09	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	3	< 1	< 1	3	1.89	1	1.75	59	--	3.78	4	1	31	8	19	0.02	0.16	< 0.001	< 0.001	0.034	0.021	--	< 0.001	< 0.05	0.08	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	14	< 1	< 1	14	2.24	5	2.23	63	--	0.22	5	2	35	9	33	0.03	0.08	< 0.001	< 0.001	0.036	0.022	--	< 0.001	< 0.05	0.13	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	3	< 1	< 1	3	1.76	1	1.52	56	--	7.37	3	2	27	6	15	0.02	0.28	< 0.001	< 0.001	0.03	0.014	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	4	< 1	< 1	4	2.29	2	2.09	74	--	4.63	4	2	37	6	21	0.02	0.09	< 0.001	< 0.001	0.046	0.016	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	4	< 1	< 1	4	2.71	2	2.35	88	--	7.07	4	2	43	7	21	< 0.01	0.02	< 0.001	< 0.001	0.037	0.021	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	5	< 1	< 1	5	2.48	2	2.26	80	--	4.59	4	2	41	6	21	0.01	0.05	< 0.001	< 0.001	0.032	0.018	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	4	< 1	< 1	4	2.38	2	2.06	77	--	7.05	4	1	37	6	21	0.01	0.08	< 0.001	< 0.001	0.034	0.019	--	< 0.001	0.07	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	3	< 1	< 1	3	2.07	1	1.78	66	--	7.38	3	2	33	7	15	0.02	0.12	< 0.001	< 0.001	0.031	0.016	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	4	< 1	< 1	4	1.25	1	1.26	37	--	0.51	3	2	21	6	15	0.04	0.12	< 0.001	< 0.001	0.026	0.011	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.005
< 2	6	< 1	< 1	6	2.63	2	2.54	83	--	1.74	5	1	46	8	26	0.02	0.51	< 0.001	< 0.001	0.032	0.012	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	4	< 1	< 1	4	2.47	1	2.49	81	--	0.38	5	1	46	5	23	< 0.01	0.72	< 0.001	< 0.001	0.046	0.022	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 2	4	< 1	< 1	4	2.39	1	2.3	76	--	1.91	4	2	43	8	19	0.02	0.07	< 0.001	< 0.001	0.041	0.018	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	5	< 1	< 1	5	1.59	2	1.65	47	--	1.92	4	2	27	8	21	0.06	0.34	< 0.001	< 0.001	0.038	0.023	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
< 2	4	< 1	< 1	4	2.37	2	2.13	76	--	5.25	4	2	38	7	21	0.03	0.06	< 0.001	< 0.001	0.034	0.018	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	mg/L	mg/L	mg/L	mg/L	meq/L	mg/L	meq/L	mg/L	mg/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
< 2	6	< 1	< 1	6	3.06	2	2.61	97	--	8.07	5	2	47	10	26	0.03	0.39	< 0.001	< 0.001	0.043	0.018	--	< 0.001	< 0.05	< 0.05	< 0.0001	< 0.0001	< 0.01	< 0.01	< 0.001	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

METALS																							MICROBIOLOGY							
Chromium, trivalent - estimated	Cobalt	Copper	Copper	Iron	Lead	Lead	Manganese	Manganese	Mercury	Mercury	Molybdenum	Molybdenum	Nickel	Nickel	Phosphorus	Selenium	Selenium	Silver	Titanium	Uranium	Vanadium	Zinc	Zinc	Coliform,Thermotolerant	ENTEROCOCCI	ENTEROCOCCI	Escherichia Coli (E. Coli)	Escherichia Coli (E. Coli)	Thermophilic Amoeba	Ammonia	Ammonia as N
D	D	D	T	D	D	T	D	T	D	T	D	T	D	T	T	D	T	D	D	T	D	D	T	T	T	T	T	T	T	T	T
< 0.01	0.0001	0.0005	0.0001	0.05	0.0001	< 0.001	0.001	0.001	0.00004	< 0.0001	< 0.001	< 0.001	0.0005	0.001	0.001	< 0.0002	< 0.01	< 0.001	#CALC!	< 0.001	0.0002	0.001	0.0021	1	1	1	1	1	< 1	0.01	0.01
< 0.01	0.0075	0.007	0.07	1.64	0.001	< 0.001	1.07	0.104	0.00012	< 0.0001	< 0.001	< 0.001	0.003	0.001	5.9	< 0.01	< 0.01	< 0.001	#CALC!	< 0.001	0.02	0.08	1.2	52	15	3100	33	2300	< 1	0.16	0.05
--	0.001	0.0009	0.0061	0.14	0.0008	--	0.023	0.01	0.00008	--	--	--	0.0009	0.001	0.094	--	--	--	--	--	0.0077	0.009	0.0153	25	3	56	11	64	--	0.01	0.01
--	0.001	0.001	0.005	0.06	0.001	--	0.006	0.005	0.0001	--	--	--	0.001	0.001	0.02	--	--	--	--	--	0.01	0.005	0.01	22	1	10	1	10	--	0.01	0.01
26	255	255	1112	46	255	46	255	46	225	46	46	46	255	46	1324	255	46	46	0	46	255	255	1068	7	7	209	7	209	7	209	46
0	70	12	32	27	16	0	247	42	1	0	0	0	20	1	827	0	0	0	0	0	31	103	290	5	1	187	3	179	0	58	9
1.1%	10.5%	10.5%	45.8%	1.9%	10.5%	1.9%	10.5%	1.9%	9.3%	1.9%	1.9%	1.9%	10.5%	1.9%	54.6%	10.5%	1.9%	1.9%	0.0%	1.9%	10.5%	10.5%	44.0%	0.3%	0.3%	8.6%	0.3%	8.6%	0.3%	8.6%	1.9%
		2	**2**		**0.01**	**0.01**	**0.5**	**0.5**	**0.001**	**0.001**	**0.05**	**0.05**	**0.02**	**0.02**		**0.01**	**0.01**	**0.1**		**0.017**												
		0	*0*		*0*	*0*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*		*0*	*0*	*0*		*0*												
		1	**1**	**0.3**			**0.1**	**0.1**														**3**	**3**							**0.5**	
		0	*0*	*3*			*10*	*1*														*0*	*0*							*0*	
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.13	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	1.1	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	1.5	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	1.5	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	1.6	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.65	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.55	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.05	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.4	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.25	--	--	--	--	--	--	--	< 0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.65	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.65	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.25	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.4	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.3	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.45	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.45	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.35	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.25	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.35	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	0.35	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.3	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.3	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.35	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.091	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.13	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.11	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.13	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.15	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.13	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	0.44	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	1.4	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	0.02	--	--	--	--	--	--	--	--	--	--	--	1.6	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	1.9	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	1.4	--	--	--	--	--	--	--	0.0021	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	2.8	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	4.7	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	2.4	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.01	--	--	--	--	--	--	--	--	--	--	--	5.9	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	2.7	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	3.5	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	0.005	--	--	--	--	--	--	--	--	--	--	--	2.4	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.005	--	--	--	--	--	--	--	--	--	--	--	4.2	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	1.6	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	3.9	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	2.2	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	3.2	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	2.2	--	--	--	--	--	--	--	< 0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.006	--	--	--	--	--	--	--	--	--	--	--	1.2	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.006	--	--	--	--	--	--	--	--	--	--	--	1.1	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	1.5	--	--	--	--	--	--	--	0.008	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	1.2	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	1.2	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.96	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.71	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.85	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	1.6	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.74	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.24	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.006	--	--	--	--	--	--	--	--	--	--	--	1.4	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.13	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.005	--	--	--	--	--	--	--	--	--	--	--	0.22	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.24	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.37	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.95	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.17	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.097	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.006	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.015	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.07	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.005	--	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--	--	--	--	--	0.057	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.07	--	--	--	--	--	--	--	0.008	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.285	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.26	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.23	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.64	--	--	--	--	--	--	--	0.011	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.13	--	--	--	--	--	--	--	0.037	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.12	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.0055	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	0.011	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.07	--	--	--	--	--	--	--	0.0135	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	0.016	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.275	--	--	--	--	--	--	--	0.0135	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.21	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.014	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.016	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.017	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.07	--	--	--	--	--	--	--	0.024	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.025	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.018	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.008	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.43	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.011	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.07	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.11	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.4	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.4	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.18	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.11	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	0.007	--	--	--	--	--	--	--	--	--	--	--	0.07	--	--	--	--	--	--	--	0.11	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.34	--	--	--	--	--	--	--	--
--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.3	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.001	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.27	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	1.2	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	1.5	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.13	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.23	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.12	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.32	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.16	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.1	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.13	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.07	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	27	--	10	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.034	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	91	--	14	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.015	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	62	--	170	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	12	--	9	--	< 0.01	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.001	< 0.001	--	--	< 0.001	--	0.03	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	6	--	13	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	24	--	27	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	22	--	4	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	51	--	49	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	12	--	15	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.003	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	17	--	12	--	0.03	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	2	--	7	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.008	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	12	--	1	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	26	--	34	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	6	--	7	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.005	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	16	--	32	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.011	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	33	--	97	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.018	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	15	--	12	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	17	--	7	--	0.01	--
--	< 0.001	0.001	--	--	< 0.001	--	0.004	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	15	--	31	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.006	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	< 1	--	7	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	1	--	2	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.017	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	10	--	35	--	0.03	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.007	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	24	--	55	--	0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.023	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	21	--	12	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.007	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	13	--	3	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.033	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	3	--	200	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.016	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.007	--	--	--	15	--	14	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.007	--	< 0.0001	--	--	--	< 0.001	--	3.4	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	14	--	1	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.018	--	< 0.0001	--	--	--	< 0.001	--	0.68	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	24	--	12	--	< 0.01	--
--	< 0.001	0.007	--	--	< 0.001	--	0.017	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	3	--	1	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.032	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	8	--	< 1	--	< 0.01	--
--	0.001	< 0.001	--	--	< 0.001	--	0.013	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	31	--	15	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.022	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	25	--	< 1	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.014	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	7	--	26	--	0.02	--
--	0.004	< 0.001	--	--	< 0.001	--	0.282	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	4	--	16	--	0.04	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	0.004	< 0.001	--	--	< 0.001	--	0.145	--	< 0.0001	--	--	--	0.002	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	1	--	10	--	0.03	--
--	0.002	< 0.001	--	--	< 0.001	--	0.068	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	2	--	< 1	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.039	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	< 1	--	< 1	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	9	--	8	--	0.04	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.01	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	43	--	22	--	0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.006	< 0.001	--	--	< 0.001	--	0.063	--	< 0.0001	--	--	--	0.002	--	0.01	< 0.01	--	--	--	--	< 0.01	0.006	--	--	--	< 1	--	< 1	--	0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.009	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	3	--	2	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.013	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	6	--	< 1	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	1	--	32	--	0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.011	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	20	--	< 1	--	0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.074	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	24	--	82	--	< 0.01	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.024	--	< 0.0001	--	--	--	< 0.001	--	0.05	< 0.01	--	--	--	--	< 0.01	0.023	--	--	--	17	--	31	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.011	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	22	--	13	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.1	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.011	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.019	--	--	--	3100	--	1500	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.006	--	< 0.0001	--	--	--	< 0.001	--	0.04	< 0.01	--	--	--	--	< 0.01	0.021	--	--	--	1	--	5	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.02	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	7	--	< 1	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	0.013	--	--	--	41	--	14	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.022	--	--	--	4	--	< 1	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	0.017	--	--	--	14	--	45	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.006	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.011	--	--	--	320	--	370	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.016	--	--	--	18	--	21	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.003	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.029	--	--	--	9	--	200	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.01	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.015	--	--	--	51	--	65	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.017	--	--	--	31	--	26	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.01	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.015	--	--	--	57	--	53	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.016	--	--	--	21	--	19	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.009	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.017	--	--	--	33	--	30	--	0.02	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.009	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	0.014	--	--	--	37	--	26	--	< 0.01	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	0.0007	< 0.0005	--	--	0.0002	--	0.0484	--	< 4e-005	--	--	--	0.0005	--	0.12	< 0.0002	--	--	--	--	0.0006	< 0.001	--	--	--	19	--	26	--	0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0002	< 0.0005	--	--	< 0.0001	--	0.0038	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	0.0005	< 0.001	--	--	--	10	--	5	--	0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.003	< 0.0005	--	--	< 0.0001	--	0.16	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	< 0.0002	< 0.001	--	--	--	< 1	--	< 1	--	0.01	--
--	0.0002	< 0.0005	--	--	< 0.0001	--	0.0221	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	< 0.0002	0.004	--	--	--	< 1	--	< 1	--	0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	0.0002	< 0.0005	--	--	< 0.0001	--	0.0041	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	0.0003	0.001	--	--	--	2	--	14	--	0.01	--
--	0.0002	< 0.0005	--	--	< 0.0001	--	0.007	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	0.0003	0.006	--	--	--	4	--	2	--	0.03	--
--	< 0.0001	< 0.0005	--	--	< 0.0001	--	0.0025	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	< 0.0002	< 0.001	--	--	--	12	--	45	--	0.04	--
--	0.0004	< 0.0005	--	--	< 0.0001	--	0.0066	--	< 4e-005	--	--	--	< 0.0005	--	0.01	< 0.0002	--	--	--	--	0.0003	< 0.001	--	--	--	7	--	3	--	< 0.01	--
--	0.0007	< 0.0005	--	--	0.0001	--	0.021	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	0.0003	< 0.001	--	--	--	14	--	18	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0001	< 0.0005	--	--	< 0.0001	--	0.0053	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	< 0.0002	< 0.001	--	--	--	< 1	--	5	--	< 0.01	--
--	0.0007	0.0006	--	--	0.0002	--	0.0134	--	< 4e-005	--	--	--	< 0.0005	--	0.01	< 0.0002	--	--	--	--	0.0006	< 0.001	--	--	--	200	--	6	--	< 0.01	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0005	0.0005	--	--	0.0002	--	0.0124	--	< 4e-005	--	--	--	< 0.0005	--	0.02	< 0.0002	--	--	--	--	0.0004	< 0.001	--	--	--	100	--	240	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0005	< 0.0005	--	--	< 0.0001	--	0.0079	--	< 4e-005	--	--	--	< 0.0005	--	0.04	< 0.0002	--	--	--	--	0.0004	< 0.001	--	--	--	45	--	27	--	< 0.01	--
--	0.0004	< 0.0005	--	--	0.0002	--	0.012	--	< 4e-005	--	--	--	< 0.0005	--	0.02	< 0.0002	--	--	--	--	0.0004	< 0.001	--	--	--	220	--	550	--	< 0.01	--
--	0.0004	< 0.0005	--	--	0.0001	--	0.0124	--	< 4e-005	--	--	--	< 0.0005	--	0.02	< 0.0002	--	--	--	--	0.0003	< 0.001	--	--	--	270	--	390	--	0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0005	0.0005	--	--	0.0002	--	0.0081	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	0.0006	< 0.001	--	--	--	62	--	110	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0001	< 0.0005	--	--	< 0.0001	--	0.002	--	< 4e-005	--	--	--	< 0.0005	--	0.01	< 0.0002	--	--	--	--	< 0.0002	< 0.001	--	--	--	36	--	53	--	< 0.01	--
--	0.0002	< 0.0005	--	--	0.0002	--	0.004	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	< 0.0002	0.001	--	--	--	41	--	36	--	0.09	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0006	< 0.0005	--	--	0.0003	--	0.0144	--	0.00012	--	--	--	0.0006	--	< 0.01	< 0.0002	--	--	--	--	0.0004	0.001	--	--	--	23	--	12	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0008	< 0.0005	--	--	< 0.0001	--	0.0485	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	< 0.0002	< 0.001	--	--	--	44	--	< 1	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0004	< 0.0005	--	--	< 0.0001	--	0.039	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	< 0.0002	0.004	--	--	--	8	--	24	--	< 0.01	--
--	0.0013	< 0.0005	--	--	0.0001	--	0.128	--	< 4e-005	--	--	--	< 0.0005	--	0.02	< 0.0002	--	--	--	--	0.0004	0.002	--	--	--	52	--	16	--	< 0.01	--
--	0.0003	< 0.0005	--	--	< 0.0001	--	0.0064	--	< 4e-005	--	--	--	0.0006	--	0.02	< 0.0002	--	--	--	--	< 0.0002	0.006	--	--	--	1	--	29	--	< 0.01	--
--	0.0009	< 0.0005	--	--	< 0.0001	--	0.0411	--	< 4e-005	--	--	--	< 0.0005	--	< 0.01	< 0.0002	--	--	--	--	< 0.0002	< 0.001	--	--	--	47	--	18	--	< 0.01	--
--	0.0005	< 0.0005	--	--	< 0.0001	--	0.0267	--	< 4e-005	--	--	--	< 0.0005	--	0.02	< 0.0002	--	--	--	--	0.0003	< 0.001	--	--	--	11	--	18	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.11	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.005	--	--	--	--	--	--	--	--	--	--	--	0.09	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	--
--	--	--	0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	11	--	13	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	--	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	21	--	28	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.007	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	2	--	9	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	7	--	7	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	1	--	6	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	--	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	8	--	26	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	7	--	7	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	3	--	3	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	< 0.001	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	7	--	3	--	< 0.01	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	1	--	23	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	< 0.001	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	1	--	9	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	17	--	180	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	4	--	3	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.004	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	32	--	49	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	--	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	7	--	8	--	< 0.01	--
--	< 0.001	0.003	--	--	< 0.001	--	0.004	--	--	--	--	--	0.002	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	< 1	--	5	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	16	--	13	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.005	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	12	--	11	--	0.01	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.005	--	--	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	9	--	3	--	0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.002	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	4	--	< 1	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.006	--	--	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	9	--	7	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	--	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	7	--	26	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.005	--	--	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	11	--	16	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.01	--	--	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	< 1	--	3	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.003	--	--	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	3	--	8	--	< 0.01	--
--	< 0.001	< 0.001	--	--	< 0.001	--	0.009	--	--	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	8	--	< 1	--	< 0.01	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	< 0.0001	--	--	--	< 0.001	--	0.04	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	< 1	--	< 1	--	< 0.01	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.007	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	3	--	10	--	< 0.01	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.05	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	0.067	--	--	--	1	--	2	--	< 0.01	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.016	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	11	--	< 1	--	< 0.01	--
< 0.01	< 0.001	< 0.001	--	--	0.001	--	0.041	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	< 1	--	5	--	< 0.01	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.006	--	< 0.0001	--	--	--	< 0.001	--	0.02	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	1	--	< 1	--	< 0.01	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.008	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	< 1	--	10	--	< 0.01	--
< 0.01	0.003	< 0.001	--	--	< 0.001	--	0.082	--	< 0.0001	--	--	--	< 0.001	--	0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	< 1	--	5	--	0.02	--
< 0.01	0.001	0.005	--	--	< 0.001	--	0.022	--	< 0.0001	--	--	--	0.001	--	0.01	< 0.01	--	--	--	--	0.02	< 0.005	--	--	--	14	--	5	--	0.04	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.001	--	< 0.0001	--	--	--	< 0.001	--	< 0.01	< 0.01	--	--	--	--	< 0.01	< 0.005	--	--	--	1	--	< 1	--	0.01	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.011	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.011	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.008	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.008	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.008	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.0001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.0001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.0001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.0001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.0001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.0001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.0001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.003	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.003	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	0.007	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.009	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	0.014	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.008	--	< 0.0001	--	--	--	< 0.001	--	0.04	< 0.01	--	--	--	--	--	< 0.01	< 0.005	--	--	--	98	--	39	--	< 0.01	--
< 0.01	< 0.001	< 0.001	--	--	< 0.001	--	0.068	--	< 0.0001	--	--	--	< 0.001	--	0.03	< 0.01	--	--	--	--	--	< 0.01	0.08	--	--	--	63	--	3	--	< 0.01	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.02	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.16	--	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.16	--	--	--	--	--	--	--	--	0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.009	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.009	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.009	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.007	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	0.008	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.006	--	--	--	--	--	--	--	--	--	--	--	0.08	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.006	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.006	--	--	--	--	--	--	--	--	--	--	--	0.06	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.05	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.006	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.04	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.005	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	0.02	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	0.1	< 0.001	< 0.001	0.011	0.012	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.035	--	--	--	--	--	--	--	--	0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	0.08	< 0.001	< 0.001	0.004	0.005	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.027	--	--	--	--	--	--	--	--	0.02
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	0.09	< 0.001	< 0.001	0.004	0.004	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.03	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.17	< 0.001	< 0.001	0.005	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.036	--	--	--	--	--	--	--	--	0.05
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.001	0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.032	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	0.004	0.08	< 0.001	< 0.001	0.006	0.007	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.024	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.23	< 0.001	< 0.001	0.013	0.023	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.03	--	--	--	--	--	--	--	--	0.03
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.03	--	--	--	--	--	--	--	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.03	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.026	--	--	--	--	--	--	--	--	< 0.01
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	2.6	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.004	0.005	< 0.0001	< 0.0001	< 0.001	< 0.001	0.003	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	< 0.005	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.06	< 0.001	< 0.001	0.006	0.008	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.005	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.06	< 0.001	< 0.001	0.01	0.013	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	< 0.005	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.07	< 0.001	< 0.001	0.006	0.009	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.029	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.003	0.005	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.006	--	--	--	--	--	--	--	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	0.15	< 0.001	< 0.001	0.002	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.008	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.001	0.009	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.006	--	--	--	--	--	--	--	--	< 0.01
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.003	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.008	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.84	< 0.001	< 0.001	0.012	0.018	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.006	--	--	--	--	--	--	--	--	0.02
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	< 0.005	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.033	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.16	< 0.001	< 0.001	0.003	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.026	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.16	< 0.001	< 0.001	0.004	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.005	--	--	--	--	--	--	--	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.004	< 0.001	0.002	0.07	< 0.001	< 0.001	0.106	0.104	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.037	--	--	--	--	--	--	--	--	0.03
--	< 0.001	< 0.001	< 0.001	0.1	< 0.001	< 0.001	0.005	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.027	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.11	< 0.001	< 0.001	0.012	0.015	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.033	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.005	--	--	--	--	--	--	--	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.001	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	< 0.005	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	< 0.005	--	--	--	--	--	--	--	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	0.18	< 0.001	< 0.001	0.008	0.058	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.032	--	--	--	--	--	--	--	--	0.03
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.03	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	1.64	< 0.001	< 0.001	0.006	0.005	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.023	--	--	--	--	--	--	--	--	0.02
--	< 0.001	< 0.001	< 0.001	0.05	< 0.001	< 0.001	0.004	0.004	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.005	--	< 1	< 1	--	< 1	--	< 1	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.54	< 0.001	< 0.001	0.007	0.008	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.021	--	--	--	--	--	--	--	--	0.01
--	< 0.001	< 0.001	< 0.001	0.09	< 0.001	< 0.001	0.004	0.008	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.006	--	--	--	--	--	--	--	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	34	< 1	--	< 1	--	< 1	--	--
--	< 0.001	< 0.001	< 0.001	0.06	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	0.02	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.032	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.017	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.005	0.006	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.01	--	< 1	< 1	--	< 1	--	< 1	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.06	< 0.001	< 0.001	0.005	0.023	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.007	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.006	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.003	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.008	--	--	--	--	--	--	--	--	< 0.01
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.005	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.025	--	--	--	--	--	--	--	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	0.11	< 0.001	< 0.001	0.003	0.004	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.032	--	22	< 1	--	10	--	< 1	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.027	--	49	15	--	33	--	< 1	--	< 0.01
--	< 0.001	< 0.001	< 0.001	0.18	< 0.001	< 0.001	0.026	0.029	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.029	--	--	--	--	--	--	--	--	< 0.01
--	< 0.001	< 0.001	< 0.001	< 0.05	< 0.001	< 0.001	0.002	0.002	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.03	--	52	< 1	--	30	--	< 1	--	< 0.01

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	cfu/100ml	cfu/100ml	orgs/100mL	cfu/100ml	orgs/100mL	Unitless	mg/L	mg/L
--	< 0.001	< 0.001	< 0.001	0.07	< 0.001	< 0.001	0.003	0.004	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.01	< 0.001	--	< 0.001	< 0.01	0.03	--	--	--	--	--	--	--	--	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	< 0.01	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

NUTRIENTS									PAHs																					
Nitrate and Nitrite	Nitrate as N	Nitrite	Nitrite as N	Nitrogen oxides, NOx	Phosphate	Phosphorus, reactive as P	Total Kjeldahl Nitrogen	Total Nitrogen, All Forms, Calculated	2-Methylnaphthalene	3-Methylcholanthrene	7,12-Dimethylbenz(A)Anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benzo[b+j]fluoranthene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[a]pyrene TEQ (half LOR)	Benzo[a]pyrene TEQ (LOR)	Benzo[a]pyrene TEQ (zero)	Benzo[b/j/k]fluoranthenes	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-C,D)Pyrene	Naphthalene	Naphthalene	PAHs, total (QM calculated)
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.01	0.01	< 0.01	< 0.01	0.01	0.01	0.01	0.1	0.1	< 0.002	< 0.004	< 0.001	< 0.002	0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	0.002	< 0.002	< 0.001	< 0.004	< 0.001
0.69	0.72	< 0.01	< 0.01	0.72	0.01	0.03	1.9	1.9	< 0.002	< 0.004	< 0.001	< 50	20	< 100	< 1	< 1	< 1	< 0.001	< 0.001	< 1	< 0.004	< 1	< 1	< 1	< 1	< 100	50	< 1	< 0.01	< 20	< 0.001
0.04	0.03	--	--	0.03	0.01	0.01	0.2	0.3	--	--	--	--	1.093	--	--	--	--	--	--	--	--	--	--	--	--	--	1.908	--	--	--	--
0.01	0.01	--	--	0.01	0.01	0.01	0.2	0.2	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
46	255	46	209	209	46	209	255	255	115	115	115	442	442	442	442	442	442	115	115	442	115	442	442	442	442	442	442	442	441	444	18
27	98	0	0	71	2	2	209	209	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
1.9%	10.5%	1.9%	8.6%	8.6%	1.9%	8.6%	10.5%	10.5%	4.7%	4.7%	4.7%	18.2%	18.2%	18.2%	18.2%	18.2%	18.2%	4.7%	4.7%	18.2%	4.7%	18.2%	18.2%	18.2%	18.2%	18.2%	18.2%	18.2%	18.3%	0.7%
		3															**0.01**													
		0															*0*													
mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	0.01	--	< 0.01	0.01	--	< 0.01	0.1	0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.4	0.4	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.3	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	0.03	--	< 0.01	0.03	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.02	--	< 0.01	0.02	--	< 0.01	< 0.1	< 0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.22	--	< 0.01	0.22	--	< 0.01	0.1	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.01	--	< 0.01	0.01	--	< 0.01	< 0.1	< 0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	0.02	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.01	--	< 0.01	0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	< 0.002	< 0.004	< 0.001	< 0.002	0.007	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	0.003	< 0.002	< 0.005	0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 0.8	--	--	< 0.5	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.005	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 0.9	--	--	< 0.5	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.005	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 0.1	--	--	< 0.5	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.005	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 0.1	--	--	< 0.5	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.005	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 0.11	--	--	< 0.5	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.005	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	--	< 0.1	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.005	< 0.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.3	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.02	--	< 0.01	0.02	--	< 0.01	1	1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.5	0.5	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.3	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.03	--	< 0.01	0.03	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.01	--	< 0.01	0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.53	--	< 0.01	0.53	--	< 0.01	0.2	0.7	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.3	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.3	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.04	--	< 0.01	0.04	--	< 0.01	0.1	0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	--	< 0.1	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.005	< 0.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	--	< 0.1	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.005	< 0.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.45	--	< 0.01	0.45	--	< 0.01	0.2	0.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.4	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	1.9	1.9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.01	--	< 0.01	0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.03	--	< 0.01	0.03	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.4	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	1.4	1.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.03	--	< 0.01	0.03	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.01	--	< 0.01	0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	--	< 0.1	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.005	< 0.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	--	< 0.1	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.005	< 0.1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 0.5	--	--	< 0.5	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.005	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.07	--	< 0.01	0.07	--	< 0.01	0.2	0.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.3	0.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.06	--	< 0.01	0.06	--	< 0.01	0.1	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.03	--	< 0.01	0.03	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.01	--	< 0.01	0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.1	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	< 0.1	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.01	--	< 0.01	0.01	--	< 0.01	< 0.1	< 0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.3	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.3	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.3	0.3	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.2	0.2	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.01	--	< 0.01	0.01	--	< 0.01	0.5	0.5	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	0.02	--	< 0.01	0.02	--	< 0.01	0.1	0.1	< 0.002	< 0.004	< 0.001	< 0.002	< 0.002	< 0.001	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.002	< 0.004	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.005	< 0.004	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.01	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.001	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.001	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.001	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.01	--	< 0.01	0.01	--	< 0.01	0.6	0.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.01	--	< 0.01	< 0.01	--	< 0.01	0.4	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.001	< 1	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 1	--	--	< 1	--	< 1	< 1	< 1	< 1	< 1	< 1	< 0.001	< 1

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 1	< 1	< 0.5	--	--	< 0.5	--	< 1	< 1	< 1	< 1	< 1	< 0.005	< 1

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.03	0.03	< 0.01	--	--	< 0.01	--	< 0.1	< 0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.4	0.4	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.02	0.02	< 0.01	--	--	< 0.01	--	0.5	0.5	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.07	0.07	< 0.01	--	--	< 0.01	--	0.2	0.3	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.7	0.7	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.03	0.03	< 0.01	--	--	< 0.01	--	0.1	0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.007	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.02	0.02	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.01	0.01	< 0.01	--	--	< 0.01	--	0.1	0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.01	0.01	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.006	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	< 0.1	< 0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.006	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.02	0.02	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.03	0.03	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.01	0.01	< 0.01	--	--	< 0.01	--	0.1	0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.1	0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.01	0.01	< 0.01	--	--	< 0.01	--	0.3	0.3	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.3	0.3	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.006	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.03	0.03	< 0.01	--	--	< 0.01	--	0.4	0.4	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.006	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.3	0.3	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.006	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.03	0.03	< 0.01	--	--	< 0.01	--	0.4	0.4	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.006	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.3	0.3	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.06	0.06	< 0.01	--	--	< 0.01	--	< 0.1	< 0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.01	0.01	< 0.01	--	--	< 0.01	--	< 0.1	< 0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.03	0.03	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.3	0.3	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.04	0.04	< 0.01	--	--	< 0.01	--	0.5	0.5	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.02	0.02	< 0.01	--	--	< 0.01	--	< 0.1	< 0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.69	0.69	< 0.01	--	--	0.01	--	0.3	1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.03	0.03	< 0.01	--	--	< 0.01	--	0.1	0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.01	0.01	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.01	0.01	< 0.01	--	--	< 0.01	--	< 0.1	< 0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.02	0.02	< 0.01	--	--	< 0.01	--	< 0.1	< 0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	< 0.1	< 0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	0.01	--	0.1	0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.02	0.02	< 0.01	--	--	< 0.01	--	0.1	0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.01	0.01	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
0.02	0.02	< 0.01	--	--	< 0.01	--	0.2	0.2	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
< 0.01	< 0.01	< 0.01	--	--	< 0.01	--	0.1	0.1	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
0.14	0.14	< 0.01	--	--	< 0.01	--	0.2	0.3	--	--	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	--	--	< 0.005	--	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.005	< 0.02	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

					PESTICIDES												PESTICIDES (OC)															
Phenanthrene	Pyrene	Sum of Aldrin + Dieldrin	Sum of PAHs	Total Polynuclear Aromatic Hydrocarbons	Azinphos, Methyl (Guthion)	Bromophos-ethyl	Carbophenothion (Trithion)	Demeton-S-methyl	Endosulfan	Fenamiphos (Nemacur)	Monochrotophos	Oxychlordane	Parathion, Ethyl	Parathion, Methyl	Sum of DDD + DDE + DDT	SUM_CHLORDANE	Aldrin	alpha BHC (Alpha Hexachlorocyclohexane	Alpha Endosulfan	beta BHC (Beta Hexachlorocyclohexane)	Beta Endosulfan	Chlordane	cis-Chlordane	delta BHC (Delta Hexachlorocyclohexane)	Dieldrin	Endosulfan sulfate	Endrin	Endrin Aldehyde	gamma BHC (Lindane)	Heptachlor	Heptachlor epoxide - isomer b
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
0.002	< 0.001	0.002	0.001	0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.002	< 0.5	< 2	< 0.002	< 2	< 2	< 0.002	< 0.01	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.002	0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
100	< 1	0.033	1	80	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.01	0.033	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
3.265	--	0.004	0.44	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.004	--	--	--	--	--	--
1	--	0.002	0.5	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	--	--	--	--	--	--
442	442	161	424	175	46	46	46	46	161	46	46	161	46	46	161	46	161	161	161	161	161	115	161	161	161	161	161	161	161	161	161
1	0	1	1	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
18.2%	18.2%	6.6%	17.5%	7.2%	1.9%	1.9%	1.9%	1.9%	6.6%	1.9%	1.9%	6.6%	1.9%	1.9%	6.6%	1.9%	6.6%	6.6%	6.6%	6.6%	6.6%	4.7%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	6.6%
		0.3			**30**	**10**	**0.5**		**20**	**0.5**			**20**	**0.7**									**2**							**10**	**0.3**	
		0			*0*	*0*	*0*		*0*	*0*			*0*	*0*									*0*							*0*	*0*	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.002	< 0.001	< 0.002	< 0.001	--	--	--	--	--	< 0.002	--	--	< 0.002	--	--	< 0.002	--	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.002	< 0.001	< 0.002	< 0.001	--	--	--	--	--	< 0.002	--	--	< 0.002	--	--	< 0.002	--	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.1	< 0.1	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	1.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.002	< 0.001	< 0.002	< 0.001	--	--	--	--	--	< 0.002	--	--	< 0.002	--	--	< 0.002	--	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.001	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	5.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	2.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.1	< 0.1	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.1	< 0.1	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.1	< 0.1	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.1	< 0.1	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.1	< 0.1	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.1	< 0.1	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.1	< 0.1	--	< 0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 100	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 1

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 1	< 1	--	< 0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	< 8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	< 0.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.02	< 0.02	< 0.01	< 0.005	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.01	< 0.5	< 2	< 0.01	< 2	< 2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

						PESTICIDES (OP)																									
Hexachlorobenzene	Methoxychlor	P,P'-DDD	P,P'-DDE	P,P'-DDT	trans-Chlordane	Chlorofenvinphos	Chlorpyrifos	Chlorpyrifos Methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Pirimiphos-Ethyl	Tokuthion (Prothiofos)	10:2 Fluorotelomer sulfonic acid (10:2 FTS	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	N-Ethyl perfluorooctane sulfonamidoetha	N-ethyl perfluorooctanesulfonamide (N-E	N-Ethyl perfluorooctanesulfonamidoaceti	N-Methyl perfluorooctane sulfonamidoet	N-methyl perfluorooctanesulfonamide (N	N-methyl perfluorooctanesulfonamidoac	Perfluorobutanesulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS) (free	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA or PFL
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.0004	0.0005	0.0005	0.0004	< 0.0005	0.0004	0.0004	0.0004	< 0.0004	0.0004	0.0004	0.0005	0.0004	0.0002	0.0004
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.1	0.1	1.8	0.13	< 0.1	0.1	0.1	0.1	< 0.1	0.1	0.16	0.24	0.1	0.1	0.1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0013	0.0012	0.0179	0.0015	--	0.0059	0.0057	0.0059	--	0.0057	0.0016	0.0064	0.0011	0.0018	0.0018
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001	0.001	0.001	0.001	--	0.0025	0.0025	0.0025	--	0.0025	0.0008	0.002	0.0005	0.001	0.001
161	161	161	161	161	161	46	46	46	46	46	46	46	46	46	46	46	1038	1528	1528	1528	1349	1349	1349	1349	1349	1349	1528	1528	1349	1349	1349
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	394	140	0	1	3	1	0	1	151	440	7	29	7
6.6%	6.6%	6.6%	6.6%	6.6%	6.6%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	42.9%	63.1%	63.1%	63.1%	55.7%	55.7%	55.7%	55.7%	55.7%	55.7%	63.1%	63.1%	55.7%	55.7%	55.7%
																											1				
																											0				
						2	**10**		**4**	**5**	**7**	**4**	**7**	**70**	**0.5**																	
						0	*0*		*0*	*0*	*0*	*0*	*0*	*0*	*0*																	
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.003	< 0.005	< 0.001	0.004	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.004	< 0.005	0.002	< 0.001	0.002
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.002	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.16	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.012	0.024	0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.006	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.009	0.031	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.033	0.029	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.026	0.044	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.003	0.008	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.038	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.008	0.019	0.08	0.003	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.008	0.006	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.006	0.007	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.01	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.14	0.24	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.002	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.017	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.019	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.003	0.013	< 0.001	0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.013	0.012	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.002	0.007	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.001	0.009	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.007	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.003	0.011	< 0.001	0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.006	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.002	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.006	0.01	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	0.008	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.006	0.007	< 0.001	< 0.001	0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.002	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.024	0.021	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	0.02
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	0.035	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0018	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0066	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0033	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.012	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.094	0.0017	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0066	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.09	0.0027	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0082	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.095	0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0076	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0028	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0082	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0079	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.012	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0009	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0007	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.035	0.0061	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.079	0.011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0034	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.056	0.0089	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0044	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.17	0.0048	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0091	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	0.0017	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0049	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0097	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.25	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0035	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0019	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0038	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.048	0.0036	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.14	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0051	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.037	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.032	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.045	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0076	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0072	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.32	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0085	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.0032	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0062	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0034	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0022	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.083	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0028	< 0.0005	< 0.001	< 0.001
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.087	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0023	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0011	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.008	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0007	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.014	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.003	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0073	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.22	0.0029	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.01	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0024	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0037	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.002	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0041	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.001	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.23	0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0048	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.17	0.0017	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0062	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0014	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0042	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0041	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.21	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.0009	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0069	< 0.0005	< 0.001	< 0.001
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.2	0.0062	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.14	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0066	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0021	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0024	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	0.011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0034	< 0.0005	0.001	< 0.001
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.23	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0049	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0052	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0054	< 0.0005	< 0.001	< 0.001
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.27	0.0035	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0058	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.0029	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0053	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.24	0.0032	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.0027	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0098	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.16	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.004	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0024	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.2	0.0052	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0084	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0089	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	0.0029	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0053	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	0.0006	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0053	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.071	0.0022	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.004	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.25	0.0034	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0034	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.007	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.015	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.002	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.016	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.006	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.031	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.006	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.006	0.008	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	0.003	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.006	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	< 0.001	0.087	0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.012	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.016	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.017	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.011	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.002	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.23	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.002	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.28	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	0.36	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	1.8	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.2	0.005	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.082	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001	< 0.001	0.029	0.004	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	0.001	0.29	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.003	0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.048	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.12	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.003	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.14	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.004	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.1	< 0.1	1.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.031	0.003	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.004	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.033	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.009	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.021	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.18	0.002	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.008	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.057	0.007	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.047	0.009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	0.082	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.03	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.012	0.015	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	0.061	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	0.015	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.068	0.005	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0079	< 0.0005	0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.006	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0064	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0022	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0006	0.0047	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0034	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0041	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0005	0.0039	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0006	0.0028	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0037	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0024	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0031	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0028	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0083	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0044	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0041	0.0049	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0014	0.0029	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0017	0.0046	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0008	0.0086	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.001	0.0058	< 0.0005	0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0008	0.0062	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0022	0.0124	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0014	0.0124	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0008	0.0035	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.001	0.0057	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.069	0.006	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0057	< 0.0005	0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0037	< 0.0005	0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001	< 0.001	0.078	0.01	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0073	< 0.0005	0.0009	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0072	< 0.0005	0.0049	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.129	0.006	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0032	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.02	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.229	0.007	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0072	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0031	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0034	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0027	< 0.0005	< 0.001	< 0.001

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0017	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0034	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.012	< 0.001	0.18	0.021	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.008	< 0.0005	0.0015	0.0019
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	< 0.001	< 0.001	0.008	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.018	0.004	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	< 0.001	0.02	0.007	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	0.003	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.001	< 0.001	0.034	0.004	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0044	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.176	0.002	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0046	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0036	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0036	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0037	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0032	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0039	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0022	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	0.003	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	0.003	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	0.004	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	0.009	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	0.003	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001	< 0.005	< 0.001	< 0.001	< 0.001

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	0.006	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	0.003	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	0.005	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.004	< 0.002	< 0.002	< 0.004	< 0.004

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.009	< 0.001	< 0.001	0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0008	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0042	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.007	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0006	0.0029	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0032	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0007	0.003	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.0008	< 0.002	< 0.002	< 0.0008	< 0.0015	< 0.004	< 0.0008	< 0.0008	< 0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	< 0.0008	< 0.002	< 0.002	< 0.0008	< 0.0008	< 0.004	< 0.0008	< 0.0008	< 0.0008
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0023	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0008	0.003	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0022	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0007	0.0028	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0005	0.0028	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0031	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0015	0.0034	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0017	0.0055	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0022	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.154	0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.0132	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.001	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0033	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0058	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.00125	0.25	< 0.00125	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.0025	0.0051	< 0.00125	< 0.0025	< 0.0025
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.29	< 0.0025	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.005	0.0066	< 0.0025	< 0.005	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.24	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.003	0.0009	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.19	0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.002	0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0025	0.23	< 0.0025	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.0125	< 0.005	< 0.0025	< 0.0025	< 0.005	< 0.005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.00125	0.39	< 0.00125	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.00625	0.003	< 0.00125	< 0.00125	< 0.0025	< 0.0025
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.00125	0.23	< 0.00125	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.00625	< 0.0025	< 0.00125	< 0.00125	< 0.0025	< 0.0025
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.002	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0026	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0012	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.001	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0043	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.001	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0007	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0021	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0029	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0016	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.22	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.001	0.013	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.12	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0047	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0008	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0006	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.04	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0096	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.038	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0029	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0016	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.001	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.002	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0022	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0083	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0032	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.001	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0049	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0014	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0014	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0013	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0008	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0048	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0018	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0006	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0007	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.003	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.002	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0064	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0012	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0042	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0045	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0049	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0007	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0037	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0019	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0014	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.001	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.014	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0039	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.033	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0024	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.003	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.005	< 0.001	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.001	< 0.05	< 0.001	< 0.01	< 0.01
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0043	< 0.0005	< 0.001	< 0.001
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.008	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.15	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.001	0.0055	< 0.0005	< 0.001	< 0.001
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.008	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.001	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.002	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.019	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0019	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.039	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0018	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0012	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0052	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.18	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.008	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.14	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0072	< 0.0005	< 0.001	< 0.001

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.031	0.0015	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0024	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.031	0.001	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.003	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0022	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0043	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0016	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	0.013	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0016	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0071	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0013	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0013	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.02	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.026	0.0013	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0034	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.046	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0036	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0013	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0015	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.001	0.0091	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.033	0.0024	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0061	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0018	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0014	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0012	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0012	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0017	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.023	0.0011	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0046	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.083	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0041	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0011	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0014	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0042	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.01	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0042	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0008	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.026	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.004	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.0009	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0007	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0006	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.024	0.0008	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0044	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.001	0.0039	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0009	< 0.0005	0.002	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.002	0.0063	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.13	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.001	0.011	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.037	0.0022	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0023	< 0.0005	0.003	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0007	< 0.0005	< 0.001	< 0.001

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.1	0.0007	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.002	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	0.0015	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	< 0.0005	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.087	0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.003	0.059	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.089	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.003	0.061	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.11	0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.003	0.051	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0005	0.095	< 0.0005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.002	< 0.0005	< 0.0005	< 0.001	< 0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	0.005	< 0.002	< 0.004	< 0.004	< 0.0016	< 0.004	< 0.004	< 0.0016	< 0.0016	< 0.0081	< 0.0016	< 0.0016	< 0.0016
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0006	0.0062	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.003	< 0.001	0.011	0.008	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0079	< 0.0005	0.0007	0.0006
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0018	0.0069	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0005	0.0027	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.0005	< 0.001	< 0.004	< 0.0005	0.0018	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0016	< 0.008	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	0.0088	< 0.001	< 0.001	< 0.0005	0.0016	0.0102	< 0.0005	0.0193	0.0071
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.008	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.004	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.002	< 0.002	< 0.002	< 0.002	--	--	--	--	--	--	< 0.0005	< 0.0084	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	--	--	--	--	--	--	< 0.0005	< 0.0084	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0009	< 0.004	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0015	< 0.001	< 0.001	< 0.0005	0.0008	0.0048	< 0.0005	0.006	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	0.007	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.0004	< 0.001	< 0.001	< 0.0004	< 0.0005	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.0004	< 0.001	< 0.0004	< 0.0002	< 0.0004
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0079	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0081	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0016	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.008	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.008	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.008	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.004	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0079	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0081	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.004	< 0.0005	< 0.0005	< 0.0079	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0016	< 0.001	< 0.004	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0079	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.008	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0079	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0081	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0079	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.016	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0082	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0079	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.0078	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.003	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	0.027	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.008	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.004	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0005	< 0.001	< 0.001	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

PFAS																							SVOC								
Perfluorododecanesulfonic acid (PFDoS)	Perfluoroheptanesulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorohexanesulfonic acid (PFHxS)	Perfluorohexanoic acid (PFHxA)	Perfluorononanesulfonic acid (PFNS)	Perfluorononanoic acid (PFNA)	Perfluorooctanesulfonamide (FOSA or PF	Perfluorooctanesulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropane sulfonic acid	Perfluorotetradecanoic acid (PFTA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA or PFU	Sum of enHealth PFAS (PFHxS + PFOS + PF	Sum of PFAS (sum 28 compounds, ALS AU	Sum of PFAS (sum 30 compounds, Eurofir	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	Sum of US EPA PFAS (PFOS + PFOA)	1,3,5-Trinitrobenzene	2-(2-Butoxyethoxy)Ethanol	2,6-Dinitrotoluene	Aminomethylphosphonic	Benzo[e]pyrene	Coronene	Diethylene glycol	Endrin Ketone	Ethoxyethanol Acetate, 2-
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 0.005	0.0001	0.0005	< 0.0005	0.0001	0.0002	< 0.0005	0.0004	0.0004	0.0001	0.0002	0.0004	0.0002	0.001	0.0004	0.0004	0.0002	0.001	0.0002	0.005	0.0002	0.0001	0.0001	< 1	< 2	< 1	< 10	< 0.001	< 0.002	< 2	< 0.002	< 2
< 0.005	0.1	0.1	< 0.0005	0.1	0.37	< 0.001	0.1	0.1	2.6	0.103	0.1	0.19	0.1	0.1	0.1	0.1	0.143	2.844	0.9939	0.8249	2.6	2.6	< 1	< 2	< 2	< 10	< 0.001	< 0.002	< 2	< 0.01	< 2
--	0.0009	0.0021	--	0.0017	0.0075	--	0.0019	0.0054	0.0051	0.0021	0.0014	0.0039	0.003	0.0019	0.0018	0.0018	0.033	0.031	0.094	0.0112	0.0062	0.0306	--	--	--	--	--	--	--	--	--
--	0.0005	0.0006	--	0.0005	0.0005	--	0.001	0.002	0.0002	0.0005	0.001	0.0005	0.001	0.001	0.001	0.001	0.022	0.005	0.054	0.0002	0.0002	0.001	--	--	--	--	--	--	--	--	--
43	1349	1528	43	1528	1528	209	1349	1349	1528	1528	1349	1528	304	1348	1349	1349	81	1154	81	731	1528	258	116	7	116	24	115	115	7	161	7
0	29	356	0	144	444	0	34	5	347	264	59	406	6	1	3	9	79	347	76	143	308	130	0	0	0	0	0	0	0	0	0
1.8%	55.7%	63.1%	1.8%	63.1%	63.1%	8.6%	55.7%	55.7%	63.1%	63.1%	55.7%	63.1%	12.6%	55.7%	55.7%	55.7%	3.3%	47.6%	3.3%	30.2%	63.1%	10.7%	4.8%	0.3%	4.8%	1.0%	4.7%	4.7%	0.3%	6.6%	0.3%
				0.03					**0.004**	**0.2**																					
				12					*78*	*0*																					
										0.56											**0.07**										
										0											*11*										
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.001	0.011	--	0.011	0.026	--	0.002	< 0.005	0.029	0.027	0.001	0.031	--	< 0.001	< 0.001	< 0.001	0.067	--	0.145	0.138	0.04	0.056	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.019	0.002	--	< 0.001	< 0.005	0.0085	0.003	0.003	0.002	--	< 0.001	< 0.001	< 0.001	0.0305	--	0.0455	0.0385	0.0275	0.0115	--	--	--	--	--	--	--	--	--
--	< 0.001	0.002	--	0.004	0.007	--	< 0.001	< 0.005	0.0016	0.002	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	0.0076	--	0.0276	0.0276	0.0056	0.0036	--	--	--	--	--	--	--	--	--
--	< 0.001	0.036	--	0.023	0.15	--	< 0.001	< 0.005	0.0006	0.02	0.019	< 0.001	--	< 0.001	< 0.001	< 0.001	0.0436	--	0.4486	0.3896	0.0236	0.0206	--	--	--	--	--	--	--	--	--
--	0.007	0.019	--	0.072	0.046	--	0.001	< 0.005	0.033	0.026	0.014	0.039	--	< 0.001	< 0.001	< 0.001	0.131	--	0.294	0.271	0.105	0.059	--	--	--	--	--	--	--	--	--
--	0.001	0.004	--	0.029	0.007	--	< 0.001	< 0.005	0.0068	0.009	0.005	0.005	--	< 0.001	< 0.001	< 0.001	0.0448	--	0.0778	0.0718	0.0358	0.0158	--	--	--	--	--	--	--	--	--
--	< 0.001	0.006	--	0.006	0.014	--	< 0.001	< 0.005	0.0009	0.007	0.006	0.007	--	< 0.001	< 0.001	< 0.001	0.0139	--	0.0869	0.0809	0.0069	0.0079	--	--	--	--	--	--	--	--	--
--	< 0.001	0.003	--	0.009	0.008	--	< 0.001	< 0.005	0.0007	0.003	0.016	0.004	--	< 0.001	< 0.001	< 0.001	0.0127	--	0.1357	0.0897	0.0097	0.0037	--	--	--	--	--	--	--	--	--
--	< 0.001	0.004	--	0.01	0.022	--	< 0.001	< 0.005	0.0007	0.002	0.017	0.009	--	< 0.001	< 0.001	< 0.001	0.0127	--	0.1747	0.1177	0.0107	0.0027	--	--	--	--	--	--	--	--	--
--	< 0.001	0.008	--	0.008	0.016	--	< 0.001	< 0.005	0.0011	0.009	0.003	0.012	--	< 0.001	< 0.001	< 0.001	0.0181	--	0.0681	0.0651	0.0091	0.0101	--	--	--	--	--	--	--	--	--
--	< 0.001	0.006	--	0.005	0.016	--	< 0.001	< 0.005	0.0004	0.006	0.003	0.016	--	< 0.001	< 0.001	< 0.001	0.0114	--	0.0954	0.0924	0.0054	0.0064	--	--	--	--	--	--	--	--	--
--	< 0.001	0.002	--	0.002	0.003	--	< 0.001	< 0.005	0.0011	0.01	< 0.001	0.001	--	< 0.001	< 0.001	< 0.001	0.0131	--	0.0201	0.0201	0.0031	0.0111	--	--	--	--	--	--	--	--	--
--	0.002	0.025	--	0.024	0.041	--	0.004	< 0.005	0.028	0.038	0.003	0.041	--	< 0.001	< 0.001	< 0.001	0.09	--	0.316	0.224	0.052	0.066	--	--	--	--	--	--	--	--	--
--	0.003	0.008	--	0.047	0.015	--	0.006	< 0.005	0.026	0.012	0.009	0.013	--	< 0.001	< 0.001	< 0.001	0.085	--	0.153	0.135	0.073	0.038	--	--	--	--	--	--	--	--	--
--	0.004	0.008	--	0.035	0.012	--	0.001	< 0.005	0.044	0.016	0.005	0.008	--	< 0.001	< 0.001	< 0.001	0.095	--	0.146	0.136	0.079	0.06	--	--	--	--	--	--	--	--	--
--	0.001	0.009	--	0.014	0.015	--	< 0.001	< 0.005	0.0061	0.013	0.003	0.012	--	< 0.001	< 0.001	< 0.001	0.0331	--	0.0881	0.0841	0.0201	0.0191	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.003	< 0.001	--	< 0.001	< 0.005	0.0017	0.001	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.001	0.0057	--	0.0057	0.0057	0.0047	0.0027	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.004	< 0.001	--	< 0.001	< 0.005	0.0006	< 0.001	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.001	0.0046	--	< 0.005	< 0.005	0.0046	< 0.001	--	--	--	--	--	--	--	--	--
--	0.004	0.038	--	0.017	0.16	--	< 0.001	< 0.005	0.0039	0.036	0.045	0.19	--	< 0.001	< 0.001	< 0.001	0.0569	--	0.9939	0.8249	0.0209	0.0399	--	--	--	--	--	--	--	--	--
--	< 0.001	0.003	--	0.004	0.003	--	< 0.001	< 0.005	0.0017	0.002	< 0.001	0.002	--	< 0.001	< 0.001	< 0.001	0.0077	--	0.0157	0.0157	0.0057	0.0037	--	--	--	--	--	--	--	--	--
--	< 0.001	0.003	--	0.015	0.006	--	< 0.001	< 0.005	0.0084	0.005	0.002	0.003	--	< 0.001	< 0.001	< 0.001	0.0284	--	0.0444	0.0424	0.0234	0.0134	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0054	< 0.001	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.001	0.0054	--	0.0054	0.0054	0.0054	0.0054	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	0.003	0.014	--	0.039	0.03	--	0.002	< 0.005	0.033	0.014	0.008	0.05	--	< 0.001	< 0.001	< 0.001	0.086	--	0.22	0.207	0.072	0.047	--	--	--	--	--	--	--	--	--
--	0.005	0.02	--	0.08	0.05	--	0.001	< 0.005	0.029	0.034	0.018	0.041	--	< 0.001	< 0.001	< 0.001	0.143	--	0.317	0.293	0.109	0.063	--	--	--	--	--	--	--	--	--
--	< 0.001	0.009	--	0.011	0.021	--	0.002	< 0.005	0.014	0.009	0.003	0.028	--	< 0.001	< 0.001	< 0.001	0.034	--	0.114	0.108	0.025	0.023	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.001	0.001	--	0.003	0.004	< 0.001	< 0.001	< 0.005	0.0014	< 0.001	0.002	0.001	0.006	< 0.001	< 0.001	< 0.001	0.0044	--	0.0434	0.0354	0.0044	0.0014	--	--	--	--	--	--	--	--	--
--	< 0.001	0.004	--	0.003	0.009	< 0.001	< 0.001	< 0.005	0.0021	0.005	< 0.001	0.005	< 0.001	< 0.001	< 0.001	< 0.001	0.0101	--	0.0371	0.0371	0.0051	0.0071	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.001	--	0.002	0.004	< 0.001	< 0.001	< 0.005	0.0011	0.002	< 0.001	0.006	< 0.001	< 0.001	< 0.001	< 0.001	0.0051	--	0.0261	0.0261	0.0031	0.0031	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.002	--	0.001	0.004	< 0.001	< 0.001	< 0.005	0.0017	0.005	< 0.001	0.007	< 0.001	< 0.001	< 0.001	< 0.001	0.0077	--	0.0207	0.0207	0.0027	0.0067	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.011	--	0.009	0.028	< 0.001	0.001	< 0.005	0.019	0.019	< 0.001	0.024	< 0.001	< 0.001	< 0.001	< 0.001	0.047	--	0.133	0.131	0.028	0.038	--	--	--	--	--	--	--	--	--	--
--	0.001	0.006	--	0.031	0.014	< 0.001	0.003	< 0.005	0.029	0.01	0.003	0.011	0.001	< 0.001	< 0.001	< 0.001	0.07	--	0.12	0.112	0.06	0.039	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.004	--	0.011	0.006	< 0.001	< 0.001	< 0.005	0.013	0.009	< 0.001	0.005	< 0.001	< 0.001	< 0.001	< 0.001	0.033	--	0.05	0.05	0.024	0.022	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.007	--	0.025	0.018	< 0.001	< 0.001	< 0.005	0.033	0.013	0.002	0.01	0.001	< 0.001	< 0.001	< 0.001	0.071	--	0.125	0.122	0.058	0.046	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.003	--	0.006	0.006	< 0.001	< 0.001	< 0.005	0.011	0.005	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.022	--	0.041	0.041	0.017	0.016	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.001	< 0.001	< 0.001	< 0.001	< 0.005	0.0016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0026	--	< 0.005	< 0.005	0.0026	0.0016	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.002	< 0.001	< 0.001	< 0.001	< 0.005	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	--	< 0.005	< 0.005	0.003	0.001	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.004	--	0.026	0.012	< 0.001	< 0.001	< 0.005	0.027	0.007	0.003	0.013	< 0.001	< 0.001	< 0.001	< 0.001	0.06	--	0.105	0.102	0.053	0.034	--	--	--	--	--	--	--	--	--	--
--	0.002	0.007	--	0.029	0.009	< 0.001	< 0.001	< 0.005	0.044	0.015	0.003	0.008	< 0.001	< 0.001	< 0.001	< 0.001	0.088	--	0.127	0.122	0.073	0.059	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.004	--	0.007	0.008	< 0.001	< 0.001	< 0.005	0.012	0.008	< 0.001	0.008	< 0.001	< 0.001	< 0.001	< 0.001	0.027	--	0.049	0.049	0.019	0.02	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.009	--	0.028	0.016	< 0.001	< 0.001	< 0.005	0.018	0.021	0.003	0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.067	--	0.15	0.147	0.046	0.039	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.001	--	0.002	0.002	< 0.001	< 0.001	< 0.005	0.0017	0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0047	--	0.0297	0.0097	0.0037	0.0027	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	0.003	< 0.001	< 0.001	< 0.005	0.0019	< 0.001	< 0.001	0.006	< 0.001	< 0.001	< 0.001	< 0.001	0.0019	--	0.0459	0.0459	0.0019	0.0019	--	--	--	--	--	--	--	--	--	--
--	< 0.001	0.002	--	0.009	0.004	< 0.001	< 0.001	< 0.005	0.009	0.004	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.022	--	0.031	0.031	0.018	0.013	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	0.0005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	< 0.005	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.003	< 0.001	< 0.001	< 0.001	< 0.005	0.0017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.0047	--	0.0447	< 0.005	0.0047	0.0017	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0002	0.003	--	< 0.0002	0.094	--	< 0.001	< 0.002	< 0.0002	0.0009	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0029	--	< 0.0002	0.087	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0019	--	< 0.0002	0.042	--	< 0.001	< 0.002	< 0.0002	0.0007	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0019	--	< 0.0002	0.042	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0025	--	< 0.0002	0.044	--	< 0.001	< 0.002	< 0.0002	0.0006	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0023	--	< 0.0002	0.04	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0009	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0007	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0006	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0015	--	< 0.0002	0.0073	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0046	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0023	--	< 0.0002	0.016	--	< 0.001	< 0.002	< 0.0002	0.002	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.002	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0013	--	< 0.0002	0.012	--	< 0.001	< 0.002	< 0.0002	0.0024	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0081	--	< 0.0002	0.097	--	< 0.001	< 0.002	< 0.0002	0.003	< 0.001	0.037	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0037	--	< 0.0002	0.025	--	< 0.001	< 0.002	< 0.0002	0.0016	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0022	--	< 0.0002	0.022	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0029	--	0.0004	0.088	--	< 0.001	< 0.002	0.0012	0.0009	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0016	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0028	--	< 0.0002	0.094	--	< 0.001	< 0.002	0.0005	0.0007	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0032	--	< 0.0002	0.079	--	< 0.001	< 0.002	< 0.0002	0.0011	< 0.001	0.014	--	< 0.001	< 0.001	0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0029	--	< 0.0002	0.077	--	< 0.001	< 0.002	< 0.0002	0.0011	< 0.001	0.014	--	< 0.001	< 0.001	0.002	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	0.0066	--	< 0.001	< 0.002	< 0.0002	0.0012	< 0.001	0.006	--	< 0.001	< 0.001	0.006	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0031	--	< 0.0002	0.11	--	< 0.001	< 0.002	< 0.0002	0.0011	< 0.001	0.017	--	< 0.001	< 0.001	0.003	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0002	0.0018	--	< 0.001	< 0.002	0.0003	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0029	--	0.0002	0.023	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0037	--	0.0002	0.022	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.003	--	0.0002	0.02	--	< 0.001	< 0.002	0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0002	0.0015	--	< 0.001	< 0.002	0.0005	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0002	0.0024	--	< 0.001	< 0.002	0.0003	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0018	--	0.0002	0.014	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0047	--	< 0.0002	0.12	--	< 0.001	< 0.002	0.0008	0.0018	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0008	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.071	--	< 0.0002	0.039	--	< 0.001	< 0.002	0.0005	0.0014	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0014	--	0.0002	0.0053	--	< 0.001	< 0.002	0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	0.0024	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	0.0024	0.0024	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	0.0004	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	0.0004	0.0004	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0021	--	< 0.0002	0.07	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.01	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0034	--	< 0.0002	0.034	--	< 0.001	< 0.002	< 0.0002	0.0006	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0002	0.005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.002	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0002	0.0019	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0011	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	0.002	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0023	--	< 0.0002	0.066	--	< 0.001	< 0.002	0.0003	0.001	< 0.001	0.0097	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0034	--	< 0.0002	0.039	--	< 0.001	< 0.002	< 0.0002	0.0007	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0026	--	< 0.0002	0.066	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.01	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0033	--	< 0.0002	0.033	--	< 0.001	< 0.002	0.0003	0.0006	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0003	0.0007	--	< 0.0002	0.0016	--	< 0.001	< 0.002	0.0004	< 0.0005	< 0.001	0.0009	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	0.0003	0.0013	--	0.0002	0.0074	--	< 0.001	< 0.002	0.002	< 0.0005	< 0.001	0.0034	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0022	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0042	--	< 0.0002	0.046	--	< 0.001	< 0.002	< 0.0002	0.0007	< 0.001	0.021	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0025	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0037	--	< 0.0002	0.097	--	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0025	--	--	--	--	--	--	--	--	--	--
--	0.0003	< 0.0005	--	0.0018	0.0009	--	< 0.001	< 0.002	0.019	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.02	--	--	--	--	--	--	--	--	--	--
--	0.0003	0.0007	--	< 0.0002	0.0011	--	< 0.001	< 0.002	0.0005	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	0.0002	0.0011	--	< 0.0002	0.0057	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0025	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	0.0004	< 0.0005	--	0.0076	0.0017	--	< 0.001	< 0.002	0.0022	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0098	--	--	--	--	--	--	--	--	--	--
--	0.0003	< 0.0005	--	0.0085	0.0019	--	< 0.001	< 0.002	0.0021	0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.011	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0008	--	< 0.0002	0.001	--	< 0.001	< 0.002	0.0004	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0042	--	< 0.0002	0.12	--	< 0.001	< 0.002	0.0002	0.0019	< 0.001	0.023	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0063	--	< 0.0002	0.086	--	< 0.001	< 0.002	< 0.0002	0.0019	< 0.001	0.038	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0021	--	< 0.0002	0.076	--	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0076	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.079	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0041	--	0.0003	0.057	--	< 0.001	< 0.002	0.0009	0.0011	< 0.001	0.025	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0012	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	0.0004	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.0004	0.0004	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	0.0051	0.0006	--	--	--	0.0046	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.0178	0.0097	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	0.0053	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.0053	0.0053	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0009	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0007	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.001	--	< 0.0002	0.0098	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0049	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.002	--	< 0.0002	0.01	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0048	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	0.0026	--	< 0.001	< 0.002	< 0.0002	0.0005	< 0.001	0.0008	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0007	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0029	--	< 0.0002	0.087	--	< 0.001	< 0.002	< 0.0002	0.0011	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0041	--	< 0.0002	0.05	--	< 0.001	< 0.002	0.0004	0.0008	< 0.001	0.022	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0014	--	< 0.001	< 0.002	0.0003	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.004	--	< 0.0002	0.0007	--	< 0.001	< 0.002	0.0015	0.0014	< 0.001	0.0097	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0015	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.002	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	0.0004	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.0004	0.0004	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	0.0006	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.0006	0.0006	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0016	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.081	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0035	--	< 0.0002	0.056	--	< 0.001	< 0.002	< 0.0002	0.0011	< 0.001	0.024	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0028	--	0.0002	0.11	--	< 0.001	< 0.002	0.0019	0.0011	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0022	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0048	--	< 0.0002	0.068	--	0.001	< 0.002	0.001	0.0011	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.001	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0027	--	< 0.0002	0.084	--	< 0.001	< 0.002	0.0003	0.001	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0039	--	< 0.0002	0.046	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 1	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0031	--	< 0.0002	0.089	--	< 0.001	< 0.002	< 0.0002	0.0016	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0049	--	< 0.0002	0.045	--	< 0.001	< 0.002	0.0004	0.0013	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0038	--	< 0.0002	0.11	--	< 0.001	< 0.002	0.0008	0.002	< 0.001	0.015	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0008	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0053	--	< 0.0002	0.06	--	< 0.001	< 0.002	0.0008	0.0012	< 0.001	0.025	--	< 0.001	< 0.001	< 0.001	--	--	--	--	0.0008	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0026	--	< 0.0002	0.074	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0042	--	< 0.0002	0.043	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0025	--	< 0.0002	0.085	--	< 0.001	< 0.002	< 0.0002	0.0013	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0046	--	< 0.0002	0.053	--	< 0.001	< 0.002	< 0.0002	0.03	< 0.001	0.022	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0039	--	< 0.0002	0.099	--	< 0.001	< 0.002	< 0.0002	0.0012	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.006	--	< 0.0002	0.06	--	< 0.001	< 0.002	< 0.0002	0.018	< 0.001	0.027	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0036	--	< 0.0002	0.037	--	< 0.001	< 0.002	< 0.0002	0.0009	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0023	--	< 0.0002	0.054	--	< 0.001	< 0.002	< 0.0002	0.0013	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	--	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0142	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.02	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0653	--	--	< 0.001	0.0013	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0292	--	--	< 0.001	0.0012	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0054	--	--	< 0.001	0.0014	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0007	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0187	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0492	--	--	< 0.001	0.0022	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0018	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	0.0018	0.0018	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0023	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0403	--	--	0.0023	0.0043	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0006	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0131	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	0.003	< 0.01	--	< 0.01	< 0.05	0.85	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.969	--	--	0.853	0.852	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.29	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.376	--	--	0.29	0.29	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0016	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	0.0016	0.0016	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.02	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	0.02	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0563	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0008	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0138	--	--	< 0.001	0.0038	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0064	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.03	--	< 0.01	< 0.05	0.0032	< 0.01	< 0.001	0.04	< 0.001	< 0.01	< 0.01	< 0.01	--	0.2312	--	--	0.0032	0.0092	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.57	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.621	--	--	0.57	0.57	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0024	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	0.0024	0.0024	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0132	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0183	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0006	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0296	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0141	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	0.001	< 0.01	--	0.036	< 0.01	--	< 0.01	< 0.05	0.0094	< 0.01	0.002	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0544	--	--	0.0454	0.0094	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	0.001	< 0.01	--	0.004	< 0.01	--	< 0.01	< 0.05	0.047	0.04	< 0.001	0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.137	--	--	0.051	0.088	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.009	--	--	< 0.001	0.003	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.11	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	0.02	< 0.001	< 0.01	< 0.01	< 0.01	--	--	--	--	< 0.001	0.0023	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.17	--	< 0.01	< 0.05	0.0004	< 0.01	< 0.001	0.02	< 0.001	< 0.01	< 0.01	< 0.01	--	0.5014	--	--	< 0.001	0.0024	--	--	--	--	--	--	--	--
--	< 0.1	< 0.1	--	< 0.1	< 0.1	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	0.36	--	--	< 0.1	< 0.1	--	--	--	--	--	--	--	--
--	< 0.1	< 0.1	--	< 0.1	< 0.1	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	1.92	--	--	< 0.1	< 0.1	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.1	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	0.02	< 0.001	< 0.01	< 0.01	< 0.01	--	--	--	--	< 0.001	0.002	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.05	--	< 0.01	< 0.05	0.0005	< 0.01	< 0.001	0.03	< 0.001	< 0.01	< 0.01	< 0.01	--	0.1745	--	--	< 0.001	0.0025	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.01	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	0.02	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0663	--	--	< 0.001	0.0023	--	--	--	--	--	--	--	--
--	< 0.001	0.01	--	< 0.001	0.37	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	0.05	< 0.001	< 0.01	< 0.01	< 0.01	--	--	--	--	< 0.001	0.0023	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0013	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0873	--	--	0.0013	0.0033	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.03	--	< 0.01	< 0.05	0.0008	< 0.01	< 0.001	0.04	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0858	--	--	< 0.001	0.0018	--	--	--	--	--	--	--	--
--	< 0.1	< 0.1	--	< 0.1	0.13	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	0.13	--	--	< 0.1	< 0.1	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.01	--	< 0.01	< 0.05	0.0005	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.1605	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.01	--	< 0.01	< 0.05	0.0011	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.1891	--	--	0.0011	0.0021	--	--	--	--	--	--	--	--
--	< 0.1	< 0.1	--	< 0.1	0.14	--	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	--	1.34	--	--	< 0.1	< 0.1	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.08	--	--	0.001	0.005	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.01	--	< 0.01	< 0.05	0.0005	< 0.01	< 0.001	0.02	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0855	--	--	< 0.001	0.0025	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	--	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0003	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0143	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0004	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0284	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.08	--	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	0.03	< 0.001	< 0.01	< 0.01	< 0.01	--	0.2862	--	--	< 0.001	0.0012	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0152	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	0.0002	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.0122	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0028	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	0.0028	0.0028	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.02	--	< 0.01	< 0.05	0.0007	< 0.01	< 0.001	0.03	< 0.001	< 0.01	< 0.01	< 0.01	--	0.1377	--	--	< 0.001	0.0037	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	0.01	--	< 0.01	0.08	1.3	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	1.694	--	--	1.3	1.3	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	0.046	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	2.6	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	2.844	--	--	2.6	2.6	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0015	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.003	--	< 0.0005	0.0177	--	< 0.0005	< 0.0005	< 0.0002	0.0016	< 0.0005	0.0177	--	< 0.0005	< 0.0005	< 0.0005	--	0.116	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0044	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0041	--	< 0.0005	< 0.0005	< 0.0005	--	0.0209	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0022	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0009	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0072	--	--	0.0009	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0009	--	< 0.0005	0.0014	--	< 0.0005	< 0.0005	0.0012	< 0.0005	< 0.0005	0.0026	--	< 0.0005	< 0.0005	< 0.0005	--	0.0125	--	--	0.0012	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0046	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0048	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0034	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0037	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0024	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0034	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0028	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0015	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0098	--	--	0.0015	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0017	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0017	--	--	0.0017	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0013	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0057	--	--	0.0013	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0007	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0097	--	--	0.0007	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0049	--	--	0.0006	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0067	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.01	--	--	0.0006	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	0.0005	< 0.0005	0.003	0.0006	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0124	--	--	0.003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0076	--	--	0.0006	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0006	< 0.0005	--	< 0.0005	< 0.0005	0.0013	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0165	--	--	0.0019	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0158	--	--	0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0007	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.005	--	--	0.0007	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0009	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0076	--	--	0.0009	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.0006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0016	--	< 0.0005	0.0099	--	< 0.0005	< 0.0005	0.0004	0.0014	< 0.0005	0.0154	--	< 0.0005	< 0.0005	< 0.0005	--	0.11	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0015	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	0.0088	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0047	--	< 0.0005	0.02	--	0.0005	< 0.0005	< 0.0002	0.0028	< 0.0005	0.0262	--	< 0.0005	< 0.0005	< 0.0005	--	0.151	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.007	--	0.0035	0.0104	--	0.0026	0.0007	0.0271	0.0411	< 0.0005	0.0064	--	< 0.0005	< 0.0005	< 0.0005	--	0.111	--	--	0.0306	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0025	--	< 0.0005	0.0232	--	< 0.0005	< 0.0005	< 0.0002	0.0016	< 0.0005	0.0154	--	< 0.0005	< 0.0005	< 0.0005	--	0.181	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0006	--	< 0.0005	0.0024	--	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	0.0021	--	< 0.0005	< 0.0005	< 0.0005	--	0.0253	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0111	--	< 0.0005	0.0373	--	< 0.0005	< 0.0005	< 0.0002	0.0014	< 0.0005	0.0533	--	< 0.0005	< 0.0005	< 0.0005	--	0.346	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0008	--	< 0.0002	0.0012	--	< 0.001	< 0.002	0.0009	< 0.0005	< 0.001	0.0035	--	< 0.001	< 0.001	< 0.001	--	0.011	--	--	0.0009	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0012	--	< 0.001	< 0.002	0.0005	< 0.0005	< 0.001	0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0067	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0005	--	< 0.0002	0.0009	--	< 0.001	< 0.002	0.0002	< 0.0005	< 0.001	0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0061	--	--	0.0002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0002	< 0.0005	--	< 0.0002	0.0013	--	< 0.001	< 0.002	0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0066	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0036	--	< 0.0005	0.0795	--	< 0.0005	< 0.0005	0.0013	0.0018	< 0.0005	0.0155	--	< 0.0005	< 0.0005	0.002	--	0.328	--	--	0.0013	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0007	--	0.0111	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.002	--	< 0.0005	0.0075	--	< 0.0005	< 0.0005	0.0003	0.0008	< 0.0005	0.0115	--	< 0.0005	< 0.0005	< 0.0005	--	0.0441	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0017	--	< 0.0005	0.0048	--	0.002	< 0.0005	0.0009	0.0066	< 0.0005	0.0059	--	< 0.0005	< 0.0005	< 0.0005	--	0.0539	--	--	0.0009	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0014	--	< 0.0005	0.0069	--	< 0.0005	< 0.0005	< 0.0002	0.0016	< 0.0005	0.0082	--	< 0.0005	< 0.0005	< 0.0005	--	0.0615	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0037	--	< 0.0005	0.0626	--	< 0.0005	< 0.0005	< 0.0002	0.0015	< 0.0005	0.0134	--	< 0.0005	< 0.0005	< 0.0005	--	0.264	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0011	--	< 0.0005	0.0056	--	< 0.0005	< 0.0005	< 0.0002	0.001	< 0.0005	0.0042	--	< 0.0005	< 0.0005	< 0.0005	--	0.0195	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0018	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0019	--	< 0.0005	< 0.0005	< 0.0005	--	0.0037	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0012	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0015	--	< 0.0005	< 0.0005	< 0.0005	--	0.0047	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	0.0026	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.001	--	< 0.001	< 0.001	< 0.001	--	0.012	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0027	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.001	--	< 0.001	< 0.001	< 0.001	--	0.011	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0052	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.003	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.003	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	0.004	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	0.003	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	0.005	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	0.006	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	0.003	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	0.008	--	< 0.004	< 0.008	< 0.002	0.002	< 0.004	0.003	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	0.004	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0032	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	0.0032	0.0032	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0081	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0281	--	--	0.0261	0.0081	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.002	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	0.002	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	0.002	--	< 0.001	0.006	--	< 0.001	< 0.005	< 0.001	0.003	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	--	0.014	--	--	< 0.001	0.003	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	0.002	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	0.005	--	< 0.001	0.022	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	0.013	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0622	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	0.002	--	< 0.001	0.004	--	< 0.001	< 0.005	0.0002	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0092	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	0.004	--	< 0.001	0.006	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	0.007	< 0.001	< 0.001	< 0.001	< 0.001	--	0.025	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0024	--	< 0.0005	0.0126	--	< 0.0005	< 0.0005	0.0004	0.0006	< 0.0005	0.0118	--	< 0.0005	< 0.0005	< 0.0005	--	0.0623	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0169	0.0008	--	< 0.0005	< 0.0005	0.0044	0.0007	0.0008	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0257	--	--	0.0213	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0035	--	0.0016	0.0029	--	0.002	0.0008	0.0166	0.0182	< 0.0005	0.0008	--	< 0.0005	< 0.0005	< 0.0005	--	0.0517	--	--	0.0182	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0046	--	< 0.0005	0.0477	--	< 0.0005	< 0.0005	< 0.0002	0.0073	< 0.0005	0.0091	--	< 0.0005	< 0.0005	< 0.0005	--	0.437	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.004	--	< 0.0005	0.015	--	< 0.0005	< 0.0005	0.0005	0.0011	< 0.0005	0.0114	--	< 0.0005	< 0.0005	< 0.0005	--	0.0656	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0038	--	< 0.0005	0.0147	--	< 0.0005	< 0.0005	0.0005	0.0011	< 0.0005	0.0119	--	< 0.0005	< 0.0005	< 0.0005	--	0.0668	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0039	--	< 0.0005	0.0146	--	< 0.0005	< 0.0005	0.0004	0.0011	< 0.0005	0.0113	--	< 0.0005	< 0.0005	< 0.0005	--	0.0648	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0016	0.0046	--	< 0.0016	0.0157	--	< 0.0016	< 0.0005	< 0.0016	< 0.0016	< 0.0016	0.0101	--	< 0.004	< 0.0016	< 0.0016	--	0.231	--	--	< 0.0016	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0036	--	< 0.0005	0.0445	--	< 0.0005	< 0.0005	< 0.0002	0.0012	< 0.0005	0.0085	--	< 0.0005	< 0.0005	< 0.0005	--	0.183	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0012	--	< 0.0005	0.0024	--	< 0.0005	< 0.0005	0.0004	0.0007	< 0.0005	0.0032	--	< 0.0005	< 0.0005	< 0.0005	--	0.0179	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0054	--	< 0.0005	0.0051	--	0.0011	< 0.0016	0.0014	0.0014	< 0.0005	0.0083	--	< 0.0005	< 0.0005	< 0.0005	--	0.045	--	--	0.0014	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0053	--	< 0.0005	0.0045	--	0.0009	< 0.0005	0.0011	0.0013	< 0.0005	0.0069	--	< 0.0005	< 0.0005	< 0.0005	--	0.0373	--	--	0.0011	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0055	--	< 0.0005	0.005	--	0.0016	< 0.0005	0.0016	0.0015	< 0.0005	0.008	--	< 0.0005	< 0.0005	< 0.0005	--	0.0469	--	--	0.0016	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0058	--	< 0.0005	0.059	--	< 0.0005	< 0.0005	< 0.0002	0.0008	< 0.0005	0.0085	--	< 0.0005	< 0.0005	< 0.0005	--	0.288	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0031	--	< 0.0005	0.0237	--	< 0.0005	< 0.0005	< 0.0002	0.0014	< 0.0005	0.0091	--	< 0.0005	< 0.0005	< 0.0005	--	0.145	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0008	--	< 0.0005	0.0019	--	< 0.0005	< 0.0005	< 0.0002	0.0006	< 0.0005	0.0008	--	< 0.0005	< 0.0005	< 0.0005	--	0.0061	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.002	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0014	--	< 0.0005	< 0.0005	< 0.0005	--	0.011	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0019	--	< 0.0005	0.0154	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0106	--	< 0.0005	< 0.0005	< 0.0005	--	0.0621	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	< 0.002	< 0.002	--	< 0.002	0.003	--	< 0.004	< 0.008	< 0.002	0.002	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.002	< 0.002	--	< 0.002	0.005	--	< 0.004	< 0.008	< 0.002	0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	< 1	--	< 2	--	< 0.001	< 0.002	--	< 0.002	--
--	< 0.002	< 0.002	--	< 0.002	0.004	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	0.006	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	0.003	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	0.003	--	< 0.004	< 0.008	< 0.002	0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	0.002	--	< 0.002	0.006	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.002	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	0.001	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	0.006	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	0.002	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	0.003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	0.003	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	0.003	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	0.027	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	0.027	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	0.01	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	0.01	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	0.005	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	0.005	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	0.0032	< 0.0005	--	--	--	0.0038	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	--	0.007	0.007	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.006	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	0.0007	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.002	< 0.002	--	< 0.002	< 0.002	--	< 0.004	< 0.008	< 0.002	< 0.001	< 0.004	< 0.002	--	< 0.004	< 0.004	< 0.004	--	< 0.04	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0016	< 0.0016	< 0.001	< 0.0005	< 0.0005	< 0.0005	--	< 0.0039	< 0.0016	< 0.0016	--	0.0076	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0013	--	< 0.0005	0.0038	--	< 0.0016	< 0.0016	0.0004	< 0.0005	< 0.0005	0.0029	--	< 0.004	< 0.0016	< 0.0016	--	0.0168	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0006	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.003	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0016	--	< 0.0005	0.0024	--	0.0006	< 0.0005	0.0008	0.0013	< 0.0005	0.0057	--	< 0.0005	< 0.0005	< 0.0005	--	0.0124	--	--	0.0008	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0005	--	< 0.0005	0.0006	--	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	0.0007	--	< 0.0005	< 0.0005	< 0.0005	--	0.0069	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0009	--	< 0.0016	< 0.0016	< 0.0002	< 0.0005	< 0.0005	0.0025	--	< 0.004	< 0.0016	< 0.0016	--	0.0069	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0018	--	< 0.0005	0.0037	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0037	--	< 0.0005	< 0.0005	< 0.0005	--	0.0117	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0009	--	< 0.0005	0.0031	--	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	0.0014	--	< 0.0005	< 0.0005	< 0.0005	--	0.0121	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0005	--	< 0.0005	< 0.0005	0.0013	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0056	--	--	0.0013	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0015	--	< 0.0005	0.004	--	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	0.0018	--	< 0.0005	< 0.0005	< 0.0005	--	0.0187	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0036	--	< 0.0005	0.0128	--	< 0.0005	< 0.0005	< 0.0002	0.0008	< 0.0005	0.011	--	< 0.0005	< 0.0005	< 0.0005	--	0.0456	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.017	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0016	< 0.0016	< 0.0016	< 0.0005	< 0.0005	< 0.001	--	< 0.004	< 0.0016	< 0.0016	--	0.0038	--	--	0.0006	--	--	--	--	--	--	--	--	--	--
--	< 0.0008	0.0028	--	< 0.0008	0.0059	--	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	0.0129	--	< 0.002	< 0.0008	< 0.0008	--	0.0316	--	--	< 0.0008	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0026	--	< 0.0005	0.0065	--	< 0.0005	< 0.0005	0.0005	0.0005	< 0.0005	0.0126	--	< 0.0005	< 0.0005	< 0.0005	--	0.0407	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0012	--	< 0.0005	0.004	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	0.0028	--	< 0.0005	< 0.0005	< 0.0005	--	0.0165	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0017	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	0.0011	--	< 0.0005	< 0.0005	< 0.0005	--	0.0126	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0021	--	< 0.0005	0.0069	--	< 0.0005	< 0.0005	0.0005	0.0006	< 0.0005	0.0053	--	< 0.0005	< 0.0005	< 0.0005	--	0.0345	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0011	--	< 0.0005	0.0023	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	0.0014	--	< 0.0005	< 0.0005	< 0.0005	--	0.0116	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0012	--	< 0.0005	< 0.0005	0.0003	0.0005	< 0.0005	0.0006	--	< 0.0005	< 0.0005	< 0.0005	--	0.0076	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0032	--	< 0.0005	0.0112	--	< 0.0005	< 0.0005	< 0.0002	0.0006	< 0.0005	0.0125	--	< 0.0005	< 0.0005	< 0.0005	--	0.0353	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0005	--	< 0.0005	0.0018	--	< 0.0005	< 0.0005	< 0.0002	0.0005	< 0.0005	0.0008	--	< 0.0005	< 0.0005	< 0.0005	--	0.0076	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0008	--	< 0.0005	0.0038	--	< 0.0005	< 0.0005	0.0005	< 0.0005	< 0.0005	0.0034	--	< 0.0005	< 0.0005	< 0.0005	--	0.013	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0006	--	< 0.0005	0.0007	--	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0025	--	--	0.0002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0005	0.0008	--	< 0.0005	0.0033	--	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	0.0017	--	< 0.0005	< 0.0005	< 0.0005	--	0.0168	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0011	--	< 0.0005	0.0014	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0006	--	< 0.0005	< 0.0005	< 0.0005	--	0.0041	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0012	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0056	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0007	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0049	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0016	--	< 0.0005	0.0032	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0036	--	< 0.0005	< 0.0005	< 0.0005	--	0.0094	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0029	--	< 0.0005	0.0103	--	< 0.0005	< 0.0005	< 0.0002	0.0005	< 0.0005	0.0078	--	< 0.0005	< 0.0005	< 0.0005	--	0.032	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0005	--	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0021	--	--	0.0006	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0008	0.0009	--	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	0.0006	--	< 0.0005	< 0.0005	< 0.0005	--	0.0098	--	--	0.0011	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0016	--	--	0.0006	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0037	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0008	< 0.0008	--	< 0.0008	< 0.0008	--	< 0.0008	< 0.0008	0.0012	< 0.0008	< 0.0008	< 0.0008	--	< 0.002	< 0.0008	< 0.0008	--	0.0012	--	--	0.0012	--	--	--	--	--	--	--	--	--	--
--	< 0.0008	< 0.0008	--	< 0.0008	0.001	--	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	0.0015	--	< 0.002	< 0.0008	< 0.0008	--	0.0025	--	--	< 0.0008	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0026	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0008	--	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	0.0017	--	< 0.0005	< 0.0005	< 0.0005	--	0.0067	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0006	--	< 0.0005	0.0025	--	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	0.002	--	< 0.0005	< 0.0005	< 0.0005	--	0.0105	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.001	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.001	--	--	0.001	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.004	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0033	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0028	--	< 0.0005	0.0077	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0093	--	< 0.0005	< 0.0005	< 0.0005	--	0.0239	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0055	--	--	0.0006	--	--	--	--	--	--	--	--	--	--
--	0.0006	0.0005	--	0.0131	0.0023	--	< 0.0005	< 0.0005	0.0041	0.0007	0.001	0.0012	--	< 0.0005	< 0.0005	< 0.0005	--	0.0307	--	--	0.0172	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0009	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0011	--	< 0.0005	< 0.0005	< 0.0005	--	0.002	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0006	--	< 0.0005	0.0018	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0028	--	< 0.0005	< 0.0005	< 0.0005	--	0.0084	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0106	--	< 0.0005	0.0666	--	< 0.0005	< 0.0005	0.0007	0.0019	< 0.0005	0.0502	--	< 0.0005	< 0.0005	< 0.0005	--	0.298	--	--	0.0007	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0015	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	0.0006	--	< 0.0005	< 0.0005	0.0005	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0021	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0003	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0003	< 0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.001	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0068	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0086	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0069	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0037	--	< 0.0005	0.042	--	< 0.0025	< 0.005	< 0.0005	< 0.00125	< 0.0025	0.0076	--	< 0.0025	< 0.0025	< 0.0025	--	0.31	--	--	< 0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0001	0.0042	--	< 0.0001	0.074	--	< 0.005	< 0.01	< 0.0001	< 0.0025	< 0.005	0.072	--	< 0.005	< 0.005	< 0.005	--	0.46	--	--	< 0.0001	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0002	0.0023	--	< 0.0002	0.049	--	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	0.0019	--	0.001	< 0.001	< 0.001	--	0.3	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0024	--	< 0.0002	0.045	--	< 0.001	< 0.002	< 0.0002	0.0005	< 0.001	0.0007	--	< 0.001	< 0.001	< 0.001	--	0.24	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.0025	--	< 0.001	0.046	--	< 0.005	< 0.01	< 0.001	< 0.0025	< 0.005	0.017	--	< 0.005	< 0.005	< 0.005	--	0.29	--	--	< 0.001	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0049	--	< 0.0005	0.064	--	< 0.0025	< 0.005	< 0.0005	< 0.00125	< 0.0025	0.034	--	< 0.0025	< 0.0025	< 0.0025	--	0.5	--	--	< 0.005	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0029	--	< 0.0005	0.052	--	< 0.0025	< 0.005	< 0.0005	< 0.00125	< 0.0025	0.022	--	< 0.0025	< 0.0025	< 0.0025	--	0.31	--	--	< 0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0026	--	< 0.0002	0.037	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.24	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.003	--	< 0.0002	0.041	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.28	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0017	--	< 0.0002	0.0094	--	< 0.001	< 0.002	0.0003	0.0011	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.11	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.029	0.005	--	< 0.001	< 0.005	0.0081	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0441	--	--	0.0371	0.0081	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	0.032	0.002	--	< 0.001	< 0.005	0.0092	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	0.0452	--	--	0.0412	0.0092	--	--	--	--	--	--	--	--	--
--	< 0.001	0.001	--	0.035	0.004	--	< 0.001	< 0.005	0.013	0.001	0.003	0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	0.06	--	--	0.048	0.014	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	0.0003	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0005	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	0.0005	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	0.0001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0042	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	0.0042	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	0.0015	0.0015	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	0.0001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.001	--	< 0.001	< 0.001	--	< 0.001	< 0.005	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0037	--	< 0.0002	0.082	--	< 0.001	< 0.002	< 0.0002	0.0011	< 0.001	0.021	--	< 0.001	< 0.001	< 0.001	--	0.42	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0024	--	< 0.0002	0.0022	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0072	--	< 0.001	< 0.001	< 0.001	--	0.025	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0012	--	< 0.0002	0.0012	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0024	--	< 0.001	< 0.001	< 0.001	--	0.014	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0009	--	< 0.0002	0.0009	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0015	--	< 0.001	< 0.001	< 0.001	--	0.0065	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.001	--	< 0.0002	0.0012	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0019	--	< 0.001	< 0.001	< 0.001	--	0.0086	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0002	0.0011	--	< 0.0002	0.0015	--	< 0.001	< 0.002	< 0.0002	0.0006	< 0.001	0.0019	--	< 0.001	< 0.001	< 0.001	--	0.0098	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0013	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0025	--	< 0.001	< 0.001	< 0.001	--	0.0092	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0005	--	< 0.0002	0.0016	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0013	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0009	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0008	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0018	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0038	--	< 0.0002	0.056	--	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.002	--	< 0.0002	0.037	--	< 0.001	< 0.002	< 0.0002	0.0006	< 0.001	0.0096	--	< 0.001	< 0.001	< 0.001	--	0.17	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.011	--	0.0002	0.02	--	< 0.001	< 0.002	0.0047	< 0.0005	< 0.001	0.037	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	0.0049	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0015	--	< 0.0002	0.0069	--	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.062	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0006	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	0.001	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	0.001	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0006	--	< 0.0002	0.0012	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0019	--	< 0.001	< 0.001	< 0.001	--	0.013	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0009	--	< 0.0002	< 0.0005	--	0.001	< 0.002	0.001	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0071	--	--	0.001	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	0.0007	0.0009	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0078	--	--	0.0007	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0012	--	< 0.0002	0.0027	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0025	--	< 0.001	< 0.001	< 0.001	--	0.013	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.013	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.014	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	0.0006	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.0082	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0008	--	< 0.001	< 0.001	< 0.001	--	0.0066	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0018	--	< 0.0002	0.033	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.16	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0024	--	< 0.0002	0.034	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.012	--	< 0.001	< 0.001	< 0.001	--	0.16	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	0.0016	--	0.002	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0022	--	< 0.001	< 0.001	< 0.001	--	0.012	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0005	--	< 0.001	0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0011	--	< 0.0002	0.0032	--	< 0.001	< 0.002	0.0005	0.0008	< 0.001	0.0068	--	< 0.001	< 0.001	< 0.001	--	0.03	--	--	0.0005	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0014	--	< 0.0002	0.002	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0036	--	< 0.001	0.001	< 0.001	--	0.043	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	0.0016	< 0.0002	< 0.0004	0.0007	--	< 0.0004	< 0.0004	< 0.0002	--	0.0023	--	--	0.0016	0.0016	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	< 0.001	< 0.01	--	< 0.001	< 0.01	--	< 0.01	< 0.05	< 0.0001	< 0.01	< 0.001	< 0.01	< 0.001	< 0.01	< 0.01	< 0.01	--	< 0.005	--	--	< 0.001	< 0.001	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0021	--	< 0.0002	0.059	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0002	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0002	< 0.0002	--	< 1	--	< 1	< 10	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0002	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0002	< 0.0002	--	< 1	--	< 1	< 10	< 0.001	< 0.002	--	< 0.002	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0018	--	< 0.0002	0.056	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.23	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0002	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0002	< 0.0002	--	< 1	--	< 1	< 10	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0002	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0002	< 0.0002	--	< 1	--	< 1	< 10	< 0.001	< 0.002	--	< 0.002	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0002	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0002	< 0.0002	--	< 1	--	< 1	< 10	< 0.001	< 0.002	--	< 0.002	--
--	--	< 0.0005	--	< 0.0005	< 0.0005	--	--	--	< 0.0002	< 0.0005	--	< 0.0005	--	--	--	--	--	--	--	< 0.0002	< 0.0002	--	< 1	--	< 1	< 10	< 0.001	< 0.002	--	< 0.002	--
--	< 0.0002	0.0008	--	< 0.0002	0.0035	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.006	--	< 0.001	< 0.001	< 0.001	--	0.031	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	0.012	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0074	--	< 0.001	< 0.001	< 0.001	--	0.062	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0014	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0012	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0012	--	< 0.001	< 0.001	< 0.001	--	0.0088	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0024	--	< 0.0002	0.049	--	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	0.02	--	< 0.001	< 0.001	< 0.001	--	0.26	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0028	--	< 0.0002	0.055	--	< 0.001	< 0.002	< 0.0002	0.0012	< 0.001	0.023	--	< 0.001	< 0.001	< 0.001	--	0.23	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0002	0.0013	--	< 0.0002	0.0044	--	< 0.001	< 0.002	0.0003	0.0008	< 0.001	0.0071	--	< 0.001	< 0.001	< 0.001	--	0.049	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0011	--	< 0.0002	0.0088	--	< 0.001	< 0.002	0.0003	0.001	< 0.001	0.0048	--	< 0.001	< 0.001	< 0.001	--	0.051	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0013	--	< 0.0002	0.0016	--	< 0.001	< 0.002	0.0003	0.0011	< 0.001	0.002	--	< 0.001	< 0.001	< 0.001	--	0.0099	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0005	--	< 0.0002	0.0016	--	< 0.001	< 0.002	< 0.0002	0.0005	< 0.001	0.0013	--	< 0.001	< 0.001	< 0.001	--	0.0099	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	0.0025	< 0.0002	< 0.0004	0.0011	--	< 0.0004	< 0.0004	< 0.0002	--	0.017	--	--	0.0025	0.0025	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0007	--	< 0.0002	0.005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0016	--	< 0.001	< 0.001	< 0.001	--	0.016	--	--	< 0.002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0019	--	< 0.0002	0.0053	--	< 0.001	< 0.002	0.0003	0.0011	< 0.001	0.0038	--	< 0.001	< 0.001	< 0.001	--	0.044	--	--	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0015	--	< 0.0002	0.0059	--	< 0.001	< 0.002	< 0.0002	0.0014	< 0.001	0.0085	--	< 0.001	< 0.001	< 0.001	--	0.048	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0011	--	< 0.0002	0.0093	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.0042	--	< 0.001	< 0.001	< 0.001	--	0.065	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0006	--	0.0002	0.0007	--	< 0.001	< 0.002	< 0.0002	0.0006	< 0.001	0.0011	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.001	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0007	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0018	--	< 0.0002	0.029	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.011	--	< 0.001	< 0.001	< 0.001	--	0.16	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	0.0002	0.0023	--	0.0002	0.0084	--	< 0.001	< 0.002	0.0005	0.0017	< 0.001	0.018	--	< 0.001	< 0.001	< 0.001	--	0.073	--	--	0.0007	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0008	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0013	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0003	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0006	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	0.0005	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.009	--	< 0.001	< 0.001	< 0.001	--	0.01	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0021	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0022	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0007	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0017	--	< 0.0002	0.0069	--	< 0.001	< 0.002	< 0.0002	0.001	< 0.001	0.014	--	< 0.001	< 0.001	< 0.001	--	0.052	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0016	--	< 0.0002	0.026	--	< 0.001	< 0.002	< 0.0002	0.0007	< 0.001	0.0044	--	< 0.001	< 0.001	< 0.001	--	0.12	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0009	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0011	--	< 0.0002	0.0085	--	< 0.001	< 0.002	< 0.0002	0.0007	< 0.001	0.017	--	< 0.001	< 0.001	< 0.001	--	0.042	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	0.0007	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.0009	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0019	--	< 0.0002	0.0077	--	0.001	< 0.002	< 0.0002	0.001	< 0.001	0.016	--	< 0.001	< 0.001	< 0.001	--	0.057	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	0.0006	< 0.001	0.0008	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0024	--	< 0.0002	0.0075	--	< 0.001	< 0.002	< 0.0002	0.0015	< 0.001	0.019	--	< 0.001	< 0.001	< 0.001	--	0.059	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0029	--	< 0.0002	0.067	--	< 0.001	< 0.002	< 0.0002	0.0007	< 0.001	0.0061	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.002	--	< 0.0002	< 0.0005	--	0.001	< 0.002	< 0.0002	0.0055	< 0.001	0.0007	--	< 0.001	< 0.001	0.002	--	0.013	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.002	--	0.0004	0.079	--	0.002	< 0.002	< 0.0002	0.0008	< 0.001	0.0061	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0029	--	< 0.0002	0.13	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	0.013	--	< 0.001	< 0.001	< 0.001	--	0.3	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0039	--	< 0.0002	0.0025	--	< 0.001	< 0.002	< 0.0002	0.0082	< 0.001	0.0093	--	< 0.001	< 0.001	< 0.001	--	0.069	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0015	--	< 0.0002	0.1	--	< 0.001	< 0.002	< 0.0002	0.0008	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.21	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	< 0.0005	--	< 0.0002	< 0.0005	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	< 0.006	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0014	--	< 0.0002	0.073	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.047	--	< 0.001	< 0.001	< 0.001	--	0.27	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0013	--	< 0.0002	0.07	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.036	--	< 0.001	< 0.001	< 0.001	--	0.26	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0016	--	< 0.0002	0.056	--	< 0.001	< 0.002	< 0.0002	0.0019	< 0.001	< 0.0005	--	< 0.001	< 0.001	< 0.001	--	0.22	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0002	0.0016	--	< 0.0002	0.04	--	< 0.001	< 0.002	< 0.0002	< 0.0005	< 0.001	0.0024	--	< 0.001	< 0.001	< 0.001	--	0.14	--	--	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0016	< 0.0016	--	< 0.0016	0.0018	--	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	0.0026	--	< 0.004	< 0.0016	< 0.0016	--	0.0094	--	0.0094	< 0.0016	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0006	--	< 0.0005	0.0013	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0011	--	< 0.0005	< 0.0005	< 0.0005	--	0.0098	--	0.0098	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0013	--	< 0.0005	0.0033	--	0.0006	< 0.0005	0.001	0.0011	< 0.0005	< 0.004	--	< 0.0005	< 0.0005	0.0007	--	0.0313	--	0.0257	0.001	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0026	--	< 0.0005	0.0065	--	< 0.0005	< 0.0005	0.0006	0.0007	< 0.0005	0.0068	--	< 0.0005	< 0.0005	< 0.0005	--	0.0259	--	0.0259	0.0006	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.001	--	< 0.0005	0.002	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0012	--	< 0.0005	< 0.0005	< 0.0005	--	0.0042	--	0.0042	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0014	--	< 0.0005	0.003	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0026	--	< 0.0005	< 0.0005	< 0.0005	--	0.007	--	0.007	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0011	0.0007	< 0.0005	< 0.0005	--	< 0.0042	< 0.0005	< 0.0005	--	0.005	--	0.005	0.0011	--	--	--	--	--	--	--	--	--	--
--	0.0008	< 0.0005	--	0.0194	0.0018	--	< 0.0005	< 0.0005	0.0092	0.0007	0.0018	0.0006	--	< 0.0039	< 0.0005	< 0.0005	--	0.0361	--	0.0335	0.0286	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	0.0007	0.0007	--	0.0186	0.0038	--	< 0.0005	< 0.0005	0.0072	0.0008	0.0016	0.0015	--	< 0.0005	< 0.0005	< 0.0005	--	0.0365	--	0.0342	0.0258	--	--	--	--	--	--	--	--	--	--
--	0.001	0.0263	--	0.0036	0.0361	--	0.006	0.0044	0.0542	0.099	0.001	0.0255	--	< 0.0005	< 0.0005	0.0049	--	0.309	--	0.256	0.0578	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0029	0.0007	< 0.0005	0.0014	--	< 0.0005	< 0.0005	< 0.0005	--	0.005	--	0.005	0.0029	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0005	0.0005	--	< 0.0005	0.0012	--	< 0.0005	< 0.0005	< 0.0002	0.0007	< 0.0005	0.0033	--	< 0.0005	< 0.0005	< 0.0005	--	0.0057	--	0.0057	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0017	--	< 0.0005	< 0.0017	--	--	--	0.0004	< 0.0017	--	< 0.0017	--	--	--	--	--	--	--	< 0.0017	< 0.0017	--	--	--	--	--	--	--	--	--	--
--	--	< 0.0017	--	< 0.0005	< 0.0017	--	--	--	< 0.0002	< 0.0005	--	< 0.0017	--	--	--	--	--	--	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	0.0006	< 0.0005	--	0.0163	0.001	--	< 0.0005	< 0.0005	0.0058	0.0006	0.0011	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0263	--	0.0246	0.0221	--	--	--	--	--	--	--	--	--	--
--	0.0006	0.025	--	0.0034	0.0298	--	0.0055	0.001	0.024	0.103	0.0008	0.0174	--	< 0.0005	< 0.0005	< 0.0005	--	0.224	--	0.208	0.0274	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0008	--	0.0024	0.0021	--	< 0.0005	< 0.0005	0.0027	0.0026	< 0.0005	0.0012	--	< 0.0005	< 0.0005	< 0.0005	--	0.0123	--	0.0123	0.0051	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0032	--	< 0.0005	0.0125	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0281	--	< 0.0005	< 0.0005	< 0.0005	--	0.0508	--	0.0508	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0004	< 0.0008	--	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	< 0.0002	< 0.0004	< 0.0002	--	< 0.0004	< 0.0004	< 0.0002	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	0.0002	--	0.0002	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	0.0013	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	0.0013	--	0.0013	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	0.0002	--	0.0002	0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0008	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	0.0008	--	0.0008	0.0008	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0016	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0016	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0016	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0016	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0016	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0039	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0002	< 0.0016	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.004	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.004	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0002	< 0.0016	< 0.0005	< 0.0016	--	< 0.004	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0016	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0008	--	0.0008	0.0008	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.001	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0015	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	0.0023	--	0.0023	0.0023	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0007	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0003	--	0.0003	0.0003	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0007	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0003	--	0.0003	0.0003	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0003	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.027	--	0.027	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0003	--	0.0003	0.0003	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0006	--	0.0006	0.0006	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0026	--	0.0026	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0051	--	0.0051	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.004	< 0.0016	< 0.0005	--	0.0032	--	0.0032	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	< 2	--	--	--	--	< 2	< 0.01	< 2
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0002	--	0.0002	0.0002	--	--	< 2	--	--	--	--	< 2	--	< 2
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	< 2	--	--	--	--	< 2	< 0.01	< 2
--	< 0.0005	< 0.0005	--	0.0018	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.003	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0048	--	0.0048	0.0048	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0002	--	0.0002	0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0016	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	< 2	--	--	--	--	< 2	< 0.01	< 2
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0004	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0004	--	0.0004	0.0004	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	0.0008	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0008	--	0.0008	< 0.0002	--	--	< 2	--	--	--	--	< 2	< 0.01	< 2
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	< 2	--	--	--	--	< 2	< 0.01	< 2

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	mg/L
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0039	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.005	--	0.0045	0.0039	--	--	--	--	--	--	--	--	--	--
--	0.001	0.0008	--	0.0383	0.0011	< 0.0005	< 0.0005	< 0.0005	0.0116	0.0018	0.0014	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.057	--	0.0546	0.0499	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0077	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0023	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.01	--	0.01	0.01	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	0.0011	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0017	--	0.0017	0.0017	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0021	--	0.0021	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0106	--	0.0106	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0021	--	0.0021	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0003	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	0.0003	--	0.0003	0.0003	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0045	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	< 0.01	--
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.001	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	< 2	--	--	--	--	< 2	--	< 2
--	< 0.0005	< 0.0005	--	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0002	< 0.0005	< 0.0005	< 0.0005	< 0.002	< 0.0005	< 0.0005	< 0.0005	--	< 0.0002	--	< 0.0002	< 0.0002	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

							TPH						TPH (Silica Gel)										TRH (Silica Gel)								
Ethylene Glycol	Ethylene Glycol Mono Butyl Ether	Glyphosate	Nitrobenzene	Perylene	Propylene Glycol	Triethylene Glycol	C10 - C14 Fraction	C10 - C36 Fraction (sum)	C15 - C28 Fraction	C29 - C36 Fraction	C6 - C9 Fraction	Total C6-C40	C10 - C14 Fraction (SG)	C10 - C36 Fraction (sum) (SG)	C29 - C36 Fraction (SG)	>C10 - C16 Fraction minus Naphthalene (F	>C10 - C40 Fraction (sum)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34 - C40 Fraction	C6-C10 Fraction (F1)	C6-C10 Fraction minus BTEX (F1)	>C10 - C16 Fraction minus Naphthalene (F	>C10 - C40 Fraction (sum) (SG)	>C10-C16 Fraction (F2) (SG)	>C16-C34 Fraction (F3) (SG)	>C34 - C40 Fraction (SG)	1,1-Dichloroethane	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
< 2	< 2	< 10	< 1	< 0.002	< 2	< 2	< 50	50	< 100	50	< 20	50	< 50	< 50	< 50	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 100	< 100	< 100	< 100	< 100	< 5	< 5	< 5	< 5
< 2	< 2	< 10	< 1	< 0.002	< 2	< 2	< 50	60	< 100	60	< 20	46000	< 50	< 50	< 50	< 100	< 100	< 100	< 100	< 100	< 20	< 20	< 100	< 100	< 100	< 100	< 100	< 5	< 5	< 5	< 5
--	--	--	--	--	--	--	--	50	--	50	--	2313	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	50	--	50	--	1600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7	7	124	116	115	7	7	177	177	201	177	201	177	24	24	24	419	419	419	419	419	443	443	24	24	24	24	24	39	39	39	39
0	0	0	0	0	0	0	0	1	0	1	0	171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.3%	0.3%	5.1%	4.8%	4.7%	0.3%	0.3%	7.3%	7.3%	8.3%	7.3%	8.3%	7.3%	1.0%	1.0%	1.0%	17.3%	17.3%	17.3%	17.3%	17.3%	18.3%	18.3%	1.0%	1.0%	1.0%	1.0%	1.0%	1.6%	1.6%	1.6%	1.6%
		1000																													
		0																													
mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	--	< 1	< 0.002	--	--	< 50	< 50	< 100	< 50	< 20	--	--	--	--	< 100	< 100	< 100	< 100	< 100	< 20	< 20	--	--	--	--	--	--	--	--	--

Appendix D
Table D3a
Huntly Surface Water Historical Dataset
Alcoa Water Resources Management Plant

mg/L	mg/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
--	--	< 10	< 1	< 0.002	--	--	< 50	< 50	< 100	< 50	< 20	--	--	--	--	< 100	< 100	< 100	< 100	< 100	< 20	< 20	--	--	--	--	--	--	--	--	--