

Tabba Tabba Project

Materials Characterisation Report

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J-AU0389-001-R-Rev0



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EXECUTIVE SUMMARY

Mine Waste Management Pty Ltd (MWM) has developed this environmental geochemistry characterisation report for Wildcat Resources Limited's (WRL) Tabba Tabba Lithium-Tantalum Project (Tabba Tabba). This report was completed in accordance with MWM proposal J-AU0389-001-P-Rev0 (11 January 2024).

The objectives of this scope of work were to complete a geochemical waste characterisation program for the samples provided and to use the collected data to assess the potential for geoenvironmental hazards within Tabba Tabba waste rock.

The scope of work completed included development of a sampling and analysis plan, coordination of the laboratory program, analysis and interpretation of the collected data, and reporting of the potential geoenvironmental hazards for the project.

The key findings are:

- The risk of generating NMD¹ or SD² associated with neutralisation of oxidation products (after any sulfide mineral oxidation) is unlikely for any of the tested lithologies.
- Mineral fibres were not detected in any of the samples submitted for fibrous mineral screening suggesting a low hazard potential in the lithologies tested (i.e., asbestiform minerals).
- All leachates generated from static leach testing were circum-neutral to alkaline (pH 7.7-9.5), fresh (EC 28-98 $\mu\text{S}/\text{cm}$), and generally contained low levels of anions, cations, and trace elements, suggesting a low metal leaching potential.
- Based on the total uranium and thorium concentrations of the samples tested, combined head-of-chain activity concentrations for the natural U and Th decay series were low, suggesting the naturally occurring radioactive material (NORM) hazard potential for the materials tested is low.
- The pegmatite (waste rock and low-grade ore), basalt, interbedded sediments, phyllite, schist, and siltstone lithologies all present a low acidic drainage potential based on acid base accounting (ABA) data.
- A conservative low-moderate acidic drainage hazard potential was assigned to the gabbro lithology due to a single sample (1 of 9) returning an acidic NAG pH. Although this sample generated a negative NAPP³ when using the ANC⁴ value, ABCC⁵ results suggest the measured ANC may not be readily available and when accounting for this reduced neutralisation capacity, the sample returns a positive NAPP. This positive NAPP with the acidic NAG pH warrants a potentially acid forming (PAF) classification.

¹ *Neutral metalliferous drainage*

² *Saline drainage*

³ *Net acid producing potential*

⁴ *Acid neutralisation capacity test*

⁵ *Acid buffering characteristic curve test*

- A low-moderate acidic drainage hazard potential was assigned to the dolerite lithology due to four of the 30 samples being classified as UC-PAF (uncertain-PAF). These classifications were due to conflicting NAG pH and NAPP values. However, if incorporating a reduced capacity in the measured ANC, as indicated by ABCC testing, these samples would likely return a positive NAPP and therefore would be classified as PAF.

Environmental hazard potentials for the main lithologies incorporated into this program are presented in the below table (Table A).

Table A: Environmental hazard potentials.

LITHOLOGY	AD	SD	NMD	ML	NORM	FIBROUS
Pegmatite (low grade)	LOW	LOW	LOW	LOW	LOW	LOW
Pegmatite (waste rock)	LOW	LOW	LOW	LOW	LOW	LOW
Basalt	LOW	LOW	LOW	LOW	LOW	LOW
Dolerite	LOW-MOD	LOW	LOW	LOW	LOW	LOW
Gabbro	LOW-MOD	LOW	LOW	LOW	LOW	LOW
Interbedded sediments	LOW	LOW	LOW	LOW	LOW	-
Phyllite	LOW	LOW	LOW	LOW	LOW	-
Schist	LOW	LOW	LOW	LOW	LOW	LOW
Siltstone	LOW	LOW	LOW	LOW	LOW	-

AD = acidic drainage potential; SD = saline drainage potential; NMD = neutral metalliferous drainage potential; ML = metal leaching potential; NORM = naturally occurring radioactive materials potential. A hyphen indicates the materials were not assessed.

The geoenvironmental hazard assessment results suggest that management will be required for higher sulfur dolerite and gabbro. Interrogation of the sulfur block model suggests that this could represent approximately 3.5% of the overall waste rock to be mined if considering a 0.2 wt%S cut-off. Note that the estimated proportion of material requiring management considers all waste rock blocks, independent of lithology. With some further refinement by WRL in restricting the waste blocks requiring management to gabbro and dolerite only, the overall proportion will likely reduce.

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1 INTRODUCTION

Mine Waste Management Pty Ltd (MWM) has developed this geoenvironmental characterisation report for Wildcat Resources Limited's (WRL) Tabba Tabba Lithium-Tantalum Project (Tabba Tabba). This report was completed in accordance with MWM proposal J-AU0389-001-P-Rev0 (11 January 2024).

1.1 Objectives

The objectives of this scope of work were to:

- Complete a geochemical waste characterisation of samples provided.
- Use the collected data to assess the potential for geoenvironmental hazards to exist within Tabba Tabba waste rock.

1.2 Scope of Work

The following scope of works was completed:

- TASK 1 – Develop a sampling and analysis plan (SAP). Assist WRL in selecting appropriate samples representing waste rock lithologies to be mined, develop an analytical testing programme for the samples selected.
- TASK 2 – Coordinate laboratory program. Liaise with the selected commercial laboratory during the analysis program.
- TASK 3 – Data analysis and interpretation. Collate, analyse, and interpret the dataset to identify the geoenvironmental hazards for the project.
- TASK 4 – Report preparation. Develop a concise report that discusses the potential geoenvironmental hazards for the project. Where required, provide further works recommendations including recommendations for the development of practicable management options for identified geochemical hazards.

2 PROJECT SETTING

The following section provides basic Tabba Tabba Project background and geology information.

2.1 Background

The Project tenements are located approximately 50 kilometres southeast of Port Hedland and have been the focus of historic alluvial tin and tantalum mining (early 20th century) as well as more recent mining and processing of tantalum ores by the Pilbara Minerals / Nagrom joint venture. Recent mining occurred during 2015, after which the process infrastructure was removed, and existing mine landforms were rehabilitated. The tenements are currently occupied by a shallow open pit and rehabilitated waste rock dump, tailings storage facility (TSF), and stockpiles (run of mine and low-grade ore).

The lithium resource is hosted across numerous pegmatite outcrops, and WRL are currently undertaking a drilling program to establish a maiden lithium resource estimate (current resource is defined for tantalum). WRL is planning an open pit lithium operation which, over a projected 13 year mine life, will likely consume the existing pit, rehabilitated waste rock dump, and low grade ore stockpile.

2.2 Geology

The main Tabba Tabba pegmatite intrusives outcrop as a southeast to north-westerly striking body at the surface. It dips to the northeast at 35-40° over a distance of approximately 500 m and has a maximum width of up to 70 m. It is thickest in its south-eastern portion and reduces to some 8-10 m width two-thirds of the way along its outcropping length until it disappears below the detritus (interpreted as granite/granodiorite basement) to the northwest. The pegmatite has intruded a narrow, southwest to northeast trending greenstone belt comprising a sheared metagabbro sill of amphibolite facies on the south-western boundary of the main pegmatite and mafic schists and amphibolite of the Warrawoona Group Sediments from the southeast to northwest of the pegmatite. The weathering profile at Tabba Tabba is very thin, and that negligible volumes of highly weathered waste rock ('oxide') are expected to be disturbed during mining.

2.3 Predicted Material Volumes

The Project has a proposed 11 years of mining with an additional 2 years of ore processing. Figure 1 and Table 1 present material quantities per type for the project and predicted schedule.⁶ WRL has recently developed a sulfur block model for the deposit. Interrogation of the provided block model export for modelled sulfur content is provided in Table 2 and Figure 2.

⁶Quantities and schedule provided by Wildcat Resources (Matt Holmes) 22 October 2024.

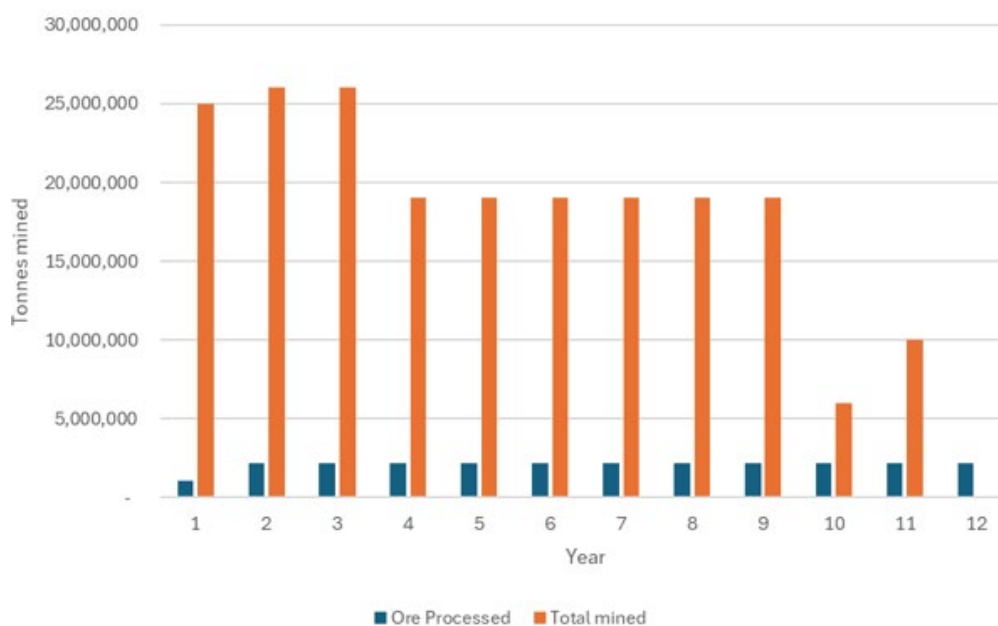


Figure 1: Materials schedule.

Table 1: Predicted material quantities to be mined over an 11-year period.

ROCK TYPE	ORE TONNES	WASTE TONNES	% OF TOTAL WASTE
TRANSITION			
Dolerite		8,100,000	4.3
Pegmatite		1,100,000	0.6
Proterozoic Dolerite		700,000	0.4
Cordierite-Biotite Schist		6,600,000	3.5
FRESH			
Dolerite		109,000,000	57.9
Pegmatite	24,000,000	13,400,000	7.1
Proterozoic Dolerite		9,700,000	5.1
Cordierite-Biotite Schist		39,800,000	21.1
TOTAL	24,000,000	188,400,000¹	

¹Approximately equivalent to 65,000,000 m³.

Table 2: Block model results.

MATERIAL TYPE	VOLUME (m ³)	MASS (t)	MASS (t) WITH S ≥0.2 wt%	% OF BLOCKS WITH S ≥0.2 wt%
1 (ore)	14,416,000	38,419,000	0	0.0%
2 (waste)	58,921,000	173,818,000	6,085,000	3.5%
TOTAL	73,337,000	212,237,000	6,085,000	2.8%

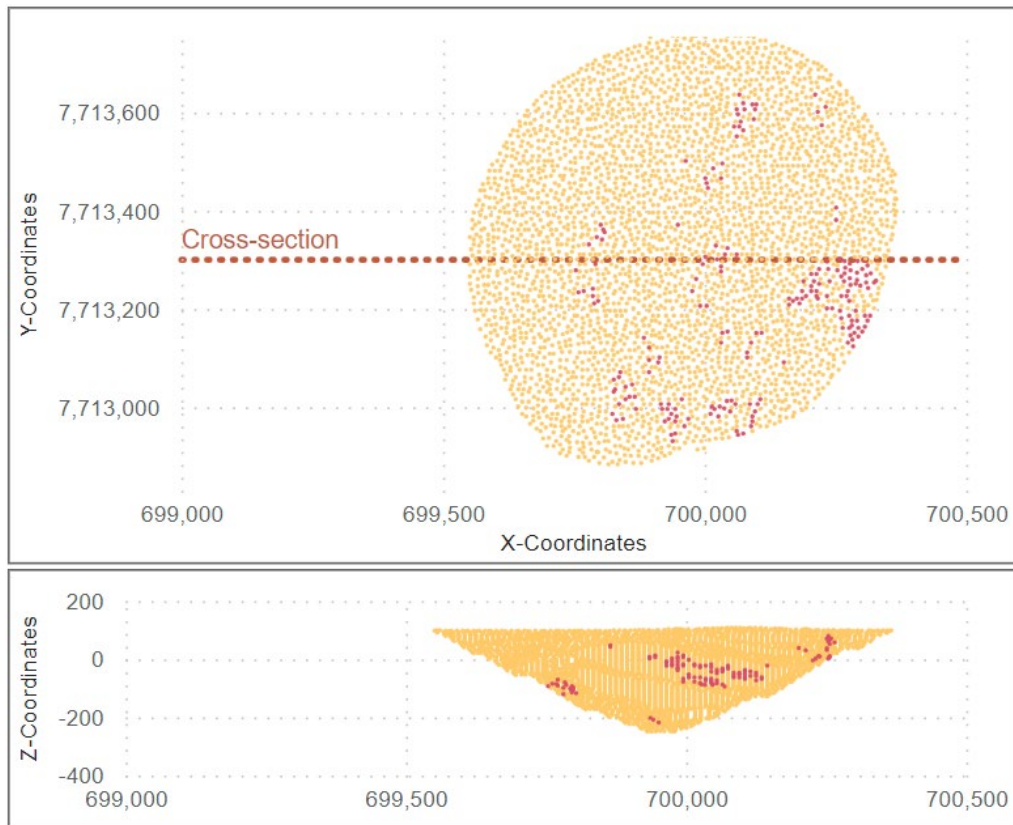


Figure 2: Block model export demonstrating approximate distribution of blocks with modelled sulfur greater than 0.2 wt% S (red circles).

3 MATERIALS CHARACTERISATION METHOD

The following section provides details for the sample selection method, analysis program development, and the geoenvironmental hazard assessment approach.

3.1 Sample Selection

MWM liaised with WRL personnel for the selection of appropriate samples. This involved a high-level assessment of drilling assay data, geology data (lithology, weathering extent, ore grade) review of a list of available samples, and other relevant supporting information provided by WRL.

3.2 Analysis Program

Table 3 presents the completed laboratory program. Variations to the initially proposed program were largely due to material availability. Sample masses provided to the laboratory required prioritisation of testing and adjustment of the proposed leach method. The 2:1 method (liquid to solid ratio) required a sample mass that was not available and therefore the method was adjusted to a 20:1 liquid to solid ratio, which required 100 g of sample.

Table 3: Analysis program.

PARAMETER	SAMPLES
Paste pH/EC	96
Total sulfur (LECO – combustion furnace)	100
Acid neutralisation capacity (ANC)	101
Total carbon (LECO – combustion furnace)	29
Total organic carbon	27
Sulfide sulfur (chromium reducible sulfur)	30
Net acid generating (NAG) testing	31
Static leach testing	30
Total metals	30
Mineralogy	16
Asbestos presence/absence	10

3.3 Hazard Assessment

To facilitate the geoenvironmental hazard assessment, the laboratory test results received to date have been subjected to quality assurance and quality control (QA/QC), tabulation, figure generation, and interpretation. The key interpretation components of the characterisation have and will include:

- Geoenvironmental hazard classification of the materials for acidic seepage potential using best-practise acid base accounting (ABA) approaches (e.g., non-acid forming, potentially acid forming, acid forming).
- Screening of leachate testing results for indications that the materials tested may generate saline and/or neutral metalliferous drainage (ABA results will also be considered in this hazard screening).

- Identification of elemental enrichment patterns versus typical levels in crustal rock.
- Screening for naturally occurring radioactive materials (NORM) related to natural uranium and thorium series radionuclides, as calculated from total uranium and thorium concentrations.
- Screening for potential presence of fibrous minerals, based on mineralogical test results.

4 RESULTS AND DISCUSSION

Key results from laboratory testing are reported and discussed in this section with supporting information found in:

- Appendix B: Tabulated Results;
- Appendix C: Laboratory Method Details;
- Appendix D: Results Dashboard; and
- Appendix E: Laboratory Certificates.

4.1 Acid Generating Potential

This assessment is designed to identify specific potential acid generation or acid neutralisation characteristics associated with key lithologies to be disturbed. It was completed to highlight both acid generation hazards as well as those lithologies that may offer beneficial characteristics (i.e., acid neutralisation capacity).

The key data sources interrogated were the geological assay database and the environmental geochemical dataset. The environmental geochemical dataset was used to assess the geochemical properties of key materials via standard industry AMD⁷ characterisation procedures (Appendix C). ABA was conducted to predict the acid generation characteristics of a waste rock material through determination of the ANC, the maximum potential acidity (MPA), and the net acid production potential (NAPP). The environmental geochemical dataset provides detailed results regarding the potential acidity, neutralising potential, and elemental mobility under oxidising conditions.

Key results are:

- Most lithologies present very low to low median sulfur concentrations (Figure 3), generate circum-neutral to alkaline (pH_{1:2} 7.6-9.3) and fresh to moderately saline (EC_{1:2} 132-922 µS/cm) pastes, have negative NAPP values, are classified as non-acid forming (NAF), and therefore have a low acid generating hazard potential.
- Sulfide analysis demonstrates through a high correlation coefficient that measured sulfur through total sulfur analysis (via combustion furnace) is predominantly sulfidic (Figure 4). The more robust combustion furnace method for total sulfur also correlates strongly with sulfur XRF results ($r^2 = 0.98$). Total sulfur analysis via XRF would therefore be a reasonable proxy for sulfide sulfur determination throughout the mining process to validate current assumptions on waste rock sulfur composition.

⁷ Acid and metalliferous drainage

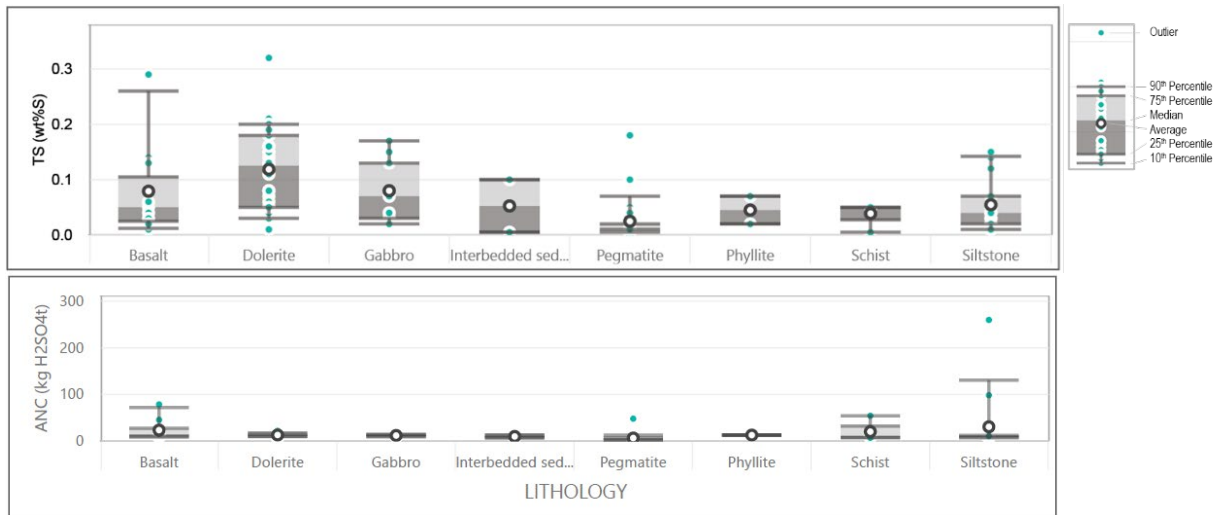


Figure 3: Total sulfur and ANC distribution for the samples within the environmental geochemistry dataset.

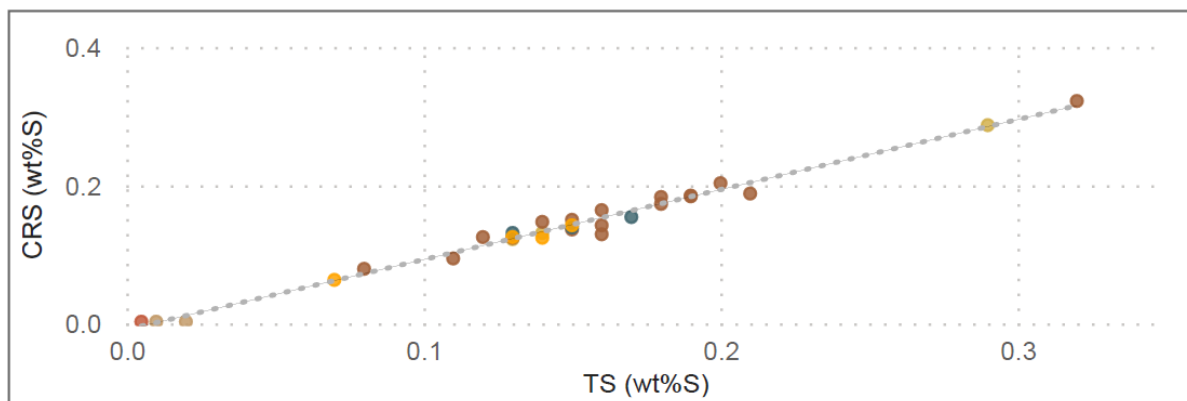


Figure 4: Chromium reducible sulfur (CRS) analysis, which represents sulfur in sulfidic form, is strongly correlated ($r^2 = 0.98$) to total sulfur.

- Although moderate (30-60 kg H₂SO₄/t) to high (>60 kg H₂SO₄/t) ANC was measured in approximately 7% of the samples, ANC is generally low within the environmental geochemistry dataset (median ANC of 10.6 kg H₂SO₄/t; Figure 3). ABCC testing shows variable effective neutralisation capacities (ENC) to pH 4.5 with 15-78% of measured ANC found to be available in waste rock samples tested (Figure 5). Therefore, the neutralisation potential represented by the ANC test should be reduced accordingly when applying to NAPP calculations. Total carbon data showed a variable correlation to ANC results and would therefore not be considered a suitable proxy for ANC testing.

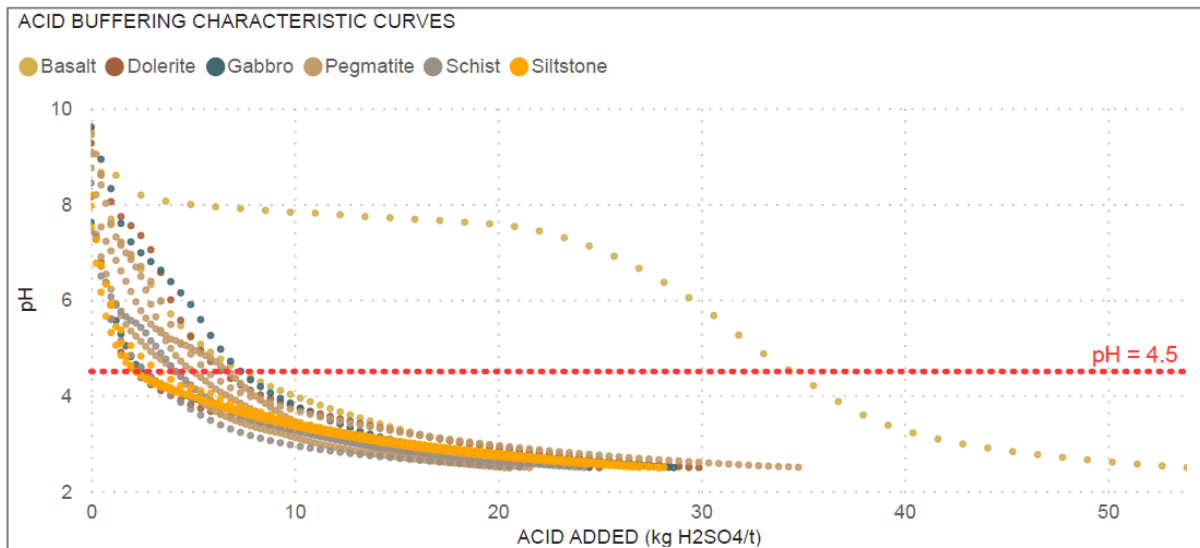


Figure 5: Results for all samples submitted for acid buffering characteristic curve testing.

- NAG pH testing shows five of the samples tested have a net acid generating capacity under the conditions of the test. These four dolerite samples and one gabbro sample had low to moderate total sulfur (0.17-0.32 wt%S). The majority of dolerite and gabbro samples are classified NAF.
- When considering all ABA data, one gabbro sample was classified as PAF (potentially acid forming) and four dolerite samples were classified as UC-PAF (uncertain, likely PAF). The fresh PAF gabbro sample, collected from 60-61 m below ground level (mbgl), generated an acidic NAG pH result and positive NAPP value, when substituting the lower ENC for measured ANC into the NAPP calculation. The four fresh UC-PAF dolerite samples have 0.2-0.32 wt%S as measured by XRF and were collected from 103-191 mbgl. They generated acidic NAG pH values and negative NAPP values. These four samples were not submitted for ABCC testing and therefore do not have an ENC measured. However, if ANC was adjusted for available ANC as measured on other dolerite samples, these four samples would have a positive NAPP and would be classified PAF.

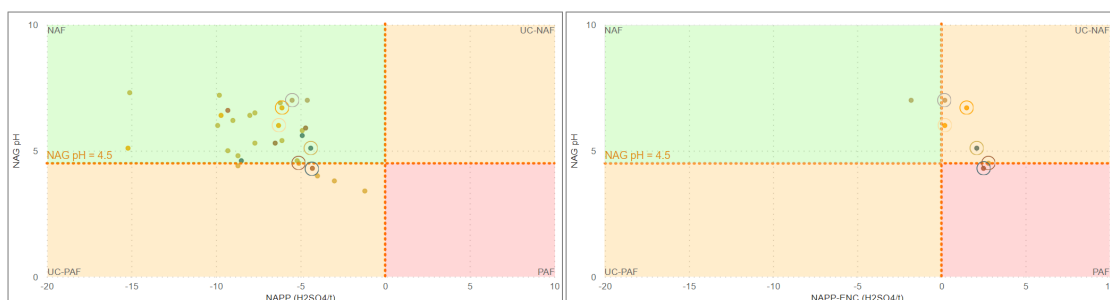


Figure 6: The left chart plots NAG pH and NAPP results against an industry standard approach to classifying acid generating potential (AMIRA, 2002). The right chart applies an adjustment for available ANC as demonstrated through ABCC test work (i.e., only samples submitted for ABCC testing are shown).

4.2 Saline and Neutral Metalliferous Drainage Potential

High sulfate is a characteristic of both neutral metalliferous drainage (NMD) and saline drainage (SD), therefore, in the absence of elevated sulfur, NMD and SD would be unlikely. Sulfur and ANC results were interrogated to identify high sulfur material (>1 wt%S) with accompanying high ANC so that the resulting NAPP is either negative or slightly positive.

The potential for NMD/SD is not limited to high sulfur materials that also contain high ANC materials. For instance, co-disposal of high ANC waste rock with high sulfur waste rock as a management approach can lead to elevated sulfate and/or metal concentrations (e.g., NMD/SD). Therefore, the assessment of NMD and SD was not limited to materials containing both high sulfur and high ANC and was also considered when recommending waste rock disposal options.

The risk of generating NMD or SD associated with neutralisation of oxidation products is unlikely, when assessing the samples presented in Appendix B. Generally, the deposit contains very little sulfur with only three samples out of more than 7,000 sample dataset exceeding 1 wt%S and only 14 samples exceeding 0.5 wt%S.

4.3 Elemental Enrichment

Concentrations of major and trace elements in the samples were used to calculate geochemical abundance index (GAI) values, which provide an indication of elemental enrichment relative to the average abundance of a specific element in rocks of the Earth's crust (see Appendix C for further detail). Full elemental composition results, as well as the corresponding GAI values, are presented in Tables B3 and B4 (Appendix B). A GAI of 0 indicates that the content of the element is less than, or similar to, the average crustal abundance, whereas a GAI of 3 corresponds to a 12-fold enrichment above the average crustal-abundance. Generally, a GAI of 3 or greater signifies enrichment that warrants further examination such as leachate testing. It is also important to note that elemental enrichment is not unexpected in samples from mineralised areas and that enrichment does not necessarily mean that specific elements will be environmentally mobile and bioavailable. Elements that were found to be enriched in the samples tested are presented in Table 4.

Table 4: Elements with GAI values ≥ 3 (enriched).

ELEMENT	NO. OF ENRICHED SAMPLES (GAI ≥ 3)	MAX. GAI	CONCENTRATION RANGE (mg/kg)	AVERAGE CRUSTAL ABUNDANCE (mg/kg)
Be	8	5	0.84 - 159.5	3
Li	11	6	55.9 - 3,230	30
Rb	7	5	36.6 - 4,850	90
Sn	6	6	0.47 - 216	2.5
Te	9	5	<0.005 - 0.061	0.001
Tl	5	5	0.283 - 38.5	1

4.4 Metal Leaching Potential

A total of 30 samples were subjected to leach testing with deionised (DI) water as a proxy for leaching under freshwater conditions. The complete leachate test results are presented in Table B5 (Appendix B). The key findings are:

- All leachates generated were circum-neutral to alkaline (pH 7.7-9.5), fresh (EC 28-98 $\mu\text{S}/\text{cm}$), and generally contained low levels of anions, cations, and trace elements.
- Of the elements that were identified as enriched by total elemental analyses and were analysed for in the generated leachates:
 - Beryllium, tin, and tellurium were not detectable in any leachates.
 - Thallium was detected in one siltstone leachate at the limit of reporting (0.01 mg/L).
 - Lithium was measured in all leachates from 0.005-0.653 mg/L, which is expected given the deposit.
- Aluminium was the only trace element mobilised at a concentration greater than 1 mg/L ($n = 3$). The median aluminium concentration was 0.6 mg/L.
- Arsenic concentrations were typically either below or just above the limit of reporting (<0.001-0.004 mg/L).

4.5 Naturally Occurring Radioactive Materials

Naturally occurring radioactive materials (NORMs) are typically geological materials enriched with respect to long-lived radioactive isotopes arising from the presence of elevated levels of uranium (^{238}U decay series) and thorium (^{232}Th decay series). The activity concentrations (level of radioactivity present at the source) of geological samples can be calculated based on elemental concentrations (U and Th), assuming secular equilibrium and using established specific activities. Note that the assumption of secular equilibrium is valid for the waste rock materials tested, given no chemical alteration of the materials is expected to occur.

Specific activities, which relate elemental concentration to activity concentration for naturally occurring proportions of the isotopes considered, were 12,500 Bq/g U (^{238}U) and 4,090 Bq/g Th (^{232}Th) (DMP, 2010; IAEA, 2006).

Based on the total uranium and thorium concentrations of the samples tested (Table B3, Appendix B), combined head-of-chain activity concentrations for the natural U and Th decay series were all <0.2 Bq/g. A level of 1 Bq/g head of chain activity concentration is considered 'inherently safe' for uranium and thorium series radionuclides (IAEA, 2004; IAEA, 2006) and the materials tested would not be classifiable as radioactive wastes for the purposes of occupational safety management or in relation to restrictions on transporting the materials (ARPANSA, 2014).

4.6 Fibrous Minerals Potential Screening

Ten samples were submitted for fibrous minerals screening from the main lithologies. Fibres were not detected in any of the samples submitted suggesting a low hazard potential in the six lithologies tested.

5 KEY FINDINGS AND RECOMMENDATIONS

The following sections provide key preliminary findings and potential management implications.

5.1 Summary of Key Findings

Table 5 presents preliminary hazard potentials for each of the lithologies tested, based on the environmental geochemistry data presented in Appendix B. The key findings are:

- The risk of generating NMD or SD associated with neutralisation of oxidation products (derived from sulfide minerals) is unlikely from any of the tested lithologies, when assessing the samples presented in Appendix B.
- Mineral fibres were not detected in any of the samples submitted for fibrous mineral screening suggesting a low hazard potential in the six lithologies tested.
- All leachates generated from static leach testing were circum-neutral to alkaline (pH 7.7-9.5), fresh (EC 28-98 $\mu\text{S}/\text{cm}$), and generally contained low levels of anions, cations, and trace elements, suggesting a low metal leaching potential.
- Based on the total uranium and thorium concentrations of the samples tested, combined head-of-chain activity concentrations for the natural U and Th decay series were all <0.2 Bq/g. Therefore, the NORM hazard potential for the materials tested is low.
- The pegmatite (waste rock and low-grade ore), basalt, interbedded sediments, phyllite, schist, and siltstone lithologies all present a low acidic drainage potential based on ABA data.
- A conservative low-moderate acidic drainage hazard potential was assigned to the gabbro lithology due to a single sample (1 of 9) returning an acidic NAG pH. Although this sample generated a negative NAPP when using the ANC value, ABCC results suggest the measured ANC may not be readily available and when accounting for this reduced neutralisation capacity, the sample returns a positive NAPP. This positive NAPP with the acidic NAG pH warrants a potentially acid forming (PAF) classification.
- A low-moderate acidic drainage hazard potential was assigned to the dolerite lithology due to four of the 30 samples being classified as UC-PAF (uncertain-PAF). These classifications were due to conflicting NAG pH and NAPP values. However, if incorporating a reduced capacity in the measured ANC, as indicated by ABCC testing, these samples would likely return a positive NAPP and therefore would be classified as PAF.

Table 5: Preliminary hazard potentials.

LITHOLOGY	AD	SD	NMD	ML	NORM	FIBROUS
Pegmatite (low grade)	LOW	LOW	LOW	LOW	LOW	LOW
Pegmatite (waste rock)	LOW	LOW	LOW	LOW	LOW	LOW
Basalt	LOW	LOW	LOW	LOW	LOW	LOW
Dolerite	LOW-MOD	LOW	LOW	LOW	LOW	LOW
Gabbro	LOW-MOD	LOW	LOW	LOW	LOW	LOW
Interbedded sediments	LOW	LOW	LOW	LOW	LOW	-

LITHOLOGY	AD	SD	NMD	ML	NORM	FIBROUS
Phyllite	LOW	LOW	LOW	LOW	LOW	-
Schist	LOW	LOW	LOW	LOW	LOW	LOW
Siltstone	LOW	LOW	LOW	LOW	LOW	-

AD = acidic drainage potential; SD = saline drainage potential; NMD = neutral metalliferous drainage potential; ML = metal leaching potential; NORM = naturally occurring radioactive materials potential. A hyphen indicates the materials were not assessed.

5.2 Implications for Management

The environmental geochemistry results suggest management will be required for higher sulfur dolerite and gabbro. Interrogation of the sulfur block model suggests that this could represent approximately 3.5% of the overall waste rock to be mined if considering a 0.2 wt%S cut-off. Note that the estimated proportion of material requiring management considers all waste rock blocks, independent of lithology. With some further refinement by WRL in restricting the waste blocks requiring management to gabbro and dolerite only, the overall proportion will likely reduce.

The material requiring management, higher sulfur dolerite and gabbro waste rock, can be managed via encapsulation. This standard management approach aims to minimise oxygen and water access to sulfides within the PAF waste rock. This can be executed by not placing PAF waste rock directly on the ground surface (keep elevated out of drainage paths), not placing below waste rock dump slopes, and not placing within a fixed distance of the final landform surface (e.g., 5-10 m).⁸ Ideally, the PAF waste rock is placed centrally within the waste rock dump, using thin lifts or paddock dumping, to maximise the distance oxygen and water must travel from the landform surfaces.

Given the low overall quantity of material requiring management, WRL could potentially demonstrate the suitability of a co-disposal approach by undertaking an AMD contaminant load assessment for the facility. If WRL can demonstrate that the expected drainage of the overall facility under a co-disposal approach would be neutral, this could facilitate the justification of placing PAF and NAF waste rock as it is mined, while leaving a buffer zone of 5-10 m on the outer surface of the waste rock dump.

5.3 Recommendations

The following recommendations should be considered:

- There is existing uncertainty on the long-term acid generating potential of the samples classified as UC-PAF or PAF. WRL should consider commencing kinetic test work on dolerite samples with sulfur equal to or greater than 0.2 wt%S. If higher sulfur gabbro is determined to be mined at significant quantities, this unit could also be included in the program.
- Given the small proportion of samples classified as PAF or UC-PAF, WRL should consider stepping through an AMD contaminant load assessment to estimate if the potential acidity from this small proportion of material could reasonably be accounted for by the bulk material within the waste rock storage facility. This could be supported through co-disposal kinetic testing trials.

⁸*Ideal buffer zone distances (e.g., cover system thickness) can be determined via a cover system optimisation assessment. The distances provided (e.g., 5-10 m) are conservative and can likely be reduced through an optimisation assessment.*

- Assess the sulfur block model against the mining schedule to assess the timing of the blocks to be managed. This will allow WRL to plan accordingly to ensure sufficient room within the waste rock dump is available at all times for material requiring management.
- Undertake a cover system optimisation assessment to determine a suitable buffer zone thickness for the plateau of the waste rock dump.
- An AMD management plan will require development to provide greater detail on how the material will be managed and monitored through the life of the project. This document should be written so it can be appended to future submissions of the mine closure plan.

6 REFERENCES

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7 LIMITATIONS

Attention is drawn to the document “Limitations”, which is included in Appendix F of this report. The statements presented in this document are intended to provide advice on what the realistic expectations of this report should be, and to present recommendations on how to minimise the risks associated with this project. The document is not intended to reduce the level of responsibility accepted by Mine Waste Management, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in doing so.

APPENDIX A ABBREVIATIONS AND DEFINITIONS

ABBREVIATION	DEFINITION
ABA	Acid base accounting
ABCC	Acid buffering characteristic curve
AD	Acidic drainage
AMD	Acid and metalliferous drainage, which can also include low metal saline drainage
AMDMP	Acid and metalliferous drainage management plan
ANC	Acid neutralisation capacity
CSM	Conceptual site model
DWER	Department of Water and Environmental Regulation
DMIRS	Department of Mines, Industry Regulation and Safety
LOM	Life of mine
Mt	Million tonnes
MPA	Maximum potential acidity
MWM	Mine Waste Management Pty Ltd
NAF	Non-acid forming
NAPP	Net acid production potential
NP	Net percolation
PAF	Potentially acid forming
PSD	Particle size distribution
QA/QC	Quality assurance and quality control
ROM	Run of mine
SD	Saline drainage
TSF	Tailings storage facility
WRD	Waste rock dump

TERM	DEFINITION
Acid Base Accounting	Conducted to predict acid generation and neutralisation characteristics of a waste rock material.
Acid Neutralisation Capacity	This is a measure of the insitu neutralising potential of a sample. Expressed as kg H ₂ SO ₄ equivalent per tonne.
Acid and Metalliferous Drainage	Includes both acidic drainage typically caused from the oxidation of exposed sulfides, and metalliferous drainage resulting from elevated levels of toxic metals and salinity. Saline drainage can also occur. In all instances sulfate is high.
Acidic Drainage	A form of AMD, characterised by low pH, elevated toxic metal concentrations, high sulfate concentrations and high salinity.
Maximum Potential Acidity	Is a measure of the insitu acid production of a sample. Expressed as kg H ₂ SO ₄ equivalent per tonne.
Metalliferous Drainage	A form of AMD characterised by near-neutral pH, elevated heavy metal concentrations, and high sulfate salinity.
Net Acid Production Potential	Is a measure of the samples overall acid generating capacity and is calculated by subtracting the ANC from MPA. A negative NAPP indicates a net neutralising capacity and a positive NAPP indicates a net acid generating capacity. NAPP, MPA, and ANC are expressed in kg H ₂ SO ₄ per tonne equivalent.

APPENDIX B TABULATED RESULTS

SAMPLE ID 1	FROM-m	TO-m	LITHOTYPE	OXIDATION	GRADE	LOR	PARAMETER	XRF-S	pH _{1,2}	EC _{1,2}	TS	CRS	MPA-TS	MPA-CRS	ANC	ENC	NAPP	NAPP-ENC	ANC/MPA	TC	TOC	NAG pH	NAG _{4,5}	NAG ₇	AMD CLASS.
							UNITS	wt%	pH unit	µS/cm	wt.%S	kg H ₂ SO ₄ /t			kg H ₂ SO ₄ /t		no unit	%	pH unit	kg H ₂ SO ₄ /t					
TBRC06712	16.00	17.00	Pegmatite	FR	LG		0.01	0.1	10	0.01	0.01	0.1	0.3	2.7	0.5	0.1	0.5		8.8	0.02	<0.02				NAF
TBRC12552	190.00	191.00	Pegmatite	FR	LG		0.01	9.0	256	0.01		0.3	0.3	3.2	6.9	-2.9	-6.6	10.5							NAF
TBRC19583	127.00	128.00	Pegmatite	FR	LG		0.01	9.0	290	0.01		0.3	0.3	7.7		-7.4		25.2							NAF
TBRC20432	320.00	321.00	Pegmatite	FR	LG		0.01	9.0	273	0.01		0.3	0.3	3.5		-3.2		11.4	0.04	0.02					NAF
TBRC18376	220.00	221.00	Pegmatite	FR	LG		0.01	9.2	207	<0.01		0.2	0.2	2.7		-2.5		17.6							NAF
TBRC18045	267.00	268.00	Pegmatite	FR	LG		0.01	9.2	133	0.01		0.3	0.3	1.0		-0.7		3.3	0.03	0.02					NAF
TBRC17490	59.00	60.00	Pegmatite	FR	LG		0.05	9.3	234	0.04		1.2	1.2	5.0		-3.8		4.1							NAF
TBRC26586	51.00	52.00	Pegmatite	FR	LG		0.01					0.2	0.2	2.6	4.2	-2.4	-4.0	17.0							NAF
TBDD14058	416.00	417.00	Pegmatite	FR	LG		0.01	8.4	247	<0.01		0.2	0.2	5.2		-5.0		34.0							NAF
TBRC24021	8.00	9.00	Pegmatite	SW	LG		0.03	8.7	351	0.01		0.3	0.3	47.9		-47.6		156.5	0.84	0.26					NAF
TBRC05946	93.00	94.00	Basalt	FR	Waste		0.07	8.0	224	0.08		2.4	2.4	35.4		-33.0		14.5							NAF
TBRC04728	59.00	60.00	Basalt	FR	Waste		0.04	8.2	245	0.05		1.5	1.5	14.9		-13.4		9.7	0.06	0.05					NAF
TBRC06248	216.00	217.00	Basalt	FR	Waste		0.04	8.1	256	0.04		1.2	1.2	8.0		-6.8		6.5							NAF
TBRC06609	163.00	164.00	Basalt	FR	Waste		0.01	8.4	213	0.03		0.9	0.9	9.7		-8.8		10.6							NAF
TBRC12390	28.00	29.00	Basalt	FR	Waste		0.12	8.8	206	0.14	0.131	4.3	4.0	9.2		-4.9		2.1	0.08	0.04	5.6		0.8		NAF
TBRC12516	154.00	155.00	Basalt	FR	Waste		0.31	9.2	286	0.29	0.287	8.9	8.8	13.3	7.4	-4.4	2.1	1.5	0.08	0.04	5.1		1.4		NAF
TBRC26567	32.00	33.00	Basalt	FR	Waste		0.05	8.8	316	0.06		1.8	1.8	18.9		-17.1		10.3							NAF
TBRC26341	148.00	149.00	Basalt	FR	Waste		0.14	9.1	241	0.13	0.122	4.0	3.7	12.5		-8.5		3.1	<0.02	<0.02	4.6		0.9		NAF
TBRC17247	32.00	33.00	Basalt	MW	Waste		0.01	8.7	371	0.02		0.6	0.6	45.4	35.5	-44.8	-35.2	74.2							NAF
TBRC24821	10.00	11.00	Basalt	SW	Waste		0.01	8.5	341	0.02		0.6	0.6	10.8		-10.2		17.6							NAF
TBRC23651	10.00	11.00	Basalt	SW	Waste		0.01	8.4	336	0.01		0.3	0.3	78.6		-78.3		256.9							NAF
TBRC05969	114.00	115.00	Dolerite	FR	Waste		0.20	8.2	239	0.20	0.203	6.1	6.2	9.1		-3.0		1.5			3.8	1.0	2.3		UC-PAF
TBRC04699	34.00	35.00	Dolerite	FR	Waste		0.15	7.8	378	0.16	0.129	4.9	3.9	14.7		-9.8		3.0	0.11	0.02	7.2				NAF
TBRC04802	126.00	127.00	Dolerite	FR	Waste		0.08	7.9	512	0.07		2.1		13.4		-11.3		6.3							NAF
TBRC04804	128.00	129.00	Dolerite	FR	Waste		0.15	8.3	263	0.14	0.147	4.3	4.5	12.0		-7.7		2.8			6.5		0.2		NAF
TBRC05462	42.00	43.00	Dolerite	FR	Waste		0.08	8.1	220	0.08		2.4		9.4		-7.0		3.8							NAF
TBRC05541	113.00	114.00	Dolerite	FR	Waste		0.14	8.4	190	0.16	0.142	4.9	4.3	10.0	1.5	-5.1	2.8	2.0	0.03	0.03	4.5	<0.1	0.9		NAF
TBRC05018	45.00	46.00	Dolerite	FR	Waste		0.02	7.8	580	0.03		0.9		12.9		-12.0		14.1							NAF
TBRC05104	122.00	123.00	Dolerite	FR	Waste		0.10	7.9	230	0.11	0.094	3.4	2.9	11.4		-8.0		3.4			6.4		0.6		NAF
TBRC05608	53.00	54.00	Dolerite	FR	Waste		0.20	8.1	386	0.21	0.188	6.4	5.8	15.4		-9.0		2.4			6.2		0.7		NAF
TBRC05647	88.00	89.00	Dolerite	FR	Waste		0.03	8.5	237	0.03		0.9		13.2		-12.3		14.4							NAF
TBRC05669	108.00	109.00	Dolerite	FR	Waste		0.14	7.9	225	0.15	0.136	4.6	4.2	12.3		-7.7		2.7	0.07	0.04	5.3		0.7		NAF
TBRC06186	160.00	161.00	Dolerite	FR	Waste		0.19	7.6	922	0.18	0.173	5.5	5.3	14.8		-9.3		2.7			5.0		0.9		NAF
TBRC06228	198.00	199.00	Dolerite	FR	Waste		0.16	8.0	352	0.15	0.150	4.6	4.6	13.3		-8.7		2.9			4.8		1.0		NAF
TBRC06781	78.00	79.00	Dolerite	FR	Waste		0.02	8.6	291	0.03		0.9		4.0		-3.1		4.4							NAF
TBRC06867	155.00	156.00	Dolerite	FR	Waste		0.32	8.5	234	0.32	0.322	9.8	9.9	11.0		-1.2		1.1	0.02	0.02	3.4	2.7	5.4		UC-PAF
TBRC06638	190.00	191.00	Dolerite	FR	Waste		0.20	8.3	203	0.18	0.183	5.5	5.6	14.2		-8.7		2.6			4.4	<0.1	1.3		UC-PAF
TBRC19579	123.00	124.00	Dolerite	FR	Waste		0.04	8.8	247	0.05		1.5		15.6		-14.1		10.2							NAF
TBRC19884	68.00	69.00	Dolerite	FR	Waste		0.05	8.5	281	0.04		1.2		13.8	6.9	-12.6	-5.3	11.3							NAF
TBRC17869	90.00	91.00	Dolerite	FR	Waste		0.22	8.6	247	0.19	0.184	5.8	5.6	11.0		-5.2		1.9			4.6		1.6		NAF
TBRC17306	91.00	92.00	Dolerite	FR	Waste		0.13	8.6	239	0.13	0.124	4.0	3.8	10.1		-6.1		2.5			5.4		0.9		NAF
TBRC17415	200.00	201.00	Dolerite	FR	Waste		0.07	8.8	213	0.06		1.8		12.0		-10.2		6.5							NAF
TBRC24512	103.00	104.00	Dolerite	FR	Waste		0.20	8.8	200	0.19	0.185	5.8	5.7	9.8		-4.0		1.7	0.04	0.04	4.0	0.6	2.1		UC-PAF
TBRC26833	298.00	299.00	Dolerite	FR	Waste		0.17	8.7	218	0.16	0.164	4.9	5.0	9.8		-4.9		2.0			5.8		0.3		NAF
TBDD14144	487.10	488.10	Dolerite	FR	Waste		0.14	7.9	152	0.12	0.125	3.7	3.8	9.9		-6.2		2.7			6.9		0.4		NAF
TBRC06035	25.00	26.00	Dolerite	MW	Waste		0.05			0.05		1.5		11.1		-9.6		7.3							NAF
TBRC12059	16.00	17.00	Dolerite	MW	Waste		0.01	8.6	249	0.01		0.3		11.0		-10.7		35.9							NAF
TBRC05426	9.00	10.00	Dolerite	SW	Waste		0.10	7.7	324	0.08	0.079	2.4	2.4	17.5		-15.1		7.1			7.3				NAF

SAMPLE ID 1	FROM-m	TO-m	LITHOTYPE	OXIDATION	GRADE	LOR	PARAMETER	XRF-S	pH _{1,2}	EC _{1,2}	TS	CRS	MPA-TS	MPA-CRS	ANC	ENC	NAPP	NAPP-ENC	ANC/MPA	TC	TOC	NAG pH	NAG _{4,5}	NAG ₇	AMD
							UNITS	wt%	pH unit	µS/cm	wt.%S	kg H ₂ SO ₄ /t			kg H ₂ SO ₄ /t		no unit	%		pH unit	kg H ₂ SO ₄ /t		CLASS.		
TBRC19811	151.00	152.00	Dolerite	SW	Waste		0.01	0.1	10	0.01	0.01	0.1		0.5	0.1	0.5			0.01	0.02	0.1	0.1	0.1		NAF
TBRC19815	155.00	156.00	Dolerite	SW	Waste		0.22			0.20		6.1		16.0		-9.9		2.6		6.0			0.8		NAF
TBRC20124	12.00	13.00	Dolerite	SW	Waste		0.04			0.03		0.9		23.8		-22.9		25.9							NAF
TBRC05354	60.00	61.00	Gabbro	FR	Waste		0.06	8.6	238	0.05		1.5		21.9		-20.4		14.3							NAF
TBRC05087	106.00	107.00	Gabbro	FR	Waste		0.17	8.1	225	0.17	0.154	5.2	4.7	9.5	2.7	-4.3	2.5	1.8			4.3	0.2	1.2		PAF
TBRC05229	54.00	55.00	Gabbro	FR	Waste		0.15			0.15	0.139	4.6	4.3	11.1		-6.5		2.4	0.05	0.02	5.3		0.4		NAF
TBRC05259	83.00	84.00	Gabbro	FR	Waste		0.03	8.2	307	0.03		0.9		12.0		-11.1		13.1							NAF
TBRC05261	84.00	85.00	Gabbro	FR	Waste		0.02	8.7	273	0.02		0.6		14.0	7.4	-13.4	-6.7	22.9	0.09						NAF
TBRC26858	323.00	324.00	Gabbro	FR	Waste		0.05	8.4	272	0.04		1.2		13.6		-12.4		11.1							NAF
TBRC31313	114.00	115.00	Gabbro	FR	Waste		0.13	8.9	186	0.13	0.131	4.0	4.0	8.7		-4.7		2.2	0.04	0.04	5.9		0.5		NAF
TBDD13979	350.65	351.65	Gabbro	FR	Waste		0.08	8.7	186	0.07		2.1		10.3		-8.2		4.8							NAF
TBDD13980	351.65	352.50	Gabbro	FR	Waste		0.08	8.4	208	0.08		2.4		14.4		-12.0		5.9							NAF
TBRC12955	35.00	36.00	Interbedded sediments	FR	Waste		0.03	8.7	245	0.03		0.9		12.4		-11.5		13.5							NAF
TBRC12939	19.00	20.00	Interbedded sediments	FR	Waste		0.12	8.2	515	0.10		3.1		12.4		-9.3		4.1	0.05	0.04	6.6		1.3		NAF
TBRC05902	19.00	20.00	Interbedded sediments	SW	Waste		0.01	8.7	199	<0.01	<0.005	0.2	0.2	7.1		-6.9		46.4	0.04	0.04					NAF
TBRC04964	54.00	55.00	Pegmatite	FR	Waste		0.02	8.2	289	0.02		0.6		3.7		-3.1		6.0							NAF
TBRC05433	272.00	273.00	Pegmatite	FR	Waste		0.01	8.7	214	<0.01		0.2		2.9		-2.7		19.0							NAF
TBRC05533	16.00	17.00	Pegmatite	FR	Waste		0.11	8.3	340	0.10		3.1		7.7	5.1	-4.6	-1.8	2.5			7.0		0.3		NAF
TBRC05138	106.00	107.00	Pegmatite	FR	Waste		0.03	8.6	221	0.04		1.2		8.1		-6.9		6.6							NAF
TBRC05627	153.00	154.00	Pegmatite	FR	Waste		0.05	8.1	383	0.05		1.5		16.4		-14.9		10.7							NAF
TBRC05253	70.00	71.00	Pegmatite	FR	Waste		0.01	8.5	249	0.01		0.3		3.0		-2.7		9.8							NAF
TBRC06703	77.00	78.00	Pegmatite	FR	Waste		0.03	8.2	282	0.01	<0.005	0.3	0.2	4.8		-4.5		15.7	0.05	0.02					NAF
TBRC06759	8.00	9.00	Pegmatite	FR	Waste		0.01	8.7	297	<0.01		0.2		3.4		-3.2		22.2							NAF
TBRC06849	59.00	60.00	Pegmatite	FR	Waste		0.01	8.5	331	0.02		0.6		3.8		-3.2		6.2							NAF
TBRC06904	139.00	140.00	Pegmatite	FR	Waste		0.01	8.9	243	0.02		0.6		7.1		-6.5		11.6	0.07	0.02					NAF
TBRC12625	27.00	28.00	Pegmatite	FR	Waste		0.01	8.5	176	0.01		0.3		1.1		-0.8		3.6							NAF
TBRC23937	263.00	264.00	Pegmatite	FR	Waste		0.01	8.8	205	<0.01		0.2		1.0		-0.8		6.5							NAF
TBDD14054	296.00	297.00	Pegmatite	FR	Waste		0.01	8.9	286	<0.01		0.2		2.2		-2.0		14.4							NAF
TBRC26287	412.00	413.00	Pegmatite	FR	Waste		0.01	8.7	229	0.02	<0.005	0.6	0.2	5.8		-5.2		9.5	0.08	0.02					NAF
TBRC05322	94.00	95.00	Pegmatite	FR	Waste		0.01	9.3	260	0.01		0.3		2.3		-2.0		7.5							NAF
TBRC19720	31.00	32.00	Pegmatite		Waste		0.20	7.9	280	0.18		5.5		11.0	5.9	-5.5	0.2	2.0			7.0		0.2		NAF
TBRC19739	60.00	61.00	Phyllite	FR	Waste		0.07	8.3	368	0.07		2.1		13.1		-11.0		6.1							NAF
TBRC12835	79.00	80.00	Phyllite	FR	Waste		0.01	9.0	289	0.02		0.6		12.1		-11.5		19.8							NAF
TBRC24920	47.00	48.00	Schist	FR	Waste		0.01	8.7	257	<0.01		0.2		10.3	2.9	-10.1	-2.6	67.3	0.04	0.02					NAF
TBRC25014	109.00	110.00	Schist	FR	Waste		0.05	8.7	268	0.05		1.5		9.4		-7.9		6.1	0.03	0.02					NAF
TBRC26347	203.00	204.00	Schist	FR	Waste		0.05	8.5	158	0.05		1.5		54.1		-52.6		35.4							NAF
TBRC12103	154.00	155.00	Schist	FR	Waste		0.04	8.4	348	0.05		1.5		6.8	4.4	-5.3	-3.2	4.4	0.03	0.03					NAF
TBRC12144	60.00	61.00	Siltstone	FR	Waste		0.04	7.9	384	0.04		1.2		10.4		-9.2		8.5							NAF
TBRC24864	101.00	102.00	Siltstone	FR	Waste		0.01	8.7	173	0.02		0.6		7.2		-6.6		11.8							NAF
TBRC24899	53.00	54.00	Siltstone	FR	Waste		0.14	8.5	326	0.14	0.124	4.3	3.8	14.0		-9.7		3.3			6.4		0.4		NAF
TBRC25164	88.00	89.00	Siltstone	FR	Waste		0.03	8.6	242	0.04		1.2		8.9		-7.7		7.3	0.03	<0.02					NAF
TBRC20110	149.00	150.00	Siltstone	FR	Waste		0.12	8.4	260	0.12		3.7		9.8	2.2	-6.1	1.5	2.7	0.02	0.02	6.7		0.4		NAF
TBRC17312	174.00	175.00	Siltstone	FR	Waste		0.05	9.1	216	0.05		1.5		7.6		-6.1		5.0							NAF
TBRC25464	97.00	98.00	Siltstone	FR	Waste		0.01	9.2	184	0.01		0.3		12.1		-11.8		39.5							NAF
TBRC24298	299.00	300.00	Siltstone	FR	Waste		0.14	8.5	160	0.15	0.142	4.6	4.3	19.8		-15.2		4.3			5.1		0.6		NAF
TBRC24398	39.00	40.00	Siltstone	FR	Waste		0.07	8.9	194	0.07	0.063	2.1	1.9	11.8		-9.7		5.5	0.02	0.02					NAF
TBRC24398	139.00	140.00	Siltstone	FR	Waste		0.01	8.9	226	0.03		0.9		6.5		-5.6		7.1							NAF

PARAMETER		XRF-S	pH _{1,2}	EC _{1,2}	TS	CRS	MPA-TS	MPA-CRS	ANC	ENC	NAPP	NAPP-ENC	ANC/MPA	TC	TOC	NAG pH	NAG _{4,5}	NAG ₇	AMD					
UNITS		wt%	pH unit	µS/cm	wt.%S		kg H ₂ SO ₄ /t			kg H ₂ SO ₄ /t			no unit	%	pH unit	kg H ₂ SO ₄ /t		CLASS.						
SAMPLE ID 1	FROM-m	TO-m	LITHOTYPE	OXIDATION	GRADE	LOR	0.01	0.1	10	0.01	0.01	0.1		0.5	0.1	0.5			0.01	0.02	0.1	0.1	0.1	
TBRC24012	371.00	372.00	Siltstone	FR	Waste		0.01	9.0	132	0.02		0.6		9.0	2.2	-8.4	-1.9	14.7						NAF
TBRC06878	3.00	4.00	Siltstone	MW	Waste		0.01	8.9	882	0.01		0.3		98.2		-97.9		320.9						NAF
TBRC25018	3.00	4.00	Siltstone	MW	Waste		0.05	9.1	524	0.02		0.6		260.0		-259.4		424.8						NAF
TBRC06893	17.00	18.00	Siltstone	SW	Waste		0.12	8.3	303	0.13	0.125	4.0	3.8	10.3	3.4	-6.3	0.2	2.6	0.04		6.0		1.0	NAF
TBRC12657	19.00	20.00	Siltstone	SW	Waste		0.05	8.4	280	0.04		1.2		12.3		-11.1		10.0	0.04	<0.02				NAF
TBRC24338	79.00	80.00	Siltstone	SW	Waste		0.04	8.9	218	0.03		0.9		9.6		-8.7		10.5						NAF
TBRC26212	19.00	20.00	Siltstone	SW	Waste		0.01	8.6	255	0.01		0.3		10.6		-10.3		34.6						NAF

KEY

pH _{1,5} = pH of 1:5 extract	MPA = Maximum Potential Acidity (kg H ₂ SO ₄ /t)	TC = Total Carbon	ABCC = Acid Buffering Characteristic Curve (kg H ₂ SO ₄ /t)
EC _{1,5} = Electrical Conductivity of 1:5 extract (µS/m)	ANC = Acid Neutralising Capacity (kg H ₂ SO ₄ /t)	TOC = Total Organic Carbon	Effective Neutralising Capacity (ENC) = ABCC @pH4.5
TS = Total Sulfur; Scr = Sulfide Sulfur; SO ₄ = Sulfate	NAPP = Net Acid Producing Potential (kg H ₂ SO ₄ /t)	TIC = Total Inorganic Carbon	

PARAMETER					XRD															FIBRE SCREENING			
					Amphibole group	Boehmite	Chlorite group	Clinopyroxene subgroup	Epidote	Garnet group	Ilmenite	Mica group	Potassium Feldspar	Quartz	Serpentine subgroup	Smectite group	Sodium Plagioclase	Zeolite	Zirconium Titanate	Total	Asbestos Detected	Asbestos (Trace)	Synthetic Mineral Fibre
UNITS					wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%						
SAMPLE ID 1	LITHOTYPE	OXIDATION	GRADE	LOR	1	1	1	1	1	1	1	1	1	1	1	1	1						
TBRC12552	Pegmatite	FR	LG				1				8	7	68			16		100					
TBRC20432	Pegmatite	FR	LG			1					8	14	53			23	1	100	No	No	No	No	
TBRC24021	Pegmatite	SW	LG																No	No	No	No	
TBRC12390	Basalt	FR	Waste		27		11		9		15	3	29	1		4		99	No	No	No	No	
TBRC17247	Basalt	MW	Waste		13		9		8		1	20	30	3	2	14		100	No	No	No	No	
TBRC06867	Dolerite	FR	Waste		17		8		4		2	5	53	1		11		101					
TBRC19884	Dolerite	FR	Waste		7		4	16		3	4	3		15		< 1	48		100	No	No	No	No
TBRC05259	Gabbro	FR	Waste		10		9		8		3	17	38	< 1		14		99	No	No	No	No	
TBRC26858	Gabbro	FR	Waste		28		20				6	4	22			20		100	No	No	No	No	
TBRC12939	Interbedded sediments	SW	Waste				7				3	3	33		< 1	52		99					
TBDD14054	Pegmatite	FR	Waste								6	16	50			28		100	No	No	No	No	
TBRC12835	Schist	FR	Waste				6				17		61			17		101					
TBRC26347	Schist	FR	Waste		11		9				11		43			26		100	No	No	No	No	
TBRC24920	Schist	FR	Waste																No	No	No	No	
TBRC24298	Siltstone	FR	Waste		5		10	2		< 1	< 1	3	6	44		28		98					
TBRC24864	Siltstone	FR	Waste				6	2		1		8	2	42		39		100					

PARAMETER				Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe	Ga	Ge	Hg	In	K	La	Li	Mg	Mn	Mo
UNITS				mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	%	mg/kg	mg/kg
SAMPLE ID 1	LITHOTYPE	OXIDATION	GRADE																0.1							
TBRC12552	Pegmatite	FR	LG	0.02	6.94	0.35	10	105	1.895	0.23	<0.005	3.02	0.537	9.6	0.85	0.93	63.6	0.07	<0.1	<0.005	1.97	0.952	2740	0.04	2600	2.04
TBRC20432	Pegmatite	FR	LG	0.005	7.94	0.3	18	95.2	0.126	0.53	<0.005	0.97	0.865	19.6	1.78	0.65	40.9	0.06	<0.1	<0.005	2.94	0.338	1475	0.05	592	3.78
TBRC24021	Pegmatite	SW	LG	0.132	8.3	0.35	138	124	0.05	2.48	<0.005	2.2	2.04	13.1	8.56	0.82	31.4	0.06	<0.1	<0.005	1.63	0.985	1270	0.18	189.5	2.2
TBRC05946	Basalt	FR	Waste	0.049	7.41	11.15	223	2.46	0.211	5.78	0.098	23.5	55.1	63.7	75.9	9.02	20.5	0.09	<0.1	0.052	0.54	11.05	352	2.71	1230	1.72
TBRC12390	Basalt	FR	Waste	0.085	7.93	5.36	147	5.45	0.355	5.74	0.13	30.6	52.5	16.6	65	10.35	19.95	0.09	<0.1	0.062	0.41	13.75	2160	2.18	1625	2.21
TBRC17247	Basalt	MW	Waste	0.062	7.94	1	369	9.07	0.285	5.1	0.147	27.4	49.6	37.5	78.9	8.9	21.4	0.09	<0.1	0.052	0.79	15.65	410	2.13	1300	0.77
TBRC24821	Basalt	SW	Waste	0.108	6.57	1.98	740	1.7	0.036	5.42	0.157	89.7	45.2	45.7	253	11.4	22.4	0.14	<0.1	0.119	1.32	40.8	55.9	2.21	1505	2.47
TBRC05647	Dolerite	FR	Waste	0.052	7.97	1.83	222	23.2	0.199	6.11	0.1	19.45	40.6	35.7	56.7	6.57	18.65	0.08	<0.1	0.046	0.69	8.97	340	3.45	1360	1
TBRC05969	Dolerite	FR	Waste	0.05	8.06	0.78	220	0.84	0.166	6.36	0.11	23.1	59.9	62.7	87.6	10.25	18.75	0.09	<0.1	0.056	0.6	11.2	121.5	3.11	1415	1.54
TBRC06186	Dolerite	FR	Waste	0.119	7.61	4.78	377	2.86	0.258	5.34	0.588	38.9	52.7	63.7	139	9.67	20.1	0.1	<0.1	0.065	0.85	17.9	609	2.48	1410	2.22
TBRC17415	Dolerite	FR	Waste	0.044	8.13	3.19	355	60.1	0.331	3.73	0.094	31.1	36.1	36.3	53.9	6.94	28.1	0.1	<0.1	0.037	1.11	14.6	254	1.74	1195	2.47
TBRC19884	Dolerite	FR	Waste	0.094	6.92	0.69	530	1.69	0.037	5.54	0.134	92.9	43.6	26.7	322	11.6	24.8	0.15	<0.1	0.114	1.51	43.3	104.5	2.18	1585	2.15
TBRC06035	Dolerite	MW	Waste	0.113	7.11	0.8	439	1.03	0.035	1.77	0.233	43.9	20.9	225	30.7	3.71	15.35	0.09	<0.1	0.019	1.22	20.7	443	1.98	725	2.37
TBRC19815	Dolerite	SW	Waste	0.11	8.93	0.36	870	1.3	0.133	1.76	0.123	64.5	25.6	167.5	56.7	4.95	21.1	0.11	<0.1	0.054	1.44	30.9	172	2.08	697	1.55
TBRC05087	Gabbro	FR	Waste	0.05	8.21	1.4	339	0.87	0.074	6.24	0.115	31.8	55.1	45.6	108.5	9.84	19.9	0.09	<0.1	0.054	0.79	14.45	251	2.64	1315	2.41
TBRC05259	Gabbro	FR	Waste	0.067	8.05	0.73	254	49.3	0.75	3.34	0.1	32.5	22.3	25.3	51.9	5.16	33.7	0.08	<0.1	0.021	1.44	14.2	3230	1.33	1230	1.69
TBRC26858	Gabbro	FR	Waste	0.039	7.59	1.1	268	1.7	0.197	5.92	0.1	30	49.6	48.6	71.1	9.57	19.15	0.09	<0.1	0.057	0.65	13.75	366	2.77	1350	2.23
TBRC12939	Interbedded sediments	SW	Waste	0.034	9.06	1	390	3.73	0.109	2.74	0.05	53.8	22.5	204	23.8	3.85	21.6	0.1	<0.1	0.031	1.16	24.2	165	1.65	699	0.8
TBDD14054	Pegmatite	FR	Waste	0.03	7.87	0.41	41	133	0.504	0.57	0.155	1.58	0.932	2.7	0.82	0.55	43.9	0.06	<0.1	<0.005	2.87	0.546	612	0.09	340	0.48
TBRC06849	Pegmatite	FR	Waste	0.031	8.49	1.52	162	154	0.567	2.83	0.279	12.3	17.55	32.7	14.25	3.01	42.5	0.07	<0.1	0.016	1.85	5.33	407	1.38	1700	2.36
TBRC23937	Pegmatite	FR	Waste	0.008	7.47	0.34	46	159.5	0.467	0.35	0.014	1.53	0.497	15.4	1.48	0.52	25	0.06	<0.1	<0.005	3.4	0.545	237	0.03	103	3.59
TBRC19720	Phyllite	FR	Waste	0.044	7.56	0.41	214	0.89	0.072	2.72	0.157	46.2	25	254	15.45	5.16	16.8	0.09	<0.1	0.039	1.01	21.3	60.1	1.58	1160	3.75
TBRC12835	Schist	FR	Waste	0.039	9.04	0.4	450	70	1.15	1.34	<0.005	31.9	20.8	197.5	9.06	3.49	66.9	0.09	<0.1	<0.005	3.47	15.35	1720	1.7	819	0.57
TBRC25014	Schist	FR	Waste	0.06	7.68	6.03	218	1.01	0.194	3.33	0.084	39.2	30.6	237	66.2	13.9	19.15	0.25	<0.1	0.083	0.72	18.15	102.5	2.31	1780	1.84
TBRC26347	Schist	FR	Waste	0.051	7.41	2.33	460	6.63	0.569	3.5	0.156	56.4	19.15	121.5	36.8	4.45	18.85	0.1	<0.1	0.032	1.31	26.2	719	1.57	736	2.2
TBRC12103	Siltstone	FR	Waste	0.211	8.1	2.01	372	2.94	0.296	1.51	2.11	30.9	37.1	385	185	5.33	17.55	0.08	<0.1	0.044	1.29	13.75	821	2.74	806	0.77
TBRC24298	Siltstone	FR	Waste	0.019	7.38	0.37	376	0.96	0.06	2.31	0.045	48.3	24.3	258	16.3	4.25	14.65	0.09	<0.1	0.052	1.15	22.6	98	1.89	1105	3.08
TBRC24864	Siltstone	FR	Waste	0.068	8.42	0.45	550	1.37	0.092	2.29	0.066	44.3	21.3	177	113	4.45	18.85	0.09	<0.1	0.049	1.77	20.7	169.5	1.85	678	3.27
TBRC06893	Siltstone	SW	Waste	0.088	9.19	0.9	252	8.34	1.57	2.1	1.44	37.7	30.9	271	74.4	8.66	22.5	0.11	<0.1	0.086	2.46	16.8	1880	2.68	1200	1.83
TBRC24338	Siltstone	SW	Waste	0.052	7.36	0.63	450	1.02	0.121	1.97	0.074	40.7	15.6	231	12.6	3.67	15.45	0.09	<0.1	0.032	1.17	18.85	110.5	1.91	813	2.63

PARAMETER				Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
UNITS				%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
SAMPLE ID 1	LITHOTYPE	OXIDATION	GRADE																								
TBRC12552	Pegmatite	FR	LG		2.44	120	1.32	0.021	9.35	2150	0.0007	0.01	0.1	2.24	0.007	106.5	6.63	<0.005	7.65	0.008	15	12.75	0.7	4.02	5.5	63.3	38.4
TBRC20432	Pegmatite	FR	LG		3.21	50.3	2.53	0.023	4.04	2550	0.0005	0.01	0.07	0.79	<0.006	62	68.4	<0.005	2.35	0.009	20.8	2.67	4	3.58	1.74	42.2	5.9
TBRC24021	Pegmatite	SW	LG		4.59	86.5	6.62	0.009	2.22	802	0.0004	0.01	0.04	1.32	0.02	50.1	68.7	<0.005	1.96	0.03	6.06	0.592	15.4	1.5	1.46	34.1	6.5
TBRC05946	Basalt	FR	Waste		1.195	3.96	61.6	0.026	5.19	92.9	0.0026	0.08	0.15	33.4	0.193	1.51	154	0.02	3	0.708	0.832	0.766	497	1.78	16.8	108	59.2
TBRC12390	Basalt	FR	Waste		1.23	10.4	20.7	0.035	6.25	339	0.0019	0.15	0.78	39.8	0.228	7.29	226	0.009	3.68	1.46	3.91	4.94	214	9.61	21.2	122	79.3
TBRC17247	Basalt	MW	Waste		1.61	5.38	41.1	0.044	7.38	123.5	0.0007	0.01	0.16	36.1	0.432	9.16	180.5	0.019	3.78	0.898	0.974	1.04	349	1.66	20.1	117	70.1
TBRC24821	Basalt	SW	Waste		1.765	20.1	55.3	0.167	11.55	56.7	0.0016	0.02	0.09	27.7	0.213	2.65	278	0.008	7.26	1.85	0.417	0.943	402	0.759	43.4	148	309
TBRC05647	Dolerite	FR	Waste		1.89	19.9	80.4	0.025	4.62	306	0.0006	0.03	0.3	31.2	0.089	5.67	163	0.011	3.07	0.224	2.61	1.245	152.5	0.982	16.4	84.7	48.7
TBRC05969	Dolerite	FR	Waste		1.495	3.63	66.7	0.026	5.17	56.1	0.0032	0.2	0.25	36.6	0.378	1.4	204	0.012	2.77	0.774	0.438	0.667	535	2.41	16.75	127.5	50.1
TBRC06186	Dolerite	FR	Waste		1.4	6.75	53.2	0.052	21.9	150	0.0011	0.2	0.47	32.8	0.49	3.22	200	0.03	5.01	0.91	1.655	1.465	356	1.94	24	148.5	101
TBRC17415	Dolerite	FR	Waste		2.81	22.4	33	0.045	8.47	145.5	0.0016	0.07	0.39	24.6	0.159	10.45	127.5	0.014	4.86	0.58	1.14	2.41	319	2.58	19.35	92.2	93.1
TBRC19884	Dolerite	FR	Waste		1.95	21.4	43.5	0.187	12	74	0.0014	0.06	0.06	26.5	0.387	2.7	266	0.006	7.73	1.9	0.34	1.03	321	1.375	47.5	154	336
TBRC06035	Dolerite	MW	Waste		2.12	5	95.8	0.028	15.7	67.7	0.0008	0.05	0.06	13.8	0.21	0.47	261	0.012	5.33	0.328	0.616	1.605	100	0.683	11.3	79.5	97.1
TBRC19815	Dolerite	SW	Waste		2	6.63	89.1	0.053	23.7	68.1	0.0008	0.04	0.02	18.05	0.092	1.95	308	0.017	7.79	0.378	0.352	1.53	133	0.786	14.85	102	127.5
TBRC05087	Gabbro	FR	Waste		1.675	4.72	54.1	0.038	6.42	90.1	0.0022	0.16	0.32	35	0.33	1.09	210	0.018	3.79	0.829	0.645	0.963	505	4.35	20.6	112.5	79.3
TBRC05259	Gabbro	FR	Waste		2.04	23.3	30.7	0.128	7.11	1910	0.0006	0.02	0.12	17.25	0.103	45.2	143.5	0.009	5.32	0.323	20.2	1.955	145.5	2.61	19.45	99.3	88.1
TBRC26858	Gabbro	FR	Waste		1.475	4.9	55.9	0.04	5.78	115.5	0.0023	0.14	0.15	32.6	0.268	1.54	184	0.014	3.84	0.769	1.115	1.03	465	1.925	19.8	107	67.8
TBRC12939	Interbedded sediments	SW	Waste		2.78	6.1	92.7	0.022	12.15	78.3	0.0005	0.01	0.03	13.4	0.023	5.56	303	0.012	6.99	0.341	0.688	1.365	99.9	4.58	11.1	66.7	110.5
TBDD14054	Pegmatite	FR	Waste		3.64	38.9	1.16	0.023	5.39	2220	<0.0004	0.01	0.05	1.78	0.018	67.7	24.5	<0.005	2.25	0.01	17.7	2.18	3.6	1.165	0.35	70	4.5
TBRC06849	Pegmatite	FR	Waste		3.47	123.5	35.2	0.037	8.73	1380	0.0009	0.01	0.19	12.75	0.027	35.8	72.4	0.006	7.73	0.116	11.25	7.45	78.6	2.69	9.66	64.7	36.9
TBRC23937	Pegmatite	FR	Waste		3.5	16.55	1.86	0.017	4.1	1795	0.001	0.01	0.06	0.86	0.015	18.55	38.2	0.005	2.03	0.006	14.15	0.655	2.9	1.21	0.39	15.4	0.8
TBRC19720	Phyllite	FR	Waste		1.94	5.79	104.5	0.031	14	46.4	0.0015	0.08	0.03	15.2	0.131	1.24	174.5	0.016	5.68	0.361	0.337	1.715	112	3.18	15.4	153.5	113
TBRC12835	Schist	FR	Waste		1.86	23.1	98.7	0.294	6.49	4850	0.0004	0.01	0.09	15	0.026	216	122.5	0.011	3.76	0.297	38.5	1.46	106	4.02	10.65	120	58.4
TBRC25014	Schist	FR	Waste		0.478	4.84	134	0.04	5.05	36.6	0.001	0.05	0.05	24.1	0.095	3.17	89.9	0.034	5.05	0.335	0.283	1.45	160	1.085	17.8	166.5	97.4
TBRC26347	Schist	FR	Waste		1.385	7.85	57.2	0.048	9.87	484	0.0007	0.05	0.17	13.35	0.133	16.65	206	0.014	8.01	0.325	3.91	1.845	75.1	5.48	18.65	80.5	151
TBRC12103	Siltstone	FR	Waste		1.415	5.95	177.5	0.046	24.9	98.3	0.0005	0.05	0.18	21.6	0.54	1.02	179	0.061	3.93	0.428	1.5	1.69	167.5	1.345	14.05	125	110
TBRC24298	Siltstone	FR	Waste		2.11	5.41	112	0.032	6.31	42.6	0.0011	0.08	0.02	15.15	0.106	0.86	279	0.015	5.78	0.373	0.419	1.77	112.5	1.005	13.15	85	98.8
TBRC24864	Siltstone	FR	Waste		1.675	6.14	88.4	0.038	7.6	78.7	0.0009	0.15	0.03	14.6	0.402	1.07	202	0.05	6.09	0.329	0.562	1.8	103.5	1.465	9.07	86.3	106.5
TBRC06893	Siltstone	SW	Waste		0.666	6.92	153.5	0.053	19	3350	0.0012	0.14	0.07	22.5	0.578	34.9	186	0.02	5.24	0.398	30.3	1.695	152.5	0.639	18.45	309	80
TBRC24338	Siltstone	SW	Waste		2.28	4.92	100.5	0.027	10.2	41.5	0.0011	0.04	0.04	13.4	0.147	0.81	272	0.007	4.73	0.339	0.36	1.495	103	0.86	9.48	103.5	89.9

PARAMETER					Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe	Ga	Ge	Hg	In	K	La	Li	Mg	Mn	Mo	Na
Average Crustal Abundance					0.07	8	2	430	3	0.2	3	0.18	45	25	200	60	5	17	15	0.08	0.1	2.6	30	30	2.1	900	2	2.4
SAMPLE ID 1	LITHOTYPE	OXIDATION	GRADE	LOR																								
TBRC12552	Pegmatite	FR	LG		0	0	0	0	5	3	0	0	0	0	0	0	0	1	0	0	0	0	0	6	0	1	0	0
TBRC20432	Pegmatite	FR	LG		0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5	0	0	0	0
TBRC24021	Pegmatite	SW	LG		0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
TBRC05946	Basalt	FR	Waste		0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0
TBRC12390	Basalt	FR	Waste		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
TBRC17247	Basalt	MW	Waste		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
TBRC24821	Basalt	SW	Waste		0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
TBRC05647	Dolerite	FR	Waste		0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
TBRC05969	Dolerite	FR	Waste		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
TBRC06186	Dolerite	FR	Waste		0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0
TBRC17415	Dolerite	FR	Waste		0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
TBRC19884	Dolerite	FR	Waste		0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0
TBRC06035	Dolerite	MW	Waste		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
TBRC19815	Dolerite	SW	Waste		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
TBRC05087	Gabbro	FR	Waste		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0
TBRC05259	Gabbro	FR	Waste		0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
TBRC26858	Gabbro	FR	Waste		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
TBRC12939	Interbedded sediments	SW	Waste		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
TBDD14054	Pegmatite	FR	Waste		0	0	0	0	5	1	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0
TBRC06849	Pegmatite	FR	Waste		0	0	0	0	5	1	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0
TBRC23937	Pegmatite	FR	Waste		0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
TBRC19720	Phyllite	FR	Waste		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TBRC12835	Schist	FR	Waste		0	0	0	0	4	2	0	0	0	0	0	0	0	1	0	0	0	0	0	5	0	0	0	0
TBRC25014	Schist	FR	Waste		0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
TBRC26347	Schist	FR	Waste		0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
TBRC12103	Siltstone	FR	Waste		1	0	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0
TBRC24298	Siltstone	FR	Waste		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
TBRC24864	Siltstone	FR	Waste		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
TBRC06893	Siltstone	SW	Waste		0	0	0	0	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
TBRC24338	Siltstone	SW	Waste		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

PARAMETER				pH	EC	TOT-ALK	SO4 as S	Cl	Ca	K	Mg	Na	Ag	Al	As	Ba	Be	Bi	Cd	Co	Cr	Cu	Fe	Hg
UNITS				pH units	µS/cm	mg CaCO3 / L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SAMPLE ID 1	LITHOTYPE	OXIDATION	GRADE	0.1	10	1	1	1	1	1	1	1	0.001	0.01	0.001	0.001	0.001	0.001	0.0001	0.001	0.001	0.001	0.05	0.00004
TBRC12552	Pegmatite	FR	LG	9.3	58	31	<1	2	3	5	<1	5	<0.001	0.67	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC20432	Pegmatite	FR	LG	8.7	37	17	<1	2	<1	4	<1	6	<0.001	1.24	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	0.001	<0.001	<0.05	<0.00004
TBRC24021	Pegmatite	SW	LG	9.1	73	35	<1	4	5	3	<1	8	<0.001	0.3	<0.001	0.004	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC05946	Basalt	FR	Waste	9.3	57	28	<1	1	7	2	<1	3	<0.001	0.62	0.004	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC12390	Basalt	FR	Waste	9.0	48	25	<1	<1	4	2	<1	3	<0.001	0.66	0.003	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC17247	Basalt	MW	Waste	9.2	98	61	<1	<1	3	2	2	16	<0.001	0.12	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC24821	Basalt	SW	Waste	8.5	66	28	3	<1	2	<1	<1	12	<0.001	0.15	0.002	0.012	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	0.15	<0.00004
TBRC05647	Dolerite	FR	Waste	9.4	58	28	<1	2	5	2	<1	5	<0.001	0.58	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC05969	Dolerite	FR	Waste	9.1	42	18	<1	<1	4	3	<1	3	<0.001	0.81	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC06186	Dolerite	FR	Waste	8.2	96	22	8	4	7	3	2	7	<0.001	0.17	<0.001	0.002	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC17415	Dolerite	FR	Waste	9.0	53	27	<1	<1	5	2	<1	5	<0.001	0.66	0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC19884	Dolerite	FR	Waste	8.9	61	30	<1	<1	5	1	<1	8	<0.001	0.33	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC06035	Dolerite	MW	Waste	7.7	28	8	2	<1	<1	2	<1	5	<0.001	0.42	<0.001	0.001	<0.001	<0.001	<0.0001	<0.001	0.009	<0.001	0.16	<0.00004
TBRC19815	Dolerite	SW	Waste	9.0	72	32	<1	1	3	7	<1	8	<0.001	0.81	<0.001	0.002	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC05087	Gabbro	FR	Waste	9.1	49	24	<1	<1	6	2	<1	3	0.01	1.01	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC05259	Gabbro	FR	Waste	9.5	67	36	<1	1	3	6	<1	6	0.001	0.63	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC26858	Gabbro	FR	Waste	8.8	49	25	<1	<1	5	2	<1	3	<0.001	0.86	0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC12955	Interbedded sec	FR	Waste	8.7	95	36	4	1	4	13	1	7	<0.001	0.34	<0.001	0.004	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBDD14054	Pegmatite	FR	Waste	9.4	52	27	<1	2	3	5	<1	5	<0.001	0.84	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC06849	Pegmatite	FR	Waste	9.3	56	30	<1	1	3	3	<1	7	<0.001	0.53	0.002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC23937	Pegmatite	FR	Waste	8.8	46	20	<1	2	1	5	<1	6	<0.001	0.7	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC19720	Phyllite	FR	Waste	8.4	48	12	3	2	<1	6	<1	5	<0.001	0.41	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	0.05	<0.00004
TBRC12835	Schist	FR	Waste	9.0	34	16	<1	1	<1	3	<1	5	<0.001	0.74	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC25014	Schist	FR	Waste	8.6	60	31	<1	<1	8	3	<1	1	<0.001	1.22	0.002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC26347	Schist	FR	Waste	8.3	51	21	2	1	<1	4	<1	7	<0.001	0.32	<0.001	0.002	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	0.06	<0.00004
TBRC12103	Siltstone	FR	Waste	8.4	37	14	2	1	<1	2	<1	6	<0.001	0.69	<0.001	0.002	<0.001	<0.001	<0.0001	<0.001	0.002	0.003	0.31	<0.00004
TBRC24298	Siltstone	FR	Waste	8.9	51	27	1	<1	4	5	<1	4	<0.001	0.56	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC24864	Siltstone	FR	Waste	8.7	73	34	2	1	3	9	<1	5	<0.001	0.49	<0.001	0.002	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004
TBRC06893	Siltstone	SW	Waste	8.3	36	13	2	<1	<1	4	<1	4	<0.001	0.47	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	0.15	<0.00004
TBRC24338	Siltstone	SW	Waste	8.8	59	29	1	1	4	6	<1	5	<0.001	0.41	<0.001	0.002	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.05	<0.00004

PARAMETER				La	Li	Mn	Mo	Ni	Pb	Sb	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Zn	
UNITS				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SAMPLE ID 1	LITHOTYPE	OXIDATION	GRADE	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.01	0.001	0.001	0.001	0.005	0.001	0.01	0.001	0.001	0.01	0.001	0.005	
TBRC12552	Pegmatite	FR	LG	<0.001	0.544	0.007	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.001	<0.001	<0.005	<0.001	<0.01	<0.001	0.01	<0.01	0.003	<0.005	
TBRC20432	Pegmatite	FR	LG	<0.001	0.174	<0.001	0.005	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	0.003	<0.005	
TBRC24021	Pegmatite	SW	LG	<0.001	0.196	<0.001	0.003	<0.001	<0.001	<0.001	<0.01	<0.001	0.014	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC05946	Basalt	FR	Waste	<0.001	0.062	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.011	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC12390	Basalt	FR	Waste	<0.001	0.393	<0.001	0.001	<0.001	<0.001	<0.001	<0.01	<0.001	0.006	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	0.006	<0.005	
TBRC17247	Basalt	MW	Waste	<0.001	0.048	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	0.031	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	0.04	<0.001	<0.005	
TBRC24821	Basalt	SW	Waste	<0.001	0.038	0.002	0.005	<0.001	<0.001	<0.001	<0.01	<0.001	0.034	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	0.04	<0.001	<0.005	
TBRC05647	Dolerite	FR	Waste	<0.001	0.068	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	0.006	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC05969	Dolerite	FR	Waste	<0.001	0.028	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.003	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	0.01	<0.001	<0.005	
TBRC06186	Dolerite	FR	Waste	<0.001	0.165	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.041	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC17415	Dolerite	FR	Waste	<0.001	0.046	<0.001	0.003	<0.001	<0.001	<0.001	<0.01	<0.001	0.003	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	0.002	<0.005	
TBRC19884	Dolerite	FR	Waste	<0.001	0.039	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.009	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	0.01	<0.001	<0.005	
TBRC06035	Dolerite	MW	Waste	<0.001	0.102	0.002	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC19815	Dolerite	SW	Waste	<0.001	0.026	<0.001	0.003	<0.001	<0.001	<0.001	<0.01	<0.001	0.012	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC05087	Gabbro	FR	Waste	<0.001	0.059	<0.001	0.003	<0.001	<0.001	<0.001	<0.01	<0.001	0.004	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	0.02	0.002	<0.005	
TBRC05259	Gabbro	FR	Waste	<0.001	0.653	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.006	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	0.001	<0.005	
TBRC26858	Gabbro	FR	Waste	<0.001	0.086	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.005	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	0.02	0.001	<0.005	
TBRC12955	Interbedded sec	FR	Waste	<0.001	0.051	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	0.025	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBDD14054	Pegmatite	FR	Waste	<0.001	0.164	0.002	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.005	<0.001	<0.01	<0.001	0.001	<0.01	<0.001	<0.005	
TBRC06849	Pegmatite	FR	Waste	<0.001	0.064	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.002	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	0.002	<0.005	
TBRC23937	Pegmatite	FR	Waste	<0.001	0.066	<0.001	0.005	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC19720	Phyllite	FR	Waste	<0.001	0.018	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.003	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	0.002	<0.005	
TBRC12835	Schist	FR	Waste	<0.001	0.315	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	0.01	0.002	<0.005	
TBRC25014	Schist	FR	Waste	<0.001	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	0.008	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC26347	Schist	FR	Waste	<0.001	0.244	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.006	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	0.016	<0.005	
TBRC12103	Siltstone	FR	Waste	<0.001	0.162	0.004	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.005	<0.001	0.01	<0.001	<0.001	0.02	<0.001	<0.005	
TBRC24298	Siltstone	FR	Waste	<0.001	0.012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	0.008	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC24864	Siltstone	FR	Waste	<0.001	0.037	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.014	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC06893	Siltstone	SW	Waste	<0.001	0.392	0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	<0.01	<0.001	<0.005	
TBRC24338	Siltstone	SW	Waste	<0.001	0.015	<0.001	0.002	<0.001	<0.001	<0.001	<0.01	<0.001	0.015	<0.001	<0.005	<0.001	<0.01	<0.001	<0.001	0.01	<0.001	<0.005	

APPENDIX C LABORATORY METHODS

ACID BASE ACCOUNTING

Acid base accounting (ABA) is conducted to predict the acid generation characteristics of a waste rock material through determination of the acid neutralising capacity (ANC) and the maximum potential acidity (MPA). Although analysis of pH using distilled water is not a standard ABA test, it is often completed to aid in the interpretation of the ABA data as ancillary information.

The net acid production potential (NAPP) is a measure of the samples overall acid generating capacity and is calculated by subtracting the ANC of the sample from the MPA. A negative NAPP indicates that the sample has a net neutralising capacity and a positive NAPP indicates that the sample has a net acid generating capacity. NAPP, MPA, and ANC are expressed in kg H₂SO₄/tonne equivalent.

ANC is determined by acid digestion (using HCl) of the sample followed by back-titration (using NaOH) to determine the quantity of acid consumed by neutralising minerals within the rock sample. MPA is based on total wt% sulfur (or wt% sulfide sulfur if available) multiplied by the stoichiometric conversion factor 30.63. This conversion factor is determined from the stoichiometry of pyrite oxidation. NAPP is calculated from the below equation (all units are in kg H₂SO₄/tonne):

Equation: $NAPP = MPA - ANC$

Thus potentially acid forming (PAF) rocks have a positive NAPP and non-acid forming (NAF) rocks have a negative NAPP.

ABA analysis typically includes determination of the following:

- Paste pH/EC: Pulverised sample (25 g) is equilibrated with deionised water at a 1:2 ratio and left for 12 hours (or overnight) before pH and EC measurements of the slurry are recorded (AMIRA, 2002).
- Total sulfur (TS): Measured by heating a pulverised sample (< 2 g) in a LECO furnace to ~1,650°C and measuring the sulfur dioxide production. Assay sulfur values measured by XRF analysis on pelletised samples can be used as a substitute for total sulfur measured by LECO.
- Total carbon (TC): Measured by heating a pulverised sample (< 2 g) in a LECO furnace to ~1,650°C and measuring the carbon dioxide production.
- Acid soluble sulfur (SHCl): Method uses hydrochloric acid to extract soluble and slightly soluble sulfate from a pulverised sample (< 2 g). Sulfides should not react and would normally be expelled; extracted sulfur is determined by ICP analysis of the digestion liquor.
- Chromium Reducible Sulfur (CRS): Method is based on the conversion of reduced inorganic sulfur to H₂S by a hot acidic CrCl₂ solution. The evolved H₂S is trapped in a zinc acetate solution as ZnS which is then quantified by iodometric titration (Ahern et al., 2004).
- Sulfide sulfur: Typically calculated if both total sulfur and sulfate sulfur (SSO₄) have been measured.

Equation: $Sulfide\ Sulfur = TS - SSO_4$

- Maximum potential acidity (MPA): A measure of the maximum potential of a sample to generate acidity. MPA can be calculated using TS or sulfide sulfur (all units are in kg H₂SO₄/tonne):

Equation: $MPA = TS \times 30.63$

- Acid neutralising capacity (ANC): Measures the amount of hydrochloric acid (HCl) a pulped sample (2 g) can neutralise with gentle heating and the addition of hydrogen peroxide (2 drops of 30%) to dissolve any ferrous iron present (AMIRA, 2002).
- Net acid production potential (NAPP): The NAPP value is calculated as the difference between MPA and ANC as per Equation 1. A negative NAPP value indicates that a sample may have sufficient ANC to prevent acid generation and conversely, if MPA exceeds ANC, the material may be acid generating.
- Single Addition Net Acid Generation (NAG) Test: A pulverised sample (2.5 g) is digested with 250 mL of 15% hydrogen peroxide and allowed to react to completion before measuring the pH of the NAG liquor. The NAG liquor is then titrated with NaOH to pH 4.5 and pH 7. Acidity measured by the titration to pH 4.5 is due to free hydrogen ion as well as acidity from aluminium and iron (AMIRA, 2002). Additional acidity measured by the titration to pH 7 can be attributed to metal hydrolysis reactions such as copper and zinc (AMIRA, 2002).
- Sequential NAG Test: Involves conducting a series of single addition NAG tests to obtain the maximum NAG acidity value. This may be required for high sulfide bearing samples where complete oxidation may not occur. Incomplete oxidation can also be due to the catalytic decomposition of the hydrogen peroxide from high organic carbon contents (AMIRA, 2002).

TOTAL ELEMENTAL ANALYSIS

The results from solid phase total or near-total analysis such as total elemental (TE) analysis or x-ray fluorescence (XRF) analysis can be used to make an inference regarding elements of potential environmental concern. Results can be assessed using tools such as the geochemical abundance index (GAI) to identify elements that may be enriched in respect to average values. However, an enrichment in a specific element does not imply mobility or bioavailability.

It is important to understand the strengths and weaknesses of each method, particularly the various digestions to ensure drainage predictions are not adversely affected (Price 2009).

Solid samples are digested to enable analysis with inductively coupled plasma mass spectrometry (ICP-MS) or ICP atomic emission spectrometry (ICP-AES). Various digestions can be utilised depending on the mineralogy of the sample or if specific elements are targeted, such as:

- Lithium borate fusion: Lithium borate flux is mixed with a pulped sample to lower the melting point and is then fused to produce a glass disc. The glass disc is either analysed directly by XRF or if a lower detection limit is required, the disc can be dissolved and analysed by ICP (Price, 2009).
- Sodium peroxide fusion: Sodium peroxide and sodium hydroxide is added to a pulped sample before being heated to 550°C. Diluted nitric acid is then used to dissolve the digested residue

before analysis with ICP. This flux is typically used to digest samples with sulfide contents greater than 5% or other refractory or resistant minerals (Price, 2009).

- Four acid digest: Hydrofluoric acid, perchloric acid and nitric acid are added to a pulped sample and taken to near dryness before leaching the nearly dry cake with hydrochloric acid (Price, 2009).
- Aqua regia digest: Samples digested in a heated water bath with a 3:1 mixture of hydrochloric acid and nitric acids (less complete digestion than the four acid digest).

MINERALOGICAL ANALYSIS

Mineralogical analysis is an essential part of geochemical assessments because the mineralogical properties determine the physical and geochemical stability and relative weathering rates of waste rock under different weathering conditions (Price, 2009). Quantitative mineralogy assessment was undertaken utilising powder x-ray diffraction (XRD) technology using a PANalytical Cubix3 with copper radiation and graphite monochromator. Qualitative analysis was undertaken using Bruker Diffracplus Search/Match (ICDD PDF-2 (2011) database) and SIROQUANT Version 4 software was used for quantitative analysis.

STATIC LEACH TESTING

Methods for static (or short-term) leach tests can vary widely, however, all tests generally measure readily soluble constituents of mine wastes and geologic materials. The short-term nature of static leach tests provides a snapshot in time of a material's environmental stability. Test results depend entirely on the present disposition of the sample (e.g., unoxidised vs. oxidised; oxidation products absent vs. oxidation products present). For reactive rocks (e.g., material that contains oxidisable sulfur), the transient processes that lead to changes in solution chemistry during water-rock interactions often develop over periods of time that are much greater than is stipulated in the testing protocols. Therefore, the results from short-term leach tests generally cannot be applied to develop reaction rates and predict long-term mine water quality, but should instead be used to get an initial indication of parameters of constituents of interest.

The method was completed on provided pulps. The sample (100 g) was leached with distilled water at a ratio of 20:1 (liquid to solid) for a period of 12 hours (bottle rolled). The leachate was then filtered through a 0.45 µm filter prior to analysis for a range of parameters.

CARBON SPECIATION

Total carbon (TC) is measured in the sample by oxidising all carbon to carbon dioxide gas in a tube furnace using oxygen to aid the oxidation process. The evolved carbon dioxide is measure by an infra-red cell. The infra-red cell output is calibrated against the value of a known standard sample to provide the TC concentration of the sample.

Total organic carbon (TOC) is measured by pre-treating the sample with hydrochloric acid to remove any inorganic carbon (carbonate). The residual carbon in the sample, representing TOC, is then measured again using the tube furnace and infra-red method.

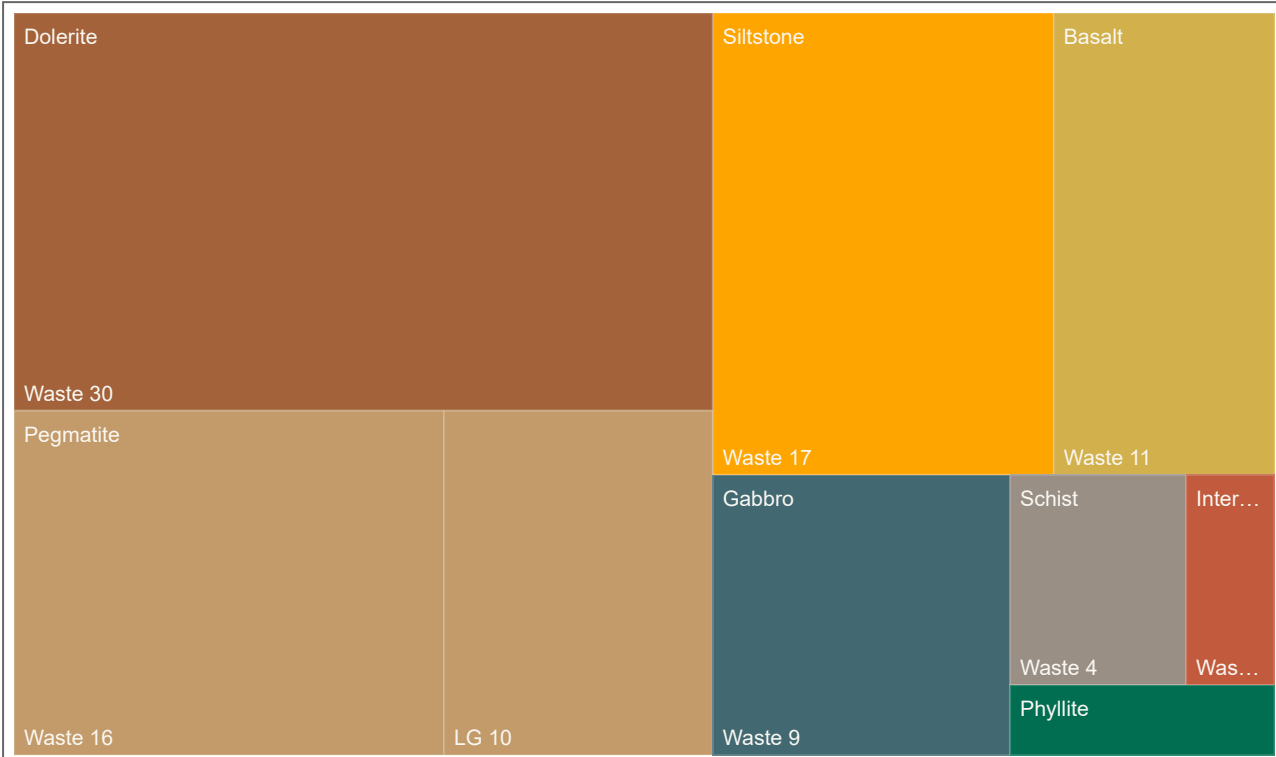
Total inorganic carbon (TIC) can then be calculated by subtracting TOC from TC:

Equation: $TIC = TC - TOC$

ACID BUFFERING CHARACTERISTIC CURVES

Acid buffering characteristic curve (ABCC) testing (AMIRA, 2002) were carried out to confirm the effective neutralising capacity (ENC) of specific samples. This should be used to provide some indication of reactive and available ANC and then be considered as part of the acid base accounting procedure. The ABCC test involves slow titration of a sample to pH 2.5 with acid while continuously monitoring pH. The ENC is equal to the amount of acid added to decrease the pH to 4.5. These data provide an indication of the portion of the ANC measured in a sample that is readily available for acid neutralisation.

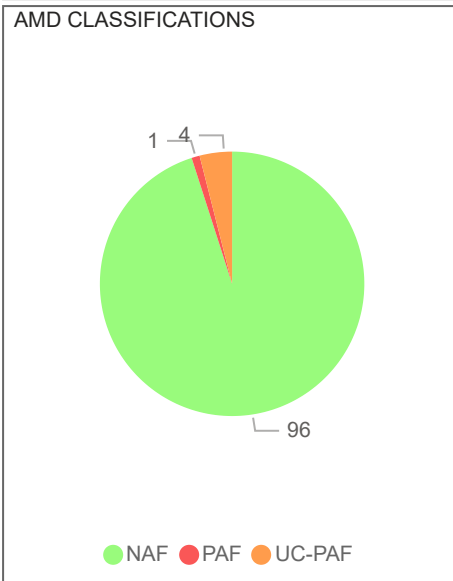
APPENDIX D RESULTS DASHBOARD



LITHOLOGY	Count of NAPP	Min of NAPP	Median of NAPP	Average of NAPP	Max of NAPP
Basalt	11	-78.30	-10.20	-20.93	-4.40
Dolerite	30	-22.90	-8.85	-9.19	-1.20
Gabbro	9	-13.40	-11.10	-9.34	-4.30
Interbedded sediments	2	-9.30	-8.10	-8.10	-6.90
Pegmatite	26	-47.60	-3.20	-5.63	-0.70
Phyllite	2	-11.50	-11.25	-11.25	-11.00
Schist	4	-52.60	-9.00	-18.98	-5.30
Siltstone	17	-259.40	-9.20	-28.81	-5.60
Total	101	-259.40	-7.90	-13.28	-0.70

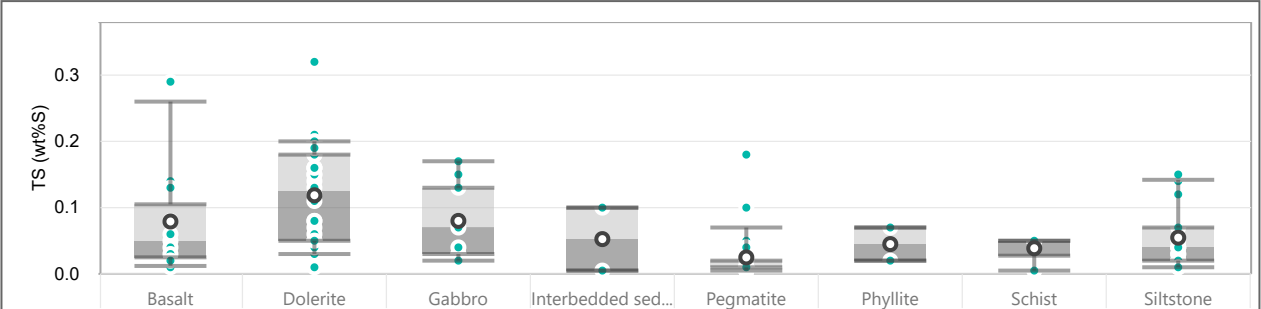
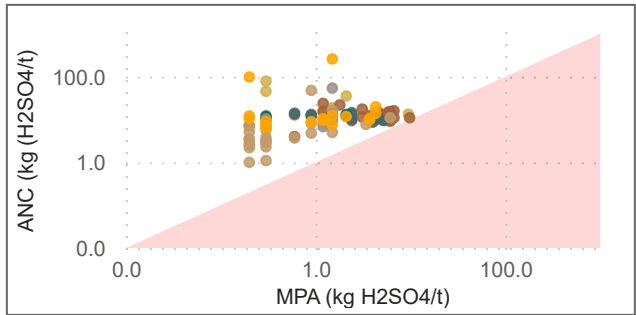
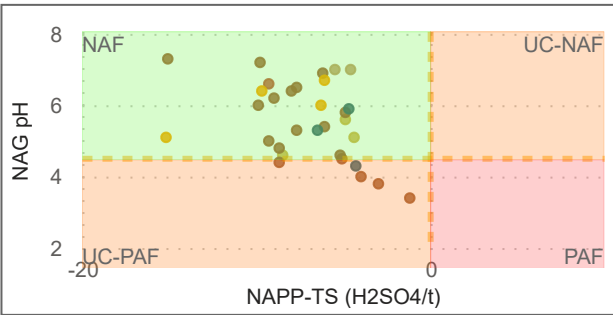
LITHOLOGY	Count of ANC/MPA	Min of ANC/MPA	Median of ANC/MPA	Average of ANC/MPA	Max of ANC/MPA
Basalt	11	1.50	10.30	37.00	256.90
Dolerite	30	1.10	2.95	6.73	35.90
Gabbro	9	1.80	5.90	8.63	22.90
Interbedded sediments	2	4.10	25.25	25.25	46.40
Pegmatite	26	2.00	10.15	17.01	156.50
Phyllite	2	6.10	12.95	12.95	19.80
Schist	4	4.40	20.75	28.30	67.30
Siltstone	17	2.60	8.50	53.71	424.80
Total	101	1.10	7.10	22.10	424.80

- Basalt
- Dolerite
- Gabbro
- Interbedded sediments
- Pegmatite
- Phyllite
- Schist
- Siltstone

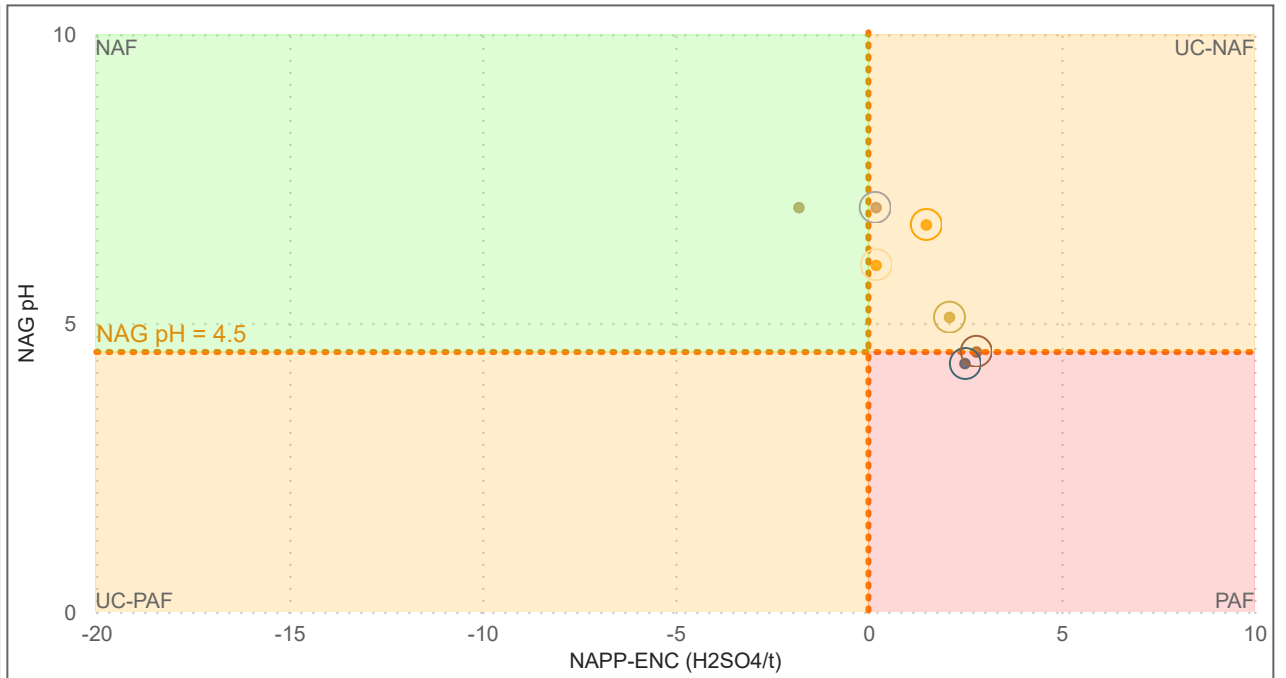
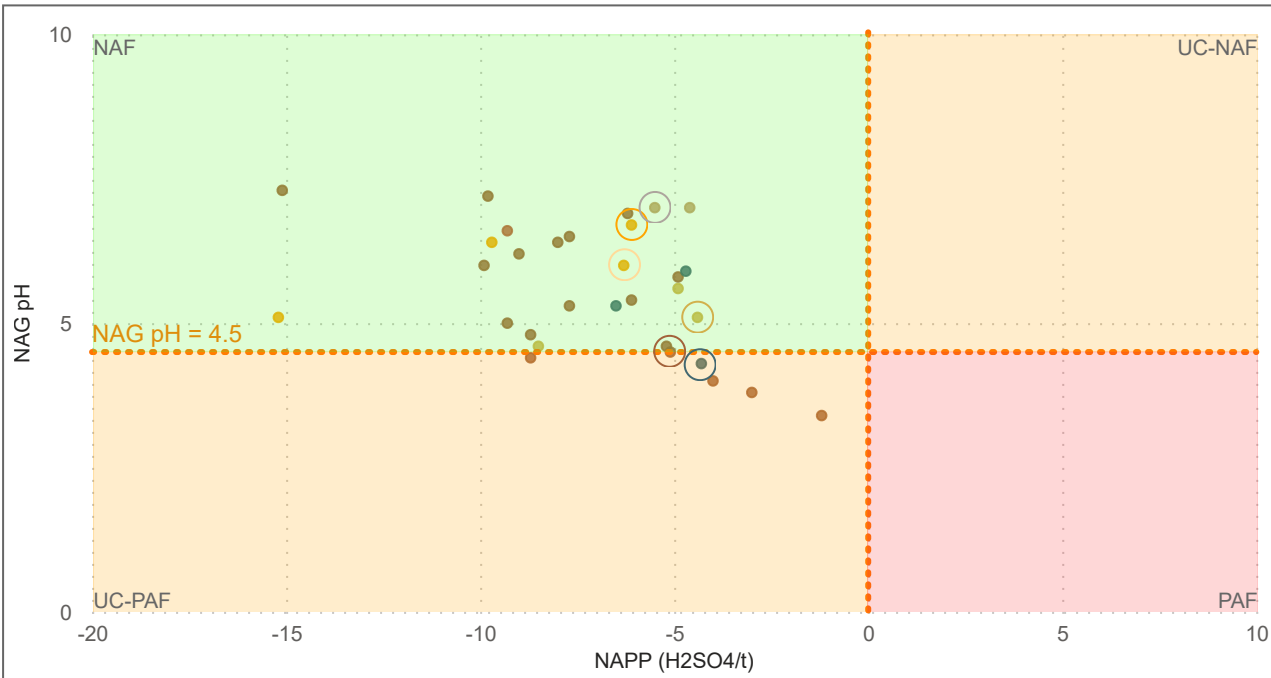
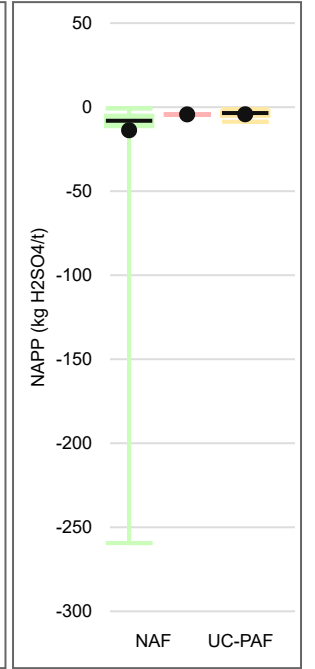
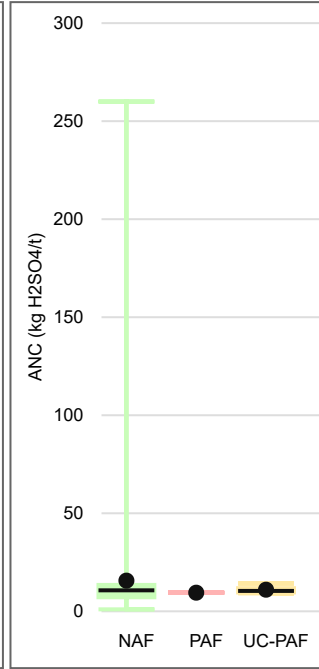
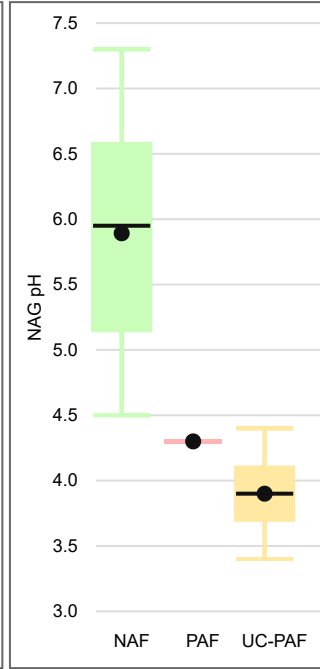
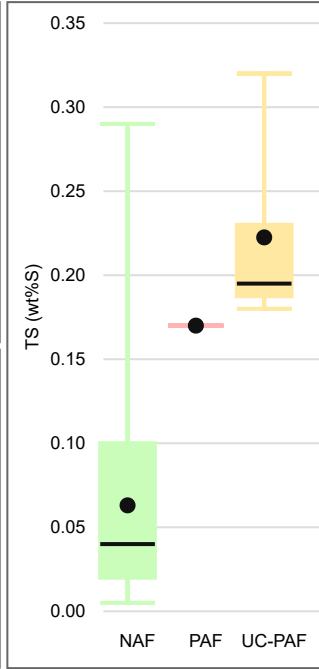
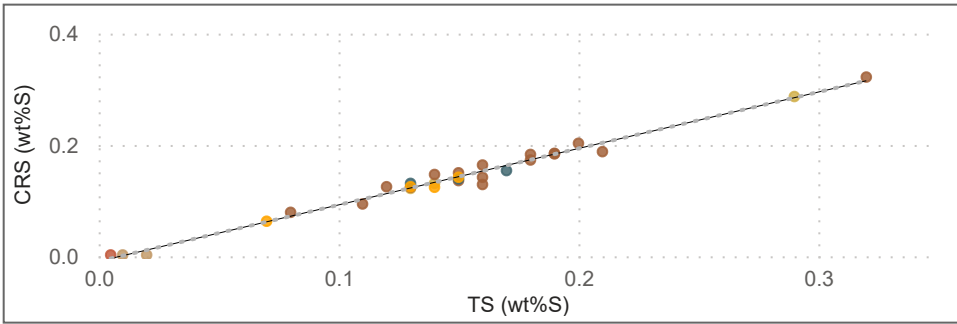
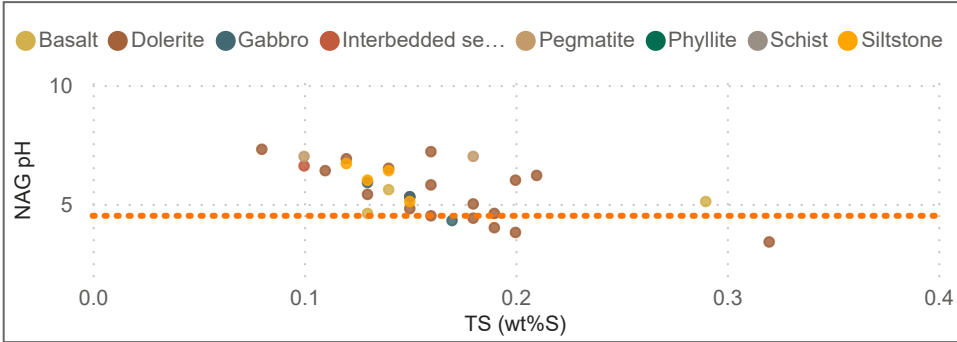


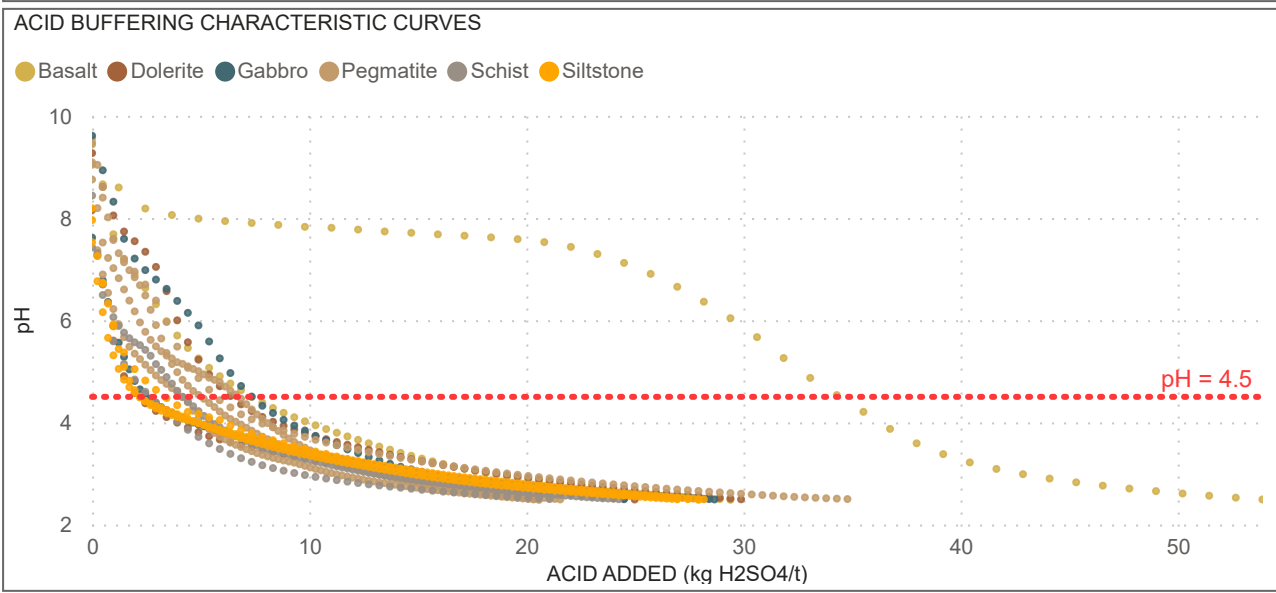
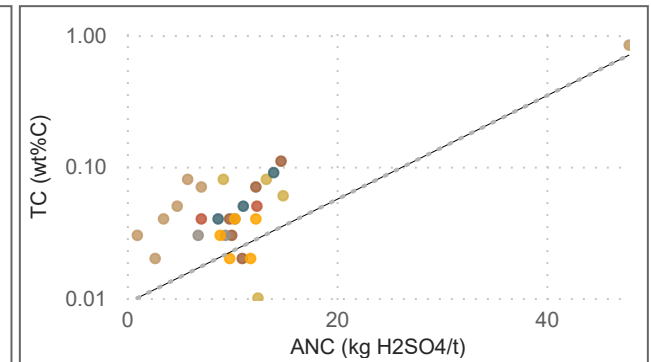
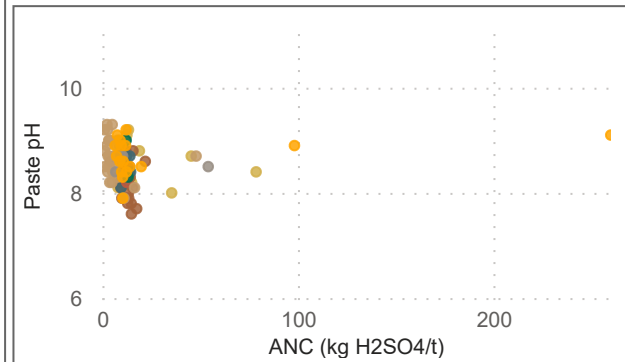
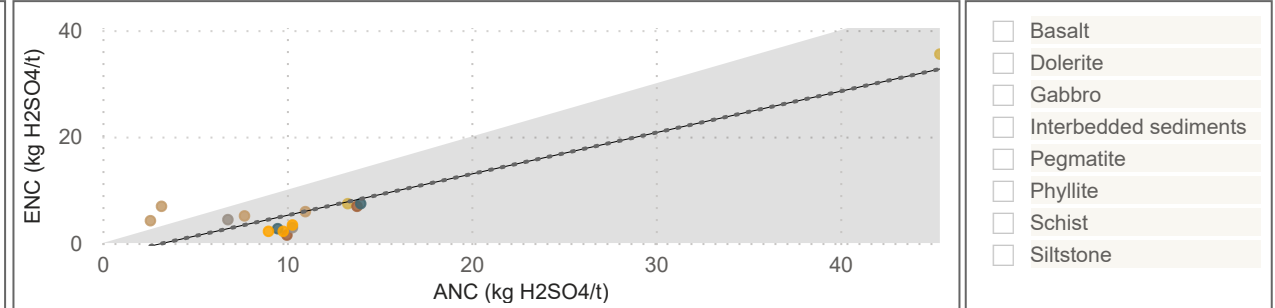
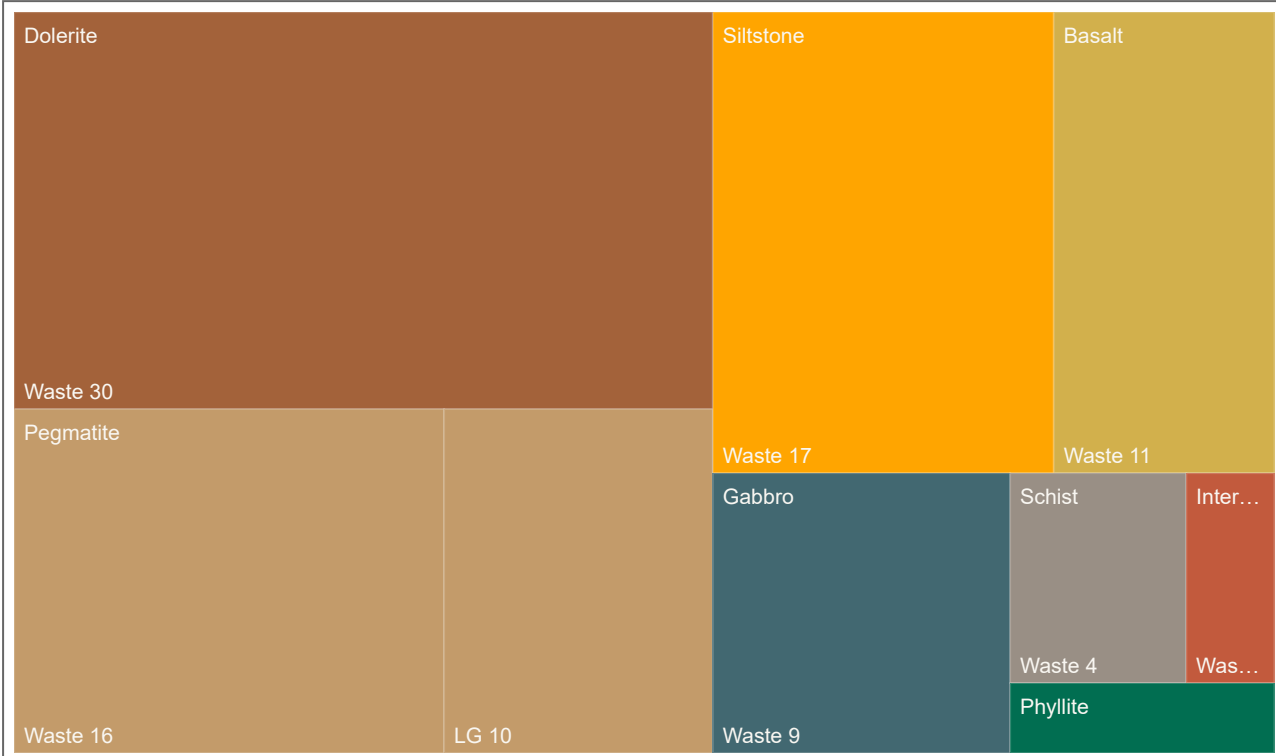
LITHOLOGY	Count of TS-LECO	Min of TS-LECO	Median of TS-LECO	Max of TS-LECO
Dolerite	30	0.01	0.13	0.32
Pegmatite	25	0.01	0.01	0.18
Siltstone	17	0.01	0.04	0.15
Basalt	11	0.01	0.05	0.29
Gabbro	9	0.02	0.07	0.17
Schist	4	0.01	0.05	0.05
Interbedded sediments	2	0.01	0.05	0.10
Phyllite	2	0.02	0.05	0.07

SAMPLE_NUMBER	LITHOLOGY	AMD CLASS.	NAG PH	NAPP ENC	XRF-S
TBRC06867	Dolerite	UC-PAF	3.40	-1.20	0.32
TBRC05969	Dolerite	UC-PAF	3.80	-3.00	0.20
TBRC24512	Dolerite	UC-PAF	4.00	-4.00	0.20
TBRC06638	Dolerite	UC-PAF	4.40	-8.70	0.20
TBRC05354	Gabbro	PAF	4.30	-4.30	0.17

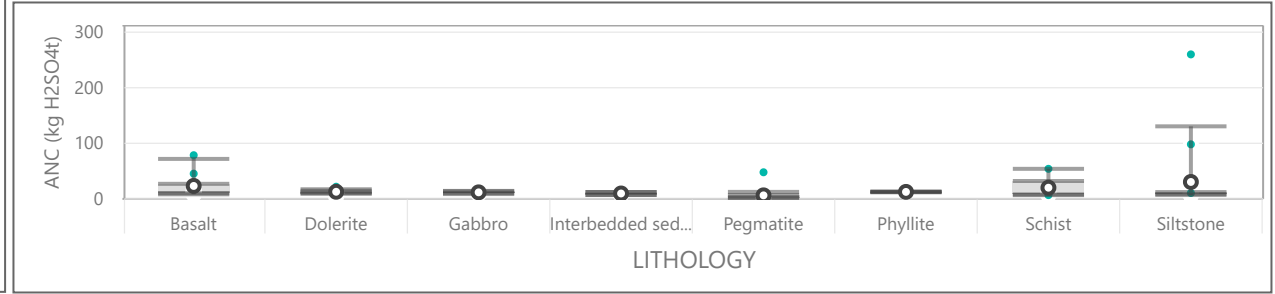


- Basalt
- Dolerite
- Gabbro
- Interbedded sediments
- Pegmatite
- Phyllite
- Schist
- Siltstone





LITHOLOGY	Count of ANC	Min of ANC	Median of ANC	Average of ANC	Min of ENC	Max of ANC	Max of ENC	Min of ENC:ANC	Max of ENC:ANC
Basalt	11	8.00	13.30	23.34	7.40	78.60	35.50	0.60	0.80
Dolerite	30	4.00	12.15	12.81	1.50	23.80	6.90	0.10	0.50
Gabbro	9	8.70	12.00	11.78	2.70	14.40	7.40	0.30	0.50
Interbedded sediments	2	7.10	9.75	9.75		12.40			
Pegmatite	26	1.00	3.60	6.38	4.20	47.90	6.90	0.50	2.10
Phyllite	2	12.10	12.60	12.60		13.10			
Schist	4	6.80	9.85	20.15	2.90	54.10	4.40	0.30	0.60
Siltstone	17	6.50	10.40	30.48	2.20	260.00	3.40	0.20	0.30
Total	101	1.00	10.60	15.41	1.50	260.00	35.50	0.10	2.10

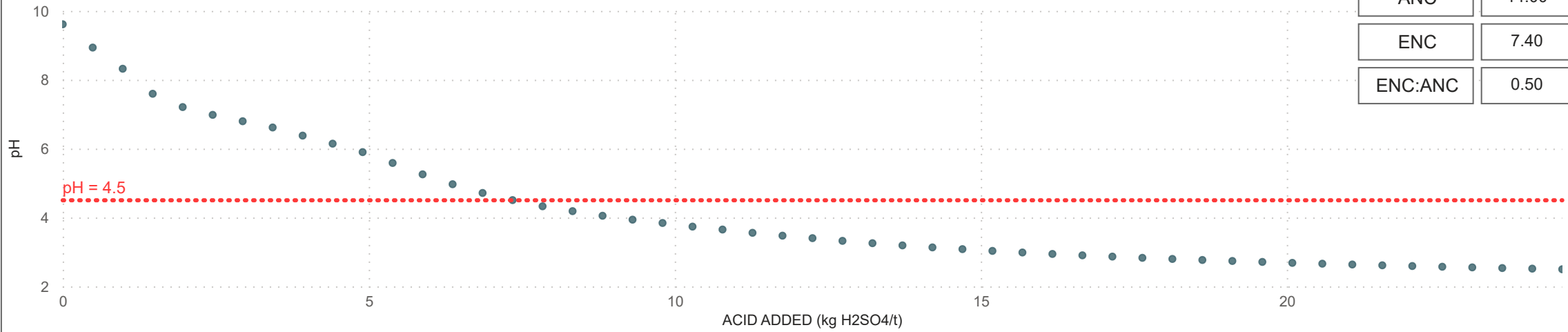


Samples per Lithology

Gabbro

Waste 1

ABCC



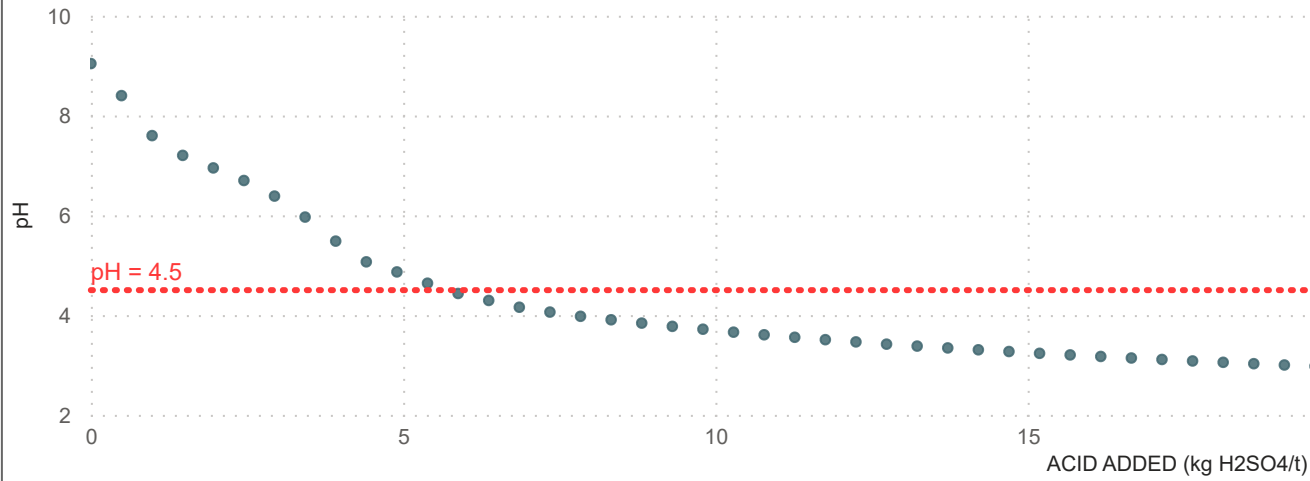
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- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

Pegmatite

Waste 1

ABCC



ANC	11.00
ENC	5.90
ENC:ANC	0.50

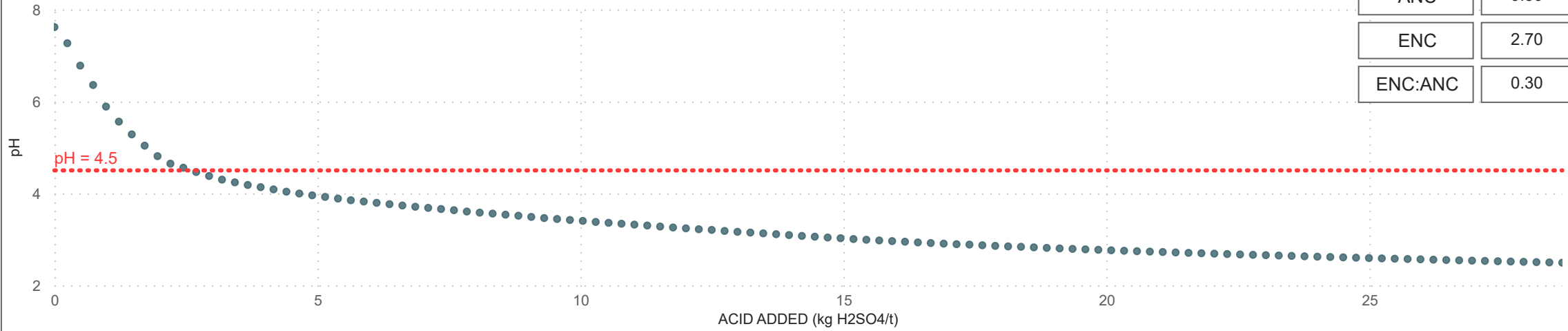
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- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
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- TBRC26586

Samples per Lithology

Gabbro

Waste 1

ABCC



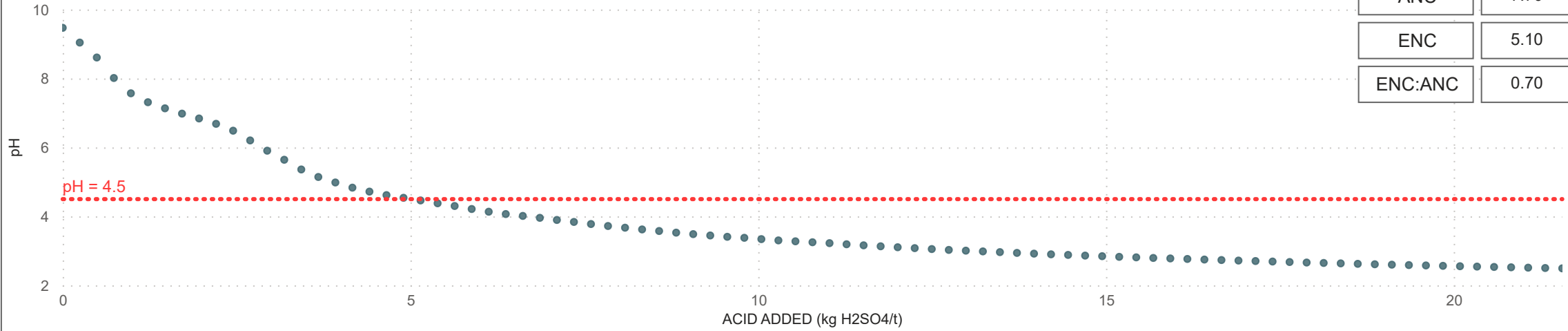
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- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

Pegmatite

Waste 1

ABCC



ANC	7.70
ENC	5.10
ENC:ANC	0.70

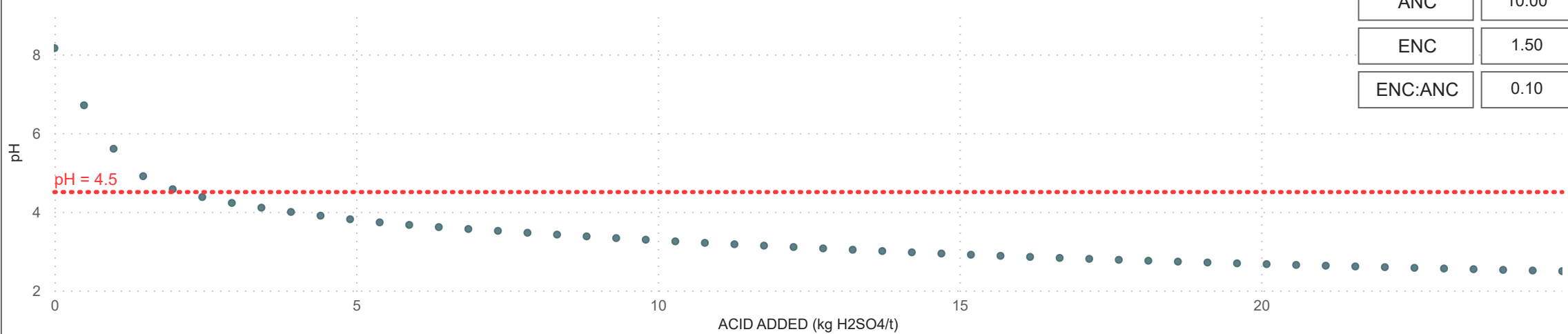
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- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

Dolerite

Waste 1

ABCC

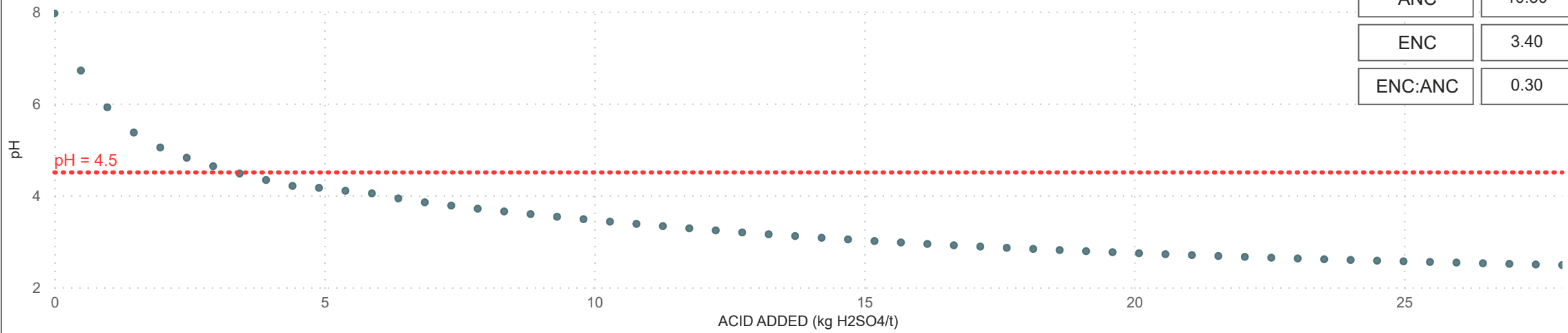


- TBRC05259
- TBRC05322
- TBRC05354
- TBRC05433
- TBRC05541
- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

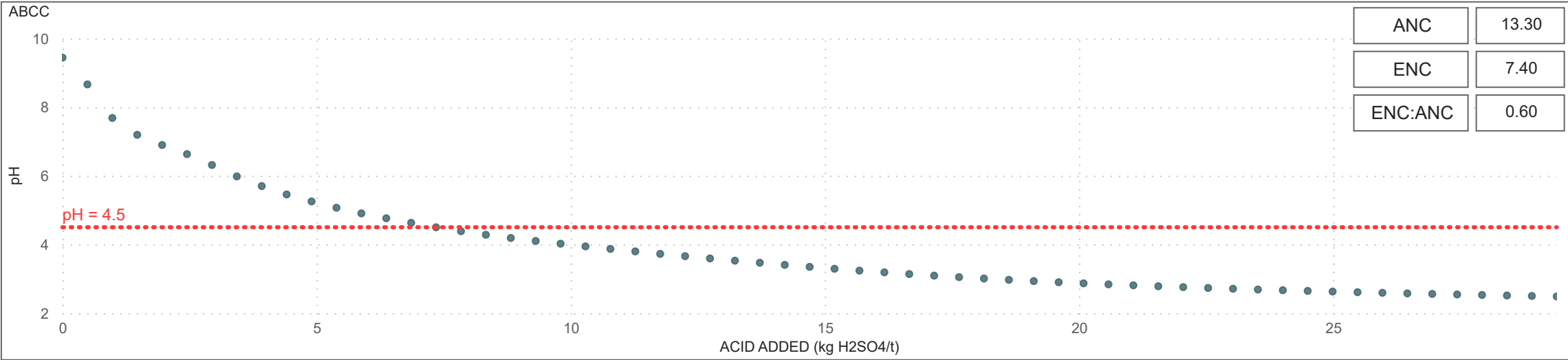


ABCC



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- TBRC05322
- TBRC05354
- TBRC05433
- TBRC05541
- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology



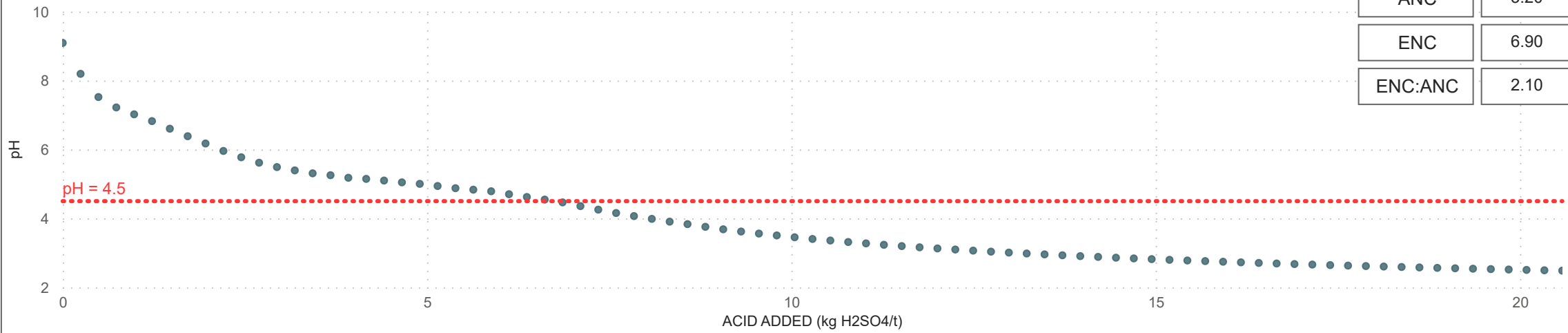
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- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

Pegmatite

LG 1

ABCC



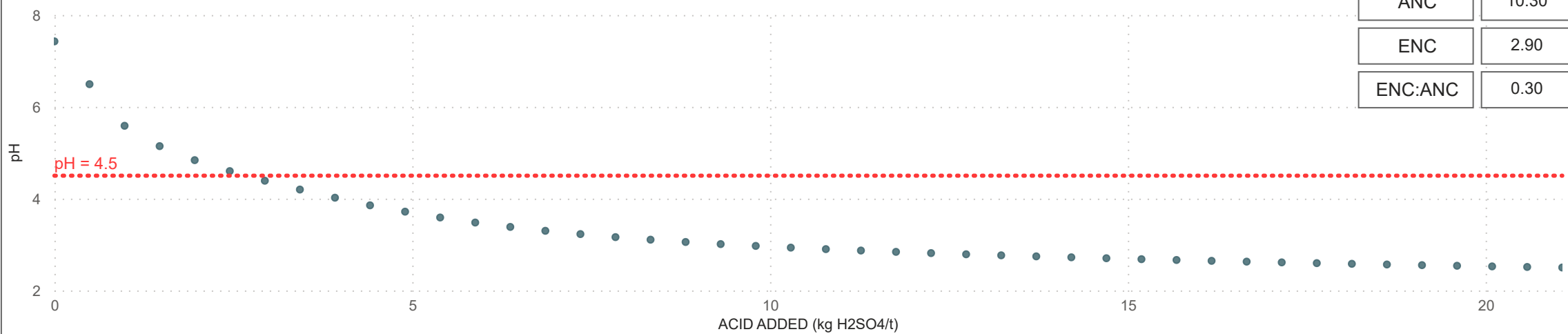
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- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

Schist

Waste 1

ABCC



ANC	10.30
ENC	2.90
ENC:ANC	0.30

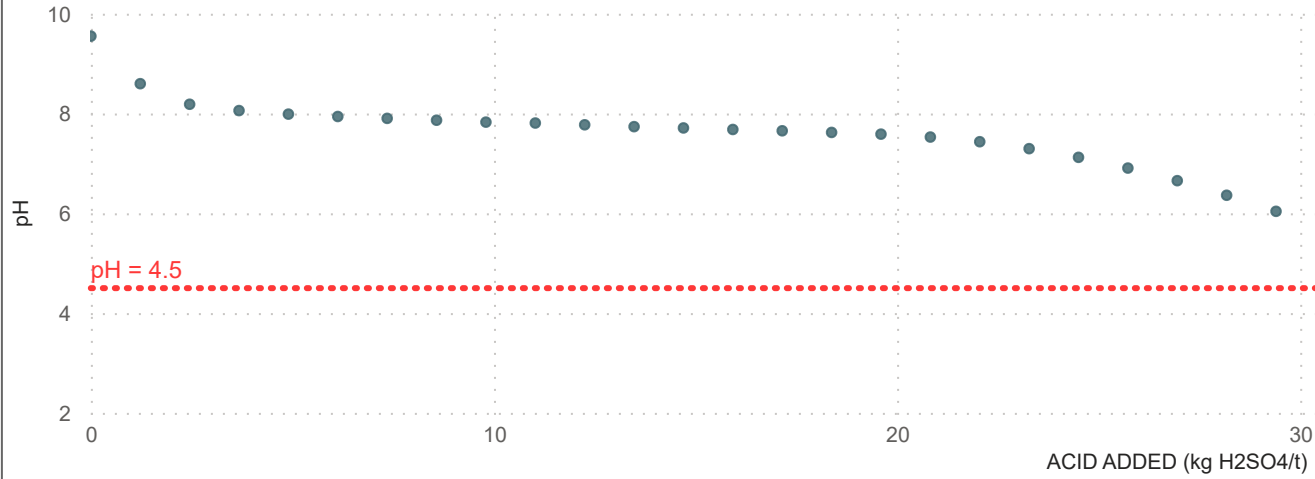
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- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

Basalt

Waste 1

ABCC



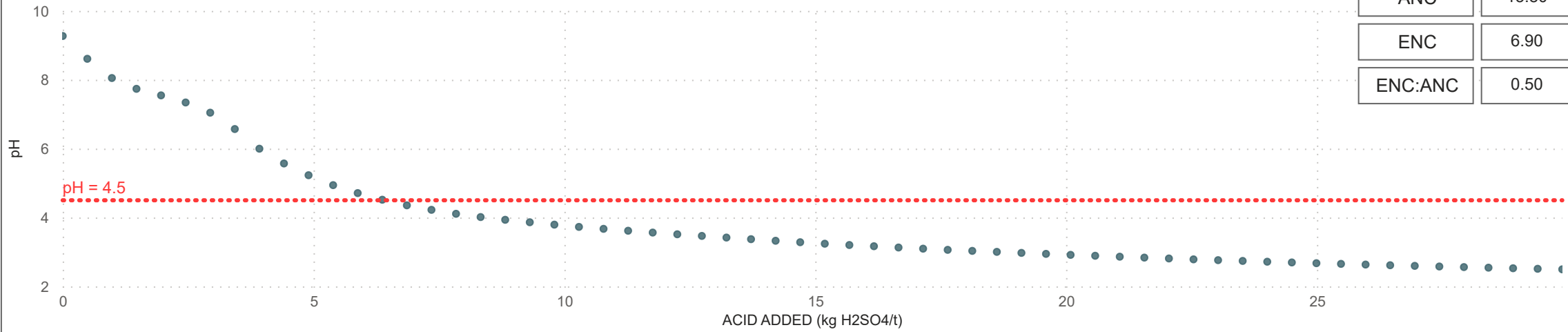
ANC	45.40
ENC	35.50
ENC:ANC	0.80

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- TBRC05354
- TBRC05433
- TBRC05541
- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology



ABCC

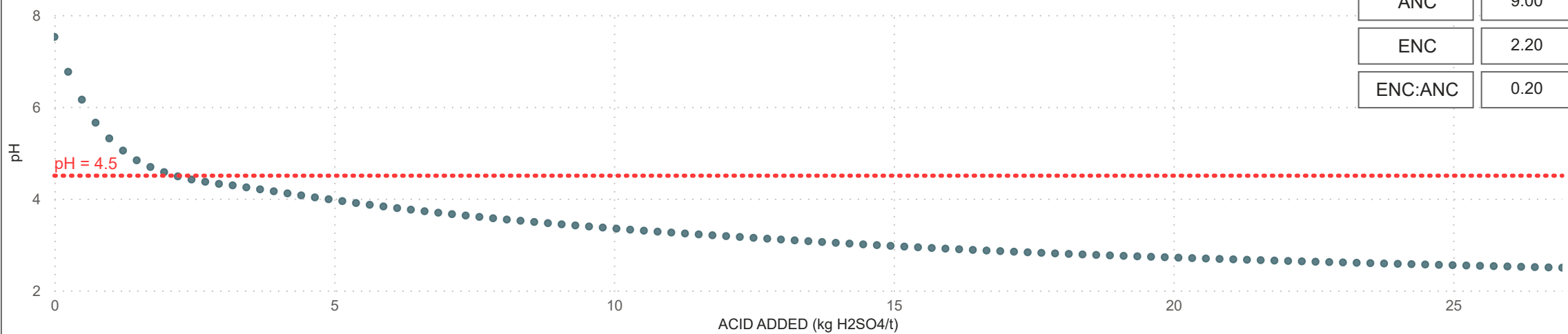


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- TBRC05322
- TBRC05354
- TBRC05433
- TBRC05541
- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology



ABCC

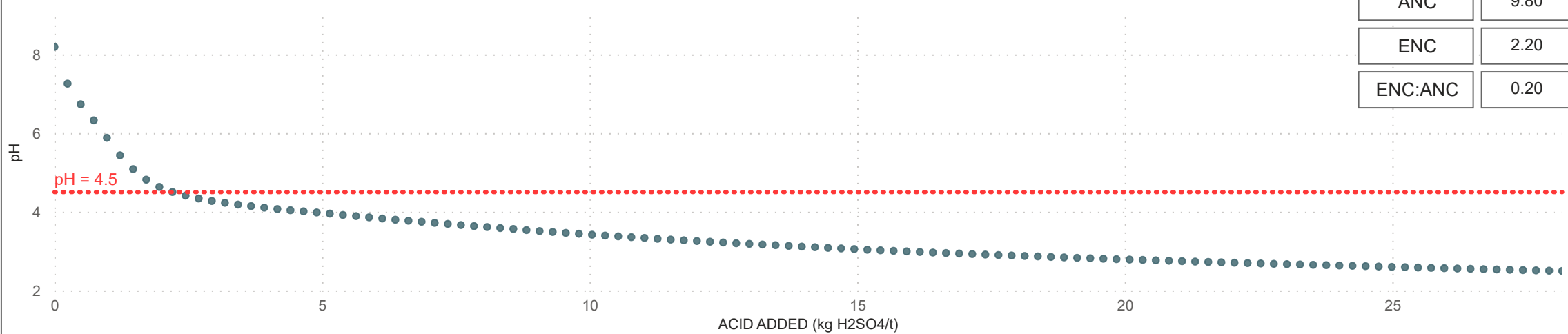


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- TBRC05354
- TBRC05433
- TBRC05541
- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology



ABCC

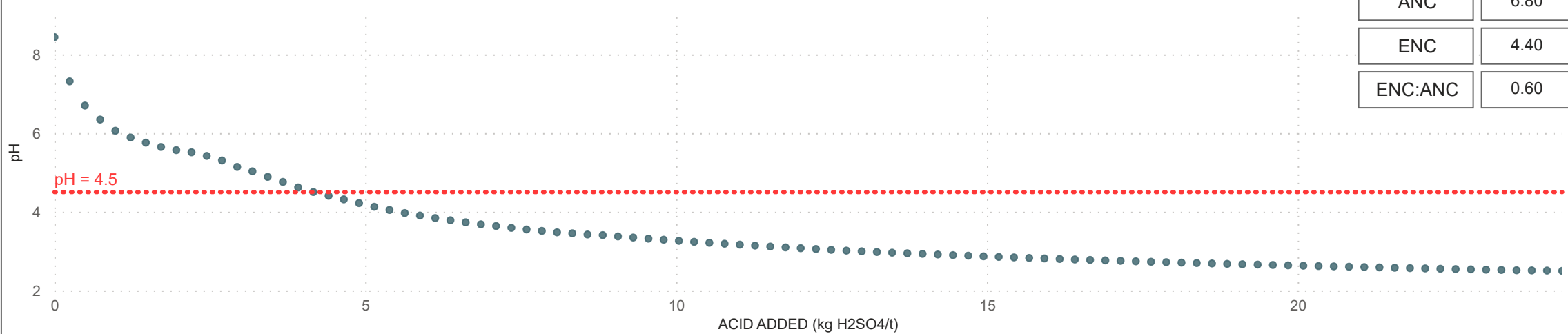


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- TBRC05322
- TBRC05354
- TBRC05433
- TBRC05541
- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

Schist
Waste 1

ABCC



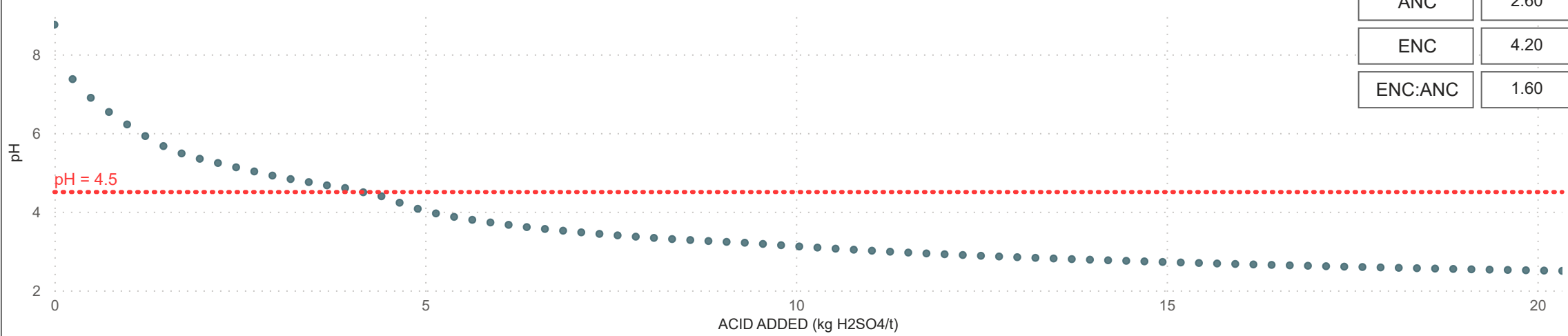
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- TBRC05354
- TBRC05433
- TBRC05541
- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

Samples per Lithology

Pegmatite

LG 1

ABCC



- TBRC05259
- TBRC05322
- TBRC05354
- TBRC05433
- TBRC05541
- TBRC06893
- TBRC12516
- TBRC12552
- TBRC12835
- TBRC17247
- TBRC19884
- TBRC24012
- TBRC25164
- TBRC26347
- TBRC26586

APPENDIX E LABORATORY CERTIFICATES



CERTIFICATE OF ANALYSIS

Work Order	: EP2411504	Page	: 1 of 35
Client	: MINE WASTE MANAGEMENT	Laboratory	: Environmental Division Perth
Contact	: Josh Pearce	Contact	: Georgina Nearygrant
Address	: Level 1, 8A/232 Churchill Ave Subiaco 6008	Address	: 26 Rigali Way Wangara WA Australia 6065
Telephone	: ----	Telephone	: +61-8-9406 1301
Project	: J-AU0389 Tabba Tabba Materials Characterisation	Date Samples Received	: 27-May-2024 08:15
Order number	: J-AU0389	Date Analysis Commenced	: 20-Aug-2024
C-O-C number	: ----	Issue Date	: 30-Aug-2024 22:58
Sampler	: Client (Wildcat Resources Pty Ltd)		
Site	: ----		
Quote number	: EP23MINWAS0006_V2		
No. of samples received	: 100		
No. of samples analysed	: 100		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Alana Smylie	Team Leader - Asbestos	Newcastle - Asbestos, Mayfield West, NSW
Canhuang Ke	Inorganics Supervisor	Perth Inorganics, Wangara, WA
Daniel Fisher	Inorganics Analyst	Perth ASS, Wangara, WA
Niamh Carthew	Inorganic Chemist	Perth Inorganics, Wangara, WA
Satishkumar Trivedi	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EA031 (Saturated Paste pH): NATA accreditation does not cover the performance of this service.
- EA032 (Saturated Paste EC): NATA accreditation does not cover the performance of this service.
- EG020: LCS recoveries for Cu and Sr fall outside ALS Dynamic Control Limit. However, they are within the acceptance criteria based on ALS DQO. No further action is required.
- EA032: LCS recovery for electrical conductivity falls outside ALS Dynamic Control Limit. However, it is within the acceptance criteria based on ALS DQO. No further action is required.
- **EA200: As only one sample container was submitted for multiple tests, at the client's request, sub sampling was conducted prior to Asbestos analysis. As this has the potential to understate detection, results should be scrutinised accordingly.**
- Moisture correction for this workorder has been disabled as samples were dried prior to receipt at ALS Environmental.
- This workorder is a rebatch of EP2408625.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.



Analytical Results

Sub-Matrix: DI WATER LEACHATE (Matrix: WATER)				Sample ID	TBDD14054	TBRC05087	TBRC05259	TBRC05647	TBRC05946
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-003	EP2411504-012	EP2411504-017	EP2411504-028	EP2411504-031	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	9.35	9.12	9.48	9.37	9.25	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	52	49	67	58	57	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	8	4	13	8	6	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	19	20	23	20	22	
Total Alkalinity as CaCO3	----	1	mg/L	27	24	36	28	28	
ED040W: Water Leachable Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	3	1	<1	3	
Sulfur as S	63705-05-5	1	mg/L	<1	<1	<1	<1	<1	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	2	<1	1	2	1	
ED093W: Water Leachable Major Cations									
Calcium	7440-70-2	1	mg/L	3	6	3	5	7	
Magnesium	7439-95-4	1	mg/L	<1	<1	<1	<1	<1	
Sodium	7440-23-5	1	mg/L	5	3	6	5	3	
Potassium	7440-09-7	1	mg/L	5	2	6	2	2	
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.84	1.01	0.63	0.58	0.62	
Antimony	7440-36-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.004	
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Bismuth	7440-69-9	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

				Sample ID	TBDD14054	TBRC05087	TBRC05259	TBRC05647	TBRC05946
				Sampling date / time	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit		EP2411504-003	EP2411504-012	EP2411504-017	EP2411504-028	EP2411504-031
					Result	Result	Result	Result	Result
EG020W: Water Leachable Metals by ICP-MS - Continued									
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lanthanum	7439-91-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	7439-93-2	0.001	mg/L		0.164	0.059	0.653	0.068	0.062
Manganese	7439-96-5	0.001	mg/L		0.002	<0.001	<0.001	<0.001	<0.001
Molybdenum	7439-98-7	0.001	mg/L		<0.001	0.003	0.002	<0.001	0.002
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Silver	7440-22-4	0.001	mg/L		<0.001	0.010	0.001	<0.001	<0.001
Strontium	7440-24-6	0.001	mg/L		<0.001	0.004	0.006	0.006	0.011
Tellurium	22541-49-7	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Thorium	7440-29-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Tin	7440-31-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	7440-32-6	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	7440-61-1	0.001	mg/L		0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	7440-62-2	0.01	mg/L		<0.01	0.02	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
Tungsten	7440-33-7	0.001	mg/L		<0.001	0.002	0.001	<0.001	<0.001
Tantalum	7440-25-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.00004	mg/L		<0.00004	<0.00004	<0.00004	<0.00004	<0.00004



Analytical Results

Sub-Matrix: DI WATER LEACHATE (Matrix: WATER)				Sample ID	TBRC05969	TBRC06035	TBRC06186	TBRC06849	TBRC06893
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-032	EP2411504-033	EP2411504-034	EP2411504-043	EP2411504-046	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	9.14	7.69	8.23	9.33	8.33	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	42	28	96	56	36	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	4	<1	<1	8	<1	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	13	8	22	22	13	
Total Alkalinity as CaCO3	----	1	mg/L	18	8	22	30	13	
ED040W: Water Leachable Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	1	mg/L	2	5	23	<1	5	
Sulfur as S	63705-05-5	1	mg/L	<1	2	8	<1	2	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	<1	<1	4	1	<1	
ED093W: Water Leachable Major Cations									
Calcium	7440-70-2	1	mg/L	4	<1	7	3	<1	
Magnesium	7439-95-4	1	mg/L	<1	<1	2	<1	<1	
Sodium	7440-23-5	1	mg/L	3	5	7	7	4	
Potassium	7440-09-7	1	mg/L	3	2	3	3	4	
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.81	0.42	0.17	0.53	0.47	
Antimony	7440-36-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	0.002	<0.001	
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Barium	7440-39-3	0.001	mg/L	<0.001	0.001	0.002	<0.001	<0.001	
Bismuth	7440-69-9	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	0.009	<0.001	<0.001	<0.001	



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

				Sample ID	TBRC05969	TBRC06035	TBRC06186	TBRC06849	TBRC06893
				Sampling date / time	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit		EP2411504-032	EP2411504-033	EP2411504-034	EP2411504-043	EP2411504-046
					Result	Result	Result	Result	Result
EG020W: Water Leachable Metals by ICP-MS - Continued									
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lanthanum	7439-91-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	7439-93-2	0.001	mg/L		0.028	0.102	0.165	0.064	0.392
Manganese	7439-96-5	0.001	mg/L		<0.001	0.002	<0.001	<0.001	0.001
Molybdenum	7439-98-7	0.001	mg/L		0.002	0.002	0.002	0.002	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Strontium	7440-24-6	0.001	mg/L		0.003	<0.001	0.041	0.002	<0.001
Tellurium	22541-49-7	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Thorium	7440-29-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Tin	7440-31-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	7440-32-6	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	7440-61-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	7440-62-2	0.01	mg/L		0.01	<0.01	<0.01	<0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	0.16	<0.05	<0.05	0.15
Tungsten	7440-33-7	0.001	mg/L		<0.001	<0.001	<0.001	0.002	<0.001
Tantalum	7440-25-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.00004	mg/L		<0.00004	<0.00004	<0.00004	<0.00004	<0.00004



Analytical Results

Sub-Matrix: DI WATER LEACHATE (Matrix: WATER)				Sample ID	TBRC12103	TBRC12390	TBRC12552	TBRC12835	TBRC12955
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-049	EP2411504-051	EP2411504-053	EP2411504-056	EP2411504-058	EP2411504-058
				Result	Result	Result	Result	Result	Result
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	8.44	9.00	9.31	8.96	8.67	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	37	48	58	34	95	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	3	9	3	2	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	14	22	23	14	34	
Total Alkalinity as CaCO3	----	1	mg/L	14	25	31	16	36	
ED040W: Water Leachable Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	1	mg/L	7	2	<1	<1	13	
Sulfur as S	63705-05-5	1	mg/L	2	<1	<1	<1	4	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	1	<1	2	1	1	
ED093W: Water Leachable Major Cations									
Calcium	7440-70-2	1	mg/L	<1	4	3	<1	4	
Magnesium	7439-95-4	1	mg/L	<1	<1	<1	<1	1	
Sodium	7440-23-5	1	mg/L	6	3	5	5	7	
Potassium	7440-09-7	1	mg/L	2	2	5	3	13	
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.69	0.66	0.67	0.74	0.34	
Antimony	7440-36-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Arsenic	7440-38-2	0.001	mg/L	<0.001	0.003	<0.001	<0.001	<0.001	
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Barium	7440-39-3	0.001	mg/L	0.002	<0.001	<0.001	<0.001	0.004	
Bismuth	7440-69-9	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	0.002	<0.001	<0.001	<0.001	<0.001	



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

				Sample ID	TBRC12103	TBRC12390	TBRC12552	TBRC12835	TBRC12955
				Sampling date / time	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit		EP2411504-049	EP2411504-051	EP2411504-053	EP2411504-056	EP2411504-058
					Result	Result	Result	Result	Result
EG020W: Water Leachable Metals by ICP-MS - Continued									
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		0.003	<0.001	<0.001	<0.001	<0.001
Lanthanum	7439-91-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	7439-93-2	0.001	mg/L		0.162	0.393	0.544	0.315	0.051
Manganese	7439-96-5	0.001	mg/L		0.004	<0.001	0.007	<0.001	<0.001
Molybdenum	7439-98-7	0.001	mg/L		<0.001	0.001	0.002	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Strontium	7440-24-6	0.001	mg/L		<0.001	0.006	0.001	<0.001	0.025
Tellurium	22541-49-7	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Thorium	7440-29-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Tin	7440-31-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	7440-32-6	0.01	mg/L		0.01	<0.01	<0.01	<0.01	<0.01
Uranium	7440-61-1	0.001	mg/L		<0.001	<0.001	0.010	<0.001	<0.001
Vanadium	7440-62-2	0.01	mg/L		0.02	<0.01	<0.01	0.01	<0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		0.31	<0.05	<0.05	<0.05	<0.05
Tungsten	7440-33-7	0.001	mg/L		<0.001	0.006	0.003	0.002	<0.001
Tantalum	7440-25-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.00004	mg/L		<0.00004	<0.00004	<0.00004	<0.00004	<0.00004



Analytical Results

Sub-Matrix: DI WATER LEACHATE (Matrix: WATER)				Sample ID	TBRC17247	TBRC17415	TBRC19720	TBRC19815	TBRC19884
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-059	EP2411504-062	EP2411504-069	EP2411504-072	EP2411504-073	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	9.20	9.04	8.35	9.04	8.88	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	98	53	48	72	61	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	17	4	<1	5	3	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	44	23	12	27	26	
Total Alkalinity as CaCO3	----	1	mg/L	61	27	12	32	30	
ED040W: Water Leachable Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	2	8	2	2	
Sulfur as S	63705-05-5	1	mg/L	<1	<1	3	<1	<1	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	<1	<1	2	1	<1	
ED093W: Water Leachable Major Cations									
Calcium	7440-70-2	1	mg/L	3	5	<1	3	5	
Magnesium	7439-95-4	1	mg/L	2	<1	<1	<1	<1	
Sodium	7440-23-5	1	mg/L	16	5	5	8	8	
Potassium	7440-09-7	1	mg/L	2	2	6	7	1	
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.12	0.66	0.41	0.81	0.33	
Antimony	7440-36-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Arsenic	7440-38-2	0.001	mg/L	<0.001	0.001	<0.001	<0.001	<0.001	
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	<0.001	0.002	<0.001	
Bismuth	7440-69-9	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

				Sample ID	TBRC17247	TBRC17415	TBRC19720	TBRC19815	TBRC19884
				Sampling date / time	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit		EP2411504-059	EP2411504-062	EP2411504-069	EP2411504-072	EP2411504-073
					Result	Result	Result	Result	Result
EG020W: Water Leachable Metals by ICP-MS - Continued									
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lanthanum	7439-91-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	7439-93-2	0.001	mg/L		0.048	0.046	0.018	0.026	0.039
Manganese	7439-96-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum	7439-98-7	0.001	mg/L		<0.001	0.003	0.002	0.003	0.002
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Strontium	7440-24-6	0.001	mg/L		0.031	0.003	0.003	0.012	0.009
Tellurium	22541-49-7	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Thorium	7440-29-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Tin	7440-31-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	7440-32-6	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	7440-61-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	7440-62-2	0.01	mg/L		0.04	<0.01	<0.01	<0.01	0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	0.05	<0.05	<0.05
Tungsten	7440-33-7	0.001	mg/L		<0.001	0.002	0.002	<0.001	<0.001
Tantalum	7440-25-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.00004	mg/L		<0.00004	<0.00004	<0.00004	<0.00004	<0.00004



Analytical Results

Sub-Matrix: DI WATER LEACHATE (Matrix: WATER)				Sample ID	TBRC20432	TBRC23937	TBRC24021	TBRC24298	TBRC24338
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-076	EP2411504-078	EP2411504-080	EP2411504-081	EP2411504-082	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	8.72	8.82	9.12	8.90	8.84	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	37	46	73	51	59	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	2	3	7	3	3	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	15	18	27	24	26	
Total Alkalinity as CaCO3	----	1	mg/L	17	20	35	27	29	
ED040W: Water Leachable Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	<1	2	3	3	
Sulfur as S	63705-05-5	1	mg/L	<1	<1	<1	1	1	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	2	2	4	<1	1	
ED093W: Water Leachable Major Cations									
Calcium	7440-70-2	1	mg/L	<1	1	5	4	4	
Magnesium	7439-95-4	1	mg/L	<1	<1	<1	<1	<1	
Sodium	7440-23-5	1	mg/L	6	6	8	4	5	
Potassium	7440-09-7	1	mg/L	4	5	3	5	6	
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	1.24	0.70	0.30	0.56	0.41	
Antimony	7440-36-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Barium	7440-39-3	0.001	mg/L	<0.001	<0.001	0.004	<0.001	0.002	
Bismuth	7440-69-9	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

				Sample ID	TBRC20432	TBRC23937	TBRC24021	TBRC24298	TBRC24338
				Sampling date / time	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit		EP2411504-076	EP2411504-078	EP2411504-080	EP2411504-081	EP2411504-082
					Result	Result	Result	Result	Result
EG020W: Water Leachable Metals by ICP-MS - Continued									
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lanthanum	7439-91-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	7439-93-2	0.001	mg/L		0.174	0.066	0.196	0.012	0.015
Manganese	7439-96-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum	7439-98-7	0.001	mg/L		0.005	0.005	0.003	<0.001	0.002
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Strontium	7440-24-6	0.001	mg/L		<0.001	<0.001	0.014	0.008	0.015
Tellurium	22541-49-7	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Thorium	7440-29-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Tin	7440-31-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	7440-32-6	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	7440-61-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	7440-62-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	0.01
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
Tungsten	7440-33-7	0.001	mg/L		0.003	<0.001	<0.001	<0.001	<0.001
Tantalum	7440-25-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.00004	mg/L		<0.00004	<0.00004	<0.00004	<0.00004	<0.00004



Analytical Results

Sub-Matrix: DI WATER LEACHATE (Matrix: WATER)				Sample ID	TBRC24821	TBRC24864	TBRC25014	TBRC26347	TBRC26858
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-085	EP2411504-086	EP2411504-089	EP2411504-096	EP2411504-100	
				Result	Result	Result	Result	Result	
EA005P: pH by PC Titrator									
pH Value	----	0.01	pH Unit	8.50	8.74	8.55	8.31	8.83	
EA010P: Conductivity by PC Titrator									
Electrical Conductivity @ 25°C	----	1	µS/cm	66	73	60	51	49	
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1	
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	1	2	1	<1	3	
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	26	31	29	21	23	
Total Alkalinity as CaCO3	----	1	mg/L	28	34	31	21	25	
ED040W: Water Leachable Sulfate by ICPAES									
Sulfate as SO4 2-	14808-79-8	1	mg/L	8	7	1	7	2	
Sulfur as S	63705-05-5	1	mg/L	3	2	<1	2	<1	
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L	<1	1	<1	1	<1	
ED093W: Water Leachable Major Cations									
Calcium	7440-70-2	1	mg/L	2	3	8	<1	5	
Magnesium	7439-95-4	1	mg/L	<1	<1	<1	<1	<1	
Sodium	7440-23-5	1	mg/L	12	5	1	7	3	
Potassium	7440-09-7	1	mg/L	<1	9	3	4	2	
EG020W: Water Leachable Metals by ICP-MS									
Aluminium	7429-90-5	0.01	mg/L	0.15	0.49	1.22	0.32	0.86	
Antimony	7440-36-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Arsenic	7440-38-2	0.001	mg/L	0.002	<0.001	0.002	<0.001	0.001	
Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Barium	7440-39-3	0.001	mg/L	0.012	0.002	<0.001	0.002	<0.001	
Bismuth	7440-69-9	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	



Analytical Results

Sub-Matrix: DI WATER LEACHATE
 (Matrix: WATER)

				Sample ID	TBRC24821	TBRC24864	TBRC25014	TBRC26347	TBRC26858
				Sampling date / time	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit		EP2411504-085	EP2411504-086	EP2411504-089	EP2411504-096	EP2411504-100
					Result	Result	Result	Result	Result
EG020W: Water Leachable Metals by ICP-MS - Continued									
Cobalt	7440-48-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lanthanum	7439-91-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	7439-93-2	0.001	mg/L		0.038	0.037	0.005	0.244	0.086
Manganese	7439-96-5	0.001	mg/L		0.002	<0.001	<0.001	<0.001	<0.001
Molybdenum	7439-98-7	0.001	mg/L		0.005	0.002	<0.001	0.002	0.002
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Strontium	7440-24-6	0.001	mg/L		0.034	0.014	0.008	0.006	0.005
Tellurium	22541-49-7	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Thallium	7440-28-0	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Thorium	7440-29-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Tin	7440-31-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Titanium	7440-32-6	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	7440-61-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	7440-62-2	0.01	mg/L		0.04	<0.01	<0.01	<0.01	0.02
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Iron	7439-89-6	0.05	mg/L		0.15	<0.05	<0.05	0.06	<0.05
Tungsten	7440-33-7	0.001	mg/L		<0.001	<0.001	<0.001	0.016	0.001
Tantalum	7440-25-7	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EG035W: Water Leachable Mercury by FIMS									
Mercury	7439-97-6	0.00004	mg/L		<0.00004	<0.00004	<0.00004	<0.00004	<0.00004



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBDD13979	TBDD13980	TBDD14054	TBDD14058	TBDD14144
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-001	EP2411504-002	EP2411504-003	EP2411504-004	EP2411504-005	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	----	<0.005	----	0.125	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.4	8.7	8.7	8.4	7.9	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	208	245	229	247	152	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	No	----	----	
Asbestos (Trace)	1332-21-4	-	-	----	----	No	----	----	
Asbestos Type	1332-21-4	-	--	----	----	-	----	----	
Sample weight (dry)	----	0.01	g	----	----	29.2	----	----	
APPROVED IDENTIFIER:	----	-	--	----	----	A. SMYLIE	----	----	
Synthetic Mineral Fibre	----	-	--	----	----	No	----	----	
Organic Fibre	----	-	--	----	----	No	----	----	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.08	0.03	0.02	<0.01	0.12	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	----	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	----	----	9.5	----	----	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	----	----	0.02	----	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	----	----	0.08	----	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC04699	TBRC04728	TBRC04802	TBRC04804	TBRC04964
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-006	EP2411504-007	EP2411504-008	EP2411504-009	EP2411504-010	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	0.129	----	----	0.147	----	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	7.8	8.2	7.9	8.3	8.7	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	378	245	512	263	214	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.16	0.05	0.07	0.14	<0.01	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	0.02	0.05	----	----	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.11	0.06	----	----	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC05018	TBRC05087	TBRC05104	TBRC05138	TBRC05229
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-011	EP2411504-012	EP2411504-013	EP2411504-014	EP2411504-015	EP2411504-015
				Result	Result	Result	Result	Result	Result
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	0.139	0.094	----	----	----
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	7.8	----	7.9	8.1	8.2	8.2
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	580	----	230	383	307	307
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.03	0.15	0.11	0.05	0.03	0.03
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	----	----	----	----
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	----	9.2	----	----	----	----
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	----	0.02	----	----	----	----
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	----	0.05	----	----	----	----



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC05253	TBRC05259	TBRC05261	TBRC05322	TBRC05354
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-016	EP2411504-017	EP2411504-018	EP2411504-019	EP2411504-020	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	<0.005	----	----	----	----	0.154
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.2	8.7	8.4	7.9	8.1	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	282	273	272	280	225	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	----	----	
Asbestos (Trace)	1332-21-4	-	-	----	No	----	----	----	
Asbestos Type	1332-21-4	-	--	----	-	----	----	----	
Sample weight (dry)	----	0.01	g	----	29.7	----	----	----	
APPROVED IDENTIFIER:	----	-	--	----	A. SMYLLIE	----	----	----	
Synthetic Mineral Fibre	----	-	--	----	No	----	----	----	
Organic Fibre	----	-	--	----	No	----	----	----	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.01	0.02	0.04	0.18	0.17	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	----	----	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
Ø Final pH	----	0.1	pH Unit	----	9.6	----	----	----	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	0.02	----	----	----	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.05	0.09	----	----	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC05426	TBRC05433	TBRC05462	TBRC05533	TBRC05541
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-021	EP2411504-022	EP2411504-023	EP2411504-024	EP2411504-025	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	0.079	----	----	----	0.142	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	7.7	8.3	8.1	8.6	8.4	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	324	340	220	221	190	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.08	0.10	0.08	0.04	0.16	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	----	----	----	----	0.03	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	----	----	----	----	0.03	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC05608	TBRC05627	TBRC05647	TBRC05669	TBRC05902
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-026	EP2411504-027	EP2411504-028	EP2411504-029	EP2411504-030	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	0.188	----	----	0.136	----	----
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.1	8.5	8.5	7.9	8.2	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	386	249	237	225	289	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.21	0.01	0.03	0.15	0.02	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	----	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	----	----	9.4	----	----	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	----	----	----	0.04	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	----	----	----	0.07	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)		Sample ID		TBRC05946	TBRC05969	TBRC06035	TBRC06186	TBRC06228	
Sampling date / time		01-Jan-2024 00:00		01-Jan-2024 00:00		01-Jan-2024 00:00		01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-031	EP2411504-032	EP2411504-033	EP2411504-034	EP2411504-035	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	0.203	----	0.173	0.150	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.0	8.2	----	7.6	8.0	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	224	239	----	922	352	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.08	0.20	0.05	0.18	0.15	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
Ø Final pH	----	0.1	pH Unit	9.4	9.3	8.7	8.7	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC06248	TBRC06609	TBRC06638	TBRC06703	TBRC06712
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-036	EP2411504-037	EP2411504-038	EP2411504-039	EP2411504-040	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	----	0.183	----	----	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.1	8.4	8.3	8.7	8.4	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	256	213	203	297	207	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.04	0.03	0.18	<0.01	0.01	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	----	----	----	----	<0.02	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	----	----	----	----	0.02	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC06759	TBRC06781	TBRC06849	TBRC06867	TBRC06878
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-041	EP2411504-042	EP2411504-043	EP2411504-044	EP2411504-045	EP2411504-045
				Result	Result	Result	Result	Result	Result
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	----	----	0.322	----	----
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.5	8.6	8.9	8.5	8.9	8.9
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	331	291	243	234	882	882
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.02	0.03	0.02	0.32	0.01	0.01
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	----	----	----
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	----	----	9.5	----	----	----
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	----	----	0.02	0.02	----	----
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	----	----	0.07	0.02	----	----



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC06893	TBRC06904	TBRC12059	TBRC12103	TBRC12144
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-046	EP2411504-047	EP2411504-048	EP2411504-049	EP2411504-050	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	0.125	----	----	----	----	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.3	8.5	8.6	7.9	8.7	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	303	176	249	384	173	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.13	0.01	0.01	0.04	0.02	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	<0.1	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	8.7	----	----	8.6	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.04	----	----	----	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC12390	TBRC12516	TBRC12552	TBRC12625	TBRC12657
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-051	EP2411504-052	EP2411504-053	EP2411504-054	EP2411504-055	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	0.131	0.287	----	----	----	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.8	9.2	9.0	8.8	8.4	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	206	286	256	205	280	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----	
Asbestos (Trace)	1332-21-4	-	-	No	----	----	----	----	
Asbestos Type	1332-21-4	-	--	-	----	----	----	----	
Sample weight (dry)	----	0.01	g	28.9	----	----	----	----	
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	----	
Synthetic Mineral Fibre	----	-	--	No	----	----	----	----	
Organic Fibre	----	-	--	No	----	----	----	----	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.14	0.29	0.01	<0.01	0.04	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	----	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
∅ Final pH	----	0.1	pH Unit	9.3	----	9.4	----	----	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	0.04	0.04	----	----	<0.02	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.08	0.08	----	----	0.04	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC12835	TBRC12939	TBRC12955	TBRC17247	TBRC17306
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-056	EP2411504-057	EP2411504-058	EP2411504-059	EP2411504-060	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	<0.005	----	----	0.124	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.7	8.7	8.2	8.7	8.6	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	257	199	515	371	239	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	No	----	
Asbestos (Trace)	1332-21-4	-	-	----	----	----	No	----	
Asbestos Type	1332-21-4	-	--	----	----	----	-	----	
Sample weight (dry)	----	0.01	g	----	----	----	30.0	----	
APPROVED IDENTIFIER:	----	-	--	----	----	----	A. SMYLIE	----	
Synthetic Mineral Fibre	----	-	--	----	----	----	No	----	
Organic Fibre	----	-	--	----	----	----	No	----	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	<0.01	<0.01	0.10	0.02	0.13	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	<0.1	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
∅ Final pH	----	0.1	pH Unit	9.1	----	9.1	9.3	----	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	0.02	0.04	0.04	----	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.04	0.04	0.05	----	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC17312	TBRC17415	TBRC17490	TBRC17869	TBRC18045
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-061	EP2411504-062	EP2411504-063	EP2411504-064	EP2411504-065	Result
				Result	Result	Result	Result	Result	Result
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	----	----	0.184	----	----
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	9.2	8.8	9.3	8.6	9.2	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	184	213	234	247	133	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.01	0.06	0.04	0.19	0.01	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	----	----	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	----	9.3	----	----	----	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	----	----	----	----	0.02	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	----	----	----	----	0.03	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC18376	TBRC19579	TBRC19583	TBRC19720	TBRC19739
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-066	EP2411504-067	EP2411504-068	EP2411504-069	EP2411504-070	
				Result	Result	Result	Result	Result	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	9.2	8.8	9.0	8.3	9.0	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	207	247	290	368	289	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	<0.01	0.05	0.01	0.07	0.02	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	----	----	----	<0.1	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	----	----	----	8.9	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC19811	TBRC19815	TBRC19884	TBRC20110	TBRC20124
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-071	EP2411504-072	EP2411504-073	EP2411504-074	EP2411504-075	
				Result	Result	Result	Result	Result	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	----	----	8.5	9.1	8.6	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	----	----	281	216	238	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	No	----	----	
Asbestos (Trace)	1332-21-4	-	-	----	----	No	----	----	
Asbestos Type	1332-21-4	-	--	----	----	-	----	----	
Sample weight (dry)	----	0.01	g	----	----	29.8	----	----	
APPROVED IDENTIFIER:	----	-	--	----	----	A. SMYLIE	----	----	
Synthetic Mineral Fibre	----	-	--	----	----	No	----	----	
Organic Fibre	----	-	--	----	----	No	----	----	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.20	0.03	0.04	0.05	0.05	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	<0.1	----	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
Ø Final pH	----	0.1	pH Unit	----	9.4	9.2	----	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC20432	TBRC23651	TBRC23937	TBRC24012	TBRC24021
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-076	EP2411504-077	EP2411504-078	EP2411504-079	EP2411504-080	
				Result	Result	Result	Result	Result	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	9.0	8.4	8.9	9.0	8.7	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	273	336	286	132	351	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	No	
Asbestos (Trace)	1332-21-4	-	-	No	----	----	----	No	
Asbestos Type	1332-21-4	-	--	-	----	----	----	-	
Sample weight (dry)	----	0.01	g	29.5	----	----	----	29.9	
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	----	A. SMYLIE	
Synthetic Mineral Fibre	----	-	--	No	----	----	----	No	
Organic Fibre	----	-	--	No	----	----	----	No	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.01	0.01	<0.01	0.02	0.01	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	<0.1	----	<0.1	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
Final pH	----	0.1	pH Unit	9.0	----	9.3	----	9.4	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	0.02	----	----	----	0.26	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.04	----	----	----	0.84	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC24298	TBRC24338	TBRC24398	TBRC24512	TBRC24821
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-081	EP2411504-082	EP2411504-083	EP2411504-084	EP2411504-085	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	0.063	----	----	0.185	----	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.9	8.9	8.9	8.8	8.5	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	194	218	226	200	341	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.07	0.03	0.03	0.19	0.02	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	<0.1	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
Ø Final pH	----	0.1	pH Unit	9.2	9.1	----	----	8.8	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	0.02	----	----	0.04	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.02	----	----	0.04	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC24864	TBRC24899	TBRC24920	TBRC25014	TBRC25018
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-086	EP2411504-087	EP2411504-088	EP2411504-089	EP2411504-090	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	0.124	----	----	----	----	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.5	8.6	8.7	8.5	9.1	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	326	242	268	158	524	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	No	----	----	
Asbestos (Trace)	1332-21-4	-	-	----	----	No	----	----	
Asbestos Type	1332-21-4	-	--	----	----	-	----	----	
Sample weight (dry)	----	0.01	g	----	----	30.6	----	----	
APPROVED IDENTIFIER:	----	-	--	----	----	A. SMYLIE	----	----	
Synthetic Mineral Fibre	----	-	--	----	----	No	----	----	
Organic Fibre	----	-	--	----	----	No	----	----	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.14	0.04	0.05	0.05	0.02	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	<0.1	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	9.1	----	----	8.9	----	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	----	<0.02	0.02	----	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	----	0.03	0.03	----	----	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC25164	TBRC25464	TBRC26212	TBRC26287	TBRC26341
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00
Compound	CAS Number	LOR	Unit	EP2411504-091	EP2411504-092	EP2411504-093	EP2411504-094	EP2411504-095	Result
				Result	Result	Result	Result	Result	Result
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	0.142	----	----	0.122	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.4	8.5	8.6	9.3	9.1	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	260	160	255	260	241	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.12	0.15	0.01	0.01	0.13	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	0.02	----	----	----	<0.02	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.02	----	----	----	<0.02	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC26347	TBRC26567	TBRC26833	TBRC26858	TBRC31313
Sampling date / time				01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	01-Jan-2024 00:00	
Compound	CAS Number	LOR	Unit	EP2411504-096	EP2411504-097	EP2411504-099	EP2411504-100	EP2411504-101	
				Result	Result	Result	Result	Result	
EA026 : Chromium Reducible Sulfur									
Chromium Reducible Sulphur	----	0.005	%	----	----	0.164	0.131	----	
EA031: pH (saturated paste)									
pH (Saturated Paste)	----	0.1	pH Unit	8.4	8.8	8.7	8.9	8.7	
EA032: Electrical Conductivity (saturated paste)									
Electrical Conductivity (Saturated Paste)	----	1	µS/cm	348	316	218	186	186	
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	No	----	
Asbestos (Trace)	1332-21-4	-	-	No	----	----	No	----	
Asbestos Type	1332-21-4	-	--	-	----	----	-	----	
Sample weight (dry)	----	0.01	g	29.3	----	----	30.5	----	
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	----	----	A. SMYLIE	----	
Synthetic Mineral Fibre	----	-	--	No	----	----	No	----	
Organic Fibre	----	-	--	No	----	----	No	----	
ED042T: Total Sulfur by LECO									
Sulfur - Total as S (LECO)	----	0.01	%	0.05	0.06	0.16	0.13	0.07	
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	<0.1	----	
EN40: Miscellaneous Leachates Procedure - Inorganics/Non-Volatile Organics (Glass Vessel)									
ø Final pH	----	0.1	pH Unit	8.9	----	----	9.2	----	
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%	0.03	----	----	0.04	----	
EP003TC: Total Carbon (TC) in Soil									
Total Carbon	TC	0.02	%	0.03	----	----	0.04	----	



Analytical Results

Descriptive Results

Sub-Matrix: PULP

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	TBDD14054 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC05259 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC12390 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC17247 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC19884 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC20432 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC24021 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC24920 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC26347 - 01-Jan-2024 00:00	Powder sample.
EA200: Description	TBRC26858 - 01-Jan-2024 00:00	Powder sample.

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) ED042T: Total Sulfur by LECO

(SOIL) EP003: Total Organic Carbon (TOC) in Soil

(SOIL) EP003TC: Total Carbon (TC) in Soil

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils



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To: **ALS ENVIRONMENTAL**
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STAFFORD QLD 4053

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 Plus Appendix Pages
 Finalized Date: 27-AUG-2024
 Account: ALSENV

CERTIFICATE PH24227774

Project: EP2411507 – Fibrous
 P.O. No.: EP2411507
 This report is for 30 samples of Pulp submitted to our lab in Perth, WA, Australia on
 21-AUG-2024.
 The following have access to data associated with this certificate:
 SUB RESULTS – PERTH

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LEV-01	Waste Disposal Levy
LOG-24	Pulp Login – Rcd w/o Barcode

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-MS61L	Super Trace Lowest DL 4A by ICP-MS	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Cameron Brosnan, Laboratory Manager, Perth



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Page: 2 - A
 Total # Pages: 2 (A - D)
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 Finalized Date: 27-AUG-2024
 Account: ALSENV

Project: EP2411507 - Fibrous

CERTIFICATE OF ANALYSIS PH24227774

ALS Perth is a NATA Accredited Testing Laboratory. Corporate Accreditation
 No: 825, Corporate Site No: 23001.

Sample Description	Method Analyte Units LOD	WEI-21	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe %
		0.02	0.002	0.01	0.02	1	0.02	0.001	0.01	0.005	0.01	0.005	0.2	0.01	0.02	0.0005
EP2411507_003		0.02	0.030	7.87	0.41	41	133.0	0.504	0.57	0.155	1.58	0.932	2.7	309	0.82	0.550
EP2411507_012		0.02	0.050	8.21	1.40	339	0.87	0.074	6.24	0.115	31.8	55.1	45.6	30.6	108.5	9.84
EP2411507_017		0.02	0.067	8.05	0.73	254	49.3	0.750	3.34	0.100	32.5	22.3	25.3	774	51.9	5.16
EP2411507_028		0.02	0.052	7.97	1.83	222	23.2	0.199	6.11	0.100	19.45	40.6	35.7	23.9	56.7	6.57
EP2411507_031		0.02	0.049	7.41	11.15	223	2.46	0.211	5.78	0.098	23.5	55.1	63.7	35.6	75.9	9.02
EP2411507_032		0.02	0.050	8.06	0.78	220	0.84	0.166	6.36	0.110	23.1	59.9	62.7	70.0	87.6	10.25
EP2411507_033		0.02	0.113	7.11	0.80	439	1.03	0.035	1.77	0.233	43.9	20.9	225	26.1	30.7	3.71
EP2411507_034		0.02	0.119	7.61	4.78	377	2.86	0.258	5.34	0.588	38.9	52.7	63.7	55.2	139.0	9.67
EP2411507_043		0.02	0.031	8.49	1.52	162	154.0	0.567	2.83	0.279	12.30	17.55	32.7	82.5	14.25	3.01
EP2411507_046		0.02	0.088	9.19	0.90	252	8.34	1.570	2.10	1.440	37.7	30.9	271	1670	74.4	8.66
EP2411507_049		0.02	0.211	8.10	2.01	372	2.94	0.296	1.51	2.11	30.9	37.1	385	78.4	185.0	5.33
EP2411507_051		0.02	0.085	7.93	5.36	147	5.45	0.355	5.74	0.130	30.6	52.5	16.6	341	65.0	10.35
EP2411507_053		0.02	0.020	6.94	0.35	10	105.0	1.895	0.23	<0.005	3.02	0.537	9.6	124.5	0.85	0.930
EP2411507_056		0.02	0.039	9.04	0.40	450	70.0	1.150	1.34	<0.005	31.9	20.8	197.5	1080	9.06	3.49
EP2411507_057		0.02	0.034	9.06	1.00	390	3.73	0.109	2.74	0.050	53.8	22.5	204	39.2	23.8	3.85
EP2411507_059		0.02	0.062	7.94	1.00	369	9.07	0.285	5.10	0.147	27.4	49.6	37.5	39.1	78.9	8.90
EP2411507_062		0.02	0.044	8.13	3.19	355	60.1	0.331	3.73	0.094	31.1	36.1	36.3	37.1	53.9	6.94
EP2411507_069		0.02	0.044	7.56	0.41	214	0.89	0.072	2.72	0.157	46.2	25.0	254	5.28	15.45	5.16
EP2411507_072		0.02	0.110	8.93	0.36	870	1.30	0.133	1.76	0.123	64.5	25.6	167.5	21.4	56.7	4.95
EP2411507_073		0.02	0.094	6.92	0.69	530	1.69	0.037	5.54	0.134	92.9	43.6	26.7	23.9	322	11.60
EP2411507_076		0.02	0.005	7.94	0.30	18	95.2	0.126	0.53	<0.005	0.97	0.865	19.6	198.0	1.78	0.650
EP2411507_078		0.02	0.008	7.47	0.34	46	159.5	0.467	0.35	0.014	1.53	0.497	15.4	51.3	1.48	0.520
EP2411507_080		0.02	0.132	8.30	0.35	138	124.0	0.050	2.48	<0.005	2.20	2.04	13.1	41.9	8.56	0.820
EP2411507_081		0.02	0.019	7.38	0.37	376	0.96	0.060	2.31	0.045	48.3	24.3	258	10.65	16.30	4.25
EP2411507_082		0.02	0.052	7.36	0.63	450	1.02	0.121	1.97	0.074	40.7	15.60	231	10.25	12.60	3.67
EP2411507_085		0.02	0.108	6.57	1.98	740	1.70	0.036	5.42	0.157	89.7	45.2	45.7	25.8	253	11.40
EP2411507_086		0.02	0.068	8.42	0.45	550	1.37	0.092	2.29	0.066	44.3	21.3	177.0	14.95	113.0	4.45
EP2411507_089		0.02	0.060	7.68	6.03	218	1.01	0.194	3.33	0.084	39.2	30.6	237	11.25	66.2	13.90
EP2411507_096		0.02	0.051	7.41	2.33	460	6.63	0.569	3.50	0.156	56.4	19.15	121.5	172.0	36.8	4.45
EP2411507_100		0.02	0.039	7.59	1.10	268	1.70	0.197	5.92	0.100	30.0	49.6	48.6	24.8	71.1	9.57



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 No: 825, Corporate Site No: 23001.

Project: EP2411507 - Fibrous

CERTIFICATE OF ANALYSIS PH24227774

Sample Description	Method Analyte Units LOD	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
		0.05	0.05	0.004	0.005	0.01	0.005	0.2	0.01	0.2	0.02	0.001	0.005	0.08	0.001	0.01
EP2411507_003		43.9	0.06	0.628	<0.005	2.87	0.546	612	0.09	340	0.48	3.64	38.9	1.16	0.023	5.39
EP2411507_012		19.90	0.09	2.35	0.054	0.79	14.45	251	2.64	1315	2.41	1.675	4.72	54.1	0.038	6.42
EP2411507_017		33.7	0.08	3.08	0.021	1.44	14.20	3230	1.33	1230	1.69	2.04	23.3	30.7	0.128	7.11
EP2411507_028		18.65	0.08	1.645	0.046	0.69	8.97	340	3.45	1360	1.00	1.890	19.90	80.4	0.025	4.62
EP2411507_031		20.5	0.09	1.685	0.052	0.54	11.05	352	2.71	1230	1.72	1.195	3.96	61.6	0.026	5.19
EP2411507_032		18.75	0.09	1.470	0.056	0.60	11.20	121.5	3.11	1415	1.54	1.495	3.63	66.7	0.026	5.17
EP2411507_033		15.35	0.09	2.51	0.019	1.22	20.7	443	1.98	725	2.37	2.12	5.00	95.8	0.028	15.70
EP2411507_034		20.1	0.10	2.75	0.065	0.85	17.90	609	2.48	1410	2.22	1.400	6.75	53.2	0.052	21.9
EP2411507_043		42.5	0.07	2.53	0.016	1.85	5.33	407	1.38	1700	2.36	3.47	123.5	35.2	0.037	8.73
EP2411507_046		22.5	0.11	2.27	0.086	2.46	16.80	1880	2.68	1200	1.83	0.666	6.92	153.5	0.053	19.00
EP2411507_049		17.55	0.08	2.90	0.044	1.29	13.75	821	2.74	806	0.77	1.415	5.95	177.5	0.046	24.9
EP2411507_051		19.95	0.09	2.37	0.062	0.41	13.75	2160	2.18	1625	2.21	1.230	10.40	20.7	0.035	6.25
EP2411507_053		63.6	0.07	4.70	<0.005	1.97	0.952	2740	0.04	2600	2.04	2.44	120.0	1.32	0.021	9.35
EP2411507_056		66.9	0.09	2.13	<0.005	3.47	15.35	1720	1.70	819	0.57	1.860	23.1	98.7	0.294	6.49
EP2411507_057		21.6	0.10	3.10	0.031	1.16	24.2	165.0	1.65	699	0.80	2.78	6.10	92.7	0.022	12.15
EP2411507_059		21.4	0.09	2.04	0.052	0.79	15.65	410	2.13	1300	0.77	1.610	5.38	41.1	0.044	7.38
EP2411507_062		28.1	0.10	3.01	0.037	1.11	14.60	254	1.74	1195	2.47	2.81	22.4	33.0	0.045	8.47
EP2411507_069		16.80	0.09	3.05	0.039	1.01	21.3	60.1	1.58	1160	3.75	1.940	5.79	104.5	0.031	14.00
EP2411507_072		21.1	0.11	3.33	0.054	1.44	30.9	172.0	2.08	697	1.55	2.00	6.63	89.1	0.053	23.7
EP2411507_073		24.8	0.15	8.19	0.114	1.51	43.3	104.5	2.18	1585	2.15	1.950	21.4	43.5	0.187	12.00
EP2411507_076		40.9	0.06	1.050	<0.005	2.94	0.338	1475	0.05	592	3.78	3.21	50.3	2.53	0.023	4.04
EP2411507_078		25.0	0.06	0.104	<0.005	3.40	0.545	237	0.03	103.0	3.59	3.50	16.55	1.86	0.017	4.10
EP2411507_080		31.4	0.06	0.354	<0.005	1.63	0.985	1270	0.18	189.5	2.20	4.59	86.5	6.62	0.009	2.22
EP2411507_081		14.65	0.09	2.75	0.052	1.15	22.6	98.0	1.89	1105	3.08	2.11	5.41	112.0	0.032	6.31
EP2411507_082		15.45	0.09	2.54	0.032	1.17	18.85	110.5	1.91	813	2.63	2.28	4.92	100.5	0.027	10.20
EP2411507_085		22.4	0.14	7.79	0.119	1.32	40.8	55.9	2.21	1505	2.47	1.765	20.1	55.3	0.167	11.55
EP2411507_086		18.85	0.09	2.95	0.049	1.77	20.7	169.5	1.85	678	3.27	1.675	6.14	88.4	0.038	7.60
EP2411507_089		19.15	0.25	2.60	0.083	0.72	18.15	102.5	2.31	1780	1.84	0.478	4.84	134.0	0.040	5.05
EP2411507_096		18.85	0.10	4.10	0.032	1.31	26.2	719	1.57	736	2.20	1.385	7.85	57.2	0.048	9.87
EP2411507_100		19.15	0.09	2.09	0.057	0.65	13.75	366	2.77	1350	2.23	1.475	4.90	55.9	0.040	5.78



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Project: EP2411507 - Fibrous

CERTIFICATE OF ANALYSIS PH24227774

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 No: 825, Corporate Site No: 23001.

Sample Description	Method Analyte Units LOD	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L
		Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V
		ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		0.02	0.0004	0.01	0.02	0.01	0.006	0.02	0.02	0.005	0.005	0.004	0.001	0.002	0.002	0.1
EP2411507_003		2220	<0.0004	0.01	0.05	1.78	0.018	67.7	24.5	32.0	<0.005	2.25	0.010	17.70	2.18	3.6
EP2411507_012		90.1	0.0022	0.16	0.32	35.0	0.330	1.09	210	0.329	0.018	3.79	0.829	0.645	0.963	505
EP2411507_017		1910	0.0006	0.02	0.12	17.25	0.103	45.2	143.5	39.4	0.009	5.32	0.323	20.2	1.955	145.5
EP2411507_028		306	0.0006	0.03	0.30	31.2	0.089	5.67	163.0	12.30	0.011	3.07	0.224	2.61	1.245	152.5
EP2411507_031		92.9	0.0026	0.08	0.15	33.4	0.193	1.51	154.0	0.350	0.020	3.00	0.708	0.832	0.766	497
EP2411507_032		56.1	0.0032	0.20	0.25	36.6	0.378	1.40	204	0.276	0.012	2.77	0.774	0.438	0.667	535
EP2411507_033		67.7	0.0008	0.05	0.06	13.80	0.210	0.47	261	0.425	0.012	5.33	0.328	0.616	1.605	100.0
EP2411507_034		150.0	0.0011	0.20	0.47	32.8	0.490	3.22	200	0.550	0.030	5.01	0.910	1.655	1.465	356
EP2411507_043		1380	0.0009	0.01	0.19	12.75	0.027	35.8	72.4	76.6	0.006	7.73	0.116	11.25	7.45	78.6
EP2411507_046		3350	0.0012	0.14	0.07	22.5	0.578	34.9	186.0	1.045	0.020	5.24	0.398	30.3	1.695	152.5
EP2411507_049		98.3	0.0005	0.05	0.18	21.6	0.540	1.02	179.0	0.708	0.061	3.93	0.428	1.500	1.690	167.5
EP2411507_051		339	0.0019	0.15	0.78	39.8	0.228	7.29	226	4.39	0.009	3.68	1.460	3.91	4.94	214
EP2411507_053		2150	0.0007	0.01	0.10	2.24	0.007	106.5	6.63	67.5	<0.005	7.65	0.008	15.00	12.75	0.7
EP2411507_056		4850	0.0004	0.01	0.09	15.00	0.026	216	122.5	17.70	0.011	3.76	0.297	38.5	1.460	106.0
EP2411507_057		78.3	0.0005	0.01	0.03	13.40	0.023	5.56	303	0.582	0.012	6.99	0.341	0.688	1.365	99.9
EP2411507_059		123.5	0.0007	0.01	0.16	36.1	0.432	9.16	180.5	1.515	0.019	3.78	0.898	0.974	1.040	349
EP2411507_062		145.5	0.0016	0.07	0.39	24.6	0.159	10.45	127.5	42.5	0.014	4.86	0.580	1.140	2.41	319
EP2411507_069		46.4	0.0015	0.08	0.03	15.20	0.131	1.24	174.5	0.459	0.016	5.68	0.361	0.337	1.715	112.0
EP2411507_072		68.1	0.0008	0.04	0.02	18.05	0.092	1.95	308	0.480	0.017	7.79	0.378	0.352	1.530	133.0
EP2411507_073		74.0	0.0014	0.06	0.06	26.5	0.387	2.70	266	1.205	0.006	7.73	1.900	0.340	1.030	321
EP2411507_076		2550	0.0005	0.01	0.07	0.79	<0.006	62.0	68.4	60.7	<0.005	2.35	0.009	20.8	2.67	4.0
EP2411507_078		1795	0.0010	0.01	0.06	0.86	0.015	18.55	38.2	12.10	0.005	2.03	0.006	14.15	0.655	2.9
EP2411507_080		802	0.0004	0.01	0.04	1.32	0.020	50.1	68.7	37.1	<0.005	1.960	0.030	6.06	0.592	15.4
EP2411507_081		42.6	0.0011	0.08	0.02	15.15	0.106	0.86	279	0.458	0.015	5.78	0.373	0.419	1.770	112.5
EP2411507_082		41.5	0.0011	0.04	0.04	13.40	0.147	0.81	272	0.427	0.007	4.73	0.339	0.360	1.495	103.0
EP2411507_085		56.7	0.0016	0.02	0.09	27.7	0.213	2.65	278	1.195	0.008	7.26	1.850	0.417	0.943	402
EP2411507_086		78.7	0.0009	0.15	0.03	14.60	0.402	1.07	202	0.487	0.050	6.09	0.329	0.562	1.800	103.5
EP2411507_089		36.6	0.0010	0.05	0.05	24.1	0.095	3.17	89.9	0.356	0.034	5.05	0.335	0.283	1.450	160.0
EP2411507_096		484	0.0007	0.05	0.17	13.35	0.133	16.65	206	1.155	0.014	8.01	0.325	3.91	1.845	75.1
EP2411507_100		115.5	0.0023	0.14	0.15	32.6	0.268	1.54	184.0	1.080	0.014	3.84	0.769	1.115	1.030	465



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Project: EP2411507 - Fibrous

CERTIFICATE OF ANALYSIS PH24227774

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 No: 825, Corporate Site No: 23001.

Sample Description	Method Analyte Units LOD	ME-MS61L	ME-MS61L	ME-MS61L	ME-MS61L
		W	Y	Zn	Zr
		ppm	ppm	ppm	ppm
		0.008	0.01	0.2	0.1
EP2411507_003		1.165	0.35	70.0	4.5
EP2411507_012		4.35	20.6	112.5	79.3
EP2411507_017		2.61	19.45	99.3	88.1
EP2411507_028		0.982	16.40	84.7	48.7
EP2411507_031		1.780	16.80	108.0	59.2
EP2411507_032		2.41	16.75	127.5	50.1
EP2411507_033		0.683	11.30	79.5	97.1
EP2411507_034		1.940	24.0	148.5	101.0
EP2411507_043		2.69	9.66	64.7	36.9
EP2411507_046		0.639	18.45	309	80.0
EP2411507_049		1.345	14.05	125.0	110.0
EP2411507_051		9.61	21.2	122.0	79.3
EP2411507_053		4.02	5.50	63.3	38.4
EP2411507_056		4.02	10.65	120.0	58.4
EP2411507_057		4.58	11.10	66.7	110.5
EP2411507_059		1.660	20.1	117.0	70.1
EP2411507_062		2.58	19.35	92.2	93.1
EP2411507_069		3.18	15.40	153.5	113.0
EP2411507_072		0.786	14.85	102.0	127.5
EP2411507_073		1.375	47.5	154.0	336
EP2411507_076		3.58	1.74	42.2	5.9
EP2411507_078		1.210	0.39	15.4	0.8
EP2411507_080		1.500	1.46	34.1	6.5
EP2411507_081		1.005	13.15	85.0	98.8
EP2411507_082		0.860	9.48	103.5	89.9
EP2411507_085		0.759	43.4	148.0	309
EP2411507_086		1.465	9.07	86.3	106.5
EP2411507_089		1.085	17.80	166.5	97.4
EP2411507_096		5.48	18.65	80.5	151.0
EP2411507_100		1.925	19.80	107.0	67.8

Laboratory Report

Client: ALS
Client address: 26 Rigali Way, Wangara, WA, 6065
Job ID: 24_1473
Lab ID: See results table
Client ID: See results table
Comments: -

Date received: 20/08/2024
Date analysed: 6/09/2024
Date reported: 6/09/2024
Revision no.: 0

Analysis: Semi-quantitative X-ray diffraction (XRD) analysis

Sample preparation

Representative sub-samples were removed and lightly ground. Each specimen was packed and presented as a powder mount of the total sample.

Analysis

Only crystalline material present in the sample will give peaks in the XRD scan. Amorphous (non-crystalline) material will normally add to the background. The search/match software used was Eva 5.2. An up-to-date ICDD database was used. The X-ray source was cobalt radiation.

No standards were used in the quantification process. The concentrations were calculated using the normalized reference intensity ratio method, where the intensity of the 100% peak divided by the published I/Ic value for each mineral phase is summed and the relative percentages of each phase calculated based on the relative contribution to the sum. This method allows for slight attention to be paid to preferred orientation but is limited in considering other factors including but not limited to; variable crystallinity, alteration, substitution, and crystallite size and microstrain.

No elemental assay data (XRF/ICP) were supplied by the client as an elemental relative abundance/concentration indicator. Phase identification and quantification is subject to change should such information be provided.

It should be noted that an amphibole phase has been used to identify the presence of potentially asbestiform minerals. SEM analysis can be used to determine the morphology of these minerals should this be required.

Results summary

The phases are listed in alphabetical order in the 'Results' tab of this spreadsheet (24_1473 Semi-quantitative XRD analysis Report [FINAL].xlsx).

The results table represents the normalised concentration, as weight percent, of each phase without considering the contribution of any amorphous, or non-crystalline, material.

The ICDD match is a subjective measure of the confidence in which the identified phase matches the peak positions and intensities in each diffraction pattern.

Analysed by: Matthew Rowles, Ph.D.(Physics)
Reported by: Matthew Rowles, Ph.D.(Physics)
Approved by: Sandy Lam, B.Sc.(Multidisciplinary)

Table 1: Results.

Lab ID	Phase	Amphibole group	Boehmite	Chlorite group	Clinopyroxene subgroup	Epidote	Garnet group	Ilmenite	Mica group	Potassium Feldspar	Quartz	Serpentine subgroup	Smectite group	Sodium Plagioclase	Zeolite	Zirconium Titanate	Grand Total	
	Formula	e.g. (Na,Ca,Li)2(Fe,Mg,Al)5(Si,Al)8O22(OH)2	AlO(OH)	(Fe,Al,Mg,Li,Ni)6(Si,Al)4O10(OH)8	Ca(Mg,Fe)Si2O6	(Ca,Al)2(Al,Fe)3Si3O12OH	Ca3Fe2Si3O12	FeTiO3	(K,Ca,Na,Li)(Al,Mg,Fe)2(Si,Al)4O10(OH)2	KAlSi3O8	SiO2	Mg3Si2O5(OH)4	(Li,Na,Mg,Ca)0.3(Li,Mg,Al,Cr,Fe,Ni,Cu,Zn)2-3(Si,Al)4O10(OH,F)2.nH2O	NaAlSi3O8	e.g. (Na,K,Ca)8(Si,Al)36O72.23H2O	Zr(TiO4)	wt%	
Client ID / Units		wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	
24_1473_001	EP2411507_003 TBDD14054					16			6	16	50						28	100
24_1473_002	EP2411507_017 TBRC05259	10		9		8			3	17	38	<1					14	99
24_1473_003	EP2411507_044 TBRC06867	17		8		4			2	5	53	1					11	101
24_1473_004	EP2411507_051 TBRC12390	27		11		9			15	3	29	1					4	99
24_1473_005	EP2411507_053 TBRC12552			1		6			8	7	68						16	100
24_1473_006	EP2411507_056 TBRC12835			6		17			17		64						17	101
24_1473_007	EP2411507_057 TBRC12939			7		7			3	3	33		<1				52	99
24_1473_008	EP2411507_059 TBRC17247	13		9		8			1	20	30	3	2				14	100
24_1473_009	EP2411507_073 TBRC19884	7		4	16		3	4	3		15		<1				48	100
24_1473_010	EP2411507_076 TBRC20432		1						6	14	53				1		23	100
24_1473_011	EP2411507_081 TBRC24298	5		10	2		<1	<1	3	6	44						28	98
24_1473_012	EP2411507_086 TBRC24864			6	2		1		8	2	42						39	100
24_1473_013	EP2411507_096 TBRC26347	11		9					11		43						26	100
24_1473_014	EP2411507_100 TBRC26858	28		20					6	4	22						20	100

Table 2: ICDD match confidence.

Lab ID	Phase	Amphibole group	Boehmite	Chlorite group	Clinopyroxene subgroup	Epidote	Garnet group	Ilmenite	Mica group	Potassium Feldspar	Quartz	Serpentine subgroup	Smectite group	Sodium Plagioclase	Zeolite	Zirconium Titanate
	Formula	e.g. (Na,Ca,Li)2(Fe,Mg,Al)5(Si,Al)8O22(OH)2	AlO(OH)	(Fe,Al,Mg,Li,Ni)6(Si,Al)4O10(OH)8	Ca(Mg,Fe)Si2O6	(Ca,Al)2(Al,Fe)3Si3O12OH	Ca3Fe2Si3O12	FeTiO3	(K,Ca,Na,Li)(Al,Mg,Fe)2(Si,Al)4O10(OH)2	KAlSi3O8	SiO2	Mg3Si2O5(OH)4	(Li,Na,Mg,Ca)0.3(Li,Mg,Al,Cr,Fe,Ni,Cu,Zn)2-3(Si,Al)4O10(OH,F)2.nH2O	NaAlSi3O8	e.g. (Na,K,Ca)8(Si,Al)36O72.23H2O	Zr(TiO4)
Client ID / Units		ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match	ICDD match
24_1473_001	EP2411507_003 TBDD14054					High			High	High	High					
24_1473_002	EP2411507_017 TBRC05259	Medium		High		High			High	High	High	Medium				
24_1473_003	EP2411507_044 TBRC06867	High		High		High			High	High	High	Medium				
24_1473_004	EP2411507_051 TBRC12390	Medium		High		High			High	High	High	Low				
24_1473_005	EP2411507_053 TBRC12552			High		High			High	High	High					
24_1473_006	EP2411507_056 TBRC12835			High		High			High	High	High					
24_1473_007	EP2411507_057 TBRC12939			High		High			High	High	High					
24_1473_008	EP2411507_059 TBRC17247	High		Medium		Medium			High	High	High	Medium	Medium			Low
24_1473_009	EP2411507_073 TBRC19884	Medium		High	High	High	Medium	High	High	High	High		High			
24_1473_010	EP2411507_076 TBRC20432		Low						High	High	High		High		Low	
24_1473_011	EP2411507_081 TBRC24298	Medium		High	Medium	High	Low	Low	Medium	High	High		High			
24_1473_012	EP2411507_086 TBRC24864			High	Low	High			High	High	High		High			
24_1473_013	EP2411507_096 TBRC26347	High		High		High			High	High	High		High			
24_1473_014	EP2411507_100 TBRC26858	High		High		High			High	High	High		High			



CERTIFICATE OF ANALYSIS

Work Order : **EP2408625**
Client : **MINE WASTE MANAGEMENT**
Contact : Josh Pearce
Address : Level 1, 8A/232 Churchill Ave
Subiaco 6008
Telephone : ----
Project : J-AU0389 Tabba Tabba Materials Characterisation
Order number : J-AU0389
C-O-C number : ----
Sampler : Client (Wildcat Resources Pty Ltd)
Site : ----
Quote number : EP23MINWAS0006
No. of samples received : 101
No. of samples analysed : 101

Page : 1 of 23
Laboratory : Environmental Division Perth
Contact : Georgina Nearygrant
Address : 26 Rigali Way Wangara WA Australia 6065
Telephone : +61-8-9406 1301
Date Samples Received : 27-May-2024 08:15
Date Analysis Commenced : 21-Jun-2024
Issue Date : 18-Jul-2024 16:19



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Daniel Fisher	Inorganics Analyst	Perth ASS, Wangara, WA



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ASS: EA013 (ANC) Fizz Rating: 0- None; 1- Slight; 2- Moderate; 3- Strong; 4- Very Strong; 5- Lime.
- EA046 ABCC: NATA Accreditation does not cover the performance of this service.



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBDD13979	TBDD13980	TBDD14054	TBDD14058	TBDD14144
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-001	EP2408625-002	EP2408625-003	EP2408625-004	EP2408625-005	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	----	----	----	----	----	6.9
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	----	----	----	----	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	----	----	----	----	0.4
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	14.4	12.4	5.8	5.2	9.9	
ANC as CaCO3	----	0.1	% CaCO3	1.5	1.3	0.6	0.5	1.0	
Fizz Rating	----	0	Fizz Unit	1	1	0	0	1	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC04699	TBRC04728	TBRC04802	TBRC04804	TBRC04964
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-006	EP2408625-007	EP2408625-008	EP2408625-009	EP2408625-010	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	7.2	----	----	6.5	----	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	----	----	<0.1	----	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	----	----	0.2	----	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	14.7	14.9	13.4	12.0	2.9	
ANC as CaCO3	----	0.1	% CaCO3	1.5	1.5	1.4	1.2	0.3	
Fizz Rating	----	0	Fizz Unit	1	1	1	1	0	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC05018	TBRC05087	TBRC05104	TBRC05138	TBRC05229
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit	EP2408625-011	EP2408625-012	EP2408625-013	EP2408625-014	EP2408625-015	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	----	5.3	6.4	----	----	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	<0.1	<0.1	----	----	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	0.4	0.6	----	----	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	12.9	11.1	11.4	16.4	12.0	
ANC as CaCO3	----	0.1	% CaCO3	1.3	1.1	1.2	1.7	1.2	
Fizz Rating	----	0	Fizz Unit	1	1	1	1	1	



Analytical Results

Sub-Matrix: PULP
 (Matrix: SOIL)

Sample ID

				TBRC05253	TBRC05259	TBRC05261	TBRC05322	TBRC05354
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit	EP2408625-016	EP2408625-017	EP2408625-018	EP2408625-019	EP2408625-020
				Result	Result	Result	Result	Result
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	----	----	----	7.0	4.3
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	----	----	<0.1	0.2
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	----	----	0.2	1.2
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	4.8	14.0	13.6	11.0	9.5
ANC as CaCO3	----	0.1	% CaCO3	0.5	1.4	1.4	1.1	1.0
Fizz Rating	----	0	Fizz Unit	0	1	1	1	1



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC05426	TBRC05433	TBRC05462	TBRC05533	TBRC05541
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-021	EP2408625-022	EP2408625-023	EP2408625-024	EP2408625-025	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	7.3	7.0	----	----	4.5	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	----	----	<0.1	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	<0.1	0.3	----	----	0.9	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	17.5	7.7	9.4	8.1	10.0	
ANC as CaCO3	----	0.1	% CaCO3	1.8	0.8	1.0	0.8	1.0	
Fizz Rating	----	0	Fizz Unit	1	0	1	1	1	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC05608	TBRC05627	TBRC05647	TBRC05669	TBRC05902
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-026	EP2408625-027	EP2408625-028	EP2408625-029	EP2408625-030	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	6.2	----	----	5.3	----	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	----	----	<0.1	----	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	0.7	----	----	0.7	----	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	15.4	3.0	13.2	12.3	3.7	
ANC as CaCO3	----	0.1	% CaCO3	1.6	0.3	1.4	1.2	0.4	
Fizz Rating	----	0	Fizz Unit	1	0	1	1	0	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC05946	TBRC05969	TBRC06035	TBRC06186	TBRC06228
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-031	EP2408625-032	EP2408625-033	EP2408625-034	EP2408625-035	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	----	3.8	----	5.0	4.8	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	1.0	----	<0.1	<0.1	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	2.3	----	0.9	1.0	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	35.4	9.1	11.1	14.8	13.3	
ANC as CaCO3	----	0.1	% CaCO3	3.6	0.9	1.1	1.5	1.4	
Fizz Rating	----	0	Fizz Unit	1	1	1	1	1	



Analytical Results

Sub-Matrix: PULP
 (Matrix: SOIL)

Sample ID

				TBRC06248	TBRC06609	TBRC06638	TBRC06703	TBRC06712
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit	EP2408625-036	EP2408625-037	EP2408625-038	EP2408625-039	EP2408625-040
				Result	Result	Result	Result	Result
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	----	----	4.4	----	----
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	----	<0.1	----	----
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	----	1.3	----	----
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	8.0	9.7	14.2	3.4	2.7
ANC as CaCO3	----	0.1	% CaCO3	0.8	1.0	1.4	0.3	0.3
Fizz Rating	----	0	Fizz Unit	1	0	1	0	0



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC06759	TBRC06781	TBRC06849	TBRC06867	TBRC06878
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-041	EP2408625-042	EP2408625-043	EP2408625-044	EP2408625-045	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	----	----	----	3.4	----	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	----	----	2.7	----	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	----	----	5.4	----	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	3.8	4.0	7.1	11.0	98.2	
ANC as CaCO3	----	0.1	% CaCO3	0.4	0.4	0.7	1.1	10.0	
Fizz Rating	----	0	Fizz Unit	0	0	0	1	2	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC06893	TBRC06904	TBRC12059	TBRC12103	TBRC12144
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit	EP2408625-046	EP2408625-047	EP2408625-048	EP2408625-049	EP2408625-050	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	6.0	----	----	----	----	----
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	----	----	----	----	----
NAG (pH 7.0)	----	0.1	kg H2SO4/t	1.0	----	----	----	----	----
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	10.3	1.1	11.0	10.4	7.2	
ANC as CaCO3	----	0.1	% CaCO3	1.0	0.1	1.1	1.0	0.7	
Fizz Rating	----	0	Fizz Unit	1	0	1	1	0	



Analytical Results

Sub-Matrix: PULP
 (Matrix: SOIL)

Sample ID

				TBRC12390	TBRC12516	TBRC12552	TBRC12625	TBRC12657
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit	EP2408625-051	EP2408625-052	EP2408625-053	EP2408625-054	EP2408625-055
				Result	Result	Result	Result	Result
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	5.6	5.1	----	----	----
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	----	----	----
NAG (pH 7.0)	----	0.1	kg H2SO4/t	0.8	1.4	----	----	----
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	9.2	13.3	3.2	1.0	12.3
ANC as CaCO3	----	0.1	% CaCO3	0.9	1.4	0.3	0.1	1.2
Fizz Rating	----	0	Fizz Unit	1	1	0	0	1



Analytical Results

Sub-Matrix: PULP
 (Matrix: SOIL)

Sample ID

				TBRC12835	TBRC12939	TBRC12955	TBRC17247	TBRC17306
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit	EP2408625-056	EP2408625-057	EP2408625-058	EP2408625-059	EP2408625-060
				Result	Result	Result	Result	Result
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	----	----	6.6	----	5.4
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	----	<0.1	----	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	----	1.3	----	0.9
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	10.3	7.1	12.4	45.4	10.1
ANC as CaCO3	----	0.1	% CaCO3	1.0	0.7	1.3	4.6	1.0
Fizz Rating	----	0	Fizz Unit	1	0	1	2	1



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC17312	TBRC17415	TBRC17490	TBRC17869	TBRC18045
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-061	EP2408625-062	EP2408625-063	EP2408625-064	EP2408625-065	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	----	----	----	4.6	----	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	----	----	<0.1	----	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	----	----	1.6	----	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	12.1	12.0	5.0	11.0	1.0	
ANC as CaCO3	----	0.1	% CaCO3	1.2	1.2	0.5	1.1	0.1	
Fizz Rating	----	0	Fizz Unit	1	1	0	1	0	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC18376	TBRC19579	TBRC19583	TBRC19720	TBRC19739
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-066	EP2408625-067	EP2408625-068	EP2408625-069	EP2408625-070	
				Result	Result	Result	Result	Result	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	2.7	15.6	7.7	13.1	12.1	
ANC as CaCO3	----	0.1	% CaCO3	0.3	1.6	0.8	1.3	1.2	
Fizz Rating	----	0	Fizz Unit	0	1	0	1	1	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC19811	TBRC19815	TBRC19884	TBRC20110	TBRC20124
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-071	EP2408625-072	EP2408625-073	EP2408625-074	EP2408625-075	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	6.0	----	----	----	----	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	----	----	----	----	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	0.8	----	----	----	----	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	16.0	23.8	13.8	7.6	21.9	
ANC as CaCO3	----	0.1	% CaCO3	1.6	2.4	1.4	0.8	2.2	
Fizz Rating	----	0	Fizz Unit	1	1	1	0	1	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC20432	TBRC23651	TBRC23937	TBRC24012	TBRC24021
				Sampling date / time	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit	EP2408625-076	EP2408625-077	EP2408625-078	EP2408625-079	EP2408625-080	EP2408625-080
				Result	Result	Result	Result	Result	Result
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	3.5	78.6	2.2	9.0	47.9	
ANC as CaCO3	----	0.1	% CaCO3	0.4	8.0	0.2	0.9	4.9	
Fizz Rating	----	0	Fizz Unit	0	2	0	1	2	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC24298	TBRC24338	TBRC24398	TBRC24512	TBRC24821
				Sampling date / time	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit		EP2408625-081	EP2408625-082	EP2408625-083	EP2408625-084	EP2408625-085
					Result	Result	Result	Result	Result
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	----	----	----	----	4.0	----
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	----	----	----	0.6	----
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	----	----	----	2.1	----
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	11.8	9.6	6.5	9.8	10.8	
ANC as CaCO3	----	0.1	% CaCO3	1.2	1.0	0.7	1.0	1.1	
Fizz Rating	----	0	Fizz Unit	1	0	0	1	1	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC24864	TBRC24899	TBRC24920	TBRC25014	TBRC25018
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-086	EP2408625-087	EP2408625-088	EP2408625-089	EP2408625-090	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	6.4	----	----	----	----	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	----	----	----	----	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	0.4	----	----	----	----	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	14.0	8.9	9.4	54.1	260	
ANC as CaCO3	----	0.1	% CaCO3	1.4	0.9	1.0	5.5	26.5	
Fizz Rating	----	0	Fizz Unit	1	0	0	2	3	



Analytical Results

Sub-Matrix: PULP
 (Matrix: SOIL)

Sample ID

				TBRC25164	TBRC25464	TBRC26212	TBRC26287	TBRC26341
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]
Compound	CAS Number	LOR	Unit	EP2408625-091	EP2408625-092	EP2408625-093	EP2408625-094	EP2408625-095
				Result	Result	Result	Result	Result
EA011: Net Acid Generation								
pH (OX)	----	0.1	pH Unit	6.7	5.1	----	----	4.6
NAG (pH 4.5)	----	0.1	kg H2SO4/t	<0.1	<0.1	----	----	<0.1
NAG (pH 7.0)	----	0.1	kg H2SO4/t	0.4	0.6	----	----	0.9
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	9.8	19.8	10.6	2.3	12.5
ANC as CaCO3	----	0.1	% CaCO3	1.0	2.0	1.1	0.2	1.3
Fizz Rating	----	0	Fizz Unit	1	2	1	0	1



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID	TBRC26347	TBRC26567	TBRC26586	TBRC26833	TBRC26858
Sampling date / time				[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	[01-Jan-2024]	
Compound	CAS Number	LOR	Unit	EP2408625-096	EP2408625-097	EP2408625-098	EP2408625-099	EP2408625-100	
				Result	Result	Result	Result	Result	
EA011: Net Acid Generation									
pH (OX)	----	0.1	pH Unit	----	----	----	5.8	5.9	
NAG (pH 4.5)	----	0.1	kg H2SO4/t	----	----	----	<0.1	<0.1	
NAG (pH 7.0)	----	0.1	kg H2SO4/t	----	----	----	0.3	0.5	
EA013: Acid Neutralising Capacity									
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	6.8	18.9	2.6	9.8	8.7	
ANC as CaCO3	----	0.1	% CaCO3	0.7	1.9	0.3	1.0	0.9	
Fizz Rating	----	0	Fizz Unit	1	1	0	1	1	



Analytical Results

Sub-Matrix: PULP (Matrix: SOIL)				Sample ID				
				TBRC31313	----	----	----	----
				Sampling date / time	[01-Jan-2024]	----	----	----
Compound	CAS Number	LOR	Unit	EP2408625-101	-----	-----	-----	-----
				Result	---	---	---	---
EA013: Acid Neutralising Capacity								
ANC as H2SO4	----	0.5	kg H2SO4 equiv./t	10.3	---	---	---	---
ANC as CaCO3	----	0.1	% CaCO3	1.0	---	---	---	---
Fizz Rating	----	0	Fizz Unit	1	---	---	---	---



Acid Buffering Characteristic Curve (ABCC) REPORT

Batch: EP2408625

CONTACT:	Josh Pearce	LABORATORY:	Brisbane
CLIENT:	MINE WASTE MANAGEMENT	DATE SAMPLED:	1/01/2024
ADDRESS:	Level 1, 8A/232 Churchill Ave	DATE RECEIVED:	27/05/2024
	Subiaco 6008	DATE COMPLETED:	18/07/2024
		SAMPLE TYPE:	Soil
		No. of SAMPLES:	15

COMMENTS

EA046 : NATA accreditation does not cover performance of this service.

ISSUING LABORATORY: ALS BRISBANE

Address:	2 Byth Street	Telephone:	07 3243 7222
	STAFFORD QLD 4053	Facsimile:	07 3243 7218
	AUSTRALIA	E-mail:	Satishkumar.Trivedi@alsglobal.com

Signatory

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC05259		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

017
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	14

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.61	36	7.2	17.64	2.83
1	0.2	0.49	8.93	37	7.4	18.13	2.80
2	0.4	0.98	8.32	38	7.6	18.62	2.77
3	0.6	1.47	7.59	39	7.8	19.11	2.74
4	0.8	1.96	7.21	40	8	19.6	2.71
5	1	2.45	6.98	41	8.2	20.09	2.68
6	1.2	2.94	6.80	42	8.4	20.58	2.66
7	1.4	3.43	6.61	43	8.6	21.07	2.64
8	1.6	3.92	6.38	44	8.8	21.56	2.61
9	1.8	4.41	6.14	45	9	22.05	2.59
10	2	4.9	5.90	46	9.2	22.54	2.57
11	2.2	5.39	5.58	47	9.4	23.03	2.55
12	2.4	5.88	5.25	48	9.6	23.52	2.53
13	2.6	6.37	4.97	49	9.8	24.01	2.51
14	2.8	6.86	4.71	50	10	24.5	2.50
15	3	7.35	4.51				
16	3.2	7.84	4.33				
17	3.4	8.33	4.18				
18	3.6	8.82	4.05				
19	3.8	9.31	3.94				
20	4	9.8	3.84				
21	4.2	10.29	3.74				
22	4.4	10.78	3.65				
23	4.6	11.27	3.56				
24	4.8	11.76	3.47				
25	5	12.25	3.40				
26	5.2	12.74	3.32				
27	5.4	13.23	3.25				
28	5.6	13.72	3.19				
29	5.8	14.21	3.13				
30	6	14.7	3.08				
31	6.2	15.19	3.03				
32	6.4	15.68	2.98				
33	6.6	16.17	2.94				
34	6.8	16.66	2.90				
35	7	17.15	2.86				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC05259		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

017 Check
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	14

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.50	36	7.2	17.64	2.91
1	0.2	0.49	8.75	37	7.4	18.13	2.88
2	0.4	0.98	8.22	38	7.6	18.62	2.85
3	0.6	1.47	7.69	39	7.8	19.11	2.82
4	0.8	1.96	7.36	40	8	19.6	2.80
5	1	2.45	7.14	41	8.2	20.09	2.77
6	1.2	2.94	6.95	42	8.4	20.58	2.75
7	1.4	3.43	6.76	43	8.6	21.07	2.73
8	1.6	3.92	6.57	44	8.8	21.56	2.71
9	1.8	4.41	6.33	45	9	22.05	2.69
10	2	4.9	6.08	46	9.2	22.54	2.67
11	2.2	5.39	5.80	47	9.4	23.03	2.65
12	2.4	5.88	5.52	48	9.6	23.52	2.63
13	2.6	6.37	5.19	49	9.8	24.01	2.62
14	2.8	6.86	4.93	50	10	24.5	2.60
15	3	7.35	4.72	51	10.2	24.99	2.59
16	3.2	7.84	4.55	52	10.4	25.48	2.57
17	3.4	8.33	4.39	53	10.6	25.97	2.56
18	3.6	8.82	4.25	54	10.8	26.46	2.55
19	3.8	9.31	4.11	55	11	26.95	2.53
20	4	9.8	3.98	56	11.2	27.44	2.52
21	4.2	10.29	3.86	57	11.4	27.93	2.51
22	4.4	10.78	3.76	58	11.6	28.42	2.50
23	4.6	11.27	3.66				
24	4.8	11.76	3.57				
25	5	12.25	3.50				
26	5.2	12.74	3.42				
27	5.4	13.23	3.35				
28	5.6	13.72	3.29				
29	5.8	14.21	3.23				
30	6	14.7	3.17				
31	6.2	15.19	3.12				
32	6.4	15.68	3.07				
33	6.6	16.17	3.03				
34	6.8	16.66	2.99				
35	7	17.15	2.95				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC05322		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

019
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	11

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.04	36	7.2	17.64	3.08
1	0.2	0.49	8.40	37	7.4	18.13	3.05
2	0.4	0.98	7.60	38	7.6	18.62	3.03
3	0.6	1.47	7.20	39	7.8	19.11	3.00
4	0.8	1.96	6.95	40	8	19.6	2.98
5	1	2.45	6.70	41	8.2	20.09	2.95
6	1.2	2.94	6.39	42	8.4	20.58	2.93
7	1.4	3.43	5.96	43	8.6	21.07	2.91
8	1.6	3.92	5.48	44	8.8	21.56	2.88
9	1.8	4.41	5.07	45	9	22.05	2.86
10	2	4.9	4.87	46	9.2	22.54	2.84
11	2.2	5.39	4.64	47	9.4	23.03	2.82
12	2.4	5.88	4.43	48	9.6	23.52	2.81
13	2.6	6.37	4.29	49	9.8	24.01	2.79
14	2.8	6.86	4.16	50	10	24.5	2.77
15	3	7.35	4.06	51	10.2	24.99	2.75
16	3.2	7.84	3.98	52	10.4	25.48	2.74
17	3.4	8.33	3.91	53	10.6	25.97	2.72
18	3.6	8.82	3.84	54	10.8	26.46	2.70
19	3.8	9.31	3.77	55	11	26.95	2.69
20	4	9.8	3.72	56	11.2	27.44	2.67
21	4.2	10.29	3.66	57	11.4	27.93	2.66
22	4.4	10.78	3.61	58	11.6	28.42	2.64
23	4.6	11.27	3.56	59	11.8	28.91	2.63
24	4.8	11.76	3.51	60	12	29.4	2.62
25	5	12.25	3.46	61	12.2	29.89	2.60
26	5.2	12.74	3.42	62	12.4	30.38	2.59
27	5.4	13.23	3.38	63	12.6	30.87	2.58
28	5.6	13.72	3.34	64	12.8	31.36	2.57
29	5.8	14.21	3.30	65	13	31.85	2.55
30	6	14.7	3.27	66	13.2	32.34	2.54
31	6.2	15.19	3.23	67	13.4	32.83	2.53
32	6.4	15.68	3.20	68	13.6	33.32	2.52
33	6.6	16.17	3.17	69	13.8	33.81	2.51
34	6.8	16.66	3.14	70	14	34.3	2.51
35	7	17.15	3.11	71	14.2	34.79	2.50

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC05354		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

020
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	9.5

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	7.62	36	3.6	8.82	3.51
1	0.1	0.245	7.27	37	3.7	9.065	3.49
2	0.2	0.49	6.78	38	3.8	9.31	3.46
3	0.3	0.735	6.36	39	3.9	9.555	3.44
4	0.4	0.98	5.89	40	4	9.8	3.42
5	0.5	1.225	5.56	41	4.1	10.045	3.40
6	0.6	1.47	5.28	42	4.2	10.29	3.38
7	0.7	1.715	5.04	43	4.3	10.535	3.36
8	0.8	1.96	4.81	44	4.4	10.78	3.34
9	0.9	2.205	4.65	45	4.5	11.025	3.32
10	1	2.45	4.56	46	4.6	11.27	3.30
11	1.1	2.695	4.46	47	4.7	11.515	3.28
12	1.2	2.94	4.38	48	4.8	11.76	3.26
13	1.3	3.185	4.30	49	4.9	12.005	3.24
14	1.4	3.43	4.24	50	5	12.25	3.22
15	1.5	3.675	4.18	51	5.1	12.495	3.21
16	1.6	3.92	4.14	52	5.2	12.74	3.18
17	1.7	4.165	4.09	53	5.3	12.985	3.16
18	1.8	4.41	4.04	54	5.4	13.23	3.15
19	1.9	4.655	4.00	55	5.5	13.475	3.13
20	2	4.9	3.96	56	5.6	13.72	3.11
21	2.1	5.145	3.92	57	5.7	13.965	3.09
22	2.2	5.39	3.89	58	5.8	14.21	3.07
23	2.3	5.635	3.85	59	5.9	14.455	3.06
24	2.4	5.88	3.82	60	6	14.7	3.04
25	2.5	6.125	3.79	61	6.1	14.945	3.02
26	2.6	6.37	3.77	62	6.2	15.19	3.01
27	2.7	6.615	3.74	63	6.3	15.435	2.99
28	2.8	6.86	3.71	64	6.4	15.68	2.98
29	2.9	7.105	3.68	65	6.5	15.925	2.96
30	3	7.35	3.66	66	6.6	16.17	2.95
31	3.1	7.595	3.63	67	6.7	16.415	2.93
32	3.2	7.84	3.61	68	6.8	16.66	2.92
33	3.3	8.085	3.58	69	6.9	16.905	2.91
34	3.4	8.33	3.56	70	7	17.15	2.89
35	3.5	8.575	3.54	71	7.1	17.395	2.89

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC05354		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

020
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	9.5

EA046 -B - Curve information

Addition	mLs added		pH	Addition	mLs added		pH
	(total)	kg H2SO4/t			(total)	kg H2SO4/t	
72	7.2	17.64	2.87	108	10.8	26.46	2.55
73	7.3	17.885	2.86	109	10.9	26.705	2.54
74	7.4	18.13	2.85	110	11	26.95	2.54
75	7.5	18.375	2.84	111	11.1	27.195	2.53
76	7.6	18.62	2.83	112	11.2	27.44	2.52
77	7.7	18.865	2.81	113	11.3	27.685	2.52
78	7.8	19.11	2.80	114	11.4	27.93	2.51
79	7.9	19.355	2.79	115	11.5	28.175	2.50
80	8	19.6	2.78	116	11.6	28.42	2.50
81	8.1	19.845	2.77	117	11.7	28.665	2.49
82	8.2	20.09	2.76				
83	8.3	20.335	2.75				
84	8.4	20.58	2.74				
85	8.5	20.825	2.73				
86	8.6	21.07	2.72				
87	8.7	21.315	2.72				
88	8.8	21.56	2.71				
89	8.9	21.805	2.70				
90	9	22.05	2.69				
91	9.1	22.295	2.68				
92	9.2	22.54	2.67				
93	9.3	22.785	2.66				
94	9.4	23.03	2.66				
95	9.5	23.275	2.65				
96	9.6	23.52	2.64				
97	9.7	23.765	2.63				
98	9.8	24.01	2.62				
99	9.9	24.255	2.62				
100	10	24.5	2.61				
101	10.1	24.745	2.60				
102	10.2	24.99	2.59				
103	10.3	25.235	2.59				
104	10.4	25.48	2.58				
105	10.5	25.725	2.57				
106	10.6	25.97	2.57				
107	10.7	26.215	2.56				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC05433		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

022
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	7.7

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.47	36	3.6	8.82	3.53
1	0.1	0.245	9.04	37	3.7	9.065	3.48
2	0.2	0.49	8.61	38	3.8	9.31	3.45
3	0.3	0.735	8.01	39	3.9	9.555	3.41
4	0.4	0.98	7.57	40	4	9.8	3.38
5	0.5	1.225	7.31	41	4.1	10.045	3.34
6	0.6	1.47	7.13	42	4.2	10.29	3.30
7	0.7	1.715	6.98	43	4.3	10.535	3.28
8	0.8	1.96	6.84	44	4.4	10.78	3.25
9	0.9	2.205	6.68	45	4.5	11.025	3.22
10	1	2.45	6.48	46	4.6	11.27	3.19
11	1.1	2.695	6.20	47	4.7	11.515	3.16
12	1.2	2.94	5.90	48	4.8	11.76	3.13
13	1.3	3.185	5.64	49	4.9	12.005	3.10
14	1.4	3.43	5.36	50	5	12.25	3.08
15	1.5	3.675	5.14	51	5.1	12.495	3.05
16	1.6	3.92	4.98	52	5.2	12.74	3.03
17	1.7	4.165	4.83	53	5.3	12.985	3.01
18	1.8	4.41	4.72	54	5.4	13.23	2.98
19	1.9	4.655	4.62	55	5.5	13.475	2.96
20	2	4.9	4.54	56	5.6	13.72	2.94
21	2.1	5.145	4.46	57	5.7	13.965	2.92
22	2.2	5.39	4.38	58	5.8	14.21	2.90
23	2.3	5.635	4.30	59	5.9	14.455	2.88
24	2.4	5.88	4.21	60	6	14.7	2.86
25	2.5	6.125	4.13	61	6.1	14.945	2.84
26	2.6	6.37	4.07	62	6.2	15.19	2.83
27	2.7	6.615	4.01	63	6.3	15.435	2.81
28	2.8	6.86	3.96	64	6.4	15.68	2.79
29	2.9	7.105	3.90	65	6.5	15.925	2.78
30	3	7.35	3.84	66	6.6	16.17	2.76
31	3.1	7.595	3.78	67	6.7	16.415	2.75
32	3.2	7.84	3.72	68	6.8	16.66	2.73
33	3.3	8.085	3.67	69	6.9	16.905	2.72
34	3.4	8.33	3.62	70	7	17.15	2.70
35	3.5	8.575	3.58	71	7.1	17.395	2.69

Work Order : EP2408625 Client ID: MINE WASTE MANAGEMENT

	Sub Matrix			Soil
	Client Sample Identification 1			TBRC05433
	Client Sample Identification 2			
	Sample Date			1/01/2024
Method	Analyte	Units	LOR	

022
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	7.7

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
72	7.2	17.64	2.68				
73	7.3	17.885	2.66				
74	7.4	18.13	2.65				
75	7.5	18.375	2.64				
76	7.6	18.62	2.62				
77	7.7	18.865	2.61				
78	7.8	19.11	2.60				
79	7.9	19.355	2.59				
80	8	19.6	2.58				
81	8.1	19.845	2.56				
82	8.2	20.09	2.55				
83	8.3	20.335	2.54				
84	8.4	20.58	2.53				
85	8.5	20.825	2.52				
86	8.6	21.07	2.51				
87	8.7	21.315	2.50				
88	8.8	21.56	2.49				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC05541		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

025
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	10

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	8.16	36	7.2	17.64	2.78
1	0.2	0.49	6.71	37	7.4	18.13	2.76
2	0.4	0.98	5.60	38	7.6	18.62	2.73
3	0.6	1.47	4.90	39	7.8	19.11	2.71
4	0.8	1.96	4.57	40	8	19.6	2.69
5	1	2.45	4.37	41	8.2	20.09	2.67
6	1.2	2.94	4.22	42	8.4	20.58	2.65
7	1.4	3.43	4.10	43	8.6	21.07	2.63
8	1.6	3.92	4.00	44	8.8	21.56	2.61
9	1.8	4.41	3.90	45	9	22.05	2.59
10	2	4.9	3.81	46	9.2	22.54	2.57
11	2.2	5.39	3.73	47	9.4	23.03	2.56
12	2.4	5.88	3.67	48	9.6	23.52	2.54
13	2.6	6.37	3.61	49	9.8	24.01	2.52
14	2.8	6.86	3.56	50	10	24.5	2.51
15	3	7.35	3.51	51	10.2	24.99	2.49
16	3.2	7.84	3.47				
17	3.4	8.33	3.42				
18	3.6	8.82	3.37				
19	3.8	9.31	3.33				
20	4	9.8	3.29				
21	4.2	10.29	3.25				
22	4.4	10.78	3.21				
23	4.6	11.27	3.17				
24	4.8	11.76	3.14				
25	5	12.25	3.10				
26	5.2	12.74	3.07				
27	5.4	13.23	3.03				
28	5.6	13.72	3.00				
29	5.8	14.21	2.97				
30	6	14.7	2.94				
31	6.2	15.19	2.91				
32	6.4	15.68	2.88				
33	6.6	16.17	2.85				
34	6.8	16.66	2.83				
35	7	17.15	2.80				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC06893		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

046
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	10.3

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	7.96	36	7.2	17.64	2.86
1	0.2	0.49	6.72	37	7.4	18.13	2.84
2	0.4	0.98	5.92	38	7.6	18.62	2.81
3	0.6	1.47	5.37	39	7.8	19.11	2.79
4	0.8	1.96	5.04	40	8	19.6	2.76
5	1	2.45	4.82	41	8.2	20.09	2.74
6	1.2	2.94	4.64	42	8.4	20.58	2.72
7	1.4	3.43	4.48	43	8.6	21.07	2.70
8	1.6	3.92	4.34	44	8.8	21.56	2.68
9	1.8	4.41	4.21	45	9	22.05	2.66
10	2	4.9	4.16	46	9.2	22.54	2.64
11	2.2	5.39	4.10	47	9.4	23.03	2.63
12	2.4	5.88	4.04	48	9.6	23.52	2.61
13	2.6	6.37	3.94	49	9.8	24.01	2.60
14	2.8	6.86	3.85	50	10	24.5	2.58
15	3	7.35	3.78	51	10.2	24.99	2.57
16	3.2	7.84	3.71	52	10.4	25.48	2.55
17	3.4	8.33	3.65	53	10.6	25.97	2.54
18	3.6	8.82	3.59	54	10.8	26.46	2.52
19	3.8	9.31	3.54	55	11	26.95	2.51
20	4	9.8	3.48	56	11.2	27.44	2.50
21	4.2	10.29	3.43	57	11.4	27.93	2.48
22	4.4	10.78	3.38				
23	4.6	11.27	3.33				
24	4.8	11.76	3.28				
25	5	12.25	3.24				
26	5.2	12.74	3.19				
27	5.4	13.23	3.15				
28	5.6	13.72	3.12				
29	5.8	14.21	3.08				
30	6	14.7	3.04				
31	6.2	15.19	3.01				
32	6.4	15.68	2.98				
33	6.6	16.17	2.94				
34	6.8	16.66	2.91				
35	7	17.15	2.89				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC12516		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

052
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	13.3

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.44	36	7.2	17.64	3.05
1	0.2	0.49	8.66	37	7.4	18.13	3.01
2	0.4	0.98	7.68	38	7.6	18.62	2.97
3	0.6	1.47	7.19	39	7.8	19.11	2.93
4	0.8	1.96	6.89	40	8	19.6	2.90
5	1	2.45	6.63	41	8.2	20.09	2.87
6	1.2	2.94	6.31	42	8.4	20.58	2.84
7	1.4	3.43	5.98	43	8.6	21.07	2.81
8	1.6	3.92	5.70	44	8.8	21.56	2.78
9	1.8	4.41	5.46	45	9	22.05	2.76
10	2	4.9	5.25	46	9.2	22.54	2.73
11	2.2	5.39	5.07	47	9.4	23.03	2.71
12	2.4	5.88	4.90	48	9.6	23.52	2.69
13	2.6	6.37	4.76	49	9.8	24.01	2.67
14	2.8	6.86	4.63	50	10	24.5	2.65
15	3	7.35	4.50	51	10.2	24.99	2.63
16	3.2	7.84	4.38	52	10.4	25.48	2.61
17	3.4	8.33	4.28	53	10.6	25.97	2.59
18	3.6	8.82	4.19	54	10.8	26.46	2.58
19	3.8	9.31	4.10	55	11	26.95	2.56
20	4	9.8	4.02	56	11.2	27.44	2.54
21	4.2	10.29	3.94	57	11.4	27.93	2.53
22	4.4	10.78	3.87	58	11.6	28.42	2.51
23	4.6	11.27	3.80	59	11.8	28.91	2.50
24	4.8	11.76	3.73	60	12	29.4	2.49
25	5	12.25	3.66				
26	5.2	12.74	3.59				
27	5.4	13.23	3.53				
28	5.6	13.72	3.47				
29	5.8	14.21	3.40				
30	6	14.7	3.35				
31	6.2	15.19	3.29				
32	6.4	15.68	3.24				
33	6.6	16.17	3.19				
34	6.8	16.66	3.14				
35	7	17.15	3.09				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC12552		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

053
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	3.2

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.09	36	3.6	8.82	3.76
1	0.1	0.245	8.19	37	3.7	9.065	3.68
2	0.2	0.49	7.52	38	3.8	9.31	3.62
3	0.3	0.735	7.22	39	3.9	9.555	3.56
4	0.4	0.98	7.02	40	4	9.8	3.51
5	0.5	1.225	6.82	41	4.1	10.045	3.45
6	0.6	1.47	6.60	42	4.2	10.29	3.40
7	0.7	1.715	6.38	43	4.3	10.535	3.36
8	0.8	1.96	6.17	44	4.4	10.78	3.31
9	0.9	2.205	5.96	45	4.5	11.025	3.27
10	1	2.45	5.77	46	4.6	11.27	3.23
11	1.1	2.695	5.62	47	4.7	11.515	3.20
12	1.2	2.94	5.49	48	4.8	11.76	3.16
13	1.3	3.185	5.39	49	4.9	12.005	3.13
14	1.4	3.43	5.31	50	5	12.25	3.10
15	1.5	3.675	5.25	51	5.1	12.495	3.07
16	1.6	3.92	5.18	52	5.2	12.74	3.04
17	1.7	4.165	5.15	53	5.3	12.985	3.01
18	1.8	4.41	5.10	54	5.4	13.23	2.98
19	1.9	4.655	5.05	55	5.5	13.475	2.96
20	2	4.9	5.00	56	5.6	13.72	2.93
21	2.1	5.145	4.94	57	5.7	13.965	2.91
22	2.2	5.39	4.88	58	5.8	14.21	2.88
23	2.3	5.635	4.83	59	5.9	14.455	2.86
24	2.4	5.88	4.79	60	6	14.7	2.84
25	2.5	6.125	4.70	61	6.1	14.945	2.82
26	2.6	6.37	4.62	62	6.2	15.19	2.80
27	2.7	6.615	4.55	63	6.3	15.435	2.78
28	2.8	6.86	4.46	64	6.4	15.68	2.76
29	2.9	7.105	4.36	65	6.5	15.925	2.74
30	3	7.35	4.25	66	6.6	16.17	2.72
31	3.1	7.595	4.16	67	6.7	16.415	2.71
32	3.2	7.84	4.07	68	6.8	16.66	2.69
33	3.3	8.085	3.99	69	6.9	16.905	2.68
34	3.4	8.33	3.91	70	7	17.15	2.66
35	3.5	8.575	3.83	71	7.1	17.395	2.65

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

	Sub Matrix			Soil
	Client Sample Identification 1			TBRC12552
	Client Sample Identification 2			
	Sample Date			1/01/2024
Method	Analyte	Units	LOR	

053
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	3.2

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
72	7.2	17.64	2.63				
73	7.3	17.885	2.62				
74	7.4	18.13	2.60				
75	7.5	18.375	2.59				
76	7.6	18.62	2.58				
77	7.7	18.865	2.56				
78	7.8	19.11	2.55				
79	7.9	19.355	2.54				
80	8	19.6	2.53				
81	8.1	19.845	2.52				
82	8.2	20.09	2.51				
83	8.3	20.335	2.49				
84	8.4	20.58	2.48				



Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC12835		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

056
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	10.3

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	7.43	36	7.2	17.64	2.59
1	0.2	0.49	6.49	37	7.4	18.13	2.58
2	0.4	0.98	5.59	38	7.6	18.62	2.57
3	0.6	1.47	5.14	39	7.8	19.11	2.55
4	0.8	1.96	4.84	40	8	19.6	2.54
5	1	2.45	4.60	41	8.2	20.09	2.52
6	1.2	2.94	4.39	42	8.4	20.58	2.51
7	1.4	3.43	4.20	43	8.6	21.07	2.50
8	1.6	3.92	4.02				
9	1.8	4.41	3.85				
10	2	4.9	3.72				
11	2.2	5.39	3.59				
12	2.4	5.88	3.48				
13	2.6	6.37	3.38				
14	2.8	6.86	3.30				
15	3	7.35	3.23				
16	3.2	7.84	3.16				
17	3.4	8.33	3.11				
18	3.6	8.82	3.06				
19	3.8	9.31	3.01				
20	4	9.8	2.97				
21	4.2	10.29	2.93				
22	4.4	10.78	2.90				
23	4.6	11.27	2.87				
24	4.8	11.76	2.84				
25	5	12.25	2.81				
26	5.2	12.74	2.79				
27	5.4	13.23	2.77				
28	5.6	13.72	2.74				
29	5.8	14.21	2.72				
30	6	14.7	2.70				
31	6.2	15.19	2.68				
32	6.4	15.68	2.66				
33	6.6	16.17	2.64				
34	6.8	16.66	2.63				
35	7	17.15	2.61				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

	Sub Matrix			Soil
	Client Sample Identification 1			TBRC17247
	Client Sample Identification 2			
	Sample Date			1/01/2024
Method	Analyte	Units	LOR	

059
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.5
Weight	(g)	2
ANC	kgH2SO4/t	45.4

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.55	36	18	44.1	2.90
1	0.5	1.225	8.60	37	18.5	45.325	2.83
2	1	2.45	8.19	38	19	46.55	2.76
3	1.5	3.675	8.06	39	19.5	47.775	2.70
4	2	4.9	7.99	40	20	49	2.65
5	2.5	6.125	7.94	41	20.5	50.225	2.61
6	3	7.35	7.90	42	21	51.45	2.57
7	3.5	8.575	7.87	43	21.5	52.675	2.53
8	4	9.8	7.83	44	22	53.9	2.49
9	4.5	11.025	7.81				
10	5	12.25	7.77				
11	5.5	13.475	7.74				
12	6	14.7	7.71				
13	6.5	15.925	7.68				
14	7	17.15	7.65				
15	7.5	18.375	7.62				
16	8	19.6	7.59				
17	8.5	20.825	7.53				
18	9	22.05	7.44				
19	9.5	23.275	7.30				
20	10	24.5	7.12				
21	10.5	25.725	6.91				
22	11	26.95	6.65				
23	11.5	28.175	6.36				
24	12	29.4	6.04				
25	12.5	30.625	5.67				
26	13	31.85	5.26				
27	13.5	33.075	4.87				
28	14	34.3	4.53				
29	14.5	35.525	4.21				
30	15	36.75	3.87				
31	15.5	37.975	3.59				
32	16	39.2	3.38				
33	16.5	40.425	3.22				
34	17	41.65	3.09				
35	17.5	42.875	2.99				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC19884		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

073
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	13.8

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.27	36	7.2	17.64	3.06
1	0.2	0.49	8.61	37	7.4	18.13	3.03
2	0.4	0.98	8.05	38	7.6	18.62	3.00
3	0.6	1.47	7.74	39	7.8	19.11	2.97
4	0.8	1.96	7.55	40	8	19.6	2.94
5	1	2.45	7.34	41	8.2	20.09	2.91
6	1.2	2.94	7.04	42	8.4	20.58	2.89
7	1.4	3.43	6.57	43	8.6	21.07	2.86
8	1.6	3.92	6.00	44	8.8	21.56	2.84
9	1.8	4.41	5.57	45	9	22.05	2.81
10	2	4.9	5.23	46	9.2	22.54	2.78
11	2.2	5.39	4.94	47	9.4	23.03	2.76
12	2.4	5.88	4.71	48	9.6	23.52	2.74
13	2.6	6.37	4.52	49	9.8	24.01	2.72
14	2.8	6.86	4.35	50	10	24.5	2.69
15	3	7.35	4.22	51	10.2	24.99	2.67
16	3.2	7.84	4.11	52	10.4	25.48	2.65
17	3.4	8.33	4.01	53	10.6	25.97	2.63
18	3.6	8.82	3.93	54	10.8	26.46	2.61
19	3.8	9.31	3.86	55	11	26.95	2.60
20	4	9.8	3.79	56	11.2	27.44	2.58
21	4.2	10.29	3.73	57	11.4	27.93	2.56
22	4.4	10.78	3.67	58	11.6	28.42	2.54
23	4.6	11.27	3.62	59	11.8	28.91	2.53
24	4.8	11.76	3.56	60	12	29.4	2.51
25	5	12.25	3.51	61	12.2	29.89	2.49
26	5.2	12.74	3.46				
27	5.4	13.23	3.42				
28	5.6	13.72	3.37				
29	5.8	14.21	3.32				
30	6	14.7	3.28				
31	6.2	15.19	3.24				
32	6.4	15.68	3.20				
33	6.6	16.17	3.17				
34	6.8	16.66	3.13				
35	7	17.15	3.09				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC19884		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

073 Check
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.2
Weight	(g)	2
ANC	kgH2SO4/t	13.8

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	9.11	36	7.2	17.64	3.00
1	0.2	0.49	8.44	37	7.4	18.13	2.97
2	0.4	0.98	7.80	38	7.6	18.62	2.94
3	0.6	1.47	7.42	39	7.8	19.11	2.91
4	0.8	1.96	7.18	40	8	19.6	2.88
5	1	2.45	6.99	41	8.2	20.09	2.86
6	1.2	2.94	6.78	42	8.4	20.58	2.83
7	1.4	3.43	6.49	43	8.6	21.07	2.81
8	1.6	3.92	6.10	44	8.8	21.56	2.78
9	1.8	4.41	5.66	45	9	22.05	2.76
10	2	4.9	5.31	46	9.2	22.54	2.74
11	2.2	5.39	4.99	47	9.4	23.03	2.72
12	2.4	5.88	4.70	48	9.6	23.52	2.70
13	2.6	6.37	4.46	49	9.8	24.01	2.67
14	2.8	6.86	4.25	50	10	24.5	2.65
15	3	7.35	4.11	51	10.2	24.99	2.64
16	3.2	7.84	3.98	52	10.4	25.48	2.62
17	3.4	8.33	3.88	53	10.6	25.97	2.60
18	3.6	8.82	3.80	54	10.8	26.46	2.58
19	3.8	9.31	3.72	55	11	26.95	2.56
20	4	9.8	3.66	56	11.2	27.44	2.55
21	4.2	10.29	3.60	57	11.4	27.93	2.53
22	4.4	10.78	3.55	58	11.6	28.42	2.52
23	4.6	11.27	3.50	59	11.8	28.91	2.50
24	4.8	11.76	3.45	60	12	29.4	2.49
25	5	12.25	3.40				
26	5.2	12.74	3.36				
27	5.4	13.23	3.31				
28	5.6	13.72	3.27				
29	5.8	14.21	3.23				
30	6	14.7	3.20				
31	6.2	15.19	3.16				
32	6.4	15.68	3.12				
33	6.6	16.17	3.09				
34	6.8	16.66	3.06				
35	7	17.15	3.03				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

	Sub Matrix			Soil
	Client Sample Identification 1			TBRC24012
	Client Sample Identification 2			
	Sample Date			1/01/2024
Method	Analyte	Units	LOR	

079
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	9

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	7.52	36	3.6	8.82	3.47
1	0.1	0.245	6.76	37	3.7	9.065	3.44
2	0.2	0.49	6.16	38	3.8	9.31	3.42
3	0.3	0.735	5.66	39	3.9	9.555	3.39
4	0.4	0.98	5.31	40	4	9.8	3.37
5	0.5	1.225	5.05	41	4.1	10.045	3.35
6	0.6	1.47	4.84	42	4.2	10.29	3.32
7	0.7	1.715	4.69	43	4.3	10.535	3.30
8	0.8	1.96	4.58	44	4.4	10.78	3.28
9	0.9	2.205	4.49	45	4.5	11.025	3.26
10	1	2.45	4.42	46	4.6	11.27	3.24
11	1.1	2.695	4.37	47	4.7	11.515	3.22
12	1.2	2.94	4.32	48	4.8	11.76	3.20
13	1.3	3.185	4.29	49	4.9	12.005	3.18
14	1.4	3.43	4.25	50	5	12.25	3.17
15	1.5	3.675	4.20	51	5.1	12.495	3.15
16	1.6	3.92	4.16	52	5.2	12.74	3.13
17	1.7	4.165	4.11	53	5.3	12.985	3.11
18	1.8	4.41	4.07	54	5.4	13.23	3.09
19	1.9	4.655	4.03	55	5.5	13.475	3.07
20	2	4.9	3.99	56	5.6	13.72	3.06
21	2.1	5.145	3.95	57	5.7	13.965	3.04
22	2.2	5.39	3.90	58	5.8	14.21	3.02
23	2.3	5.635	3.87	59	5.9	14.455	3.00
24	2.4	5.88	3.83	60	6	14.7	2.99
25	2.5	6.125	3.79	61	6.1	14.945	2.97
26	2.6	6.37	3.76	62	6.2	15.19	2.96
27	2.7	6.615	3.73	63	6.3	15.435	2.94
28	2.8	6.86	3.69	64	6.4	15.68	2.93
29	2.9	7.105	3.66	65	6.5	15.925	2.91
30	3	7.35	3.63	66	6.6	16.17	2.90
31	3.1	7.595	3.60	67	6.7	16.415	2.88
32	3.2	7.84	3.57	68	6.8	16.66	2.87
33	3.3	8.085	3.54	69	6.9	16.905	2.86
34	3.4	8.33	3.52	70	7	17.15	2.84
35	3.5	8.575	3.49	71	7.1	17.395	2.83

Work Order : EP2408625 Client ID: MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC24012		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

079
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	9

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
72	7.2	17.64	2.82	108	10.8	26.46	2.51
73	7.3	17.885	2.81	109	10.9	26.705	2.50
74	7.4	18.13	2.80	110	11	26.95	2.50
75	7.5	18.375	2.78				
76	7.6	18.62	2.77				
77	7.7	18.865	2.76				
78	7.8	19.11	2.75				
79	7.9	19.355	2.74				
80	8	19.6	2.73				
81	8.1	19.845	2.72				
82	8.2	20.09	2.71				
83	8.3	20.335	2.70				
84	8.4	20.58	2.70				
85	8.5	20.825	2.69				
86	8.6	21.07	2.68				
87	8.7	21.315	2.67				
88	8.8	21.56	2.66				
89	8.9	21.805	2.65				
90	9	22.05	2.64				
91	9.1	22.295	2.63				
92	9.2	22.54	2.63				
93	9.3	22.785	2.62				
94	9.4	23.03	2.61				
95	9.5	23.275	2.60				
96	9.6	23.52	2.60				
97	9.7	23.765	2.59				
98	9.8	24.01	2.58				
99	9.9	24.255	2.57				
100	10	24.5	2.57				
101	10.1	24.745	2.56				
102	10.2	24.99	2.55				
103	10.3	25.235	2.54				
104	10.4	25.48	2.54				
105	10.5	25.725	2.53				
106	10.6	25.97	2.52				
107	10.7	26.215	2.52				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC25164		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

091
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	9.8

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	8.19	36	3.6	8.82	3.53
1	0.1	0.245	7.26	37	3.7	9.065	3.51
2	0.2	0.49	6.73	38	3.8	9.31	3.49
3	0.3	0.735	6.32	39	3.9	9.555	3.46
4	0.4	0.98	5.88	40	4	9.8	3.44
5	0.5	1.225	5.44	41	4.1	10.045	3.42
6	0.6	1.47	5.09	42	4.2	10.29	3.39
7	0.7	1.715	4.82	43	4.3	10.535	3.38
8	0.8	1.96	4.63	44	4.4	10.78	3.35
9	0.9	2.205	4.50	45	4.5	11.025	3.34
10	1	2.45	4.41	46	4.6	11.27	3.31
11	1.1	2.695	4.34	47	4.7	11.515	3.29
12	1.2	2.94	4.27	48	4.8	11.76	3.28
13	1.3	3.185	4.23	49	4.9	12.005	3.26
14	1.4	3.43	4.18	50	5	12.25	3.24
15	1.5	3.675	4.14	51	5.1	12.495	3.22
16	1.6	3.92	4.11	52	5.2	12.74	3.20
17	1.7	4.165	4.07	53	5.3	12.985	3.18
18	1.8	4.41	4.04	54	5.4	13.23	3.17
19	1.9	4.655	4.01	55	5.5	13.475	3.15
20	2	4.9	3.98	56	5.6	13.72	3.13
21	2.1	5.145	3.95	57	5.7	13.965	3.12
22	2.2	5.39	3.92	58	5.8	14.21	3.10
23	2.3	5.635	3.89	59	5.9	14.455	3.08
24	2.4	5.88	3.86	60	6	14.7	3.07
25	2.5	6.125	3.83	61	6.1	14.945	3.05
26	2.6	6.37	3.80	62	6.2	15.19	3.04
27	2.7	6.615	3.77	63	6.3	15.435	3.02
28	2.8	6.86	3.75	64	6.4	15.68	3.01
29	2.9	7.105	3.72	65	6.5	15.925	2.99
30	3	7.35	3.69	66	6.6	16.17	2.98
31	3.1	7.595	3.66	67	6.7	16.415	2.96
32	3.2	7.84	3.64	68	6.8	16.66	2.95
33	3.3	8.085	3.61	69	6.9	16.905	2.94
34	3.4	8.33	3.59	70	7	17.15	2.93
35	3.5	8.575	3.56	71	7.1	17.395	2.91

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC25164		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

091
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	9.8

EA046 -B - Curve information

Addition	mLs added		pH	Addition	mLs added		pH
	(total)	kg H2SO4/t			(total)	kg H2SO4/t	
72	7.2	17.64	2.90	108	10.8	26.46	2.55
73	7.3	17.885	2.89	109	10.9	26.705	2.54
74	7.4	18.13	2.88	110	11	26.95	2.53
75	7.5	18.375	2.87	111	11.1	27.195	2.53
76	7.6	18.62	2.85	112	11.2	27.44	2.52
77	7.7	18.865	2.84	113	11.3	27.685	2.51
78	7.8	19.11	2.83	114	11.4	27.93	2.50
79	7.9	19.355	2.82	115	11.5	28.175	2.49
80	8	19.6	2.81				
81	8.1	19.845	2.80				
82	8.2	20.09	2.79				
83	8.3	20.335	2.78				
84	8.4	20.58	2.77				
85	8.5	20.825	2.76				
86	8.6	21.07	2.74				
87	8.7	21.315	2.73				
88	8.8	21.56	2.72				
89	8.9	21.805	2.71				
90	9	22.05	2.71				
91	9.1	22.295	2.70				
92	9.2	22.54	2.69				
93	9.3	22.785	2.68				
94	9.4	23.03	2.67				
95	9.5	23.275	2.66				
96	9.6	23.52	2.65				
97	9.7	23.765	2.64				
98	9.8	24.01	2.63				
99	9.9	24.255	2.63				
100	10	24.5	2.62				
101	10.1	24.745	2.61				
102	10.2	24.99	2.60				
103	10.3	25.235	2.59				
104	10.4	25.48	2.58				
105	10.5	25.725	2.57				
106	10.6	25.97	2.57				
107	10.7	26.215	2.56				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

	Sub Matrix			Soil
	Client Sample Identification 1			TBRC26347
	Client Sample Identification 2			
	Sample Date			1/01/2024
Method	Analyte	Units	LOR	

096
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	6.8

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	8.44	36	3.6	8.82	3.41
1	0.1	0.245	7.32	37	3.7	9.065	3.37
2	0.2	0.49	6.70	38	3.8	9.31	3.35
3	0.3	0.735	6.34	39	3.9	9.555	3.32
4	0.4	0.98	6.06	40	4	9.8	3.29
5	0.5	1.225	5.89	41	4.1	10.045	3.26
6	0.6	1.47	5.76	42	4.2	10.29	3.24
7	0.7	1.715	5.65	43	4.3	10.535	3.21
8	0.8	1.96	5.57	44	4.4	10.78	3.19
9	0.9	2.205	5.51	45	4.5	11.025	3.16
10	1	2.45	5.42	46	4.6	11.27	3.14
11	1.1	2.695	5.30	47	4.7	11.515	3.12
12	1.2	2.94	5.14	48	4.8	11.76	3.09
13	1.3	3.185	5.03	49	4.9	12.005	3.07
14	1.4	3.43	4.89	50	5	12.25	3.05
15	1.5	3.675	4.76	51	5.1	12.495	3.03
16	1.6	3.92	4.62	52	5.2	12.74	3.01
17	1.7	4.165	4.50	53	5.3	12.985	2.99
18	1.8	4.41	4.41	54	5.4	13.23	2.98
19	1.9	4.655	4.32	55	5.5	13.475	2.96
20	2	4.9	4.22	56	5.6	13.72	2.94
21	2.1	5.145	4.13	57	5.7	13.965	2.93
22	2.2	5.39	4.05	58	5.8	14.21	2.91
23	2.3	5.635	3.97	59	5.9	14.455	2.90
24	2.4	5.88	3.90	60	6	14.7	2.88
25	2.5	6.125	3.84	61	6.1	14.945	2.87
26	2.6	6.37	3.78	62	6.2	15.19	2.85
27	2.7	6.615	3.73	63	6.3	15.435	2.84
28	2.8	6.86	3.68	64	6.4	15.68	2.83
29	2.9	7.105	3.64	65	6.5	15.925	2.81
30	3	7.35	3.59	66	6.6	16.17	2.80
31	3.1	7.595	3.55	67	6.7	16.415	2.79
32	3.2	7.84	3.51	68	6.8	16.66	2.78
33	3.3	8.085	3.48	69	6.9	16.905	2.76
34	3.4	8.33	3.45	70	7	17.15	2.75
35	3.5	8.575	3.42	71	7.1	17.395	2.74

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

	Sub Matrix			Soil
	Client Sample Identification 1			TBRC26347
	Client Sample Identification 2			
	Sample Date			1/01/2024
Method	Analyte	Units	LOR	

096
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	6.8

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
72	7.2	17.64	2.73				
73	7.3	17.885	2.72				
74	7.4	18.13	2.71				
75	7.5	18.375	2.70				
76	7.6	18.62	2.69				
77	7.7	18.865	2.68				
78	7.8	19.11	2.67				
79	7.9	19.355	2.66				
80	8	19.6	2.65				
81	8.1	19.845	2.64				
82	8.2	20.09	2.63				
83	8.3	20.335	2.62				
84	8.4	20.58	2.61				
85	8.5	20.825	2.60				
86	8.6	21.07	2.59				
87	8.7	21.315	2.59				
88	8.8	21.56	2.58				
89	8.9	21.805	2.57				
90	9	22.05	2.56				
91	9.1	22.295	2.55				
92	9.2	22.54	2.54				
93	9.3	22.785	2.54				
94	9.4	23.03	2.53				
95	9.5	23.275	2.52				
96	9.6	23.52	2.51				
97	9.7	23.765	2.51				
98	9.8	24.01	2.51				
99	9.9	24.255	2.50				

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

Sub Matrix	Soil		
Client Sample Identification 1	TBRC26586		
Client Sample Identification 2			
Sample Date	1/01/2024		
Method	Analyte	Units	LOR

098
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	2.6

EA046 -B - Curve information

Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
0	0	0	8.75	36	3.6	8.82	3.25
1	0.1	0.245	7.37	37	3.7	9.065	3.23
2	0.2	0.49	6.90	38	3.8	9.31	3.21
3	0.3	0.735	6.54	39	3.9	9.555	3.18
4	0.4	0.98	6.22	40	4	9.8	3.15
5	0.5	1.225	5.92	41	4.1	10.045	3.12
6	0.6	1.47	5.67	42	4.2	10.29	3.09
7	0.7	1.715	5.48	43	4.3	10.535	3.06
8	0.8	1.96	5.35	44	4.4	10.78	3.03
9	0.9	2.205	5.24	45	4.5	11.025	3.01
10	1	2.45	5.13	46	4.6	11.27	2.98
11	1.1	2.695	5.02	47	4.7	11.515	2.96
12	1.2	2.94	4.92	48	4.8	11.76	2.94
13	1.3	3.185	4.83	49	4.9	12.005	2.92
14	1.4	3.43	4.75	50	5	12.25	2.90
15	1.5	3.675	4.67	51	5.1	12.495	2.88
16	1.6	3.92	4.60	52	5.2	12.74	2.86
17	1.7	4.165	4.49	53	5.3	12.985	2.84
18	1.8	4.41	4.39	54	5.4	13.23	2.83
19	1.9	4.655	4.23	55	5.5	13.475	2.81
20	2	4.9	4.07	56	5.6	13.72	2.79
21	2.1	5.145	3.96	57	5.7	13.965	2.78
22	2.2	5.39	3.87	58	5.8	14.21	2.77
23	2.3	5.635	3.79	59	5.9	14.455	2.75
24	2.4	5.88	3.73	60	6	14.7	2.74
25	2.5	6.125	3.67	61	6.1	14.945	2.72
26	2.6	6.37	3.61	62	6.2	15.19	2.71
27	2.7	6.615	3.56	63	6.3	15.435	2.70
28	2.8	6.86	3.52	64	6.4	15.68	2.68
29	2.9	7.105	3.48	65	6.5	15.925	2.67
30	3	7.35	3.44	66	6.6	16.17	2.66
31	3.1	7.595	3.40	67	6.7	16.415	2.65
32	3.2	7.84	3.37	68	6.8	16.66	2.64
33	3.3	8.085	3.33	69	6.9	16.905	2.63
34	3.4	8.33	3.30	70	7	17.15	2.61
35	3.5	8.575	3.28	71	7.1	17.395	2.60

Work Order : EP2408625 **Client ID:** MINE WASTE MANAGEMENT

	Sub Matrix			Soil
	Client Sample Identification 1			TBRC26586
	Client Sample Identification 2			
	Sample Date			1/01/2024
Method	Analyte	Units	LOR	

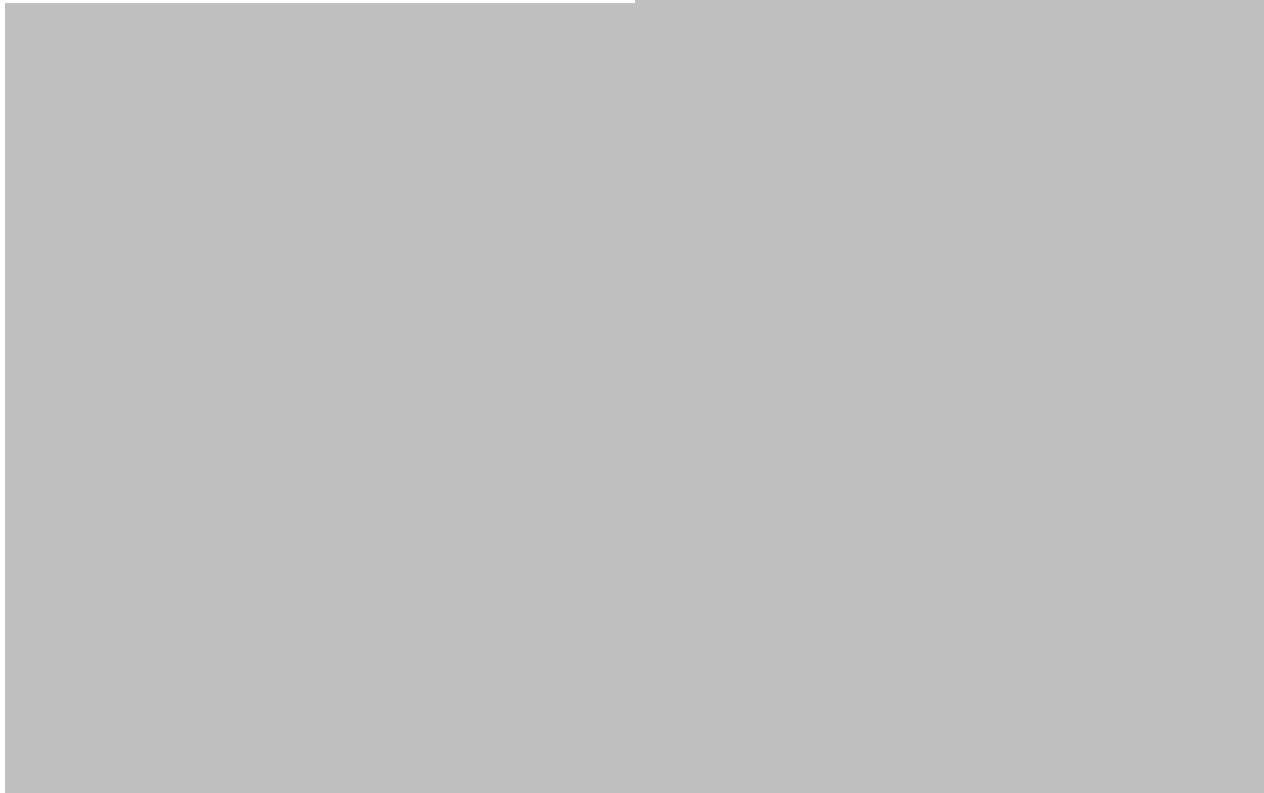
098
EP2408625

EA046 - A Titration information

HCl Molarity:	M	0.1
Increments:	mL	0.1
Weight	(g)	2
ANC	kgH2SO4/t	2.6

EA046 -B - Curve information

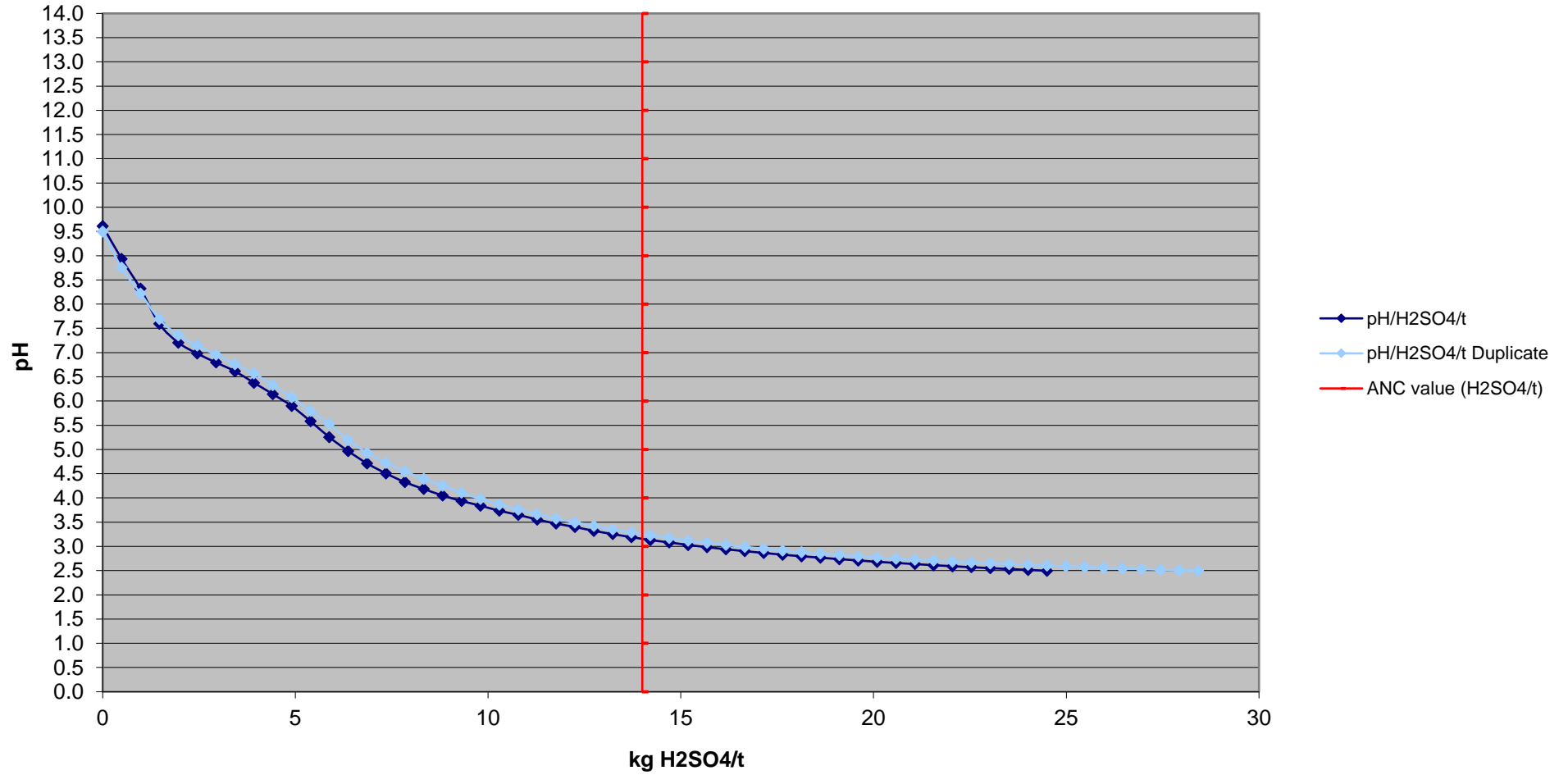
Addition	mLs added (total)	kg H2SO4/t	pH	Addition	mLs added (total)	kg H2SO4/t	pH
72	7.2	17.64	2.59				
73	7.3	17.885	2.58				
74	7.4	18.13	2.57				
75	7.5	18.375	2.56				
76	7.6	18.62	2.55				
77	7.7	18.865	2.55				
78	7.8	19.11	2.54				
79	7.9	19.355	2.53				
80	8	19.6	2.52				
81	8.1	19.845	2.51				
82	8.2	20.09	2.50				
83	8.3	20.335	2.50				



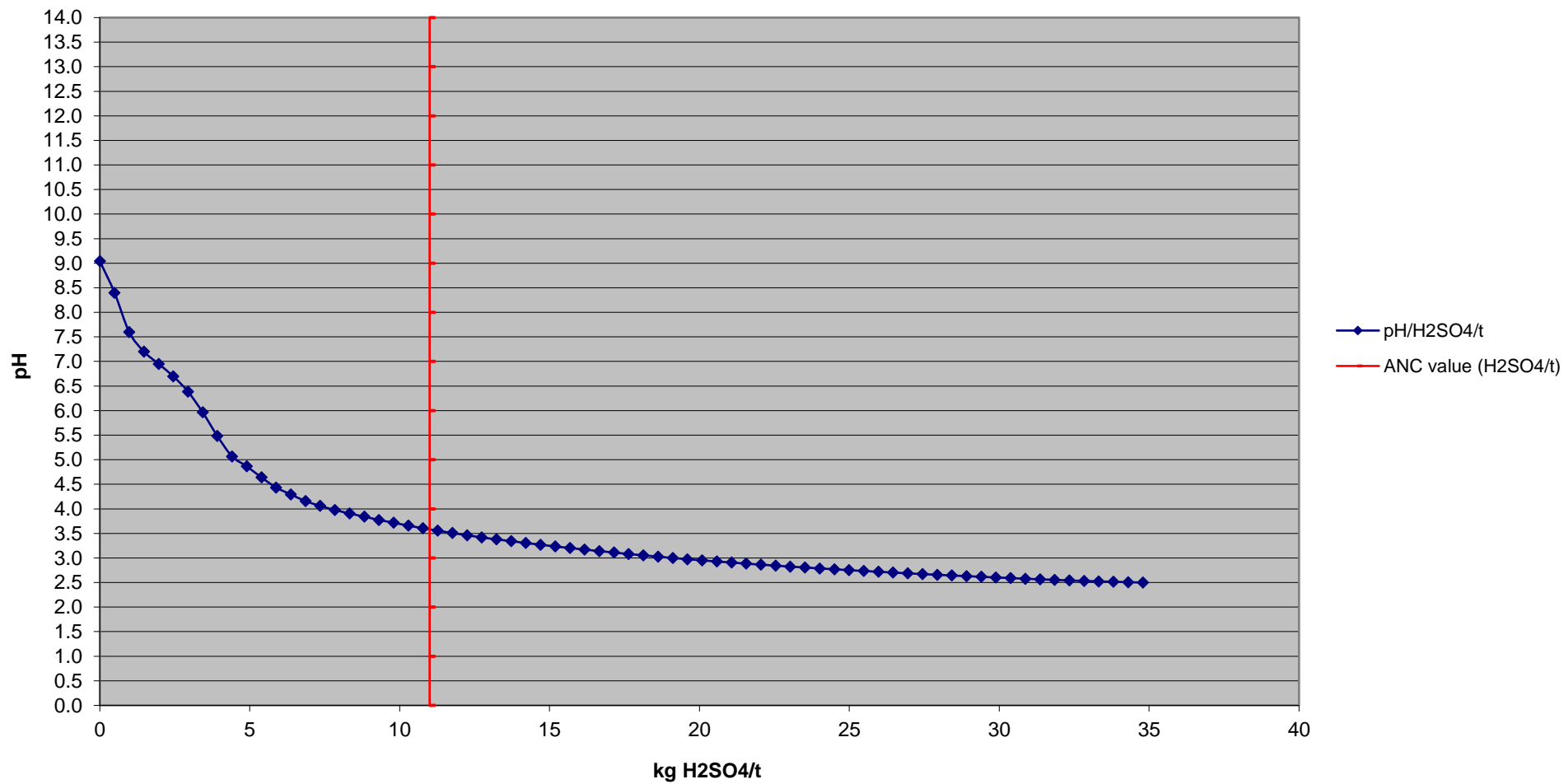
EP2408625 - 017 and Check 017 (TBRC05259)

Acid Buffering Characteristic Curve

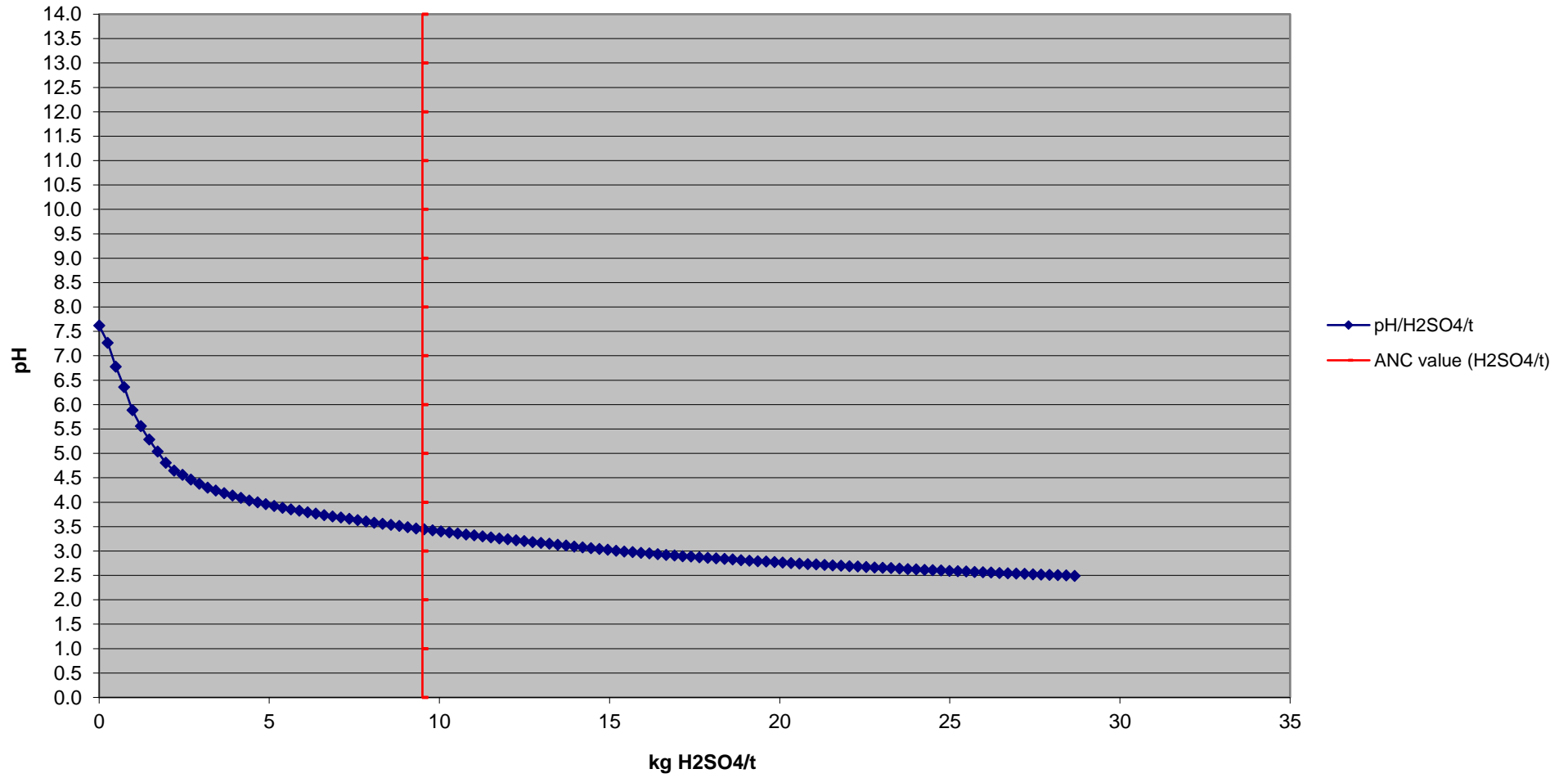
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EP2408625 - 019 (TBRC05322)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.2 mLs every 1000 seconds

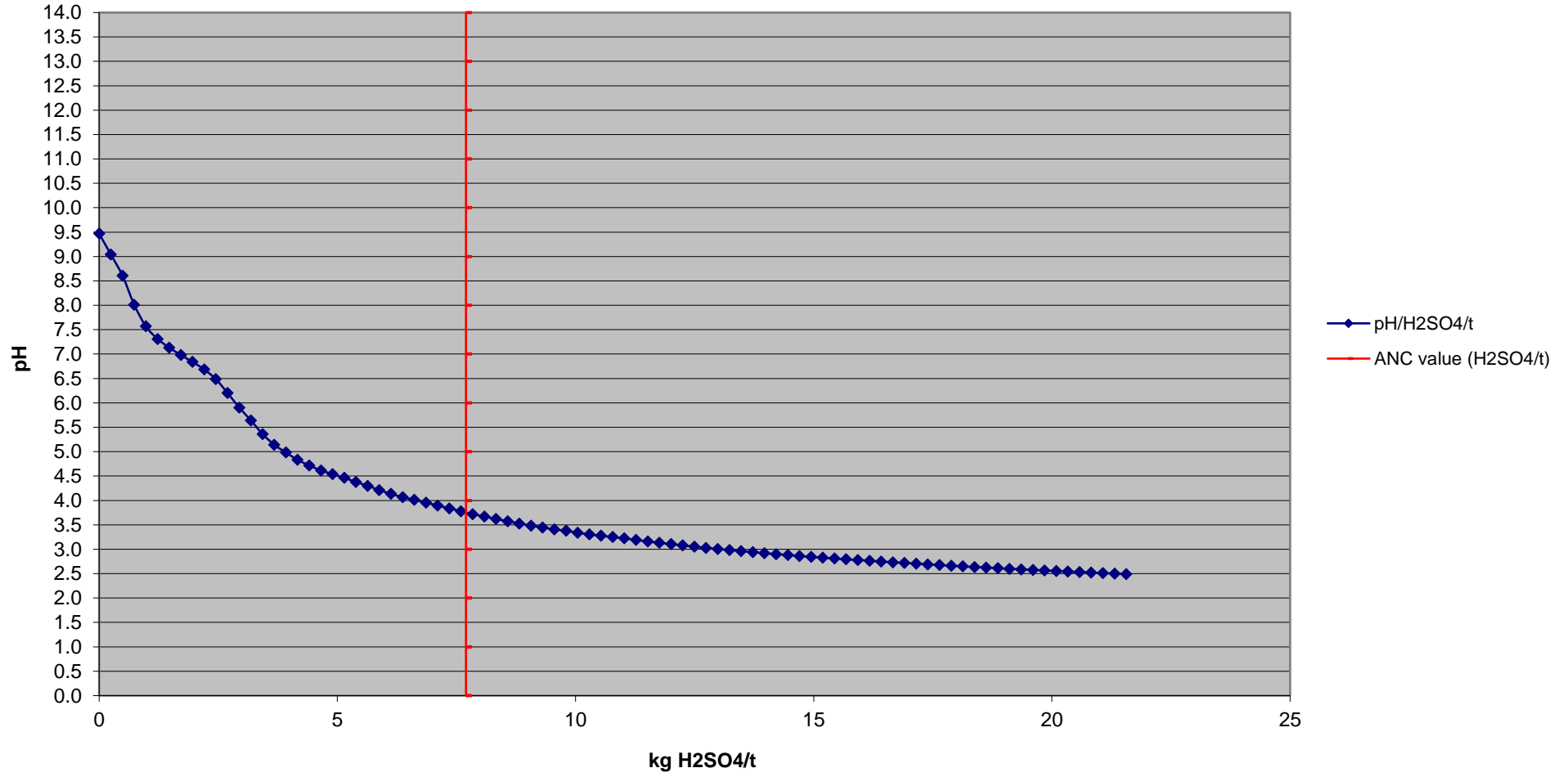


EP2408625 - 020 (TBRC05354)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



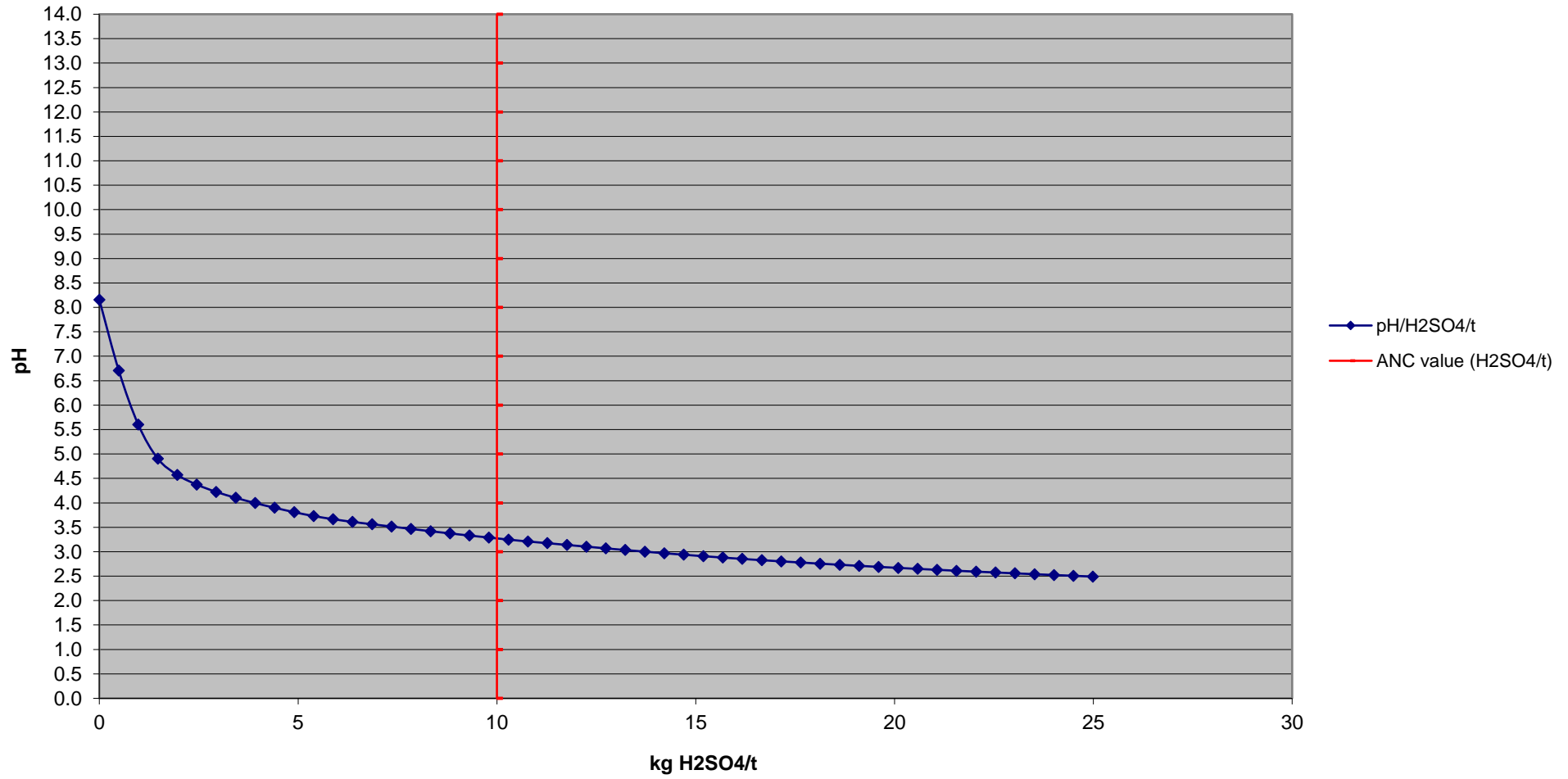
#REF!

Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds

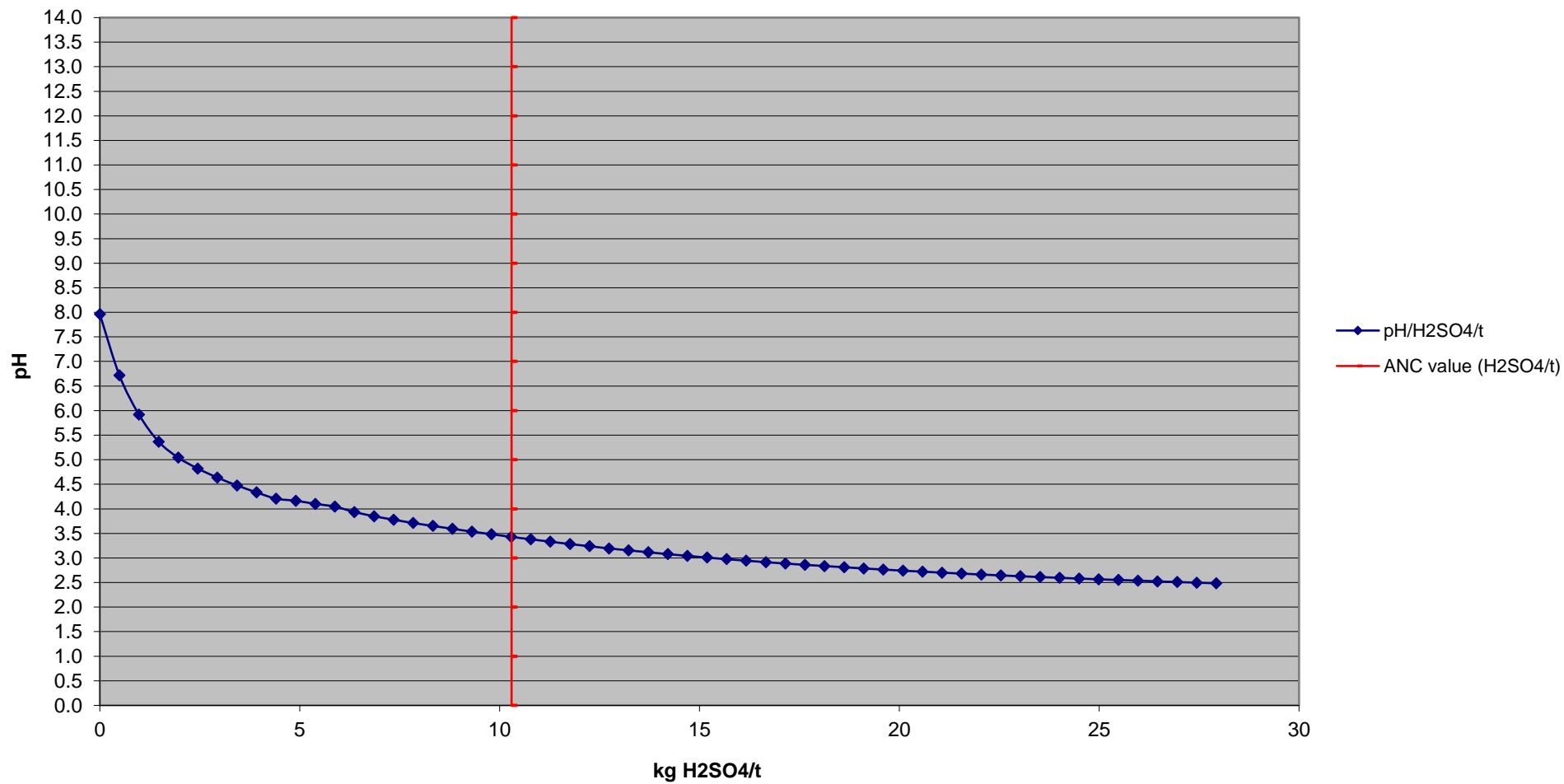


EP2408625 - 025 (TBRC05541)
Acid Buffering Characteristic Curve

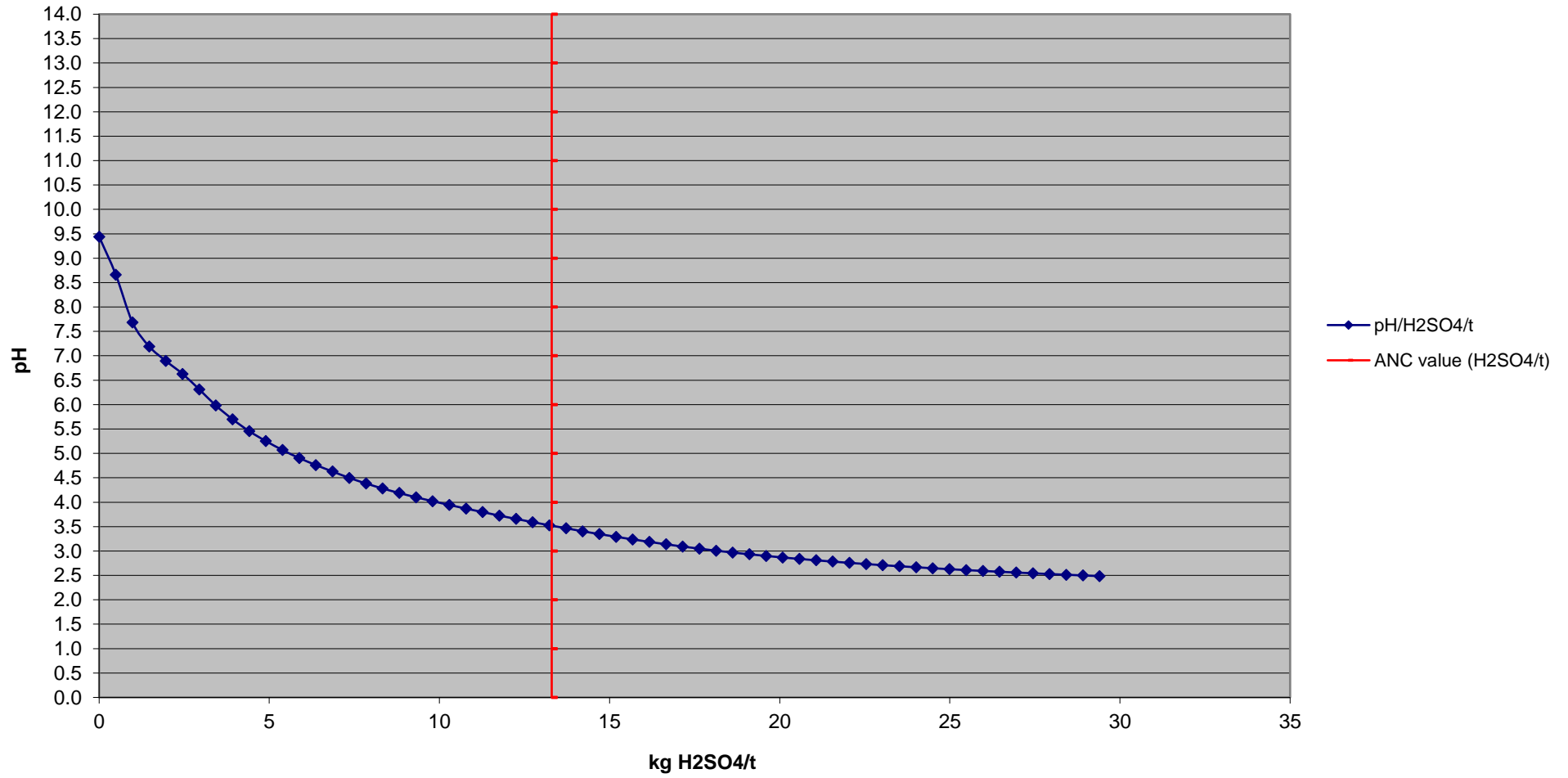
Titrating with 0.1M HCl, in increments of 0.2 mLs every 1000 seconds



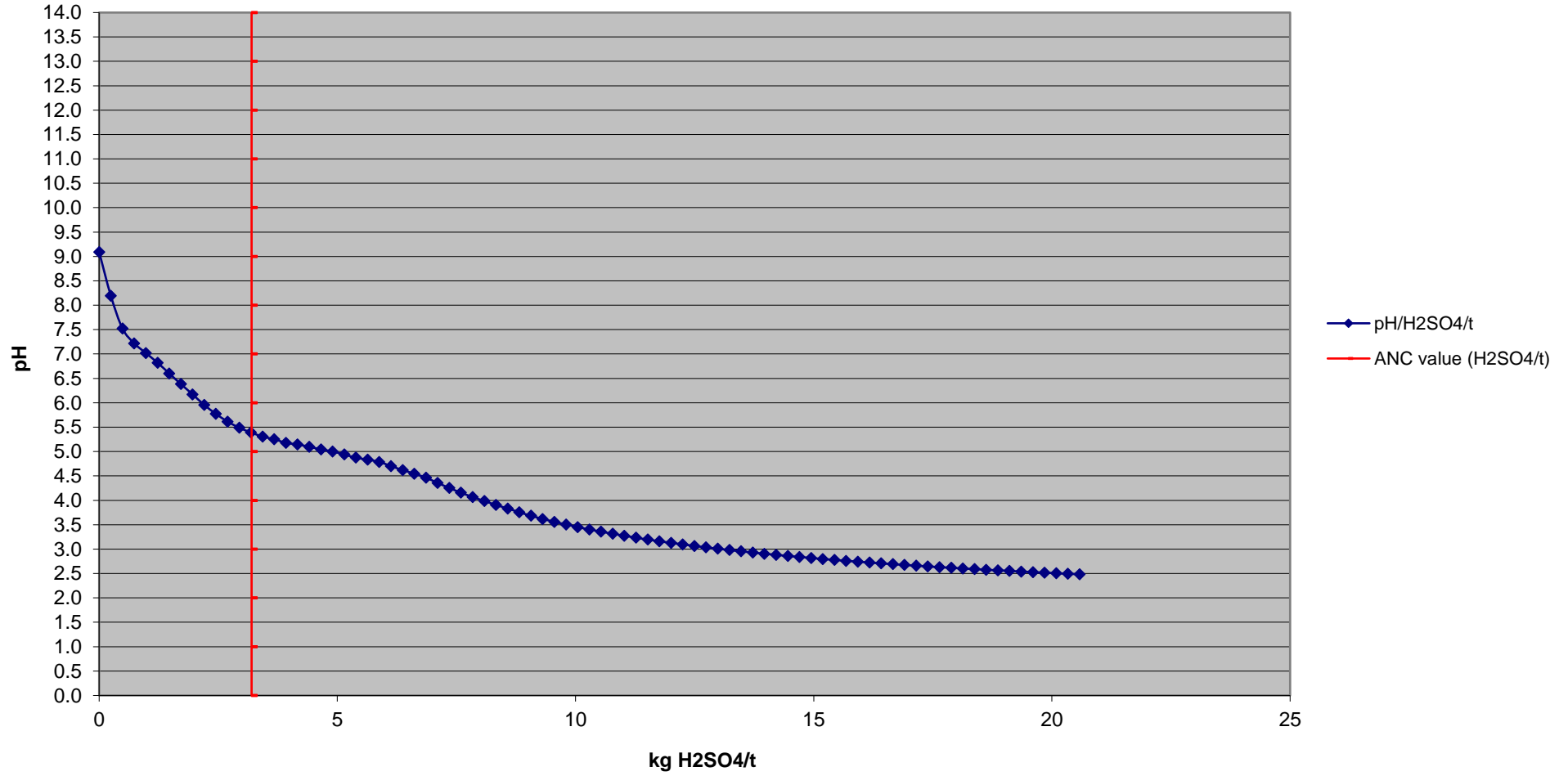
EP2408625 - 046 (TBRC06893)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.2 mLs every 1000 seconds



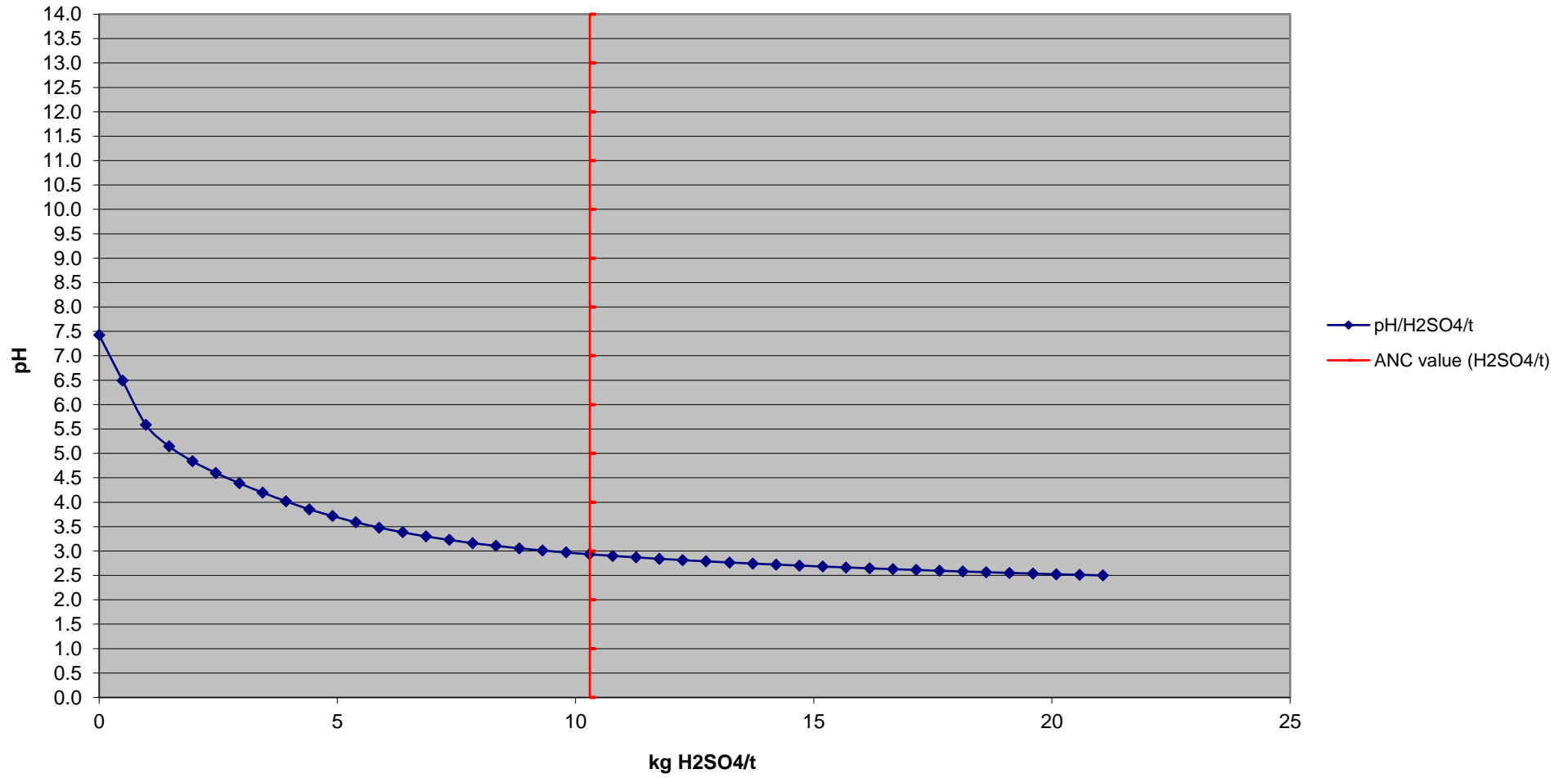
EP2408625 - 052 (TBRC12516)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.2 mLs every 1000 seconds



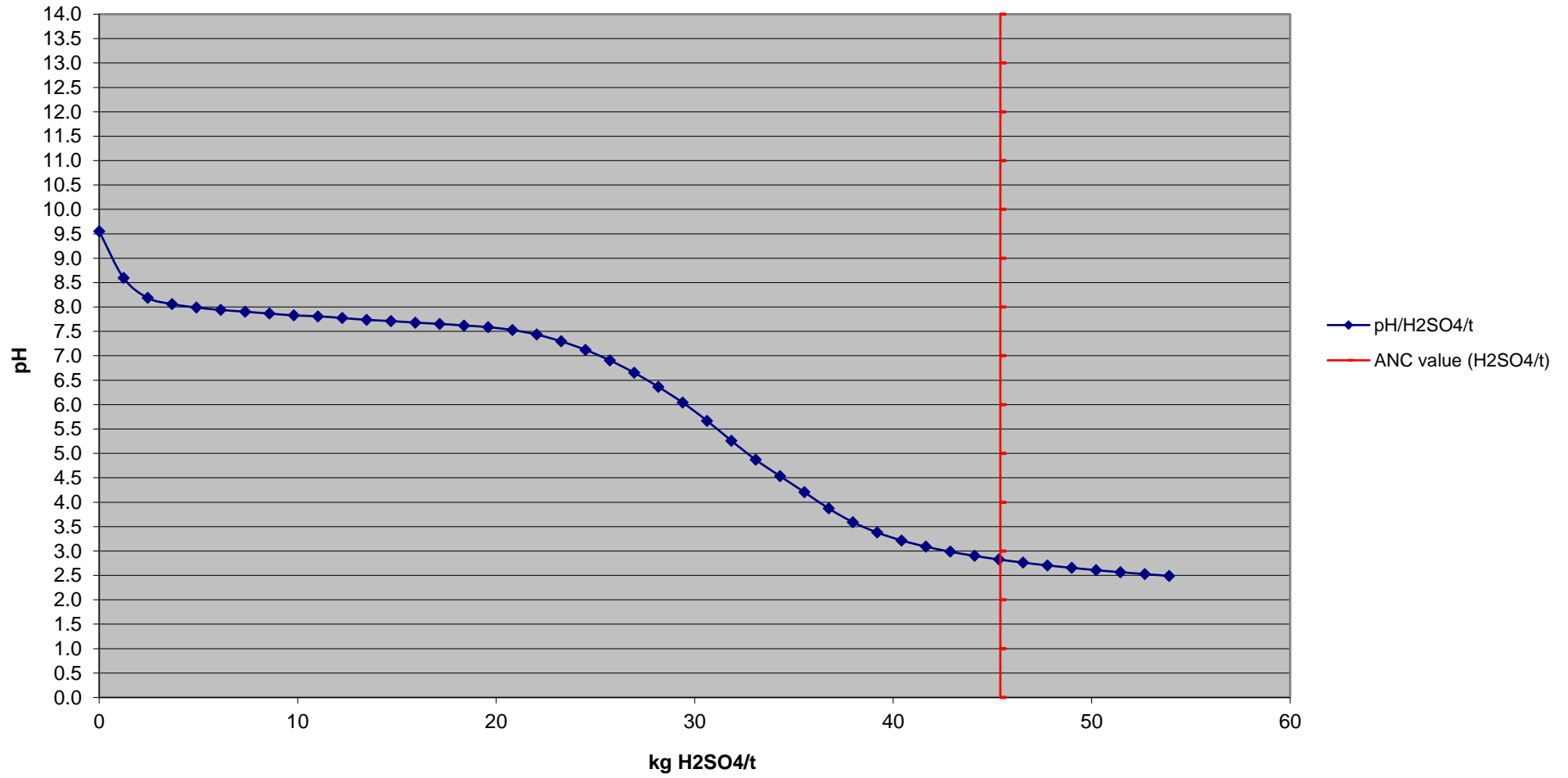
EP2408625 - 053 (TBRC12552)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP2408625 - 056 (TBRC12835)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.2 mLs every 1000 seconds



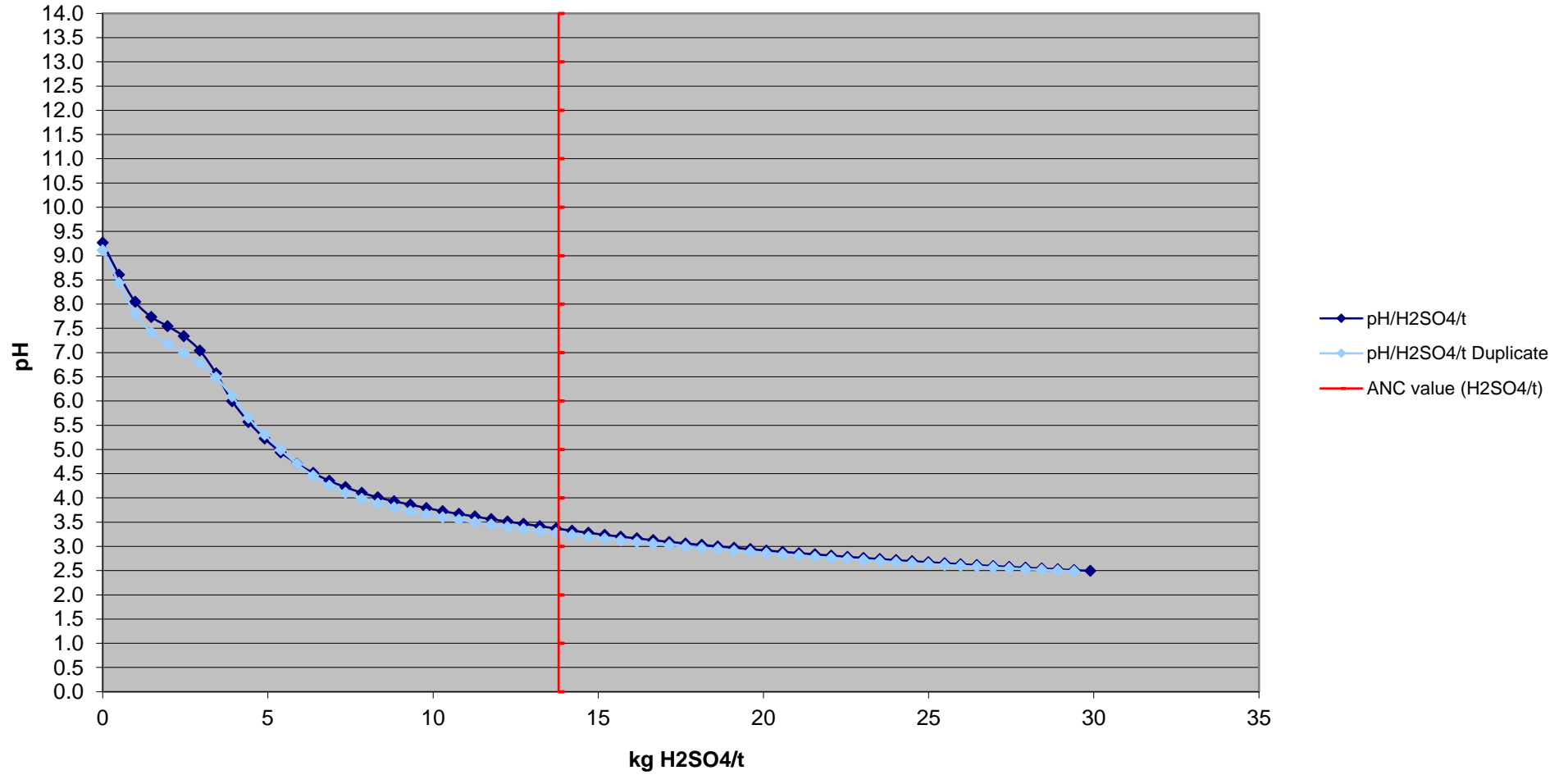
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Titrating with 0.1M HCl, in increments of 0.5 mLs every 1000 seconds



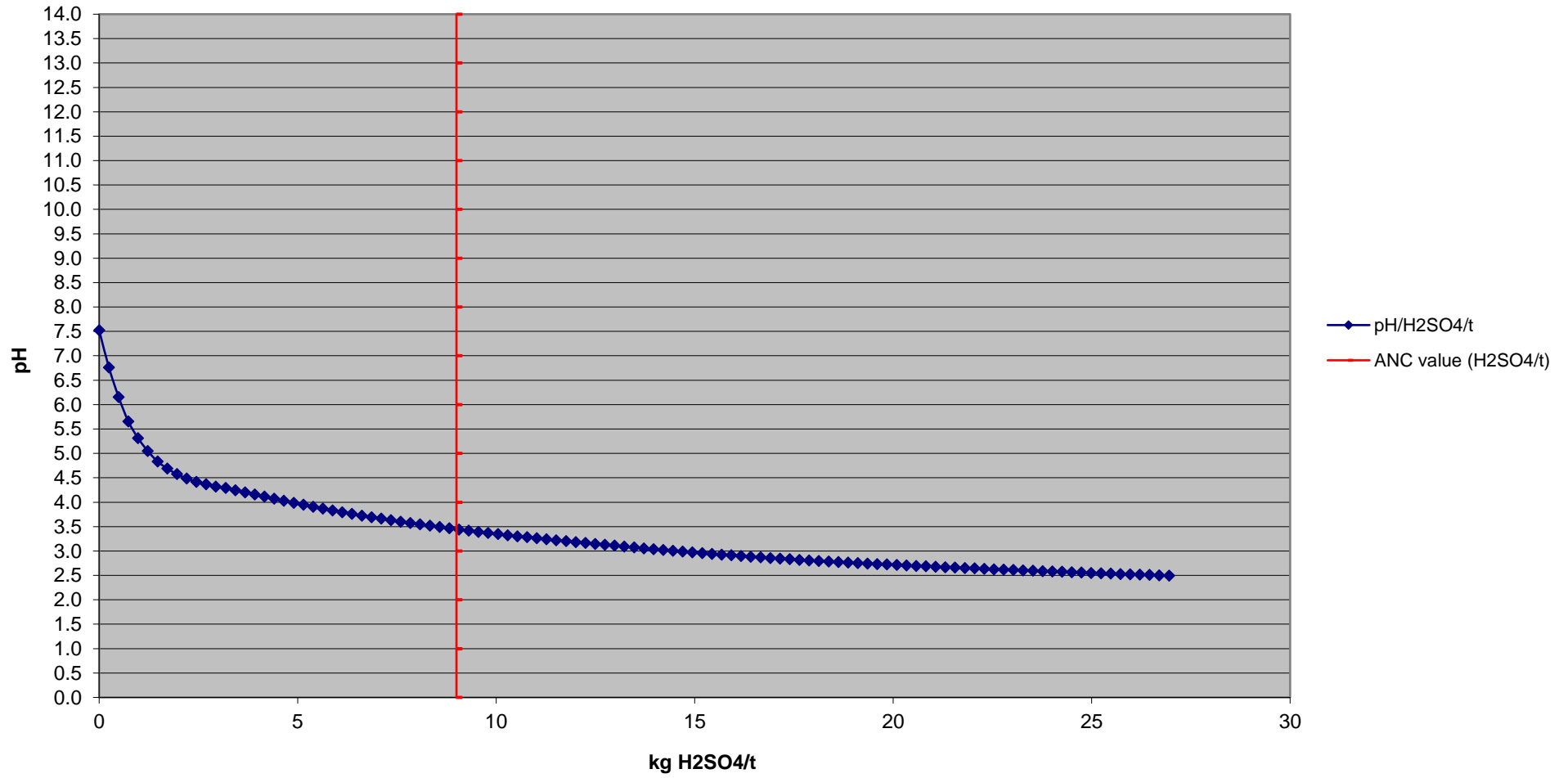
EP2408625 - 073 and Check 073 (TBRC19884)

Acid Buffering Characteristic Curve

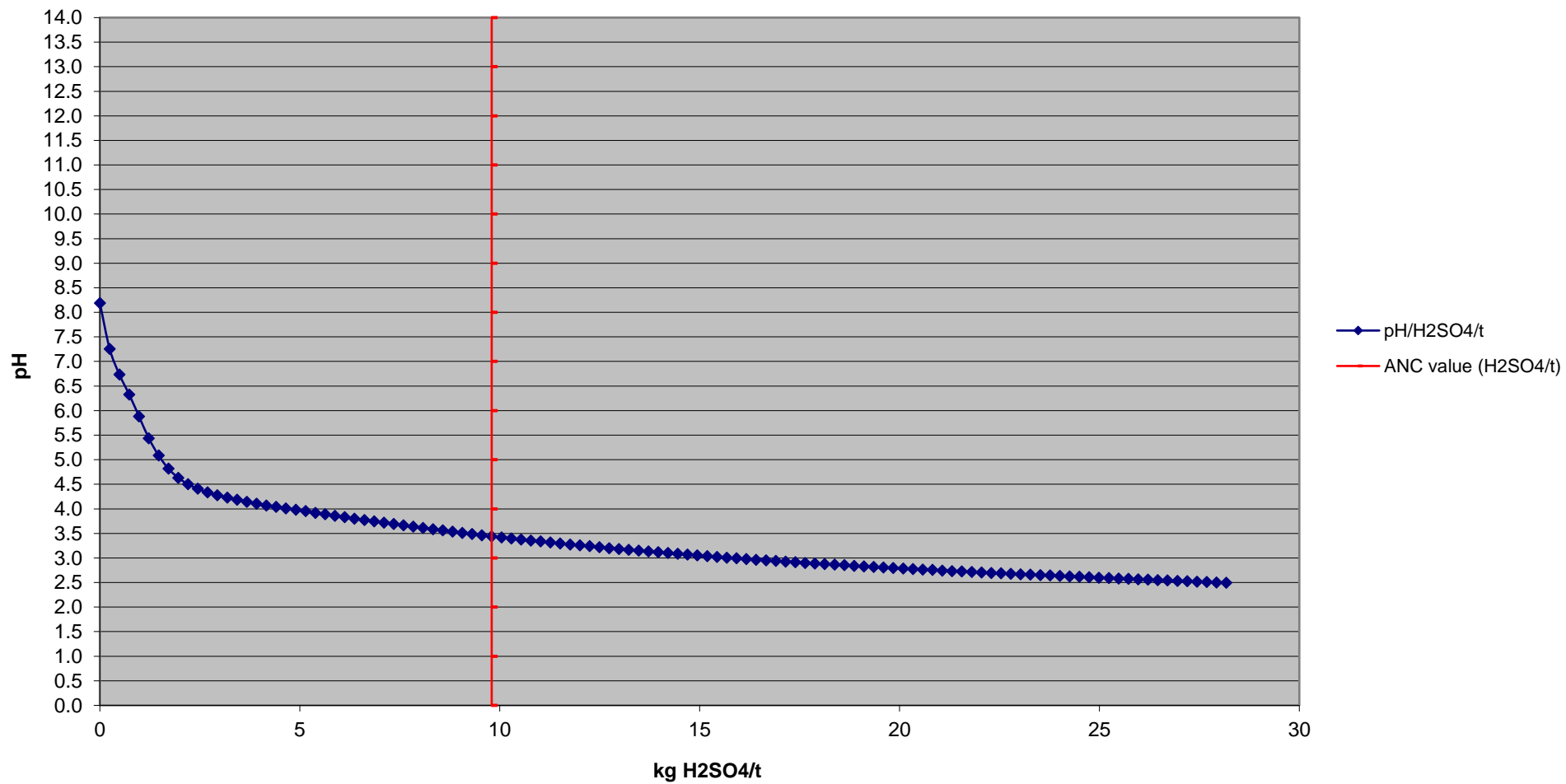
Titrating with 0.1M HCl, in increments of 0.2 mLs every 1000 seconds



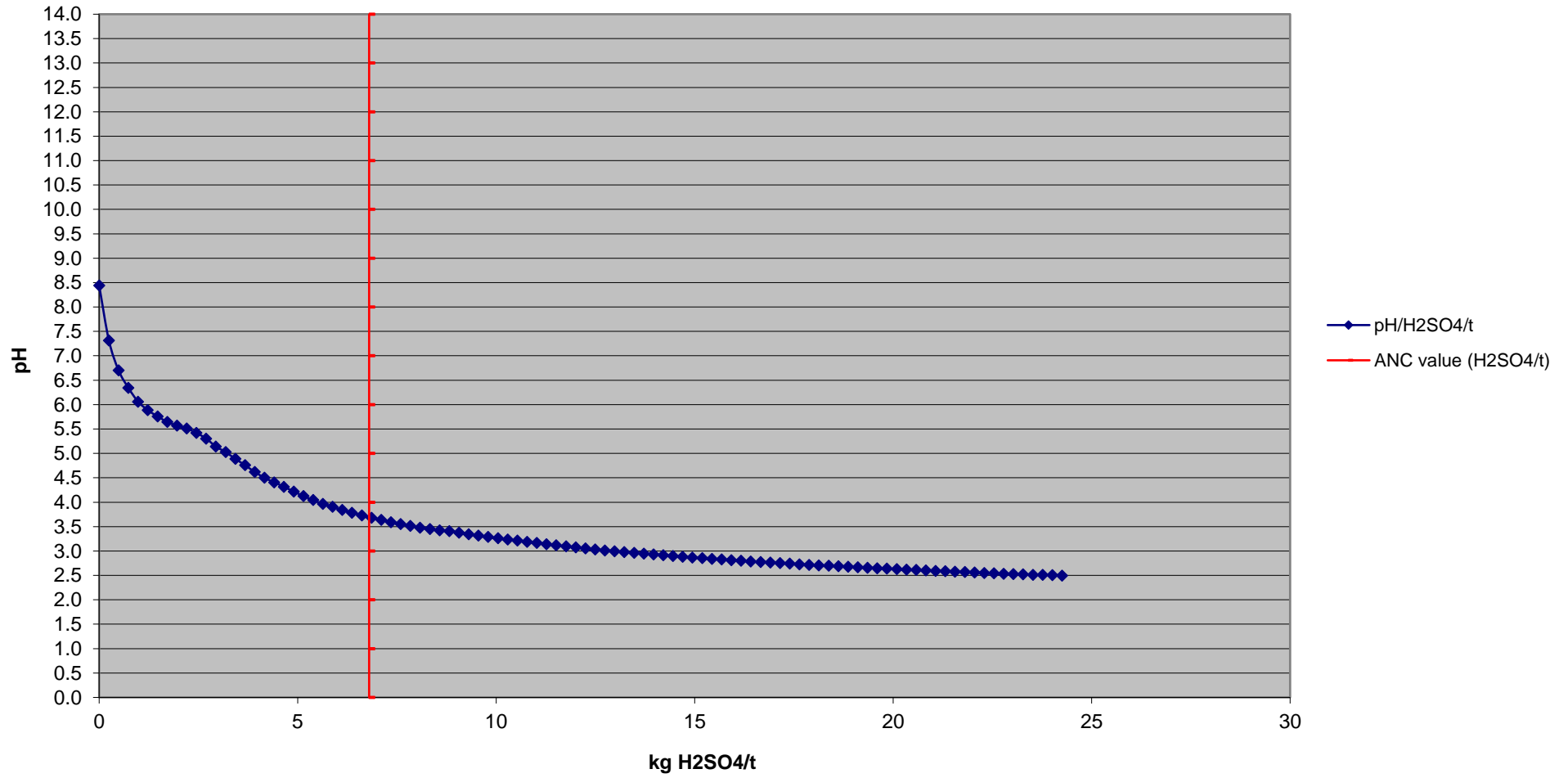
EP2408625 - 079 (TBRC24012)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



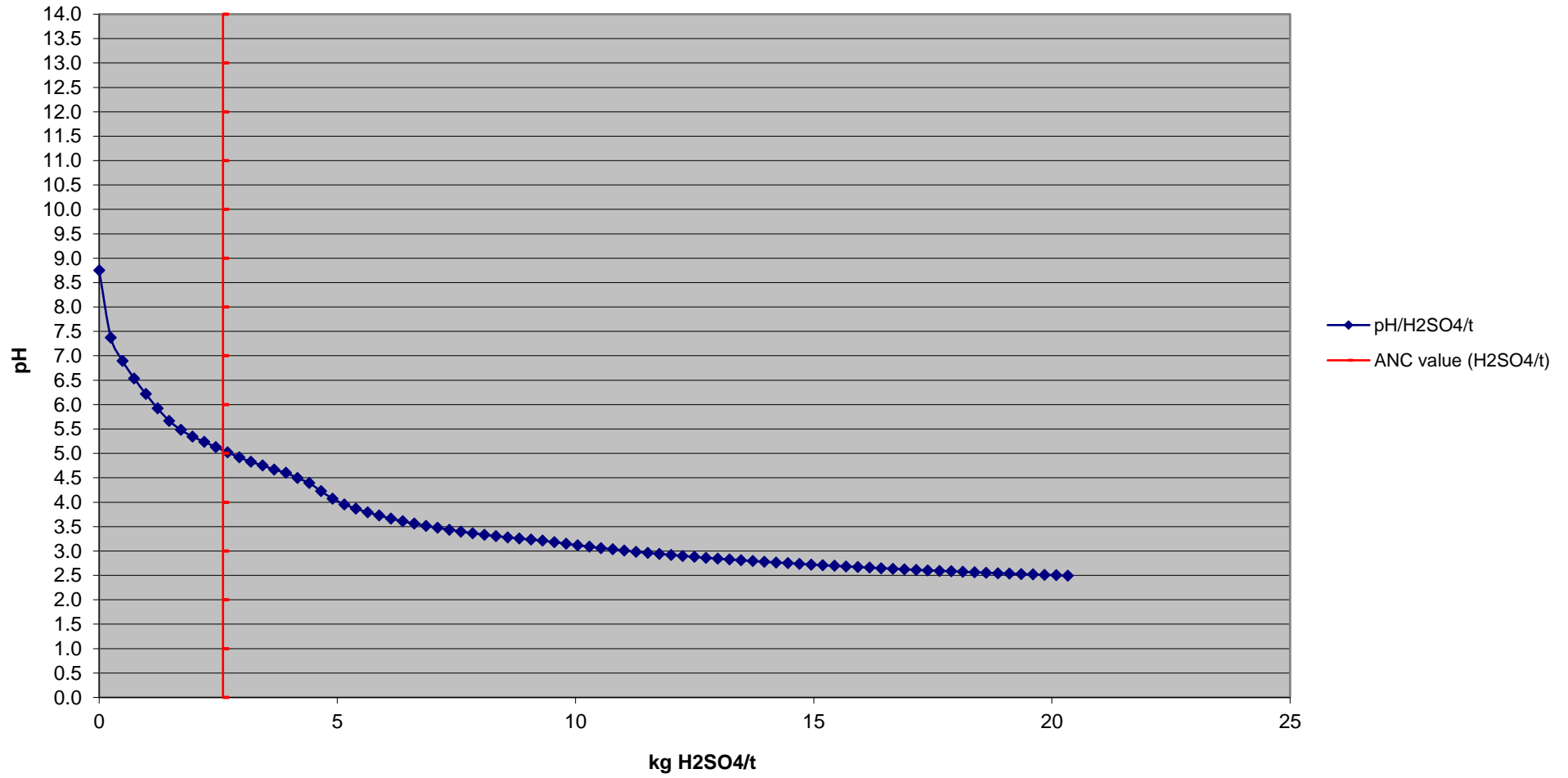
EP2408625 - 091 (TBRC25164)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP2408625 - 096 (TBRC26347)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



EP2408625 - 098 (TBRC26586)
Acid Buffering Characteristic Curve
Titrating with 0.1M HCl, in increments of 0.1 mLs every 1000 seconds



APPENDIX F LIMITATIONS

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**MINE WASTE
MANAGEMENT**

GREENROAD GROUP