



MINISTER FOR THE ENVIRONMENT WESTERN AUSTRALIA

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**RARE EARTH PROJECT, 4 KM SOUTH OF ALCOA ALUMINA REFINERY
AND NEXT TO GALLIUM PLANT, PINJARRA (954)**

RHÔNE-POULENC CHIMIE AUSTRALIA PTY LTD

This proposal may be implemented subject to the following conditions:

1 Proponent Commitments

The proponent has made a number of environmental management commitments in order to protect the environment.

- 1-1 In implementing the proposal, the proponent shall fulfil the relevant environmental management commitments made in the Environmental Review and Management Programme document "Rare Earth Project, Pinjarra, Western Australia" (September 1995) which was reported on in Environmental Protection Authority Bulletin 810, as modified in response to issues raised following public submissions and subsequently; provided that the commitments are not inconsistent with the conditions or procedures contained in this statement.

The environmental management commitments, published in Environmental Protection Authority Bulletin 810 (Appendix 7), as subsequently modified on 12 June 1996, are attached.

2 Implementation

Changes to the proposal which are not substantial may be carried out with the approval of the Minister for the Environment.

- 2-1 Subject to these conditions, the manner of detailed implementation of the proposal shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal.
- 2-2 Where, in the course of the detailed implementation referred to in condition 2-1, the proponent seeks to change the designs, specifications, plans or other technical material submitted to the Environmental Protection Authority in any way that the Minister for the Environment determines, on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

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3 Proponent

These conditions legally apply to the nominated proponent.

- 3-1 No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

4 Transport Options

- 4-1 Prior to any transport of radioactive wastes, the proponent shall carry out and report on a comparative study of road versus rail transport of wastes, examining all aspects of the transport of the wastes, in liaison with the Department of Transport, Main Roads WA, Westrail, the Radiological Council, the Shire of Murray and the Explosives and Dangerous Goods Division of the Department of Minerals and Energy, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The comparative study shall include consideration of, but not be limited to the following:

- 1 public risk;
 - 2 public concern;
 - 3 need for rail modifications;
 - 4 transport handling facilities;
 - 5 occupational exposure, and
 - 6 transportation routes.
- 4-2 Prior to submission of the report required by condition 4-1, the proponent shall make the report available for public consideration and comment for a period of not less than four weeks.

The public submissions and their consideration by the proponent shall be included in the report to the Minister for the Environment.

- 4-3 The proponent shall only transport radioactive wastes after completion of the comparative study required by condition 4-1 and to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority, the Department of Transport, the Radiological Council and the Explosives and Dangerous Goods Division of the Department of Minerals and Energy.

5 Gangue Waste

- 5-1 Prior to any transport of radioactive wastes, the proponent shall investigate and report on modification of the gangue waste to reduce its dispersion in water to a practical minimum.

The investigation of the dispersion of gangue waste in water shall include, but not be limited to the following:

- 1 Development of criteria for acceptable dispersion in water;

- 2 Investigation of alternative methods of modification to reduce dispersion;
- 3 Testing of alternative methods; and
- 4 Analysis of options available.

The modification process is to be acceptable to the Minister for the Environment on advice of the Environmental Protection Authority and shall form part of the Radiation Management Plan (See proponent's commitment no. 21).

- 5-2 The proponent shall only transport gangue waste as referred to in condition 5-1 and to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

6 Surface and Ground Water Monitoring Programmes

- 6-1 Prior to plant construction, the proponent shall develop a pre-operational monitoring programme (stage 1) for surface and ground water, including quality assurance procedures, to the requirements of the Environmental Protection Authority on advice of the Radiological Council, the Department of Minerals and Energy, the Water and Rivers Commission, the Shire of Murray and the Department of Environmental Protection.
- 6-2 Prior to plant commissioning, the proponent shall develop an operational monitoring programme (stage 2) for surface and ground water, including quality assurance procedures, to the requirements of the Environmental Protection Authority on advice of the Radiological Council, the Department of Minerals and Energy, the Water and Rivers Commission, the Shire of Murray and the Department of Environmental Protection.
- 6-3 At appropriate times, the proponent shall implement the two monitoring programmes required by conditions 6-1 and 6-2.

7 Decommissioning

- 7-1 The proponent shall achieve the satisfactory decommissioning of the plant, removal of the plant and installations and rehabilitation of the site and its environs.
- 7-2 At least twelve months prior to decommissioning, the proponent shall prepare a decommissioning and rehabilitation plan to achieve the objectives of condition 7-1, to the requirements of the Environmental Protection Authority on advice of the Radiological Council, the Department of Minerals and Energy, the Shire of Murray and the Water and Rivers Commission.

This plan shall include detailed procedures for decontamination and disposal of radioactive contaminated materials, and rehabilitation of the evaporation ponds.

- 7-3 The proponent shall implement the plan required by condition 7-2.

8 Time Limit on Approval

The environmental approval for the proposal is limited.

- 8-1 If the proponent has not substantially commenced the project within five years of the date of this statement, then the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment shall determine any question as to whether the project has been substantially commenced.

Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period to the Minister for the Environment.

Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Department of Environmental Protection that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years.

9 Performance Review

9-1 Following commencement of operation, the proponent shall carry out an annual audit of environmental performance. The proponent shall provide the audit report to the Department of Environmental Protection each year for the first five years of the operation.

9-2 Each five years following the commencement of construction, the proponent shall prepare a major review of the following:

- 1 environmental protection, including but not limited to consideration of the environmental objectives;
- 2 the audit of performance against the environmental objectives;
- 3 the audit of performance of the Radiation Management Plan (commitment 21) and the surface and ground water monitoring programmes (condition 6); and
- 4 the annual audits required by condition 9-1,

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Radiological Council, the Department of Minerals and Energy and the Water and Rivers Commission.

These environmental objectives shall include but not be limited to those identified by the Environmental Protection Authority in the assessment report (Environmental Protection Authority Bulletin 810) and account for operating experience and new knowledge.

The environmental objectives may be changed by the Environmental Protection Authority following the review.

10 Compliance Auditing

To help determine environmental performance, periodic reports on progress in implementation of the proposal are required.

10-1 The proponent shall submit periodic Performance and Compliance Reports, in accordance with an audit programme prepared by the Department of Environmental Protection in consultation with the proponent.

Procedure

- 1 Unless otherwise specified, the Department of Environmental Protection is responsible for assessing compliance with the conditions contained in this statement and for issuing formal clearance of conditions.
- 2 Where compliance with any condition is in dispute, the matter will be determined by the Minister for the Environment.
- 3 The Environmental Protection Authority will undertake a detailed review of the proposal and the results of the Radiation Management Plan and the surface and ground water monitoring programmes referred to in condition 9-2(3) after the first five years following commencement of construction.
- 4 The Shire of Murray will negotiate with the proponent to ensure that adequate provision for rehabilitation is made.

Note

The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the Environmental Protection Act.

Hon Peter Foss QC MLC
MINISTER FOR THE ENVIRONMENT

- 4 SEP 1996

Proponent's Environmental Management Commitments

12 June 1996

**RARE EARTH PROJECT, 4 KM SOUTH OF ALCOA ALUMINA
REFINERY AND NEXT TO GALLIUM PLANT, PINJARRA (954)**

RHÔNE-POULENC CHIMIE AUSTRALIA PTY LTD

PROPONENT'S CONSOLIDATED LIST OF COMMITMENTS (954)

During the preparation of the Response to Submissions, the proponent thought it appropriate to modify and expand its List of Commitments presented in the ERMP (Section 8.0) to ensure all of the issues raised in the submissions will be managed in an environmentally acceptable manner. The consolidated List of Commitments is as follows:

1. During all phases of the project, the Proponent will comply with all applicable standards and regulations pertaining to and appropriate for a chemical and mineral processing plant and for waste disposal.
2. The Proponent will transport the low level radioactive gangue residue in compliance with the Code of Practice for the Safe Transport of Radioactive Substances (1990) and will develop an Emergency Response Plan, prior to any transport of the waste, to deal with an accident.
3. The Proponent will prepare an emergency response plan for the transport of the low level radioactive gangue residue, outlining the emergency and clean-up procedures in the event of an accident, in consultation with the DEP, the DME, the WAFBB and the Radiological Council.
4. The Proponent will ensure that drivers attend approved Driver Training Courses including specific training for the transport of radioactive materials prior to any transport of waste materials.

Refresher courses will be conducted at least yearly.

This will be a condition of contract with the transport operators.

The companies transporting radioactive material shall, under the Radiation Safety Act, 1975-1981, hold an appropriate licence.

5. The Proponent will liaise with all relevant Government agencies, local authorities and emergency response groups along the proposed gangue residue transport route, prior to any transport of waste materials, to ensure there are appropriate emergency response management measures in place, including adherence to designated road routes.

The proponent is prepared to provide any specialised equipment necessary for emergency or spillage clean-up operations, which will be included in the inventory of items to be provided by Rhône-Poulenc's emergency response team.

6. Emergency Management Teams and Field Response Teams will be trained in emergency response and clean-up procedures, prior to the transportation of waste and with refresher courses conducted yearly.

Training will be funded and co-ordinated by the Proponent.

7. A shipment manifest for each load will be prepared prior to disposal operations in accordance with the Code of Practice for the Safe Transport of Radioactive Substance (1990) by the Proponent detailing the following information:
 - 1 waste specification;
 - 2 transport identification;
 - 3 waste description;
 - 4 approval certificate; and
 - 5 declaration.

The specific manifest will accompany each truck load of gangue residue.

8. If the waste delivered to the IWDF is found to not meet the required specifications it will be returned to the plant for reprocessing.

The Proponent will investigate and identify the reason for non-compliance and modify procedures to minimize the risk of repeating such non-compliance.

9. The Proponent will dispose of all process and non-process wastes in an environmentally acceptable manner and in accordance with licensing and other requirements from the DEP, the DME, the Water and Rivers Commission and the Radiological Council throughout the life of the project.
10. Any additional ponds required for the project will be constructed by the Proponent according to the design standard approved by the DEP and the Water and Rivers Commission.
11. To ensure that there will be no significant radionuclide disposed in the ponds, all effluents to the ponds will be analysed to determine if there are any traces of radionuclides and to ensure these levels are below the levels acceptable to the DME, the Radiological Council, the Water and Rivers Commission and the DEP.
12. The existing evaporation pond and groundwater monitoring systems have been approved by the DEP and the Water and Rivers Commission. The monitoring bores have been and will continue to be monitored by the Proponent for both groundwater level and groundwater quality on a routine basis.

The evaporation ponds and underdrainage sumps will also be monitored for level and quality.

The results of the monitoring will be made available to the DEP at a frequency to be determined.

If results indicate that leakage from the ponds is entering the groundwater under the site, the DEP will be notified immediately.

13. The RMP prepared by the Proponent will include a monitoring programme to determine the content of radionuclides in groundwater, surface water, effluents to the ponds and water in the ponds.
14. The Proponent will provide further information to the Water and Rivers Commission prior to plant commissioning, on the integrity of the evaporation ponds and the potential impacts on groundwater quality, and on water storage, drainage and water courses in the vicinity of the site.
15. The Proponent will implement contingency plans should there be any leakage from the ponds throughout the life of the project and remediation procedures will be undertaken.
16. The Proponent will fund, in agreement with the State Government, the following aspects of waste disposal operations:
 - 1 planning of site operations with respect to Rhône-Poulenc's waste;
 - 2 disposal costs;
 - 3 backfilling and rehabilitation of the trench area;
 - 4 monitoring of the disposal operations of Rhône-Poulenc's waste;
 - 5 contribute to long term monitoring at the IWDF site;
 - 6 contribute, together with other users of the road, to the maintenance of the IWDF access road;
 - 7 a provision for maintenance and any costs of remedial work necessary in the first five years after a disposal operation; and
 - 8 the proportion of salaries and overheads for agreed Government management staff and site management contractors in relation to disposal of Rhône-Poulenc's gangue residue, including a proportion of out-of-pocket expenses related to the involvement of Government staff on the technical committee.
17. Gangue waste disposal operations including transport will be subject to an annual audit in accordance with the Code of Practice for the Near-Surface Disposal of Radioactive Waste (NHMRC, 1992). The auditor will be selected by the Government to the satisfaction of the Radiological Council.
18. The Proponent will comply with the requirements of the applicable legislation and codes of practice relating to radiation protection.
19. Details on final plant design will be made available to the DME on completion of design.
20. The Proponent is committed to the ALARA principle (that radiation dose be kept as low as reasonably achievable, economic and social factors being taken into account) in accordance with DME and the Radiological Council regulations.

21. A comprehensive Radiation Management Plan (RMP) will be prepared by the Proponent for the Rare Earth Plant and its environment and submitted for approval from the DME, the DEP and the Radiological Council prior to commencement of operations. The RMP will include pre-operational, operational and post-operational monitoring for:
 - 1 gamma radiation;
 - 2 radon flux; and
 - 3 radionuclides in air, water, soil and sediment.

22. The Proponent will implement the following strategies for the radiation protection of plant personnel:
 - 1 Controlled areas will be established to include the monazite handling and storage facilities, filtering stages, purification area and residue handling/transport/disposal facilities and areas.
 - 2 Handling of potential dust generators (monazite and residue) will be minimized to reduce air contamination; in particular, wet milling of monazite and disposal of residue in moist form will be undertaken.
 - 3 Adequate ventilation will ensure that radon and thoron daughter levels are maintained within acceptable levels.
 - 4 Supervised areas and appropriate procedures will be established to limit access by members of the public to the plant site.
 - 5 Where necessary, equipment containing bulk quantities of radioactive material will be shielded to reduce exposure rates.
 - 6 Equipment in controlled areas will be selected and designed for reliable operation and ease of maintenance.
 - 7 Floor surfaces in controlled areas will be non-absorbent and designed for reliable operation and ease of maintenance.
 - 8 Facilities will be provided for easy washing of floors and equipment. All washings will be returned to the process via floor sumps or the purpose designed wastewater treatment plant.
 - 9 Designated staff will be trained in radiation protection practices.
 - 10 Protective equipment and clothing will be issued to workers, where required. Such workers will be fully trained in the use of this equipment.
 - 11 Special clothing worn by plant operators will be laundered on-site with changerooms specially designed to allow work clothing to remain on-site.

23. Prior to commissioning of the plant, a comprehensive survey of the existing radiation environment at the Pinjarra site will be conducted by the Proponent as required by the DME and the Radiological Council.

24. The Proponent will implement a comprehensive monitoring and health surveillance programme for Rare Earth Plant personnel according to the requirements of the DME and the Radiological Council.

25. The Proponent will establish an operational dose constraint for plant personnel of 10mSv/yr to be agreed upon with the DME and the Radiological Council.

Should any other worker exceed this dose constraint, on a pro rata basis, the circumstances relating to that exposure will be investigated and measures taken to ensure that the dose to an individual of 10mSv in any one year will not be exceeded.

26. Monitoring of radiation levels by the Proponent will continue over the life of the project.

Reporting of radiation monitoring data and record keeping will be undertaken by the Proponent in accordance with the applicable legislation of the DME and the Radiological Council.

27. Radiation protection assessments given in the ERMP will be verified by the Proponent during plant commissioning, to the satisfaction of the DEP, the DME and the Radiological Council.

28. An operational dose constraint of 2mSv/yr will be established by the Proponent, in agreement with the Radiological Council for drivers transporting the gangue residue.

Should a driver exceed this dose constraint on a pro rata basis, the circumstances relating to that exposure will be investigated and measures taken to ensure that the dose to an individual driver of 2mSv in any one year will not be exceeded.

29. Plant and employee safety will be maximized by the Proponent ensuring that the storage and handling of hazardous materials such as process chemicals is in accordance with the relevant statutory standards and codes.

30. Construction activities at the plant site will be undertaken in accordance with the statutory requirements and appropriate management techniques will be implemented to ensure that noise levels are within acceptable limits.

31. The proponent will conduct modelling of noise emissions from plant operation and construction and submit the results to the DEP at least one month before commencing the plant construction.

The proponent will conduct plant noise surveys (including baseline measurements) in consultation with the DEP, and will provide a report to the DEP detailing measurements and assessments made (including the impact of tonal noise) to confirm compliance with acceptable limits, within three months of the commissioning of the plant.

Appropriate actions will be taken by the Proponent to rectify any noise problems should levels exceed those in noise regulations and to reduce noise levels to meet those specified in the DEP regulations.

Appropriate management procedures will be implemented to ensure that construction noise levels are within acceptable limits, and that noise impacts from heavy vehicles associated with the project are minimized.

32. The Proponent will implement management procedures to ensure impacts from transport of materials, including noise impacts from heavy vehicles, are minimized.

Management procedures will include the restriction of truck movements wherever practical to Monday to Friday business hours and to outside peak traffic and school bus time, and the use of contractors whose trucks comply with the Australian Design Rule noise emissions.

33. The Proponent is committed to achieving certification of ISO 9002 for both the Rare Earth and Gallium Plants and will operate a quality assured system.
34. The Proponent endorses the concept of a Community Liaison Committee which will encourage the active involvement of local residents and the Shire of Murray officials in the monitoring process at the Pinjarra plant site.
35. The Proponent will liaise with the Mt Walton Community Liaison Committee, local Shires and interest groups on the transport, disposal, safety and environmental issues relating to the low level radioactive gangue residue.
36. The Proponent will liaise with the WA Tourism Commission, Pinjarra tourism operators, the Murray Shire Council and local agricultural industry to clarify the "perception" regarding radiation.
37. The Proponent will ensure that the best practicable technology is applied throughout the life of the project where best practicable technology is defined in Clause 1(3) of the Radioactive Waste Management (Mining and Milling) Code (1982) as:

"that technology, from time to time relevant to a specific project, which enables radioactive wastes to be managed so as to minimise radiological risks and detriment to people and the environment, having regard to:

- (a) the achievable levels of effluent control and the extent to which pollution and degradation of the environment is minimised or prevented in comparable mining and milling operations elsewhere;*
- (b) the cost of the application or adoption of that technology relative to the degree of radiological and environmental protection expected to be achieved by its application or adoption;*
- (c) evidence of detriment or lack of detriment to the environment after the commencement of mining or milling operations;*
- (d) the location of the mine or mill;*

- (e) *the age of the equipment and facilities in use for mining and milling purposes and their relative effectiveness in achieving radiological and environmental protection; and*
- (f) *the potential hazards from the wastes over the long term".*

38. In addition to complying with the requirements of the Radiation Protection (Mining and Milling) Code (1987), the Radioactive Waste Management (Mining and Milling) Code (1982) and the Code for Disposal (NHMRC, 1992), the Proponent will meet any future changes in these (and other relevant) standards throughout the life of the project.
39. The Proponent will prepare reports detailing the environmental management and performance of the plant which will be submitted to the DEP for review at least every five years.
40. Decommissioning by the Proponent will be undertaken in accordance with statutory requirements in force at the time and in a manner acceptable to the Minister for the Environment.
41. The RMP prepared by the Proponent will include procedures to be approved by the DME and the Radiological Council, for decontamination of radioactive components of the plant and post-operational monitoring.
42. Upon decommissioning, the Proponent will ensure all free water is evaporated from the ponds prior to placing materials over the ponds.

All aspects of rehabilitation of the ponds will be investigated at the time of decommissioning, including the design of the cover material.

Pond rehabilitation will be developed and designed to the satisfaction of the Minister for the Environment.