Ass # 1051
Bull # 835
State # 445

MINISTER FOR THE ENVIRONMENT;
EMPLOYMENT AND TRAINING

STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL (PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE ENVIRONMENTAL PROTECTION ACT 1986)

PROPOSAL:	NICKEL-COBALT ORE MINING & PROCESSING (FIRST PROPOSAL) MURRIN MURRIN 60 KM EAST OF LEONORA (992/1051)
CURRENT PROPONENT:	ANACONDA NICKEL NL
CONDITIONS SET ON:	5 JUNE 1996

The implementation of this proposal is now subject to the following conditions which replace all previous 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 reported on in Environmental Protection Authority Bulletins 816 and 835, the proponent shall fulfil the commitments made in the Consultative Environmental Review and Section 46 Review of September 1996 and subsequently ("commitments of October 1996"), and additionally, the "Supplementary Commitments" made by virtue of the agreement between the proponent and the Aboriginal Legal Service of Western Australia (Inc) of 24 April 1997; provided that the commitments are not inconsistent with the conditions or procedures contained in this statement.

In the event of any inconsistency between the commitments and the conditions and procedures, the conditions and procedures shall prevail to the extent of the inconsistency.

In the event of any inconsistency between the Supplementary Commitments and the commitments of October 1996, the Supplementary Commitments shall prevail to the extent of the inconsistency.

Copies of the consolidated environmental management commitments of October 1996 and the Supplementary Commitments of 24 April 1997 are attached.

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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.

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 Rare Flora

Declared Rare Flora should be managed within the project area so that no significant loss of the species occurs.

4-1 Prior to construction, the proponent shall prepare a plan for the conservation and management of *Hemigenia exilis* within the project area, to the requirements of the Department of Conservation and Land Management.

4-2 The proponent shall implement the plan required by condition 4-1 to the requirements of the Department of Conservation and Land Management.

5 Greenhouse Gas Emissions

Greenhouse gas emissions should be addressed in the Environmental Management Plan.

5-1 At appropriate times, the proponent shall address, in the Environmental Management Plan to be prepared under commitment 1, the following additional matters relating to greenhouse gas emissions:

1 calculation of the greenhouse gas emissions associated with the proposal (using the generally accepted methods);

2 indication of the measures adopted to limit greenhouse gas emissions for the project; and

3 estimation of the greenhouse gas efficiency of this project (per unit of product and/or other agreed performance indicators) and comparison with the efficiencies of other comparable projects producing a similar product;

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

5-2 The proponent shall consider entry (whether on a project-specific basis, company-wide arrangement or within an industrial grouping, as appropriate) into the Commonwealth Government's "Greenhouse Challenge" voluntary co-operative agreement programme.

The agreement would include an inventory of emissions; opportunities for abating greenhouse gas emissions in the organisation; a greenhouse gas mitigation action plan; regular monitoring and reporting of performance; and independent performance verification.

6 Decommissioning

The satisfactory decommissioning of the project, removal of plant and installations and rehabilitation of the site and its environs is the responsibility of the proponent.

6-1 Within five years following commissioning, or at such later time considered appropriate by the Minister for the Environment on advice of the Department of Environmental Protection, the proponent shall prepare a plan which:

1 describes the process for the decommissioning and rehabilitation of the project area;
2 provides for the long term management of ground and surface water systems affected by the tailings disposal area and evaporation pond area; and

3 provides for the development of a 'walk away' solution for the decommissioned mine pits, the process plant, the tailings dam and the evaporation pond and all associated infrastructure,

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Minerals and Energy, the Water and Rivers Commission and the Department of Conservation and Land Management.

Note: A 'walk away' solution means that the site shall either no longer require management at the time the proponent ceases operations, or if further management is deemed necessary, the proponent shall make adequate provision so that the required management is undertaken with no liability to the State.

6-2 The proponent shall implement the plan required by condition 6-1.

7 Time Limit on Approval

The environmental approval for the proposal is limited.

7-1 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 the statement of 5 June 1996 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.

8 **Compliance Auditing**
To help determine environmental performance and compliance with the conditions, periodic reports on the implementation of the proposal are required.

8-1 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.

Note

1 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.

2 Alternative site options have already been assessed for nickel-cobalt ore mining and processing at Murrin Murrin (Assessment No. 1038).

CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

- 5 MAY 1997

Proponent's Environmental Management Commitments

October 1996

NICKEL-COBALT ORE MINING & PROCESSING (FIRST PROPOSAL) MURRIN MURRIN, 60 KM EAST OF LEONORA (992/1051)

ANACONDA NICKEL NL

Supplementary Environmental Management Commitments and Proponent's letter re Negotiations with the Appellant

24 April 1997

NICKEL-COBALT ORE MINING & PROCESSING (FIRST PROPOSAL) MURRIN MURRIN, 60 KM EAST OF LEONORA (992/1051)

ANACONDA NICKEL NL

Issue	Objective	Commitment	Timing (Phase)	To Whose Satisfaction	Performance Indicator (if any exist)
Operation Risks	To minimise the risks associated with plant operations	Commitment 17 The following commitments are made relating to the plant operations: • hazardous chemicals and fuel storage areas will be bunded, and constructed in accordance with AS 1940 - 1933; • systems will be installed (either as procedures or by design) that would ensure shutdown following a release of either hydrogen or natural gas; • rigorous procedures will be in place to prevent air ingress into vessels containing either natural gas or hydrogen, at either plant start-up or shutdown; • the flare exhaust stack will be sited such that there is no potential for off-site thermal radiation effects and at a height sufficient to ensure adequate dispersion of toxic emissions; and • a hazard and operability study (HAZOP) will be conducted during the detailed design of the plant processing facilities.	Operations phase	EPA and DME	Compliance with statutory requirements
Fauna	To ensure that adequate information is available for the purposes of managing the Project, workforce education and workforce induction	Commitment 18 The Proponent will undertake additional fauna studies to ensure that adequate information is available for the purposes of managing the Project as well as educating the workforce. The scope of these studies will be determined prior to the commencement of the construction phase in consultation with the DEP and CALM, and will be undertaken to meet the requirements of the EPA.	Prior to the commencement of the construction phase	EPA	To be agreed with CALM and DEP
Atmospheric Emissions	To ensure that atmospheric emissions comply with specified criteria	Commitment 19 The Proponent will specify emissions criteria in tender documents for the supply of equipment for the Plant. Compliance testing will be carried out by the Proponent during the commissioning of the Plant to confirm that the emissions from plant equipment are within the specified limits. This commitment will be implemented to meet the requirements of the EPA.	Pre-construction, construction and plant commissioning phases.	EPA	To be agreed with the DEP
Waste disposal facilities - report	To provide the EPA with a review of the operations of the tailings disposal facility.	Commitment 20 The Proponent will report on the development of the Disposal Facilities (tailings dams, gypsum dams and evaporation pond) to the EPA after five years of operation of the facility. This, and subsequent reporting requirements, will be described within the Project's EMS.	Operations phase (after five years of operation)	EPA	

Note: (1) Commitments 12, 13 and 14 have been modified to include the gypsum dams (see Section 6.13.2).

Issue	Objective	Commitment	Timing (Phase)	To Whose Satisfaction	Performance Indicator (if any exist)
Overburden waste dumps	To ensure that the final overburden dumps are stable and support a self-sustaining ecosystem	Commitment 11 The Proponent will design and operate the overburden waste dumps such that they are stable and resistant to erosion, to the satisfaction of the EPA and DME.	Operations and decommissioning phases	EPA, DME	DME Guidelines
Tailings dams	To design, construct and operate an environmentally sound tailings dams	Commitment 12[1] The Proponent will design and operate the tailings dams, gypsum dams and evaporation pond in accordance with the requirements of the EPA and DME to ensure that the tailings dams and evaporation pond do not result in unacceptable impacts to the existing groundwater regime. The tailings dams, gypsum dams and evaporation pond will be treated to minimise permeability, if required.	Pre-construction, construction and operations phase	EPA, DME	DME Guidelines for Tailings Storage Facilities
Design of the solid and liquid waste disposal facilities	To ensure that the integrity of the solid and liquid waste disposal facilities	Commitment 13[1] Prior to the construction and operation of the tailings dams, gypsum dams and the evaporation pond, the Proponent will undertake the following: • A more detailed assessment of tailings solids and liquids geochemistry, including predicted compositions relevant to environmental guidelines and standards. This assessment will focus on Total Dissolved Solids , major ions and metals (via an elemental analysis). • An assessment of the predicted particle form and geotechnical characteristics of the tailings, including settling characteristics, and settled and compacted permeabilities. • A more detailed evaluation of potential alternative tailings disposal options, including provision for the re-examination of the in-pit disposal option five years after the commencement of operations. • A modelled feasibility assessment for the treatment of the tailings dam floor to achieve consistently low permeability to prevent excess seepage, depending on the predicted tailings permeability. The acceptable permeability rate will be assessed on the basis of the predicted seepage rate and effects on the groundwater. • A detailed investigation of the hydrogeology of the tailings dams and evaporation ponds sites to assess the depth to groundwater ('perched' or otherwise), aquifer characteristics, groundwater flow rates, and groundwater quality. The potential rise in groundwater levels and the dilution rates for seepage from these facilities will then be assessed, and predictions made regarding the resultant quality of the underlying groundwater and the requirement to decrease the permeability of the tailings dams to prevent unacceptable environmental impacts. This work will be undertaken to meet the requirements of the EPA, DME and WRC.	Pre-construction	EPA, DME, WRC	Guidelines and criteria for the design of waste disposal facilities agreed with the DEP and DME
Groundwater monitoring	To monitor the impacts of the construction and operation of the waste disposal facilities on local groundwater resources	Commitment 14[1] The Proponent will design and install a groundwater monitoring programme up- and down-gradient of the tailings dams and the evaporation pond prior to the construction of these facilities. The monitoring programme will be designed and operated to the satisfaction of the DME, DEP and WRC.	Designed during the pre-construction phase. Ongoing implementation	EPA, DME, Water & Rivers Commission	ANZECC and NHMRC 1992 Guidelines
Pastoral activities	To minimise the impact on existing pastoral activities	Commitment 15 The Proponent will minimise the impact of the Project on pastoral activities and ensure that pastoral water supplies in the Project Area are maintained.	Ongoing	Pastoral lease holders, Water & Rivers Commission	Compliance with agreements with pastoral lease holders and Water & Rivers Commission Groundwater Well Licences
Aboriginal heritage	To avoid disturbance of Aboriginal sites	Commitment 16 The Proponent will comply with the provisions of the *Aboriginal Heritage Act* 1972-1980.	Ongoing	Department of Aboriginal Affairs	Compliance with the *Aboriginal Heritage Act* 1972-1980

SUMMARY OF PROPONENT'S ENVIRONMENTAL MANAGEMENT COMMITMENTS

Issue	Objective	Commitment	Timing (Phase)	To Whose Satisfaction	Performance Indicator (if any exist)
Environmental Management Programme	To develop and implement an Environmental Management Programme to ensure sound environmental management of the Project's construction phase	Commitment 1 Prior to commencement of the Project, the Proponent will prepare and implement an Environmental Management Programme for the construction phase, in consultation with the DEP, DME, CALM and other relevant agencies to meet the requirements of the EPA. Further, the Proponent will ensure that its contractors will comply with the environmental management strategies and procedures described in the EMP.	Developed in the pre-construction phase. Implemented during the construction phase.	Developed in consultation with the DEP, DME, CALM and other relevant agencies to meet the requirements of the EPA	To be agreed with the DMAs
Environmental Management System	To develop and implement an Environmental Management System to ensure sound environmental management of the Project's operations and decommissioning phase	Commitment 2 The Proponent will develop and implement an Environmental Management System for the operation of the Project prior to the start of operations. This EMS will be developed in consultation with the DEP, DME and CALM, and to the satisfaction of the EPA. Further, the Proponent will ensure that its contractors will comply with the environmental management strategies and procedures described in the EMS.	Developed in the construction phase. Ongoing implementation and review.	Developed in consultation with the DEP, DME and CALM to meet the requirements of the EPA	Compliance with the intent of Interim Australian Standard 14001
Protection of flora and vegetation	To minimise disturbance of the general flora and vegetation of the Project Area	Commitment 3 The Proponent will progressively rehabilitate disturbed areas to minimise disturbance of biological communities. The rehabilitation will be completed to the satisfaction of the EPA in accordance with the approved EMP and EMS.	Ongoing	EPA	Rehabilitation objectives (completion criteria) to be agreed with the DEP and DME
Protection of Declared Rare Flora	To minimise disturbance of known *Hemigenia exilis* populations within the Project Area, where possible	Commitment 4 The Proponent will undertake the construction, operation and decommissioning of the Project in a manner that minimises disturbance to *Hemigenia exilis* populations. The Proponent will also comply with the requirements of the ***Wildlife Conservation Act*** 1950. Further the Proponent will require its contractors to comply with this commitment. This will be undertaken to the satisfaction of the EPA and CALM, in accordance with the approved EMP and EMS.	Ongoing	EPA, CALM	Compliance with the *Wildlife Conservation Act* 1950
Erosion control	To minimise the risk of erosion and sedimentation	Commitment 5 The Proponent will minimise erosion by minimising the extent of land disturbance and progressively rehabilitating disturbed areas. This will be undertaken to the satisfaction of the EPA and DME in accordance with the approved EMP and EMS.	Ongoing	EPA, DME	Rehabilitation objectives (completion criteria) to be agreed with the DEP and DME
Potential water quality impacts due to surface runoff	To minimise the off-site transport of sediments	Commitment 6 The Proponent will minimise the off-site transport of sediments by minimising exposed surfaces, identifying and treating on-site areas prone to erosion and progressively rehabilitating disturbed areas. The Proponent will also undertake a water quality monitoring programme for Cement Creek and Katata Creek. These monitoring programmes will be developed and implemented to meet the requirements of the EPA, DME and WRC.	Ongoing	EPA, DME, Water & Rivers Commission	ANZECC and NHMRC 1992 Guidelines
Dust control - construction phase	To control any dust generated as a result of construction phase activities	Commitment 7 The Proponent will implement dust mitigation measures including containment and suppression during construction to the satisfaction of the EPA and DME.	Construction phase	EPA, DME	Compliance with Work's Approval Conditions
Dust control - operations phase	To minimise dust generation during the operations phase	Commitment 8 The Proponent will minimise dust generation during operation of the facility by the following measures: • regular cleaning of areas likely to accumulate dust; • sealing of major roadways within the processing plant; and • use of water sprays on mine areas, ore and calcrete haulage routes, stockpiles and other Project areas, as required. This programme will be completed to the satisfaction of the EPA and DME.	Operations phase	EPA, DME	Compliance with licence conditions and the *Mines Safety and Inspection Act* 1994
Greenhouse Gas Emissions	To comply with the State and Federal Government Greenhouse Policies	Commitment 9 The total carbon dioxide emission for the Project will be calculated by the Proponent on an annual basis and reported to the DEP.	Operations phase	EPA	
Noise	To minimise the impact of noise generated by the construction and operation of the Project	Commitment 10 The Proponent will ensure that noise from the Project will comply with the requirements of the ***Noise Abatement (Neighbourhood Annoyance) Regulations*** 1979. If noise levels attributable to the Project exceed EPA criteria, the Proponent will take measures to reduce the impact.	Construction and operations phase	EPA	*Noise Abatement (Neighbourhood Annoyance) Regulations* 1979