



Statement No.

000559

**MINISTER FOR THE ENVIRONMENT;
LABOUR RELATIONS**

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

MAGELLAN LEAD CARBONATE PROJECT, WILUNA

Proposal: The proposal includes development of an open-cut lead carbonate mine and processing facilities 30 kilometres west of the Wiluna townsite. A waste rock dump and tailings storage facility will be built adjacent to the mine.

Lead concentrate produced at the mine is suitable for further refining to lead metal or for road transport to the Geraldton Port where it would be exported. A gas fired power station and accommodation camp will be constructed to service the minesite. The mining operations will be supplied with water from a borefield south-east of the mine. The key characteristics of the proposal and figures showing the general arrangement of the minesite and monitoring sites are included in schedule 1 of this statement.

Proponent: Magellan Metals Pty Ltd

Proponent Address: Level 1, 161 Great Eastern Highway
Belmont WA 6104

Assessment Number: 1262

Report of the Environmental Protection Authority: Bulletin 996

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following procedures and conditions:

Procedures

1 Implementation

- 1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.
- 1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.
- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

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28 NOV 2000

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Proponent

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

4 Commencement

- 4-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.
- 4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.
- 4-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.
- 4-4 Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years for the substantial commencement of the proposal.

5 Compliance Auditing

- 5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.
- 5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal, written advice that the requirements have been met.
- 5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment.

Environmental Conditions

6 Health, Hygiene and Environmental Management Program

- 6-1 Prior to the commencement of ground-disturbing activities, the proponent shall prepare a Health, Hygiene and Environmental Management Program to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Minerals and Energy and the Health Department of Western Australia.

This program shall:

1. document standards, guidelines and codes of practice relating to the management of lead;
2. detail the education and training of the workforce so as to minimise exposure of personnel and identify areas of risk for lead exposure;
3. detail rules and procedures to be applied in mining, processing and storage areas at the Wiluna minesite to minimise disturbance of lead and ensure lead uptake by the environment is minimised;
4. detail the process that will be applied to ensure ongoing assessment of the risk of lead contamination, including monitoring, evaluation of health risks and determining control measures;
5. address the review of existing storage and shiploading facilities at the Geraldton Port that is to be conducted by the proponent prior to the existing facilities being used for lead concentrates. It is to include a review of equipment, procedures and monitoring programs to identify potential pathways for lead to enter the environment, and if appropriate additional equipment, management or revised procedures are to be determined;
6. address emergency response procedures to respond to spillage of lead concentrate along the transport route or at the Geraldton Port; and
7. address monitoring of fixed soil sampling, dust deposition and air quality sampling sites.

- 6-2 The proponent shall implement the Health, Hygiene and Environmental Management Program required by condition 6-1 until such time as the Minister for the Environment, on advice of the Environmental Protection Authority, determines that decommissioning and rehabilitation are complete.
- 6-3 The proponent shall make the Health, Hygiene and Environmental Management Program required by condition 6-1 publicly available, to the requirements of the Environmental Protection Authority.

7 Decommissioning and Rehabilitation Plan

- 7-1 Prior to the commencement of productive mining, the proponent shall prepare a Decommissioning and Rehabilitation Plan to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Minerals and Energy and the Water and Rivers Commission.

The objectives of this plan are:

- to render the minesite areas safe and stable; and
- to encourage the re-establishment of self-sustaining ecosystems.

This plan shall address:

1. removal or, if appropriate, retention of plant and infrastructure;
 2. intended final land use;
 3. landform design criteria for the mining pit, tailings storage facilities and waste rock dumps;
 4. proposed scheduling arrangements to ensure sufficient barren material remains at the end of mining to rehabilitate tailings storage facilities and the waste rock dump;
 5. recovery of rehabilitation resource materials, such as topsoils;
 6. a planning and recording mechanism to identify potential contaminated sites requiring future remedial action, such as fuel storage areas, tailings dams, former ore storage areas, hardstands and landfills;
 7. rehabilitation procedures;
 8. development of site-specific criteria for lead-contaminated soils;
 9. rehabilitation performance criteria, including demonstrating compliance with appropriate standards for lead contamination, soil stability and ecosystem establishment; and
 10. proposed monitoring program to demonstrate compliance with rehabilitation performance criteria.
- 7-2 The proponent shall implement the Decommissioning and Rehabilitation Plan required by condition 7-1 until such time as the Minister for the Environment, on advice of the Department of Environmental Protection, determines that decommissioning and rehabilitation are complete.

- 7-3 At least two years prior to the completion of mining, the proponent shall conduct a comprehensive review of the matters referred to in items 1-10 of condition 7-1, to determine if any additional planning, management measures or monitoring are required and to determine if the objectives of the approved plan have been met.
- 7-4 The proponent shall make the Decommissioning and Rehabilitation Plan required by condition 7-1 publicly available, to the requirements of the Environmental Protection Authority.

8 Subterranean Fauna (Stygofauna) Sampling Plan

- 8-1 Prior to the commencement of productive abstraction of groundwater, the proponent shall prepare a Subterranean Fauna (Stygofauna) Sampling Plan to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Western Australian Museum, the Department of Conservation and Land Management and the Water and Rivers Commission.

The objective of this plan is to increase scientific knowledge about subterranean fauna to assist in conservation of subterranean fauna species.

This plan shall address:

1. subterranean fauna surveys of the areas to be affected by dewatering operations and adjacent areas to assist in establishing the conservation significance of any species within the areas;
 2. an appropriate groundwater monitoring program to ensure that groundwater drawdown is monitored and related to rainfall and climatic data so as to determine if groundwater drawdown is being managed within the expected seasonal fluctuations of the aquifer;
 3. repeat subterranean fauna sampling of the aquifer to monitor the effects of groundwater abstraction; and
 4. specific measures to record and preserve biological information on any species collected in the project area.
- 8-2 The proponent shall implement the Subterranean Fauna (Stygofauna) Sampling Plan required by condition 8-1.
- 8-3 The proponent shall make the Subterranean Fauna (Stygofauna) Sampling Plan required by condition 8-1 publicly available, to the requirements of the Environmental Protection Authority.
- 8-4 The results from the Subterranean Fauna (Stygofauna) Sampling Plan required by condition 8-1 shall be submitted to the Environmental Protection Authority, the Western Australian Museum and the Department of Conservation and Land Management.

8-5 Should the Environmental Protection Authority consider, based on the review of the results required by condition 8-4, that its objective to maintain the abundance, species diversity and geographical distribution of subterranean fauna (Stygofauna) would be compromised, then the proponent shall develop an action plan to the requirements and timing of the Environmental Protection Authority.

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.



CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

28 NOV 2000

Schedule 1

The Proposal

The development of an open-cut mine, waste rock dump, tailings storage facilities associated infrastructure, and processing facilities approximately 30 kilometres west of Wiluna. Lead concentrates produced at the mine will be refined to lead metal at the Wiluna minesite or alternatively the concentrates will be transported by road to the Geraldton Port and exported. A gas fired power station and accommodation camp will be constructed to service the minesite. The mining operations will be supplied with water from a borefield south-east of the mine. The general arrangement of the mine and process facilities and monitoring sites are documented in Figures 1, 2 and 3 (attached).

Table 1: Key Characteristics Table

Element	Quantities/Description
Mine	
Life of project (mine production)	Approximately 10 years
Size of ore body	Approximately 8.2 million tonnes
Depth of Mine Pit	Approximately 50 metres
Area of disturbance (including access)	Approximately 320 hectares
List of major components <ul style="list-style-type: none"> • open pit • waste dumps • infrastructure (plant site water supply, roads, accommodation camp, etc) • tailings storage facilities Total	55 hectares 138 hectares 57 hectares 70 hectares 320 hectares
Tailings storage facility (2 cells)	Combined total capacity of 4 million tonnes
Ore mining rate <ul style="list-style-type: none"> • maximum 	1 million tonnes per year
Solid waste materials <ul style="list-style-type: none"> • maximum 	2.4 million tonnes per year
Water supply <ul style="list-style-type: none"> • source • maximum hourly requirement • maximum annual requirement 	Calcrete and chert aquifers south-east of the minesite 170 kilolitres per hour 1.5 million kilolitres per annum
Lead concentrate transport	Road train in fully enclosed kibbles
Power generation	Natural gas – up to 139 terra joules /annum
Fuel storage <ul style="list-style-type: none"> • capacity • quantity used 	50 kilolitres of storage 1.8 million litres per year (approximately)

Note : The Wiluna refinery is not part of the proposal. The level of assessment for the Wiluna refinery was set at not assessed and managed under Part V of the Environmental Protection Act.

Figures (attached)

Figure 1 - General arrangement of the Magellan Project

Figure 2 – Magellan Lead Project Plant Layout

Figure 3 – Monitoring and Sampling Sites, Magellan Lead Project

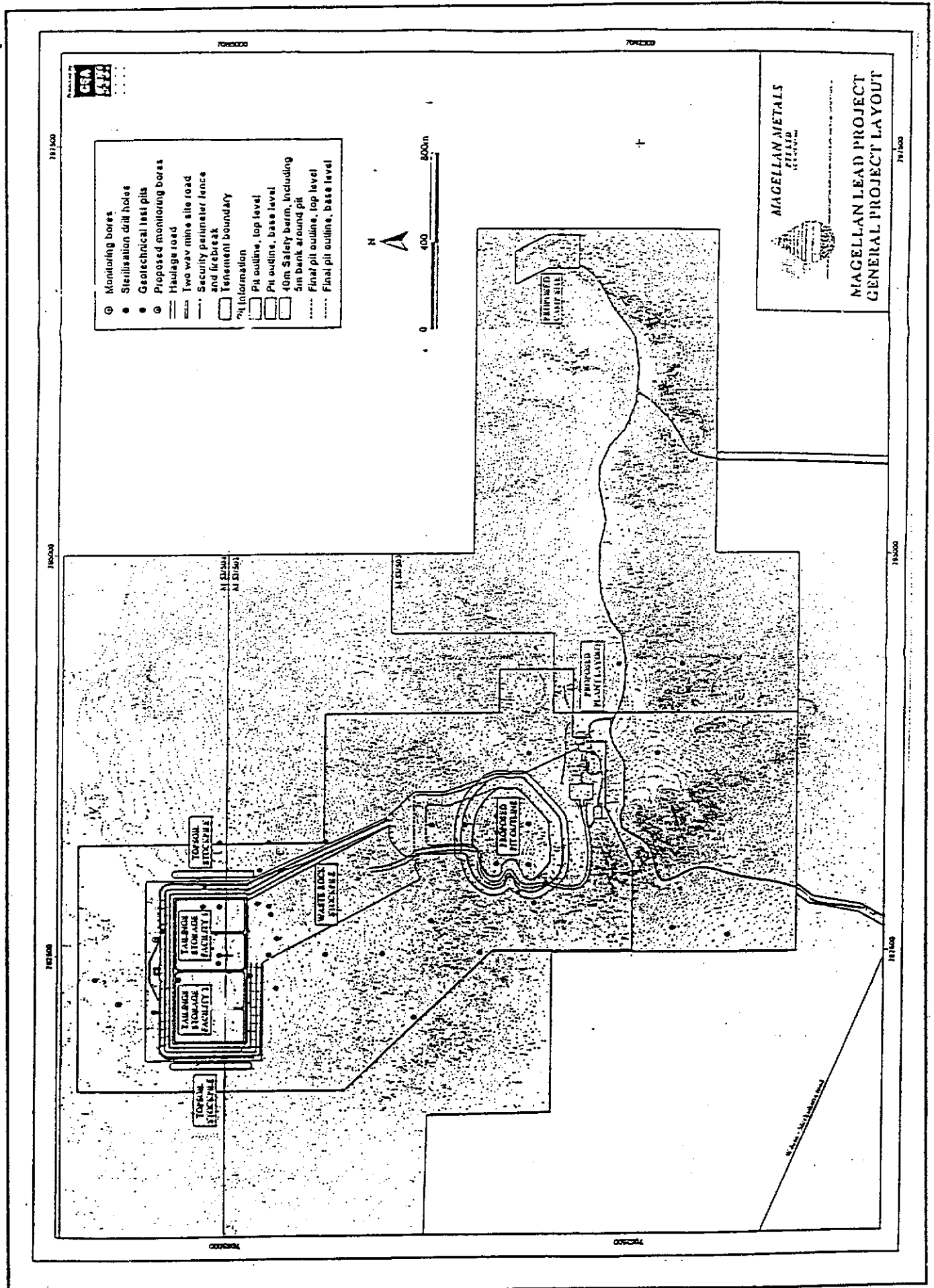


Figure 1. General arrangement of the Magellan Lead Project.

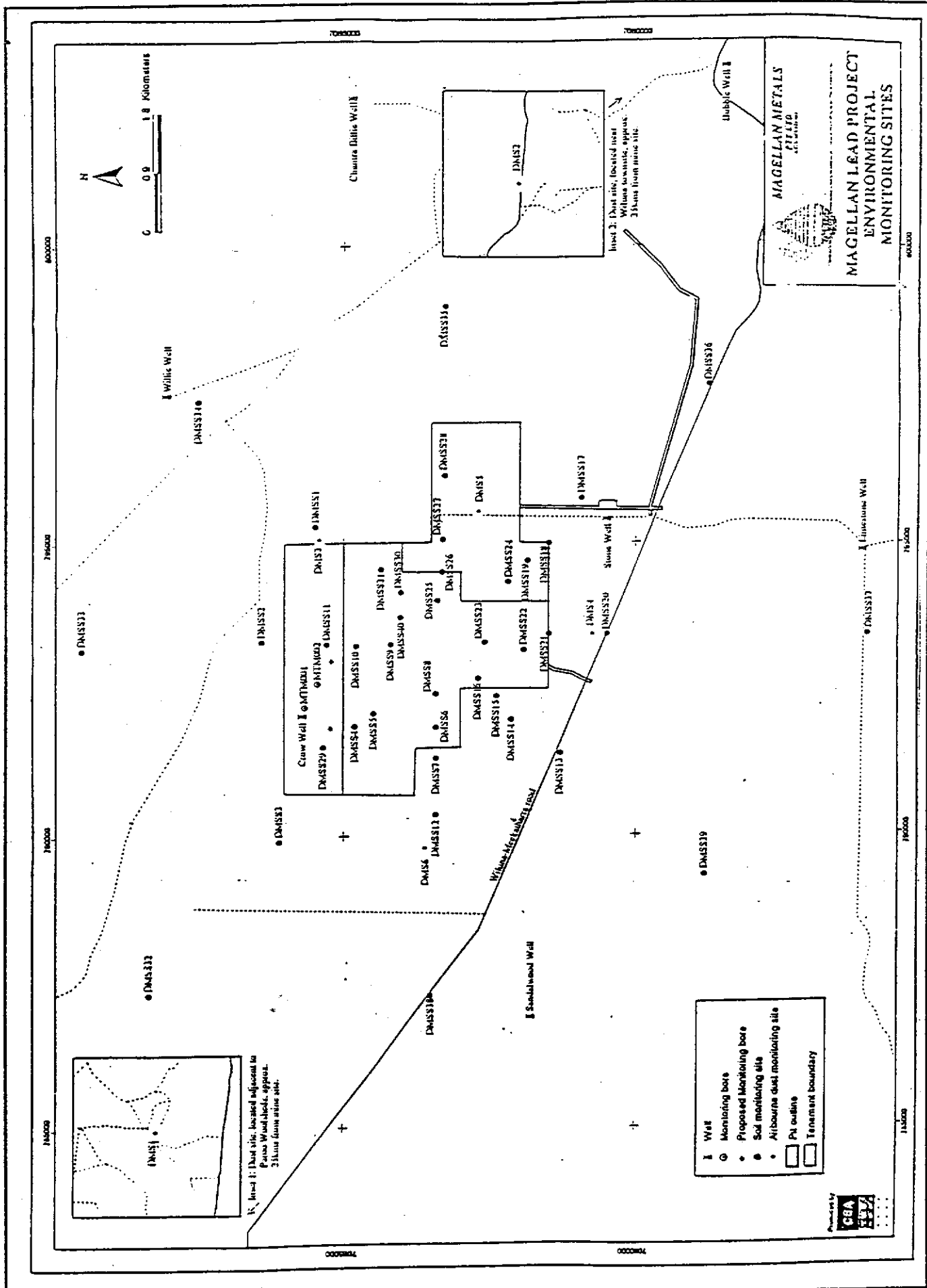


Figure 3. Monitoring and Sampling Sites, Magellan Lead Project.

**Proponent's Consolidated Environmental Management
Commitments**

**MAGELLAN LEAD CARBONATE PROJECT,
WILUNA (1262)**

MAGELLAN METALS PTY LTD

Proponent's Consolidated Environmental Management Commitments – Magellan Lead Project (1262)

No.	Topic	Action	Objective	Timing	Advice to whom
1.	Environmental Management System	<p>Prepare an Environmental Management System that includes the following elements:</p> <ol style="list-style-type: none"> 1. An environmental policy and corporate commitment to it; 2. Mechanisms and processes to ensure; <ol style="list-style-type: none"> (1) planning to meet environmental requirements (2) implementation and operation of action to meet environmental requirements (3) measurement and evaluation of environmental performance; and 3. Review and improvement of environmental outcomes. 	To manage the environmental impacts of the project and fulfil the requirements of statutory and other identified obligations.	Prior to the commencement of construction activities.	DME, WRC, and Health WA
2.	Environmental Management System	Implement the Environmental Management System described in 1. Above.	As for 1 above.	Ongoing through the life of the operations until the site is deemed rehabilitated.	DME, WRC and Health WA
3.	Surface water drainage	<p>Prepare a surface water and drainage management plan for the minesite that:</p> <ol style="list-style-type: none"> 1. Identifies surface contours and drainage. 2. Identifies diversion drains and sumps to contain runoff and divert drainage into the pit. 3. Describes measures to monitor the effectiveness of the plan and take corrective action if required. 	To maintain or improve the quality of surface water run-off to ensure that existing and potential uses including ecosystem maintenance, are protected.	Before the commencement of ground disturbing activities.	DME and WRC

No.	Topic	Action	Objective	Timing	Advice to whom
4.	Surface water drainage	Implement the surface water and drainage management plan described in 3. above.	As for 3 above.	Ongoing throughout the life of the mining operations.	
5.	The waste rock dump and tailings storage facility will be reshaped to enable rehabilitation.	Prepare a contour plan consistent with the guidelines issued by the DME.	To ensure that the structures are stable, safe and erosion-free on closure of the site.	Before the commencement of construction of the waste rock dump and tailings storage facility.	DME
6.	Revegetation trials on the waste rock dump and tailings storage facility.	Prepare a scope of works for revegetation trials that; 1. Describes the objectives of the proposed trial. 2. Outlines monitoring. 3. Outlines the timeframe for reporting of results. 4. Identifies mechanisms to consider and implement the recommendations at the conclusion of the trials.	To identify suitable techniques and plant species for site rehabilitation and revegetation.	Within two years of commencement of mining operations.	DME.
7.	Revegetation trials on the waste rock dump and tailings storage facility.	Implement revegetation trials described in 6. above	As for 6 above.	Ongoing until the trials are concluded and the recommendations implemented	DME

No.	Topic	Action	Objective	Timing	Advice to whom
8.	Waste and recycling program.	Prepare a waste and recycling program that: <ol style="list-style-type: none"> 1. Includes a procedure for identifying wastes that are suitable for recycling or reuse. 2. Identifies designated areas for the storage of recyclables 3. designates materials that should be disposed to landfill. 4. Includes the proponent's commitment to participate in the "Ruggies" recycling program 	To develop waste reduction practices and encourage re-use resources	Before commencement of construction.	DME.
9.	Waste and recycling program	Implement the waste and recycling program described in 8 above.	As for 8 above.	Throughout the life of the mining operations until it is deemed rehabilitated.	DME
10.	Control of access	The active operations area will be fenced including a firebreak. It will be constructed around the minesite, plant, waste rock dump and Tailings storage facility.	To restrict third party and large animal access to the working parts of the operation.	Prior to commencement of operations.	DME, and Pastoral lease holders.
11.	Vegetation monitoring for lead uptake	Prepare a scope of works for the sampling program that describes; <ol style="list-style-type: none"> 1. Vegetation sampling and analysis; 2. Timing of sampling program; 3. Reporting and assessment of results. 	To identify inadvertent uptake by plants during operations and to monitor rehabilitation success.	After commencement of operations.	DME, Health WA.
12.	Vegetation monitoring for lead uptake	Implement the sampling program described in 10 above	As for 11 above.	Ongoing until the minesite is deemed satisfactorily rehabilitated.	DME

No.	Topic	Action	Objective	Timing	Advice to whom
13.	Dust and particulate sampling at the Geraldton Port	<p>Prepare a sampling program to monitor dust produced during transfer of mineral products from storage areas via loading facilities to ships. The plan shall include:</p> <ol style="list-style-type: none"> 1. The locations of sampling. 2. Sampling methods and analysis. 3. Reporting of results. 	To determine if existing facilities at the Geraldton port are creating dust and particulates.	Prior to using storage areas or ship loading facilities of the Geraldton Port for lead concentrates.	DME
14.	Dust and particulate sampling at the Geraldton Port	Implement the dust and particulate sampling plan described in 12 above.	As for 13 above	After commencement of operations.	DME, Health WA.
15.	Tailings storage facility	Prepare a tailings storage facility operating manual. The manual shall detail operating procedures, emergency response plans and monitoring.	To ensure the safe management of the tailings storage facility.	Prior to the commencement of tailings disposal to the facility	DME, WRC
16.	Tailings storage facility	Implement the tailings storage facility operating manual described in 15 above.	As for 15 above	Over the life of the tailings facility	DME, WRC

Abbreviations

DME – Department of Minerals and Energy
WRC – Water and Rivers Commission
DEP – Department of Environmental Protection
Health WA – Health Department of Western Australia



MINISTER FOR THE ENVIRONMENT

ENVIRONMENTAL PROTECTION AUTHORITY
DATE RECEIVED 30.12.04
EPA FILE NO. 552
CORRESPONDENCE
REF NO. EDIN 445

Mr Trevor Watters
General Manager
Magellan Metals Pty Ltd
256 Star Street
WELSHPOOL WA 6106

Dear Mr Watters

APPROVAL TO VARY THE MAGELLAN LEAD CARBONATE PROJECT
(STATEMENT 559)

On 8 October 2004 you wrote to the Department Environment regarding a variation to export through the Port of Esperance rather than the Port of Geraldton as originally proposed.

Because this is a variation to the original proposal, it is not considered part of the EPA assessment in Bulletin 996 and authorised by Ministerial Statement 559. However under Section 45C of the *Environmental Protection Act 1986*, I am able to approve variations to a proposal, without a revised proposal being submitted to the EPA, when it is considered that the changes will not have a significant environmental impact.

On the advice of the EPA I understand that:

- The detrimental environmental impacts associated with the variation to export through the port of Esperance are not considered significant; and
- The handling, transport, storage and ship loading activities can be managed by the existing conditions of Statement 559.

I consider that the change to export through the Port of Esperance is unlikely to result in significant changes to the environmental impacts of the approved proposal. Approval is therefore granted under Section 45C of the *Environmental Protection Act 1986* for the requested variation.

Yours sincerely

ORIGINAL SIGNED
29 DEC 2004
DR JUDY EDWARDS MLA

SCANNED

Dr Judy Edwards MLA
MINISTER FOR THE ENVIRONMENT

cc: Walter Cox, EPA Chairman

Attachment 1 to Statement 559

Change to Proposal

Proposal: Magellan Lead Carbonate Project

Proponent: Magellan Metals Pty Ltd

Change:

Component	Quantities/Description
Lead concentrate transport	Road train in fully enclosed kibbles

Components of changed Proposal:

Component	Quantities/Description
Lead concentrate transport	Road to Leonora and then rail to the Port of Fremantle in sealed bags within bolt-secured steel shipping containers.

Dr Paul Vogel
Chairman
Environmental Protection Authority
under delegated authority

Approval date: 27-1-09