

**Wagoo Hills Vanadium Project & Mingenew Coal
Project — Extension of Time Limit of Approval via
Section 46**

Precious Metals Australia Limited

**Report and recommendations
of the Environmental Protection Authority**

**Environmental Protection Authority
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Summary and recommendations

Precious Metals Australia Limited wishes to extend the time limit of environmental approval for the Wagoo Hills Vanadium Project and Mingenew Coal Project for a further two years. The Wagoo Hills Project is located approximately 80 km south-east of Mt Magnet and the Mingenew Project is located approximately 20 km north-east of Mingenew.

Section 46 of the Environmental Protection Act 1986 requires the EPA to report to the Minister for the Environment on whether or not the proposed changes to conditions or procedures should be allowed. In addition, the EPA may make recommendations as it sees fit.

Relevant environmental factors

It is the EPA's opinion that the following are the environmental issues relevant to the proposal, which require detailed evaluation in the report:

- (a) extension to the time limit of approval; and
- (b) changes to other environmental conditions.

Conclusion

The EPA has considered the proposal by Precious Metals Australia Limited to extend the time limit of environmental approval for the Wagoo Hills Vanadium Project and Mingenew Coal Project and has concluded that a two year extension should be allowed.

The EPA believes that the five year period since the Wagoo Hills / Mingenew project was originally assessed has not given rise to any changes which would cause the EPA to reconsider its previous assessment of the project, and in particular, its previous recommendation as to the environmental acceptability of the project.

In addition to reporting on the extension of the time limit, the EPA considers that the conditions of the environmental approval should be updated, and accordingly has also reported on the additional changes required.

Recommendations

The EPA recommends that:

1. The Minister for the Environment notes that the EPA has concluded that:
 - the extension of the time limit of approval for another two years is acceptable; and
 - the conditions of environmental approval should also be updated;
2. That the Minister for the Environment imposes the conditions and procedures consistent with those set out in Appendix 4 of this report.

Conditions

The EPA recommends that the following conditions, which are set out in formal detail in Appendix 4, be imposed if the proposed time limit extension by Precious Metals Australia Limited for the Wagoo Hills Vanadium Project and Mingenew Coal Project is approved:

1. the existing Ministerial Conditions applied to the project (Ministerial Statement 283, 16 September 1992), subject to modifications necessary to:
 - extend the time limit of environmental approval;
 - update the statement into the current format; and
 - ensure compatibility with current environmental protection regulations.

2. additional conditions which are now routinely applied to mining/processing operations of this type and size, namely:
- requirement for an Environmental Management System for the project;
 - requirement for an Environmental Management Programme for the project;
 - requirement for a Greenhouse Gas Emissions Management Plan; and
 - requirement for environmental performance reviews every six years.

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1. Introduction and background

Precious Metals Australia Limited wishes to extend the time limit of environmental approval for the Wagoo Hills Vanadium Project and Mingenew Coal Project. The Wagoo Hills Project is located approximately 80 km south-east of Mt Magnet and the Mingenew Project is located approximately 20 km north-east of Mingenew (Figure 1).

The Wagoo Hills Vanadium Project and Mingenew Coal Project was assessed by the Environmental Protection Authority in 1992 at the level of a Public Environmental Review (EPA 1992). The Minister for the Environment subsequently gave environmental approval for the project, subject to conditions, on 16 September 1992. Condition 9 of the Minister's statement of approval (Appendix 3) set a time limit for commencing the project within five years, after which any extension to the time limit would have to occur via a request to change the condition under Section 46 of the Environmental Protection Act 1986.

In accordance with Condition 9 Precious Metals Australia Limited has requested that the time limit of approval be extended for a further two years via a Section 46 change to conditions. This request was made prior to the expiration date referred to in Condition 9 (September 1997).

Further details of the proposal are presented in Section 2 of this Report. Section 3 discusses environmental factors relevant to the proposal. Conditions and procedures to which the proposal should be subject if the Minister determines that it may be implemented are set out in Section 4. Section 5 presents the EPA's conclusion and Section 6 the EPA's recommendations.

A list of people and organisations that made submissions is included in Appendix 1. References are listed in Appendix 2, and recommended conditions and procedures and proponent's commitments are provided in Appendix 4.

The DEP's summary of submissions and the proponent's response to those submissions has been published separately and is available in conjunction with this report.

2. The proposal

Approved proposal

Wagoo Hills Vanadium Project

This consists of a proposed vanadium mining and processing operation 80 km south-east of Mt Magnet. Vanadium pentoxide ore would be mined via open-cut mining of a pit 150 m wide by 35 m deep, which would be extended 200 m each year over the 30 year life of the mine. 1.45 million tonnes per annum of ore would be processed at the adjacent processing plant and the resulting 3700 tonnes per annum of vanadium product transported to Fremantle for export. Infrastructure to support the operation would include an accommodation village, process water supply, and roads.

Mingenew Coal Project

This consists of development of a small coal quarry 20 km north-east of Mingenew to supply coal to the Wagoo Hills Vanadium Project for use in the process plant as a source of energy. The quarry is expected to supply 30000 - 70000 tonnes of coal to the Wagoo Hills Vanadium Project each year.

A more detailed description of the two components of this proposal is contained in the EPA's previous assessment of the proposal (EPA 1992) and 1992 Consultative Environmental Review (Alan Tingay & Associates 1992).

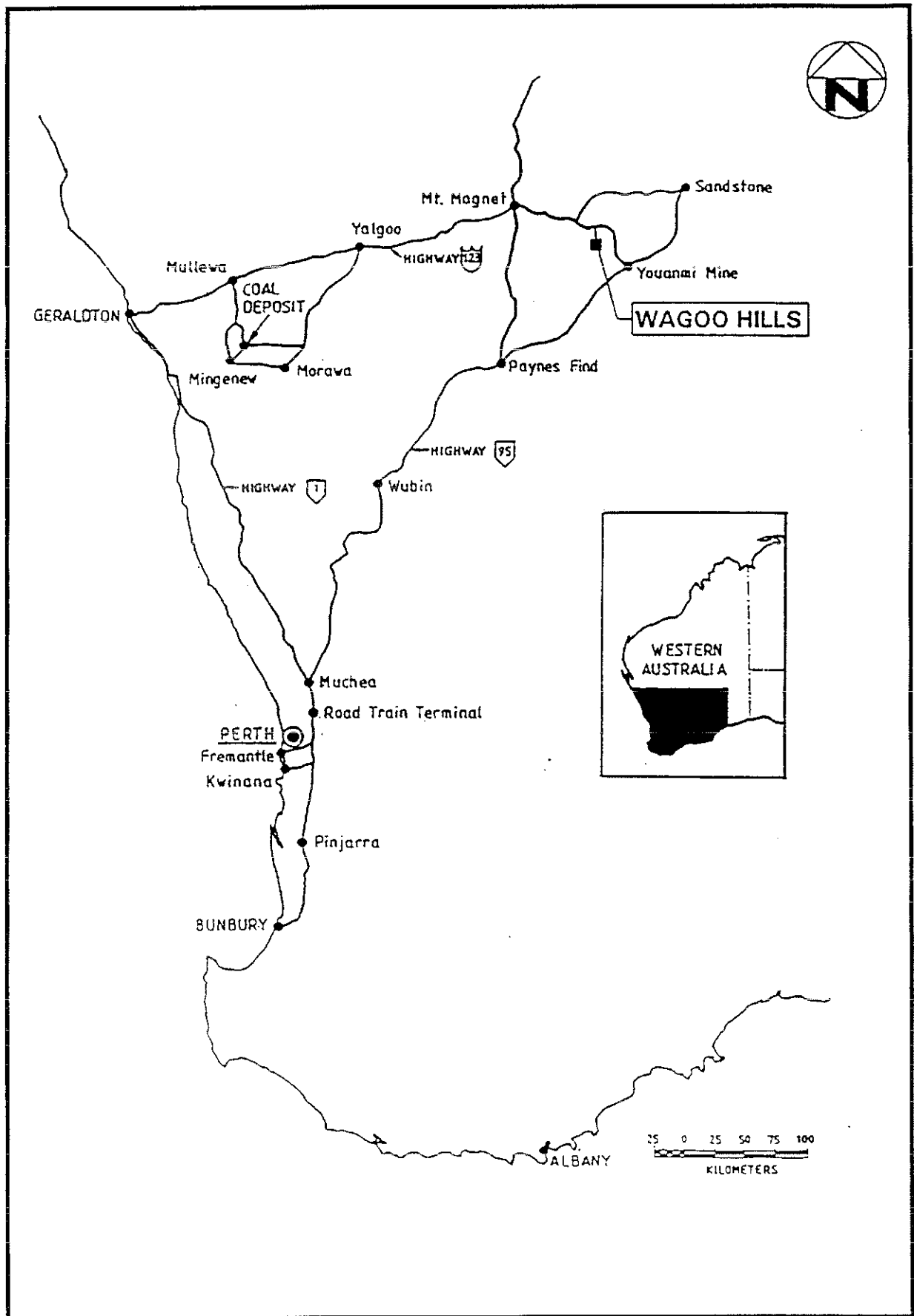


Figure 1. Locations of the Wagoo Hills Vanadium Project and Mingenew Coal Project.2

Proposed change to environmental conditions

Precious Metals Australia Limited wishes to extend the time limit of approval for this proposal another two years. The Wagoo Hills / Mingenew project has not yet been started, primarily as a result of a fall in the world vanadium price shortly after the proposal was approved in 1992. Recently the world vanadium price has improved and Precious Metals Australia Limited has decided to proceed with the proposal, with work expected to commence within the next 18 months.

In accordance with Condition 9 of the existing statement of approval Precious Metals Australia Limited has requested a two year extension to the environmental approval via Section 46 of the Environmental protection Act 1986. Section 46 allows for the amendment of conditions and procedures set under the statement of environmental approval for a proposal.

3. Environmental factors

3.1 Relevant environmental factors

Section 46 of the Environmental Protection Act 1986 requires the EPA to report to the Minister for the Environment on whether or not the proposed changes to conditions or procedures should be allowed. In addition, the EPA may make recommendations as it sees fit.

The relevant environmental factors identified in the EPA's previous (1992) assessment of the proposal were:

Vanadium mine

- control of vanadium dust;
- effect of the proposal on natural drainage;
- control of noise generated within the mine and plant area;
- impact of the process water supply borefield;

Coal mine

- rehabilitation of the open-cut pit;
- effect of mining on the groundwater;
- effects of blasting on neighbouring properties; and
- control of dust and noise from the crushing plant.

The EPA's assessment of these factors has not changed as a result of the proponent's current proposal to extend the time limit of environmental approval. The EPA's assessment of the proposal has therefore not given rise to any changes which would cause the EPA to reconsider its previous assessment of the project, and in particular, its previous recommendation as to the environmental acceptability of the project.

It is the EPA's opinion that its inquiry into the proposed time limit extension should address the following issues:

- (a) whether the requested extension to the time limit should be approved; and
- (b) what other changes to the existing environmental conditions might be required should an extension be granted.

These issues are discussed in Sections 3.2 to 3.3 of this report.

3.2 Extension of the time limit of approval

Description

Approval for this project was initially limited to five years recognising that over time the predicted environmental impacts and their considered significance may change. Over five years knowledge of the receiving environment may increase as a result of further studies, and the anticipated impacts on this environment may change as a result of increased understanding of interaction between the environment and the proposal. In addition, environmental regulations, standards, guidelines, and accepted practices, may also change.

Precious Metals Australia Limited has advised that there have been no changes in the understanding of the receiving environment or revisions to the predicted impacts from those originally presented by the proponent and assessed by the EPA in 1992.

Government agency submissions on this proposal were either neutral or in support of the proposed time limit extension. Two public submitters argued that Precious Metals Australia Limited should be required to re-submit the project for assessment as a result of the five year delay.

Assessment

Environmental standards have changed over the last five years. Changes which are applicable to this proposal include changes to the State's noise regulations and the adoption by the EPA of a number of standard environmental conditions which are now routinely applied to large mining and processing operations. None of these changes significantly affect the proposal as described in the 1992 Consultative Environmental Review document, but would only result in changes to limits which must be met, and some additional reporting requirements. These can be accommodated through recommended changes to the environmental conditions which are described in Section 3.3.

Having particular regard to:

- (a) the fact that the predicted environmental impacts of the proposal have not changed; and
- (b) changes in environmental standards that can be addressed through amendments to the conditions and procedures of environmental approval,

it is the EPA's opinion that the requested extension of the time limit of environmental approval should be allowed.

3.3 Changes to other environmental conditions

Description

Assessment of this proposal under Section 46 of the Environmental Protection Act 1986 allows the EPA the opportunity to amend other environmental conditions in addition to the time limit condition (Condition 9, Appendix 3). The environmental conditions currently applicable to the Wagoo Hills / Mingenew project are contained in Appendix 3.

Assessment

The EPA has taken the opportunity to review the environmental conditions set on this proposal with a view to:

- (a) updating the statement into the current format;
- (b) ensuring compatibility with current environmental protection regulations;

- (c) applying additional conditions which are now routinely applied to mining/processing operations of this type and size, namely:
- requirement for an Environmental Management System for the project;
 - requirement for an Environmental Management Programme for the project;
 - requirement for a Greenhouse Gas Emissions Management Plan; and
 - requirement for environmental performance reviews every six years.

The EPA's proposed changes to the existing environmental conditions are set out in greater detail in Table 1 below. Table 1 should be examined in conjunction with the original environmental conditions in Appendix 3 and the recommended draft conditions in Appendix 4.

It should be noted that no changes are proposed to the proponent's environmental management commitments. The commitments included with the recommended draft conditions are identical to those in the existing statement of approval.

4. Conditions

Section 46 of the Environmental Protection Act 1986 requires the EPA to report to the Minister for the Environment on whether or not the proposed changes to conditions or procedures should be allowed. In addition, the EPA may make recommendations as it sees fit.

In developing recommended conditions for each project, the EPA's preferred course of action is to have the proponent provide an array of commitments to ameliorate the impacts of the proposal on the environment. The commitments are considered by the EPA as part of its assessment of the proposal, and following discussion with the proponent the EPA may seek additional commitments.

The EPA recognises that not all of the commitments are written in a form which makes them readily enforceable, but they do provide a clear statement of the action to be taken as part of the proponent's responsibility for and commitment to continuous improvement in environmental performance. The commitments then form part of the conditions to which the proposal should be subject if it is to be implemented.

The EPA may, of course, also recommend conditions additional to that relating to the proponent's commitments.

Table 1: Proposed changes to Environmental Conditions

Original Condition or Commitment Number	Requirements (summarised)	Evaluation	New Condition or Commitment Number	New Condition or Commitment Text
Environmental Conditions				
1	Fulfil commitments	Wording changed to recast condition into contemporary format.	1	<p>1 Proponent Commitments</p> <p>1-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 1 of this statement, provided that the commitments are not inconsistent with the conditions or procedures contained in this statement.</p> <p>In the event of any inconsistency, the conditions and procedures shall prevail to the extent of the inconsistency.</p> <p>1-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.</p>
2	Implement the proposal as described.	No change	2	
3	Prepare and implement water management plans for the Wagoo Hills Vanadium Project.	References to government agencies updated. Point 4 deleted as redundant.	5	<p>5 Water Resources</p> <p>Development and operation of the Wagoo Hills Vanadium Project should not adversely affect surface and ground water resources on Windimurra Station. If such resources are adversely affected, stock and domestic water supplies of appropriate quality and quantity are to be supplied to Windimurra Station.</p> <p>5-1 Prior to construction at the Wagoo Hills site, the proponent shall prepare water management plans (referred to in commitments 5.1 to 5.4 and 6.1) for the Wagoo Hills Vanadium Project, to the requirements of the Environmental Protection Authority on advice of the Water and Rivers Commission, Agriculture Western Australia, and the Department of Minerals and Energy.</p> <p>These plans shall:</p> <ol style="list-style-type: none"> 1 address surface water flows affected by the project; 2 outline a groundwater monitoring programme to determine whether there has been any contamination arising from the operation of the minesite or process plant and associated tailings dam; 3 make provision for suitable water supplies for stock and domestic purposes on Windimurra Station if existing supplies are adversely affected by the project; and 4 specify responsibility for monitoring, auditing of performance and compliance with the plans. <p>5-2 The proponent shall implement the water management plans required by condition 5-1.</p>

Original Condition or Commitment Number	Requirements (summarised)	Evaluation	New Condition or Commitment Number	New Condition or Commitment Text
4	Prevent excessive levels of non-vanadium dust.	Note added to acknowledge Works Approval / Licence requirements.	6	<p>6 Non-vanadium Dust Levels The Wagoo Hills Vanadium Project and the Mingenew Coal Project should not cause excessive levels of "non-vanadium dust".</p> <p>6-1 The proponent shall not cause short term levels of non-vanadium bearing dust at residential premises near the Wagoo Hills Vanadium Project to exceed 1000 microgrammes per cubic metre (ug/m3), measured continuously over 15 minutes.</p> <p>6-2 The proponent shall not cause short term levels of non-vanadium bearing dust at residential premises near the Mingenew Coal Project to exceed 1000 microgrammes per cubic metre (ug/m3), measured continuously over 15 minutes. (Note: The 1000 ug/m3 limit referred to in conditions 6-1 and 6-2 is to be considered a minimum standard to be met by the proposal. It should be understood that the project may be subject to more stringent dust limits set by the Department of Environmental Protection through Works Approvals and/or Licence conditions.)</p>
5	Prevent excessive noise levels and conduct noise monitoring.	Acceptable noise limits determined by the noise control regulations.	8	<p>8 Noise Limits</p> <p>8-1 The proponent shall conduct operations so that noise emissions do not unreasonably impact on people in the vicinity, including residents.</p> <p>8-2 The proponent shall ensure that noise emissions meet the requirements of the noise control regulations applying from time to time under the Environmental Protection Act.</p> <p>8-3 The proponent shall conduct noise surveys (including baseline measurements) and assessments (including the impact of tonal noise) at the Wagoo Hills site and the Mingenew site in consultation with the Department of Environmental Protection.</p>
6	Prevent excessive air pressure levels occurring due to blasting.	Air-blast limits determined by the noise control regulations.	9	<p>9 Blast Limits Blasting operations at the Wagoo Hills Vanadium Project and Mingenew Coal Project should not produce excessive air pressure levels.</p> <p>9-1 The proponent shall conduct operations so that blasting does not unreasonably impact on people in the vicinity, including residents.</p> <p>9-2 The proponent shall ensure that blasting operations meet the requirements of the noise control regulations applying from time to time under the Environmental Protection Act.</p>

Original Condition or Commitment Number	Requirements (summarised)	Evaluation	New Condition or Commitment Number	New Condition or Commitment Text
7	Prepare a decommissioning plan at least six months prior to decommissioning of each project and subsequently implement the plans.	Wording changed to recast condition into contemporary format.	10	<p>10 Decommissioning</p> <p>10-1 At least six months prior to decommissioning, the proponent shall prepare a Decommissioning Management Plan to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.</p> <p>This Plan shall address:</p> <ol style="list-style-type: none"> 1 removal or, if appropriate, disposal on-site of plant and infrastructure; 2 rehabilitation of all disturbed areas to agreed final land use(s); and 3 identification of contaminated areas, including provision of evidence of notification to relevant statutory authorities. <p>10-2 The proponent shall implement the Decommissioning Management Plan required by condition 10-1.</p> <p>10-3 The proponent shall make the Decommissioning Management Plan required by condition 10-1 publicly available, to the requirements of the Environmental Protection Authority.</p>
8	No change of proponent without approval by the Minister for the Environment	Wording changed to recast condition into contemporary format.	12	<p>12 Proponent</p> <p>12-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 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.</p> <p>12-2 Any request for the exercise of that power of the Minister referred to in condition 12-1 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.</p> <p>12-3 The proponent shall notify the Minister for the Environment of any change of proponent contact name and address within 30 days of such change.</p>

Original Condition or Commitment Number	Requirements (summarised)	Evaluation	New Condition or Commitment Number	New Condition or Commitment Text
9	Project to be commenced within 5 years or the approval shall lapse and be void.	Refer to Section 3.2. Requested time limit extension considered acceptable by the EPA. If approved, project to be commenced within two years of the Section 46 statement.	13	<p>13 Commencement</p> <p>13-1 The proponent shall provide evidence to the Minister for the Environment within two years of the date of this statement that the proposal has been substantially commenced.</p> <p>13-2 Where the proposal has not been substantially commenced within two 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.</p> <p>13-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond two years from the date of this statement.</p> <p>13-4 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 two years for the substantial commencement of the proposal.</p>
10	Compliance auditing.	Wording changed to recast condition into contemporary format.	14	<p>14 Compliance Auditing</p> <p>14-1 The proponent shall submit periodic Performance and Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.</p> <p>14-2 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.</p> <p>14-3 Where compliance with any condition is in dispute, the matter will be determined by the Minister for the Environment.</p>

Original Condition or Commitment Number	Requirements (summarised)	Evaluation	New Condition or Commitment Number	New Condition or Commitment Text
New Condition	Environmental Management System	New condition - reflects current expectation that all major developments should have an Environmental Management System.	3	<p>3 Environmental Management System</p> <p>3-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to the start of mining at either Windimurra (Wagoo Hills) and/or Mingenew, the proponent shall prepare Environmental Management System documentation with components such as those adopted in Australian Standards AS/NZS ISO 14000 series, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.</p> <p>3-2 The proponent shall implement the Environmental Management System referred to in condition 3-1.</p>
New Condition	Environmental Management Programme	New condition - reflects current expectation that all major developments should have an Environmental Management Programme.	4	<p>4 Environmental Management Programme</p> <p>4-1 Prior to commencement of ground-disturbing activities, the proponent shall prepare an Environmental Management Programme 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.</p> <p>The Programme shall address:</p> <p>Vanadium mine (at Windimurra)</p> <ol style="list-style-type: none"> 1 control of vanadium dust; 2 effect of the proposal on natural drainage; 3 control of noise generated within the mine and plant area; 4 impact of the process water supply borefield (refer to condition 5); and 5 transportation of process materials; <p>Coal mine (at Mingenew)</p> <ol style="list-style-type: none"> 6 rehabilitation of the open-cut pit; 7 effect of mining on the groundwater; 8 effects of blasting on neighbouring properties; and 9 control of dust and noise from the crushing plant. <p>4-3 The proponent shall implement the Environmental Management Programme required by condition 4-2.</p>

Original Condition or Commitment Number	Requirements (summarised)	Evaluation	New Condition or Commitment Number	New Condition or Commitment Text
New Condition	Greenhouse Gas Emissions	New condition. A standard condition applied to developments which will produce significant quantities of greenhouse gases.	7	7 Greenhouse Gas Emissions
			7-1	Prior to commissioning, the proponent shall prepare a Greenhouse Gas Emissions Management Plan to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.
				This Plan shall include:
			1	calculation of the "greenhouse gas" emissions (using methodology developed for Australia);
			2	measures to limit "greenhouse gas" emissions; and
			3	estimation of the "greenhouse gas" efficiency of the project (per unit of product and/or other agreed performance indicators) and comparison with the efficiencies of other comparable projects producing a similar product.
			7-2	The proponent shall implement the Greenhouse Gas Emissions Management Plan required by condition 7-1.
				Note: The proponent should 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 program.
				Components of the agreement program include:
			1	an inventory of emissions;
			2	opportunities for abating "greenhouse gas" emissions in the organisation;
			3	a "greenhouse gas" mitigation action plan;
			4	regular monitoring and reporting of performance; and
			5	independent performance verification.

Original Condition or Commitment Number	Requirements (summarised)	Evaluation	New Condition or Commitment Number	New Condition or Commitment Text
New Condition	Performance Review	New condition - reflects current expectation that all major developments should review long-term environmental performance and implement continuous improvement.	11	<p>11 Performance Review</p> <p>The proponent should review the environmental performance of the proposal to ensure that the environmental management meets the environmental objectives and allows for continuous improvement.</p> <p>11-1 Each six years following the commencement of construction, the proponent shall prepare and submit a performance review to evaluate the environmental performance, which shall include, but not be limited to:</p> <ol style="list-style-type: none"> 1 environmental issues reported on in Environmental Protection Authority Bulletin 633; 2 proponent's consolidated environmental management commitments documented in schedule 2 of this statement and those arising from the fulfilment of conditions and procedures in this statement; 3 Environmental Management System environmental management targets; 4 Environmental Management Plans; and 5 environmental performance indicators, <p>to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.</p> <p>Note: The Environmental Protection Authority may recommend changes and where significant, recommend actions, to the Minister for the Environment following consideration of the performance review.</p>

The EPA recommends that the following conditions, which are set out in formal detail in Appendix 4, be imposed if the proposed time limit extension by Precious Metals Australia Limited for the Wagoo Hills Vanadium Project and Mingenew Coal Project is approved:

1. the existing Ministerial Conditions applied to the project (Ministerial Statement 283, 16 September 1992), subject to modifications necessary to:
 - extend the time limit of environmental approval;
 - update the statement into the current format; and
 - ensure compatibility with current environmental protection regulations.
2. additional conditions which are now routinely applied to mining/processing operations of this type and size, namely:
 - requirement for an Environmental Management System for the project;
 - requirement for an Environmental Management Programme for the project;
 - requirement for a Greenhouse Gas Emissions Management Plan; and
 - requirement for environmental performance reviews every six years.

5. Conclusions

The EPA has considered the proposal by Precious Metals Australia Limited to extend the time limit of environmental approval for the Wagoo Hills Vanadium Project and Mingenew Coal Project and has concluded that a two year extension should be allowed.

The EPA believes that the five year period since the Wagoo Hills / Mingenew project was originally assessed has not given rise to any changes which would cause the EPA to reconsider its previous assessment of the project, and in particular, its previous recommendation as to the environmental acceptability of the project.

In addition to reporting on the extension of the time limit, the EPA considers that the conditions of the environmental approval should be updated, and accordingly has also reported on the additional changes required.

6. Recommendations

Section 46 of the Environmental Protection Act 1986 requires the EPA to report to the Minister for the Environment on whether or not the proposed changes to conditions or procedures should be allowed. In addition, the EPA may make recommendations as it sees fit.

The EPA submits the following recommendations to the Minister for the Environment:

1. The Minister for the Environment notes that the EPA has concluded that:
 - the extension of the time limit of approval for another two years is acceptable; and
 - the conditions of environmental approval should also be updated;
2. That the Minister for the Environment imposes the conditions and procedures consistent with those set out in Appendix 4 of this report.

Appendix 1

List of submitters

List of organisations and individual who made submissions

Organisations:

Main Roads Western Australia

Water and Rivers Commission

Department of Resources Development

Mid West Development Commission

Conservation Council of Western Australia

Individual:

Mr Dale M. Zadow

Mrs E D Hoffmann

Appendix 2

References

Environmental Protection Authority (1992) Wagoo Hills Vanadium Project and Mingenew Coal Project: Report and recommendations of the Environmental Protection Authority, Environmental Protection Authority Bulletin 633, July 1992.

Alan Tingay & Associates (1992) Wagoo Hills Vanadium Project and Mingenew Coal Project: Public Environmental Review, Precious Metals Australia Limited, January 1992.

Appendix 3

Statement of conditions of approval (16 September 1992)



WESTERN AUSTRALIA
MINISTER FOR THE ENVIRONMENT

Ass # 653
Bull # 633
State # 283

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

WAGOO HILLS VANADIUM PROJECT & MINGENEW COAL PROJECT (653)

PRECIOUS METALS AUSTRALIA LIMITED

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 commitments (which are not inconsistent with the conditions or procedures contained in this statement) made in the Public Environmental Review and subsequently and included in Environmental Protection Authority Bulletin 633 as Appendix 1 (A copy of the commitments is 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. Where, in the course of that detailed implementation, the proponent seeks to change those designs, specifications, plans or other technical material 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 Water Resources

Development and operation of the Wagoo Hills Vanadium Project should not adversely affect surface and ground water resources on Windimurra Station. If such resources are adversely affected, stock and domestic water supplies of appropriate quality and quantity are to be supplied to Windimurra Station.

- 3-1 Prior to construction at the Wagoo Hills site, the proponent shall prepare water management plans referred to in commitments 5.1 to 5.4 and 6.1 for the Wagoo Hills Vanadium Project, in consultation with the Water Authority of Western Australia, the Department of Agriculture and the Department of Mines, to the requirements of the Environmental Protection Authority.

These plans shall:

1. address surface water flows affected by the project;
2. outline a groundwater monitoring programme to determine whether there has been any contamination arising from the operation of the minesite or process plant and associated tailings dam;

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17 SEP 1992

3. make provision for suitable water supplies for stock and domestic purposes on Windimurra Station if existing supplies are adversely affected by the project; and
4. specify responsibility for monitoring, auditing of performance and compliance with the plans.

3-2 The proponent shall subsequently implement the plans required by condition 3-1.

4 Non-vanadium Dust Levels

The Wagoo Hills Vanadium Project and the Mingenew Coal Project should not cause excessive levels of non-vanadium dust.

4-1 The proponent shall not cause short term levels of non-vanadium bearing dust at residential premises near the Wagoo Hills Vanadium Project to exceed 1000 microgrammes per cubic metre ($\mu\text{g}/\text{m}^3$), measured continuously over 15 minutes.

4-2 The proponent shall not cause short term levels of non-vanadium bearing dust at residential premises near the Mingenew Coal Project to exceed 1000 microgrammes per cubic metre ($\mu\text{g}/\text{m}^3$), measured continuously over 15 minutes.

5 Noise Limits

The noise generated by the vanadium mine and process plant at Wagoo Hills and the coal mine and stockpile area at Mingenew should be kept within environmentally acceptable levels.

5-1 The proponent shall ensure that the noise emissions from the Wagoo Hills Vanadium Project do not cause or contribute to noise levels in excess of:

- 40 dB(A) between 10.00 pm and 7.00 am;
- 45 dB(A) between 7.00 pm and 10.00 pm on any day, and between 7.00 am and 7.00 pm on Saturday, Sunday and any gazetted public holiday; and
- 50 dB(A) between 7.00 am and 7.00 pm Monday to Friday inclusive, but excluding gazetted public holidays;

as measured at the nearest affected noise-sensitive premises.

Where the combined level of the noise emissions from the project and the normal ambient noise exceeds the levels specified above, this condition will be considered to be contravened only when the noise emissions from the site are determined to be dominant and significantly influencing the measured noise levels.

5-2 The proponent shall ensure that noise emissions from the Wagoo Hills Vanadium Project do not include tonal or impulsive components or other characteristics which make the noise more annoying than it would be in their absence.

5-3 The proponent shall conduct noise surveys and assessments at the Wagoo Hills site in consultation with the Environmental Protection Authority.

5-4 The proponent shall ensure that the noise emissions from the Mingenew Coal Project do not cause or contribute to noise levels in excess of:

- 40 dB(A) between 10.00 pm and 7.00 am;
- 45 dB(A) between 7.00 pm and 10.00 pm on any day, and between 7.00 am and 7.00 pm on Saturday, Sunday and any gazetted public holiday; and

- 50 dB(A) between 7.00 am and 7.00 pm Monday to Friday inclusive, but excluding gazetted public holidays;

as measured at the nearest affected noise-sensitive premises.

Where the combined level of the noise emissions from the project and the normal ambient noise exceeds the levels specified above, this condition will be considered to be contravened only when the noise emissions from the site are determined to be dominant and significantly influencing the measured noise levels.

- 5-5 The proponent shall ensure that noise emissions from the Mingenew Coal Project do not include tonal or impulsive components or other characteristics which make the noise more annoying than it would be in their absence.
- 5-6 The proponent shall conduct noise surveys and assessments at the Mingenew site in consultation with the Environmental Protection Authority.

6 Blast Limits

Blasting operations at the Wagoo Hills Vanadium Project and Mingenew Coal Project should not produce excessive air pressure levels.

- 6-1 The proponent shall ensure that blasting operations at the Wagoo Hills Vanadium Project are undertaken such that:
 - the air-blast over-pressure level generated by any blast does not exceed 125 dB (peak linear); and
 - no more than one in any ten consecutive blasts results in an air-blast over-pressure level greater than 120 dB (peak linear);

as measured at the nearest affected noise-sensitive premises.

- 6-2 The proponent shall ensure that blasting operations at the Wagoo Hills Vanadium Project only occur between the hours of 9.00 am and 5.00 pm Monday to Saturday inclusive.

- 6-3 The proponent shall ensure that blasting operations at the Mingenew Coal Project are undertaken such that:
 - the air-blast over-pressure level generated by any blast does not exceed 125 dB (peak linear); and
 - no more than one in any ten consecutive blasts results in an air-blast over-pressure level greater than 120 dB (peak linear);

as measured at the nearest affected noise-sensitive premises.

- 6-4 The proponent shall ensure that blasting operations at the Mingenew Coal Project only occur between the hours of 9.00 am and 5.00 pm Monday to Saturday inclusive.

7 Decommissioning

The satisfactory decommissioning of the Wagoo Hills Vanadium Project and the Mingenew Coal Project, the removal of the plants and installations and the rehabilitation of the sites and their environs is the responsibility of the proponent.

- 7-1 At least six months prior to the decommissioning of each project, the proponent shall prepare a decommissioning and rehabilitation plan.
- 7-2 The proponent shall implement the plans required by condition 7-1.

8 Proponent

These conditions legally apply to the nominated proponent.

8-1 No transfer of ownership, control or management of the proposal 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 proposal in accordance with the conditions and procedures set out in the statement.

9 Time Limit on Approval

The environmental approval for the proposal is limited.

9-1 If the proponent has not substantially commenced each 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 projects have 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 by way of a request for a change in the condition under Section 46 of the Environmental Protection Act. (On expiration of the five year period, further consideration of the proposal can only occur following a new referral to the Environmental Protection Authority).

10 Compliance Auditing

In order to ensure that environmental conditions and commitments are met, an audit system is required.

10-1 The proponent shall prepare periodic "Progress and Compliance Reports", to help verify the environmental performance of each project, in consultation with the Environmental Protection Authority.

Procedure

The Environmental Protection Authority is responsible for verifying compliance with the conditions contained in this statement, with the exception of conditions stating that the proponent shall meet the requirements of either the Minister for the Environment or any other government agency.

If the Environmental Protection Authority, other government agency or proponent is in dispute concerning compliance with the conditions contained in this statement, that dispute will be determined by the Minister for the Environment.



Bob Pearce, MLA
MINISTER FOR THE ENVIRONMENT

16 SEP 1992

Public Environmental Review
Wagoo Hills Vanadium Project
and
Mingenew Coal Project
January 1992

PROPONENT'S COMMITMENTS
(Consolidated from the PER and Responses)

APRIL 1992

The Proponent undertakes to fulfil the following commitments in accordance with the applicable State laws and regulations and with the standards and procedures agreed with the State.

1. **Vegetation Clearing**
 - 1.1 Minimise clearing of land consistent with safe and efficient operations.

2. **Weeds**
 - 2.1 Develop a management strategy to minimise the spread of Saffron Thistle. This strategy will be developed in consultation with the Department of Agriculture.

3. **Fire**
 - 3.1 Maintain strict fire control procedures.

4. **Rehabilitation**
 - 4.1 Design and rehabilitate all waste dumps in consultation with the Department of Mines and in accordance with the "Guidelines for Waste Dump Design and Rehabilitation" of that Department.

 - 4.2 Rehabilitate the surrounds of the vanadium mine site and the process plant and village areas at Windimurra following decommissioning of the project.

 - 4.3 Prepare specific proposals for site decommissioning in the event of termination of the project and implement those proposals after review and approval of the relevant Government Agencies at the time.

5. **Groundwater**
 - 5.1 Design and implement a monitoring programme of groundwater levels and water quality in the borefield and other bores in the vicinity of the project area at Windimurra before operational start and to the satisfaction of the Water Authority of WA.

- 5.2 Undertake to guarantee continuity of stock water if changes in groundwater levels, caused by the Project, adversely affect pastoral activities.
- 5.3 Guarantee to provide the Pastoral Lessee with a potable water supply if the project adversely affects his current source of fresh water.
- 5.4 Design the tailings dams in consultation with the Department of Mines and in accordance with the "Guidelines for the Preparation of the New Tailings Dams" of that Department.
- 5.5 Implement measures in the process plant to conserve water.
6. Surface Water
- 6.1 Prepare drainage management plans for the vanadium mine and process plant at Windimurra in consultation with the Department of Mines.
7. Dust
- 7.1 Ensure that vanadium dust is controlled to below limits established in the Mines Regulations Act 1946 and Regulations, by incorporating dust extraction and collection equipment in the process plant.
- 7.2 Develop an effective operator training and awareness program to ensure that the process plant is well operated and any potential occupational health problems are quickly identified and are rectified immediately.
8. Emissions
- 8.1 Submit final design details of exhaust stacks and exhaust cleaning devices prior to construction for approval by the EPA as part of the Environmental Management Programme.

8.2 Submit a detailed composition of the coal to the EPA and Department of Mines to assist in designed management plans.

9. Transport/Packaging/Storage

9.1 Develop a transportation management and contingency plan to ensure that the transportation of hazardous materials is undertaken safely. A driver training program will be incorporated into the plan and will include regular review of driver awareness. Similarly, the integrity of transportation equipment will be monitored on a regular basis.

The transportation management and contingency plan will be developed in consultation with the Explosives and Dangerous Goods Division of the Department of Mines and the Western Australian Hazardous Materials Emergency Management Scheme (WAHMEMS).

9.2 Submit a final design of the storage facility for the sodium salt reagent at Windimurra to the Department of Mines and the EPA for approval as part of the Environmental Management Program prior to the construction of the process plant.

9.3 Ensure that all handling, packaging and road transport of inputs to the process plant and products from that plant comply with the requirements of the Australian Code for the Transport of Dangerous Goods by Road and Rail and the Dangerous Goods (Road Transport) Regulations 1983 and amended Regulations 1988.

10. Workforce

10.1 Prohibit domestic pets in the project area as a condition of employment.

10.2 Restrict off-road driving and prohibit hunting by employees as a condition of employment.

The Proponent undertakes to fulfil the following commitments in accordance with the applicable State laws and regulations and with the standards and procedures agreed with the State.

1. Weeds

- 1.1 Develop a management strategy to minimise the spread of Saffron Thistle. This strategy will be developed in consultation with the Department of Agriculture.

2. Rehabilitation

- 2.1 Backfill the coal quarry with overburden material, replace topsoil, and restore the site to its current use for grain production or natural vegetation.

3. Land Use

- 3.1 Manage surplus farm land areas in accordance with competent farm management techniques.

4. Groundwater

- 4.1 Design and implement a monitoring programme for abnormal contaminated coal mine water seeping from the pit and holding pond.

5. Surface Water

- 5.1 Prepare drainage management plans for the coal quarry at Mingenev in consultation with the Department of Mines.

6. Noise

- 6.1 Liaise with residents living in the vicinity of the coal quarry to ensure that blasting operations there do not cause a disturbance and modify those blasting operations if necessary.

7. Dust

- 7.1 Control coal dust and total dust and noise levels in the project areas in accordance with the applicable acts and regulations.

Appendix 4

List of recommended Ministerial Conditions and proponent's consolidated commitments

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

- Title:** WAGOO HILLS VANADIUM PROJECT AND MINGENEW COAL PROJECT
- Proposal:** The development of a vanadium mining and processing operation 80 km south-east of Mt Magnet, and a coal mine near MingeneW to provide a source of energy to the vanadium operation.
- Proponent:** Precious Metals Australia Limited
- Proponent Address:** Level 3, 18 Richardson Street , WEST PERTH WA 6872
- Assessment Number:** 1146
- Previous Assessment Number:** 653
- Previous Statement Number:** Statement No. 283 published on 17 September 1992
- Report of the Environmental Protection Authority:** Bulletin 878
- Previous Report of the Environmental Protection Authority:** Bulletin 633

The implementation of the proposal to which the above reports of the Environmental Protection Authority relate is now subject to the following conditions and procedures which replace all previous conditions and procedures:

1 Proponent Commitments

- 1-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 1 of this statement, provided that the commitments are not inconsistent with the conditions or procedures contained in this statement.

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

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

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 Environmental Management System

- 3-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to the start of mining at either Windimurra (Wagoo Hills) and/or Mingenew, the proponent shall prepare Environmental Management System documentation with components such as those adopted in Australian Standards AS/NZS ISO 14000 series, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.
- 3-2 The proponent shall implement the Environmental Management System referred to in condition 3-1.

4 Environmental Management Programme

- 4-1 Prior to commencement of ground-disturbing activities, the proponent shall prepare an Environmental Management Programme 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 Programme shall address:

Vanadium mine (at Windimurra)

- 1 control of vanadium dust;
- 2 effect of the proposal on natural drainage;
- 3 control of noise generated within the mine and plant area;
- 4 impact of the process water supply borefield (refer to condition 5); and
- 5 transportation of process materials;

Coal mine (at Mingenew)

- 6 rehabilitation of the open-cut pit;
- 7 effect of mining on the groundwater;
- 8 effects of blasting on neighbouring properties; and
- 9 control of dust and noise from the crushing plant.

- 4-3 The proponent shall implement the Environmental Management Programme required by condition 4-2.

5 Water Resources

Development and operation of the Wagoo Hills Vanadium Project should not adversely affect surface and ground water resources on Windimurra Station. If such resources are

adversely affected, stock and domestic water supplies of appropriate quality and quantity are to be supplied to Windimurra Station.

- 5-1 Prior to construction at the Wagoo Hills site, the proponent shall prepare water management plans (referred to in commitments 5.1 to 5.4 and 6.1) for the Wagoo Hills Vanadium Project, to the requirements of the Environmental Protection Authority on advice of the Water and Rivers Commission, Agriculture Western Australia, and the Department of Minerals and Energy.

These plans shall:

- 1 address surface water flows affected by the project;
- 2 outline a groundwater monitoring programme to determine whether there has been any contamination arising from the operation of the minesite or process plant and associated tailings dam;
- 3 make provision for suitable water supplies for stock and domestic purposes on Windimurra Station if existing supplies are adversely affected by the project; and
- 4 specify responsibility for monitoring, auditing of performance and compliance with the plans.

- 5-2 The proponent shall implement the water management plans required by condition 5-1.

6 Non-vanadium Dust Levels

The Wagoo Hills Vanadium Project and the Mingenew Coal Project should not cause excessive levels of “non-vanadium dust”.

- 6-1 The proponent shall not cause short term levels of non-vanadium bearing dust at residential premises near the Wagoo Hills Vanadium Project to exceed 1000 microgrammes per cubic metre (ug/m³), measured continuously over 15 minutes.
- 6-2 The proponent shall not cause short term levels of non-vanadium bearing dust at residential premises near the Mingenew Coal Project to exceed 1000 microgrammes per cubic metre (ug/m³), measured continuously over 15 minutes.

(Note: The 1000 ug/m³ limit referred to in conditions 6-1 and 6-2 is to be considered a minimum standard to be met by the proposal. It should be understood that the project may be subject to more stringent dust limits set by the Department of Environmental Protection through Works Approvals and/or Licence conditions.)

7 Greenhouse Gas Emissions

- 7-1 Prior to commissioning, the proponent shall prepare a Greenhouse Gas Emissions Management Plan to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

This Plan shall include:

- 1 calculation of the “greenhouse gas” emissions (using methodology developed for Australia);
- 2 measures to limit “greenhouse gas” emissions; and
- 3 estimation of the “greenhouse gas” efficiency of the project (per unit of product and/or other agreed performance indicators) and comparison with the efficiencies of other comparable projects producing a similar product.

- 7-2 The proponent shall implement the Greenhouse Gas Emissions Management Plan required by condition 7-1.

Note: The proponent should 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 program.

Components of the agreement program include:

- 1 an inventory of emissions;
- 2 opportunities for abating "greenhouse gas" emissions in the organisation;
- 3 a "greenhouse gas" mitigation action plan;
- 4 regular monitoring and reporting of performance; and
- 5 independent performance verification.

8 Noise Limits

- 8-1 The proponent shall conduct operations so that noise emissions do not unreasonably impact on people in the vicinity, including residents.
- 8-2 The proponent shall ensure that noise emissions meet the requirements of the noise control regulations applying from time to time under the Environmental Protection Act.
- 8-3 The proponent shall conduct noise surveys (including baseline measurements) and assessments (including the impact of tonal noise) at the Wagoo Hills site and the Mingenew site in consultation with the Department of Environmental Protection.

9 Blast Limits

Blasting operations at the Wagoo Hills Vanadium Project and Mingenew Coal Project should not produce excessive air pressure levels.

- 9-1 The proponent shall conduct operations so that blasting does not unreasonably impact on people in the vicinity, including residents.
- 9-2 The proponent shall ensure that blasting operations meet the requirements of the noise control regulations applying from time to time under the Environmental Protection Act.

10 Decommissioning

- 10-1 At least six months prior to decommissioning, the proponent shall prepare a Decommissioning Management Plan to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

This Plan shall address:

- 1 removal or, if appropriate, disposal on-site of plant and infrastructure;
- 2 rehabilitation of all disturbed areas to agreed final land use(s); and
- 3 identification of contaminated areas, including provision of evidence of notification to relevant statutory authorities.

- 10-2 The proponent shall implement the Decommissioning Management Plan required by condition 10-1.
- 10-3 The proponent shall make the Decommissioning Management Plan required by condition 10-1 publicly available, to the requirements of the Environmental Protection Authority.

11 Performance Review

The proponent should review the environmental performance of the proposal to ensure that the environmental management meets the environmental objectives and allows for continuous improvement.

- 11-1 Each six years following the commencement of construction, the proponent shall prepare and submit a performance review to evaluate the environmental performance, which shall include, but not be limited to:
- 1 environmental issues reported on in Environmental Protection Authority Bulletin 633;
 - 2 proponent's consolidated environmental management commitments documented in schedule 2 of this statement and those arising from the fulfilment of conditions and procedures in this statement;
 - 3 Environmental Management System environmental management targets;
 - 4 Environmental Management Plans; and
 - 5 environmental performance indicators,

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

Note: The Environmental Protection Authority may recommend changes and where significant, recommend actions, to the Minister for the Environment following consideration of the performance review.

12 Proponent

- 12-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 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.
- 12-2 Any request for the exercise of that power of the Minister referred to in condition 12-1 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.
- 12-3 The proponent shall notify the Minister for the Environment of any change of proponent contact name and address within 30 days of such change.

13 Commencement

- 13-1 The proponent shall provide evidence to the Minister for the Environment within two years of the date of this statement that the proposal has been substantially commenced.
- 13-2 Where the proposal has not been substantially commenced within two 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.

- 13-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond two years from the date of this statement.
- 13-4 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 two years for the substantial commencement of the proposal.

14 Compliance Auditing

- 14-1 The proponent shall submit periodic Performance and Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.
- 14-2 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.
- 14-3 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.

**Proponent's Consolidated Environmental Management
Commitments**

April 1992

**WAGOO HILLS VANADIUM PROJECT &
MINGENEW COAL PROJECT (653/1146)**

Precious Metals Australia Limited

The Proponent undertakes to fulfil the following commitments in accordance with the applicable State laws and regulations and with the standards and procedures agreed with the State.

1. **Vegetation Clearing**
 - 1.1 Minimise clearing of land consistent with safe and efficient operations.

2. **Weeds**
 - 2.1 Develop a management strategy to minimise the spread of Saffron Thistle. This strategy will be developed in consultation with the Department of Agriculture.

3. **Fire**
 - 3.1 Maintain strict fire control procedures.

4. **Rehabilitation**
 - 4.1 Design and rehabilitate all waste dumps in consultation with the Department of Mines and in accordance with the "Guidelines for Waste Dump Design and Rehabilitation" of that Department.
 - 4.2 Rehabilitate the surrounds of the vanadium mine site and the process plant and village areas at Windimurra following decommissioning of the project.
 - 4.3 Prepare specific proposals for site decommissioning in the event of termination of the project and implement those proposals after review and approval of the relevant Government Agencies at the time.

5. **Groundwater**
 - 5.1 Design and implement a monitoring programme of groundwater levels and water quality in the borefield and other bores in the vicinity of the project area at Windimurra before operational start and to the satisfaction of the Water Authority of WA.

8.2 Submit a detailed composition of the coal to the EPA and Department of Mines to assist in designed management plans.

9. Transport/Packaging/Storage

9.1 Develop a transportation management and contingency plan to ensure that the transportation of hazardous materials is undertaken safely. A driver training program will be incorporated into the plan and will include regular review of driver awareness. Similarly, the integrity of transportation equipment will be monitored on a regular basis.

The transportation management and contingency plan will be developed in consultation with the Explosives and Dangerous Goods Division of the Department of Mines and the Western Australian Hazardous Materials Emergency Management Scheme (WAHMEMS).

9.2 Submit a final design of the storage facility for the sodium salt reagent at Windimurra to the Department of Mines and the EPA for approval as part of the Environmental Management Program prior to the construction of the process plant.

9.3 Ensure that all handling, packaging and road transport of inputs to the process plant and products from that plant comply with the requirements of the Australian Code for the Transport of Dangerous Goods by Road and Rail and the Dangerous Goods (Road Transport) Regulations 1983 and amended Regulations 1988.

10. Workforce

10.1 Prohibit domestic pets in the project area as a condition of employment.

10.2 Restrict off-road driving and prohibit hunting by employees as a condition of employment.

- 7. Dust
- 7.1 Control coal dust and total dust and noise levels in the project areas in accordance with the applicable acts and regulations.