

MINISTER FOR THE ENVIRONMENT

IRON ORE MINE, DOWNSTREAM PROCESSING (DIRECT - REDUCED HOT BRIQUETTED IRON) AND PORT CONSTRUCTION, CAPE PRESTON, PILBARA – PROPOSAL UNDER S46 OF THE EP ACT TO AMEND THE MARINE WASTEWATER OUTFALL CONDITION

I refer to your letter of 19 October 2009 requesting the EPA to report to you on Mineralogy Pty Ltd's proposed changes to the environmental conditions for the Iron Ore Mine, Downstream Processing (Direct-Reduced Hot Briquetted Iron) and Port Construction, Cape Preston, Pilbara project.

The following is the EPA's Report and Recommendations (No.1343) to you pursuant to section 46(3) of the *Environmental Protection Act 1986*.

Introduction

Ministerial Statement 635 was published on 20 October 2003 granting approval for implementation of the proposal subject to the implementation of conditions, including condition 8 which relates to the Marine Wastewater Outfall.

Condition 8 requires the proponent to prepare a Wastewater Management Plan to ensure that a Moderate Protection Mixing Zone is maintained surrounding the wastewater outfall diffuser. The mixing zone is restricted to four hectares.

The proponent has requested that condition 8 be amended as:

- it is inconsistent with State environmental policy that has been developed since Statement 635 was issued;
- it is ambiguous; and
- it is impracticable to achieve a moderate level of ecological protection at the diffuser.

The proponent has provided marine dispersion modelling in support of its request to amend condition 8. As this modelling was also required by condition 7-1 5 the proponent has requested that this condition is deleted from Statement 635 as it is now redundant.

Discussion

Since Statement 635 was issued EPA Report 20 *Environmental Quality Criteria Reference Document for Cockburn Sound (2003-2004)* has been published. This document references *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC/ARMCANZ, 2000) and the two documents now represent current State and Commonwealth policy that is relevant to regulatory requirements for wastewater outfalls in Western Australia.

The EPA considers that it is appropriate to amend condition 8 of Statement 635 to reflect current State and Commonwealth policy. This would mean that the mixing zone at the wastewater outfall diffuser would become a Low Ecological Protection Area. It would be located in the port area. A moderate level of ecological protection would apply within 250 metres of the port infrastructure and a high level of ecological protection beyond that.

In preparing the draft replacement condition, the EPA has considered marine dispersion modelling provided by the proponent and is satisfied that the required water quality for a moderate level of ecological protection could be achieved within 70 metres of the outfall diffuser, as required by the condition.

EPA Recommendations

1. That Condition 8 be changed to specify a Low Ecological Protection Area within 70 metres of the wastewater outfall diffuser, which is to be located in the port area. A moderate level of ecological protection would apply within 250 meters of the port infrastructure and a high level of ecological protection beyond that.
2. That condition 7-1 5 is deleted.

Dr Paul Vogel
CHAIRMAN

29 October 2009

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

**IRON ORE MINE, DOWNSTREAM PROCESSING
(DIRECT - REDUCED HOT BRIQUETTED IRON)
AND PORT CONSTRUCTION,
CAPE PRESTON, PILBARA**

Proposal: The construction and operation of a 44.8 million tonnes per annum iron ore mine, power station, desalination plant, processing plant and accommodation and port facilities in the Cape Preston area as documented in Schedule 1 of Statement 635. The processing plant will produce pelletised, direct-reduced iron and hot-briquetted iron.

Proponent: Mineralogy Pty Ltd

Proponent Address: Level 7, 218 St George's Terrace, PERTH WA 6000

Assessment Number: 1814

Previous Assessment Number: 1114

Previous Statement Number: Statement No. 635 (published on 20 October 2003)

Report of the Environmental Protection Authority: Report 1343

Previous Report of the Environmental Protection Authority: Report 1056.

The implementation of the proposal to which the above reports of the Environmental Protection Authority relate is subject to the conditions and procedures contained in Ministerial Statement No. 635, as amended by the following:

Published on

Condition 7-1 5 (Marine Management Plan) and 8-1 to 8-4 (Marine Wastewater Outfall) of Statement No. 635 are deleted and replaced by the following conditions:

- 8-1 The proponent must locate the waste water outfall in the port area within a Moderate Ecological Protection Area which is confined to 250 metres from all points of the port structures.
- 8-2 The proponent shall ensure that the Moderate Ecological Protection Area is maintained in the port area, except for a Low Ecological Protection Area at the wastewater outfall. The boundary of the Low Ecological Protection Area must not exceed 70 metres from all points of the diffuser structure. At the outer boundary of the Moderate Ecological Protection Area a high level of ecological protection shall be maintained.
- 8-3 The proponent shall ensure that within the Low Ecological Protection Area the 95th percentile of bioaccumulating toxicant concentrations meets ANZECC and ARMCANZ 2000 *National Water Quality Management Strategy* 80% species protection guideline levels, and within the Moderate Ecological Protection Area the 95th percentile of toxicants meets ANZECC and ARMCANZ 2000 *National Water Quality Management Strategy* 90% species protection levels.
- 8-4 The proponent shall ensure that the following conditions are met at the boundary between the Low Ecological Protection Area and the Moderate Ecological Protection Area:
1. The median salinity resulting from discharge at the wastewater diffuser either, (1) does not exceed the 95th percentile of the natural salinity range over the same period; or, (2) does not exceed the median salinity at a suitable reference site by more than 1.2 parts per thousand.
 2. The 95th percentile of toxicant concentrations meets the 90% species protection levels specified in ANZECC and ARMCANZ 2000 *National Water Quality Management Strategy*.
 3. The results of Whole Effluent Toxicity testing undertaken using a minimum of five species as per ANZECC and ARMCANZ (2000) protocols demonstrate that sufficient dilution is occurring such that a moderate level of ecological protection (90% species protection) is met for at least 95% of wastewater flow and oceanographic conditions.
 4. The ambient dissolved oxygen in bottom water samples is not below 80% saturation for more than six weeks and never below 60% saturation.
 5. The median temperature in any season does not exceed the 95th percentile of the natural temperature range over the same period.
- 8-5 The proponent shall verify diffuser performance in terms of achieving the required number of dilutions to meet the requirements of 8-2 to 8-4, under a range of flow

rates, meteorological and sea state conditions for a period of at least 12 months immediately following commissioning, by use of continuous loggers or at least weekly sampling.

- 8-6 The proponent shall use procedures contained in EPA 2005 *Manual of Operating Procedures for Environmental Monitoring Against the Cockburn Sound Environmental Quality Criteria* EPA Report 21 for monitoring carried out to meet the requirements of 8-2 to 8-5.
- 8-7 Within 18 months of commissioning the proponent shall submit a report containing the results of the monitoring required by 8-2 to 8-5 and a discussion of the operating limitations necessary to ensure ongoing compliance with 8-2 to 8-4 to the Chief Executive Officer of the Department of Environment and Conservation.
- 8-8 In the event that the monitoring required by 8-5 indicates that the requirements of 8-2 to 8-4 are not being met or are not likely to be met, the proponent shall immediately report such findings to the Chief Executive Officer of the Department of Environment and Conservation along with a description of the management actions to be taken to meet the requirements of 8-2 to 8-4.