



**Environmental  
Protection  
Authority**

**Chloride Process Pigment Plant, Kemerton  
and Operations at Australind  
– inquiry under section 46 of the  
*Environmental Protection Act 1986*  
to amend Ministerial Statements 001 and 225**

**Tronox Pigment Bunbury Ltd**

Report 1709

September 2021

## **Inquiry under section 46 of the *Environmental Protection Act 1986***

The Minister for Environment has requested that the Environmental Protection Authority (EPA) inquire into and report on the matter of changing the implementation conditions of Ministerial Statement 001 and 225 relating to the Chloride Process Pigment Plant, Kemerton and Australind to consolidate, review and contemporise the conditions.

Section 46(6) of the *Environmental Protection Act 1986* requires the EPA to prepare a report that includes:

- (a) a recommendation on whether or not the implementation conditions to which the inquiry relates, or any of them, should be changed
- (b) any other recommendations that it thinks appropriate.

The following is the EPA's report to the Minister pursuant to s. 46(6) of the *Environmental Protection Act 1986*.



**Prof. Matthew Tonts**  
Chair

22 September 2021

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# 1 Proposal

The Chloride Process Pigment Plant, Kemerton and Australind (the proposal) involves the treatment of feed stock using a Chloride Process Plant to produce titanium dioxide (TiO<sub>2</sub>) in slurry form at the Kemerton Plant. The TiO<sub>2</sub> is then transported to the Australind plant, where it undergoes further chemical and heat treatment before producing dry pigment products. The proponent for the proposal is Tronox Pigment Bunbury Ltd (formally Cristal Pigment Australia Ltd).

The Environmental Protection Authority (EPA) assessed the proposal at the level of Public Environmental Review and published its report in July 1987 (Report 283). In this report, the EPA considered the following key environmental factors were relevant to the proposal:

- Location of the site
- Air quality
- Fresh water availability
- Saline water discharge
- Conservation values of the river ecosystem including flora and fauna
- Aesthetic and recreational values of the river
- Riparian rights of local users.

In applying the *Statement of Environmental Principles, Factors and Objectives* (EPA 2020c) these factors are now represented by:

- Air quality
- Flora and vegetation
- Terrestrial fauna
- Inland waters
- Social surroundings
- Marine environmental quality.

The EPA concluded in Report 283, that it was likely the EPA's objectives would be achieved provided there was satisfactory implementation by the proponent of the EPA's recommended conditions.

The then Minister for Environment approved the proposal for implementation, subject to the implementation conditions of Ministerial Statement (MS) 001 on 25 August 1987.

## Previously approved changes to the proposal

MS 001 included conditions relating to all operations at the Kemerton and Australind sites. However, a portion of the Kemerton site, the Chlor-Alkali Plant, was owned and operated by Nufarm-Coogee Pty Ltd (Nufarm). On 24 March 1988, Nufarm submitted a Notice of Intent in support of a separation of environmental responsibilities from SCM Chemicals at the Kemerton site and sought minor changes to various commitments of MS 001. The proposed changes were:

- separation of conditions and commitments in the statement, devolving those related to the Chlor-Alkali Plant to Nufarm, with the remainder continuing to be the responsibility of SCM Chemicals
- changing commitments for a foam suppression system in the chlorine storage area, remotely operated valves on the liquefied chlorine line and excess flow valves on the liquefied chlorine line
- deletion of 30,000 tonne salt stockpile.

In Bulletin 336 (EPA 1988) the EPA assessed the proposal and determined it to be environmentally acceptable. Subsequently, MS 066 was issued on 1 May 1989 for the Chlor-Alkali Plant in Kemerton, under the operation of Nufarm. The remaining plant continued to be operated by SCM Chemicals (now Tronox Pigment Bunbury Ltd).

As a result of the above assessment (Assessment Number 176 and 176-1) and the separation of responsibilities between Nufarm and SCM Chemicals, an additional statement (MS 225) was issued on 6 March 1992, applying to the SCM Chemicals Chloride Process Pigment Plant at Kemerton and operations at Australind.

## Previously approved changes to the conditions

There have been no changes to the implementation conditions since MS 225 was issued.

## 2 Requested changes to the conditions

The proponent requested the following changes to the implementation conditions of MS 001 and MS 225:

- removal of completed conditions of MS 001 and MS 225
- removal of obsolete conditions from MS 001
- removal of conditions of MS 001 and MS 225 managed by other authorities
- change to condition 13 of MS 001 regarding the requirement for a site Radiation Management Programme
- removal of conditions of MS 001 and MS 225 relating to water licensing
- retention and contemporisation of the remaining conditions, to meet current standards
- consolidation of the two statements.

The Minister for Environment requested that the EPA inquire into and report on the matter of changing the implementation conditions of MS 001 and MS 225 for the Chloride Process Pigment Plant, Kemerton and operations at Australind.

This report satisfies the requirements of the EPA's inquiry.

### 3 Inquiry into changing the conditions

The EPA has discretion as to how it conducts this inquiry. In determining the extent and nature of this inquiry, the EPA had regard to information such as:

- the currency of its original assessment (Report 283)
- subsequent s. 46 inquiry (Report 336) for the separation of the Chlor-Alkali Plant and MS 066
- MS 001 and MS 225
- information provided by the proponent (Cristal 2014)
- advice from relevant decision-making authorities
- requirements of licenses issued under Part V of the *Environmental Protection Act 1986* (EP Act) (L6046/1967/15 and L8870/2014/1)
- any new information regarding the potential impacts of the proposal on the environment.

These documents are instructive in determining the extent and nature of the inquiry under s. 46 of the EP Act.

#### EPA procedures

In December 2016, the EPA released a new suite of environmental impact assessment policy and guidance documents. These replaced EPA policy and guidance that were current at the time of receiving the change to conditions request. The EPA consulted with the proponent on the application of the current environmental impact assessment policy and guidance documents relevant to the EPA's assessment of the proposal.

In conducting this inquiry, the EPA has considered and given due regard to relevant current and former policy documents. The EPA followed the procedures in the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016* (State of Western Australia 2016) and the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual* (EPA 2020b).

## 4 Inquiry findings

The EPA considered that the following are the key environmental factors relevant to the change to the conditions:

- Air quality
- Inland waters
- Marine environmental quality.

### 4.1 Air quality

The EPA's environmental objective for air quality is *to maintain air quality and minimise emissions so that environmental values are protected*.

#### Conclusions from EPA Report 283

The EPA assessed the likely impacts on air quality from the Chlor-Alkali Plant and the sulphuric acid plant and determined that further pollution control equipment was required to reduce emissions below one part per million (ppm) and to increase reliability of the Chlor-Alkali Plant and that the sulphuric acid plant should cease to operate. The assessment also concluded that there would be no odours or fugitive emissions expected from the plant during normal operations – however the proponent needed to have objectives to minimise the likelihood of fugitive emissions from atypical conditions.

To manage these impacts, the EPA recommended the following conditions:

- *Condition 10 – The proponent should install a chlorine scrubbing system on the Chlor-Alkali Plant with sufficient back up capacity to be able to absorb all of the chlorine produced at full production rate for one hour.*
- *Condition 21 – The existing sulphuric acid plant and existing sulphate process plant at Australind shall not operate beyond 30 June 1990 unless the government is satisfied with the environmental performance of the proponent as measured against the following criteria:*
  - *until 30 December 1987 the sulphur dioxide (SO<sub>2</sub>) emissions from the Australind plant should not result in ground level concentrations of SO<sub>2</sub> exceeding 1000 micrograms per cubic metre averaged hourly in any residential area*
  - *from 1 January 1988, and until the cessation of the concurrent operating period, the SO<sub>2</sub> emissions from the combined Australind plant should not result in ground level concentrations of SO<sub>2</sub> exceeding 1000 micrograms per cubic metre (averaged over three minutes) in any residential area.*

#### Assessment of the requested change to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:



- *Environmental Factor Guideline – Air Quality* (EPA 2020a).

The EPA considers it appropriate to remove conditions relating to air quality from the Ministerial Statement given:

- The Chlor-Alkali Plant was separated from the SCM Chemical operations at Kemerton with a new Ministerial Statement being issued (MS 066) for its operation. As such the Chlor-Alkali Plant is no longer part of this operation and the conditions relating to it were removed from the revised MS 225.
- The sulphuric acid plant ceased operations in 1990, in accordance with condition 21 of MS 001. Therefore, the condition relating to this plant is no longer relevant.
- Point source and fugitive air emissions from the site are appropriately regulated through licenses issued under Part V of the EP Act.

## 4.2 Inland waters

The EPA's environmental objective for inland waters is *to maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.*

### Conclusions from EPA Report 283

The Australind plant was already in operation at the time of the publication of MS 001. The EPA's assessment of wastewater discharge in Report 283 focused on discharge from the proposed Kemerton plant. However, discharge from the Australind plant was included in the final Ministerial Statement, with conditions imposed to manage impacts associated with discharge into the Collie River.

To manage these impacts, the EPA recommended the following conditions:

- *Condition 17 of MS 001 – The wastewater discharge to the Collie River from the Australind site should conform with the marine and estuarine water quality criteria in 7(2) of the Department of Conservation and Environment (DCE) Bulletin 103 (1981) for the maintenance and preservation of aquatic ecosystems.*
- *Condition 18 of MS 001 – The proponent undertake periodic wastewater monitoring including:*
  - *temperature of the wastewater discharge and of the surface waters of the Collie River an appropriate distance upstream and downstream from the point of discharge*
  - *pH, total dissolved solids, level of radioactivity, levels of chromium and manganese, and total suspended solids of the effluent*
  - *baseline and post discharge characterization of the benthos of the Collie River in the vicinity of the outfall*
  - *volume and velocity of flow of the Collie River under low flow conditions.*

*The proponent shall also develop a monitoring programme in consultation with the Leschenault Inlet Management Authority and to the satisfaction of the EPA.*

MS 225, published after the separation of the Chlor-Alkali Plant from the remaining operation (MS 066), includes additional environmental commitments for the treatment and discharge of wastewater. Commitment 2.1 relates to the monitoring of wastewater and discharge into the Collie River.

### Assessment of the requested change to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental Factor Guideline – Inland Waters (EPA 2018).*

Environmental Licence L6046/1967/15 contains conditions requiring the proponent to undertake monitoring of discharge to the Collie River and to report against limits set for key parameters. After consideration of the original assessment and Part V licensing requirements, it is considered that the discharge of wastewater to the Collie

River can be appropriately managed and regulated through existing licence conditions and it is recommended that conditions relating to the treatment and discharge of wastewater from the Australind plant be removed from MS 001 and MS 225.

## 4.3 Marine environmental quality

The EPA's environmental objective for marine environmental quality is *to maintain the quality of water, sediment and biota so that environmental values are protected*.

### Conclusions from EPA Report 283

The original proposal sought to discharge wastewater from the Kemerton Plant into the Wellesley River. In Report 283, the EPA considered that given the low flow in the Wellesley River over the summer period, the river salinity would increase significantly if discharge of wastewater was to occur and that this would likely lead to further impact on riparian vegetation and further users of the river would be unreasonably disadvantaged. As a result, the proposal to dispose of wastewater to Wellesley River was considered environmentally unacceptable and the EPA initiated a number of studies to investigate alternative disposal methods.

Disposal via ocean outfall was considered as an option to discharge to the Wellesley River. It was concluded that this method could be made acceptable and that the proponent would need to submit a proposal for the ocean outfall prior to operation commencing.

To manage these impacts, the EPA recommended the following conditions:

- *Condition 9 of MS 001 – The proponent shall not cause or allow any wastewater discharge to the Wellesley River. Accordingly, the proponent shall submit a proposal for an ocean wastewater discharge to the EPA for its assessment prior to construction.*

MS 225, published after the separation of the Chlor-Alkali Plant from the remaining operation (MS 066), includes additional environmental commitments for the treatment and discharge of wastewater. Commitment 2.1 relates to the monitoring of wastewater and discharge from the Kemerton site via ocean outfall.

### Assessment of the requested change to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental Factor Guideline – Marine Environmental Quality (EPA 2016).*

Environmental Licence L8870/2014/1 contains conditions requiring the proponent to undertake monitoring of discharge of the ocean outfall and to report against limits set for key parameters. After consideration of the original assessment and Part V licensing requirements, it is considered that the discharge of wastewater to ocean outfall can be appropriately managed and regulated through existing licence conditions. Conditions relating to the treatment and discharge of wastewater from the Kemerton plant can be removed from MS 001 to MS 225.

## 4.4 Other conditions

Condition 13 of MS 001 requires the development of a radiation management programme for the commissioning and operation of the Kemerton plant. The EPA confirmed in a letter to the proponent of 28 February 1994, that the requirement to develop a radiation monitoring programme for the commissioning of the Kemerton plant had been completed.

The responsibility for preparation and implementation of a Radiation Management Plan is regulated through the *Radiation Safety Act 1975* administered by the Radiological Council of WA. The Radiological Council has provided advice to the EPA (letter dated 7 March 2017) that it supports the removal of this condition from the Ministerial Statement.

MS 001 and MS 225 contain other conditions not related to the key environmental factors discussed above. The EPA's recommendations regarding these other conditions are summarised in Appendix C.

## 5 Conclusions and recommendations

### *Change to Ministerial Statements 001 and 225*

The proponent has requested changes to and the removal of conditions in MS 001 and MS 225. The EPA considers it is appropriate to replace MS 001 and MS 225 with a new Ministerial Statement which contemporises the conditions. The new statement would be updated to include contemporary conditions including those to address decommissioning and closure, key characteristics table and a defined development envelope.

### Conclusions

In relation to the environmental factors, and considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA concludes that:

- there are no changes to the proposal
- there is no significant new or additional information that changes the conclusions reached by the EPA under any of the relevant environmental factors since the proposal was assessed by the EPA in Report 283 (July 1987)
- whether greenhouse gas emissions is a new significant factor since the EPA's original assessment of the proposal may be subject to a separate inquiry
- the impacts to the key environmental factors are considered manageable, based on the requirements of existing conditions of current environmental licenses, and the imposition of the attached recommended conditions.

### Recommendations

Having inquired into this matter, the EPA submits the following recommendations to the Minister for Environment under s. 46 of the EP Act:

1. Replace MS 001 and MS 225 with a new Ministerial Statement in the manner provided for in the attached recommended statement and which includes the following:
  - a) a table limiting the extent of the proposal (condition 1)
  - b) definition of the development envelope (in condition 1 and figures)
  - c) condition 5 requiring the development and implementation of a Decommissioning and Closure Plan.
2. After complying with s. 46(8) of the EP Act, the Minister may issue a statement of decision to change MS 001 and MS 225 in the manner provided for in the attached recommended Statement (Appendix A).

## 6 Other advice

Since the commencement of this inquiry, the EPA has released a guideline on greenhouse gas emissions (EPA 2020d). The proposal reported scope 1 emissions of 58,705 tonnes CO<sub>2</sub>-e from the Australind Finishing Plant and 84,299 tonnes CO<sub>2</sub>-e for the Kemerton Processing Plant during 2019-20.

Greenhouse gas emissions were not included in the original assessment of the proposal (Report 283), and the initiation letter for this enquiry from the Minister did not include reference to greenhouse gas emissions.

As such, greenhouse gas emissions were not considered in this inquiry. However, the Minister may choose to request an additional s. 46 inquiry into whether implementation conditions should be changed as a result of greenhouse gas emissions.

# Appendix A: Recommended conditions

## STATEMENT TO CHANGE THE IMPLEMENTATION CONDITIONS APPLYING TO A PROPOSAL

(Section 46 of the *Environmental Protection Act 1986*)

### CHLORIDE PROCESS PIGMENT PLANT, KEMERTON AND OPERATIONS AT AUSTRALIND

**Proposal:** The proposal includes a Titanium Dioxide Processing Plant at Kemerton which uses a Chloride Process to produce titanium oxide (TiO<sub>2</sub>) slurry which is then transported to the Australind finishing plant where it undergoes further chemical and heat treatment before producing dry pigment products.

**Proponent:** Tronox Pigment Bunbury Ltd  
Australian Company Number 008 683 627

**Proponent Address:** 139 Old Coast Road, Australind, WA 6233

**Report of the Environmental Protection Authority:** 1701

**Preceding Statements Relating to this Proposal:** 001 and 225

Pursuant to section 45 of the *Environmental Protection Act 1986*, as applied by section 46(8), it has been agreed that the implementation conditions set out in Ministerial Statement No. 001 and 225, be changed as specified in this Statement.

This Statement authorises the implementation of the proposal described and documented in condition 1. The implementation of the proposal is subject to the following implementation conditions and procedures which replace and supersede all previous conditions and procedures of Statement 001 and Statement 225 and details definitions of terms and phrases used in the implementation conditions and procedures.

## 1 Limitations and Extent of Proposal

1-1 When implementing the proposal, the proponent shall ensure the proposal does not exceed the following extents:



<b>Proposal element</b>	<b>Location</b>	<b>Limitation or maximum extent</b>
Australind Plant	Lot 350 on Diagram 26619 Old Coast Road, Australind, Figure 2	Development envelope of 28.79 hectares.
		Up to 125,000 tonnes per year of product.
Kemerton Pant	Lot 1 on Diagram 73196, Marriot Road, Wellesley Figure 3	Development envelope of 54.46 hectares.
		Up to 125,000 tonnes per year of product.

## **2 Contact Details**

- 2-1 The proponent shall notify the CEO of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

## **3 Compliance Reporting**

- 3-1 The proponent shall prepare, submit and maintain a Compliance Assessment Plan to the CEO at least six (6) months prior to the first Compliance Assessment Report required by condition 3-6.
- 3-2 The Compliance Assessment Plan shall indicate:
- (1) the frequency of compliance reporting;
  - (2) the approach and timing of compliance assessments;
  - (3) the retention of compliance assessments;
  - (4) the method of reporting of potential non-compliances and corrective actions taken;
  - (5) the table of contents of Compliance Assessment Reports; and
  - (6) public availability of Compliance Assessment Reports.
- 3-3 After receiving notice in writing from the CEO that the Compliance Assessment Plan satisfies the requirements of condition 3-2 the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 3-1.

- 3-4 The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by condition 3-1 and shall make those reports available when requested by the CEO.
- 3-5 The proponent shall advise the CEO of any potential non-compliance within seven (7) days of that non-compliance being known.
- 3-6 The proponent shall submit to the CEO the first Compliance Assessment Report fifteen (15) months from the date of issue of this statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as agreed in writing by the CEO.

The Compliance Assessment Report shall:

- (1) be endorsed by the proponent's CEO or a person delegated to sign on the CEO's behalf;
- (2) include a statement as to whether the proponent has complied with the conditions;
- (3) identify all potential non-compliances and describe corrective and preventative actions taken;
- (4) be made publicly available in accordance with the approved Compliance Assessment Plan; and
- (5) indicate any proposed changes to the Compliance Assessment Plan required by condition 3-1.

#### **4 Public Availability of Plans and Reports**

- 4-1 Subject to condition 4-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent shall make publicly available, in a manner approved in writing by the CEO, all environmental plans and reports required under this statement.
- 4-2 If any parts of the plans and reports referred to in condition 4-1 contains particulars of:
  - (1) a secret formula or process; or
  - (2) confidential commercially sensitive information,

the proponent may submit a request for approval from the CEO to not make those parts of the plans and reports publicly available. In making such a request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.

## 5 Decommissioning and Closure

- 5-1 Within twelve (12) months of the date of this Statement or as otherwise agreed in writing by the CEO, and after consulting with, and obtaining the advice of the Radiological Council, the proponent shall update and submit the Decommissioning and Closure Plan to the CEO demonstrating how the site will be rehabilitated, remediated and decommissioned to ensure it is physically safe to members of the public and non-human biota, and chemically and radiologically non-polluting, in the long term.
- 5-2 The Decommissioning and Closure Plan shall:
- (1) specify the environmental objective in condition 5-1;
  - (2) detail outcomes based upon completion criteria that would need to be quantitative or semi-quantitative;
  - (3) specify rehabilitation, remediation and decommissioning actions that would result in the site meeting the completion criteria of condition 5-2(2) above;
  - (4) specify modelling or projection techniques that are being developed and used to predict the site would meet the completion criteria of condition 5-2(2) above in the long term;
  - (5) specify monitoring to measure the effectiveness of remediation, rehabilitation and decommissioning actions against completion criteria, including but not limited to, parameters to be measured, baseline data, monitoring locations, and frequency and timing of monitoring;
  - (6) provide the format and timing to demonstrate the objective in condition 5-1 has been met for the reporting period in the Compliance Assessment Report required by condition 3-6 including, but not limited to:
    - (a) verification of the implementation of rehabilitation, remediation and decommissioning actions; and
    - (b) reporting on the effectiveness of rehabilitation, remediation and decommissioning actions against completion criteria.
- 5-3 After receiving notice in writing from the CEO that the Decommissioning and Closure Plan satisfies the requirements of conditions 5-1 and 5-2, the proponent shall implement the plan.
- 5-4 The proponent shall review and revise the Decommissioning and Closure Plan required by conditions 5-1 and 5-2 at intervals not exceeding three (3) years, or as otherwise agreed by the CEO, and submit the plan to the CEO. The

revision of the plan shall include, in addition to the requirements of condition 5-2:

- (1) an estimate of the liability represented by the site should it require closure when the revised plan is implemented;
- (2) actions that would need to be undertaken should the site require closure when the revised plan is implemented; and
- (3) the matters set out in condition 5-4(1) and condition 5-4(2) must be reviewed by an independent person with suitable expertise.

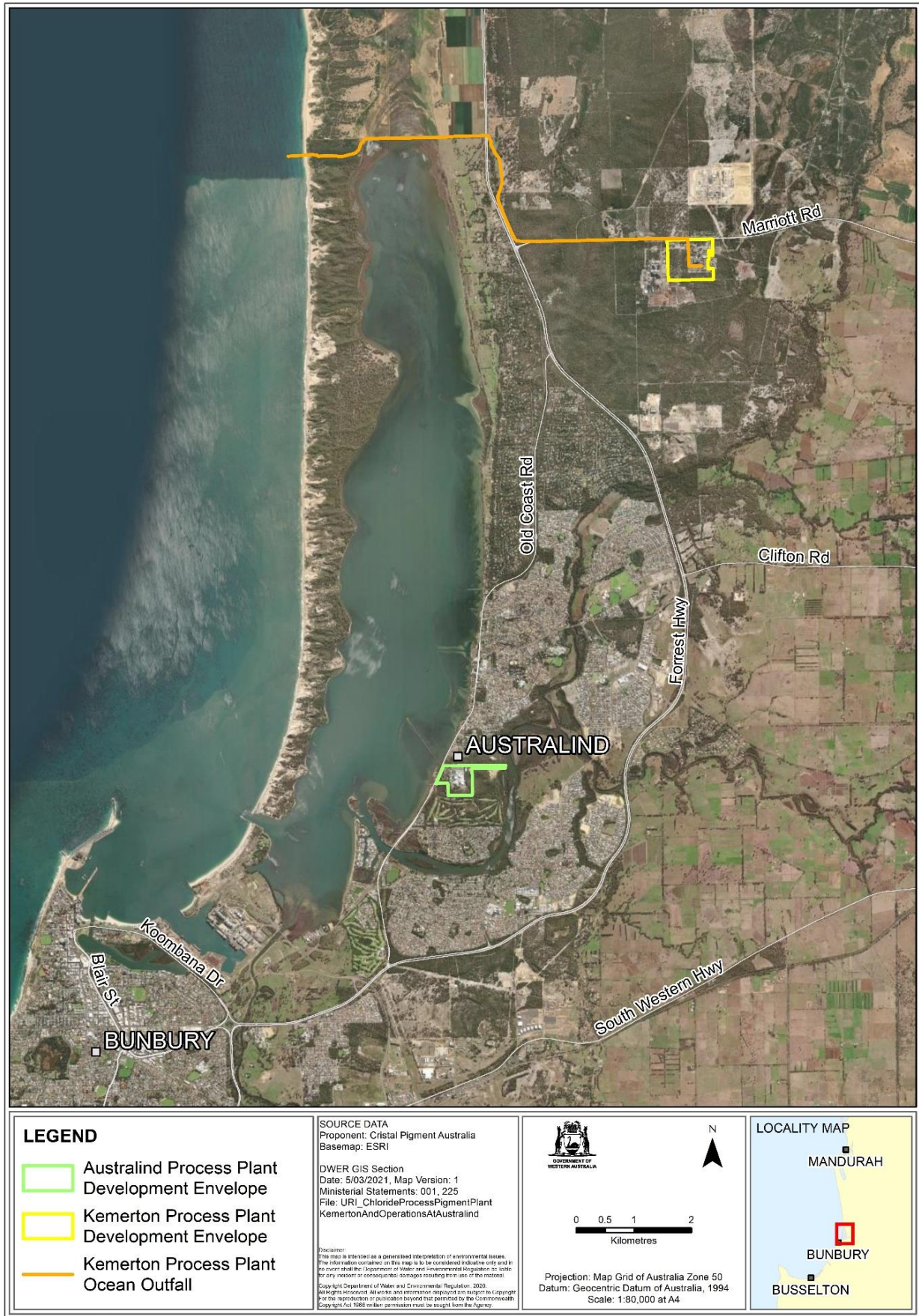
5-5 The proponent shall implement the latest revision of the Decommissioning and Closure Plan, which the CEO has confirmed by notice in writing, satisfies the requirements of condition 5-4.

5-6 After receiving notice in writing from the CEO that the final Decommissioning and Closure Plan satisfies the requirements of conditions 5-4, the proponent shall implement the final plan.

5-7 The proponent shall not stop implementing the final Decommissioning and Closure Plan until it has demonstrated the completion criteria of the final plan will be met in the long term to the satisfaction of the CEO.

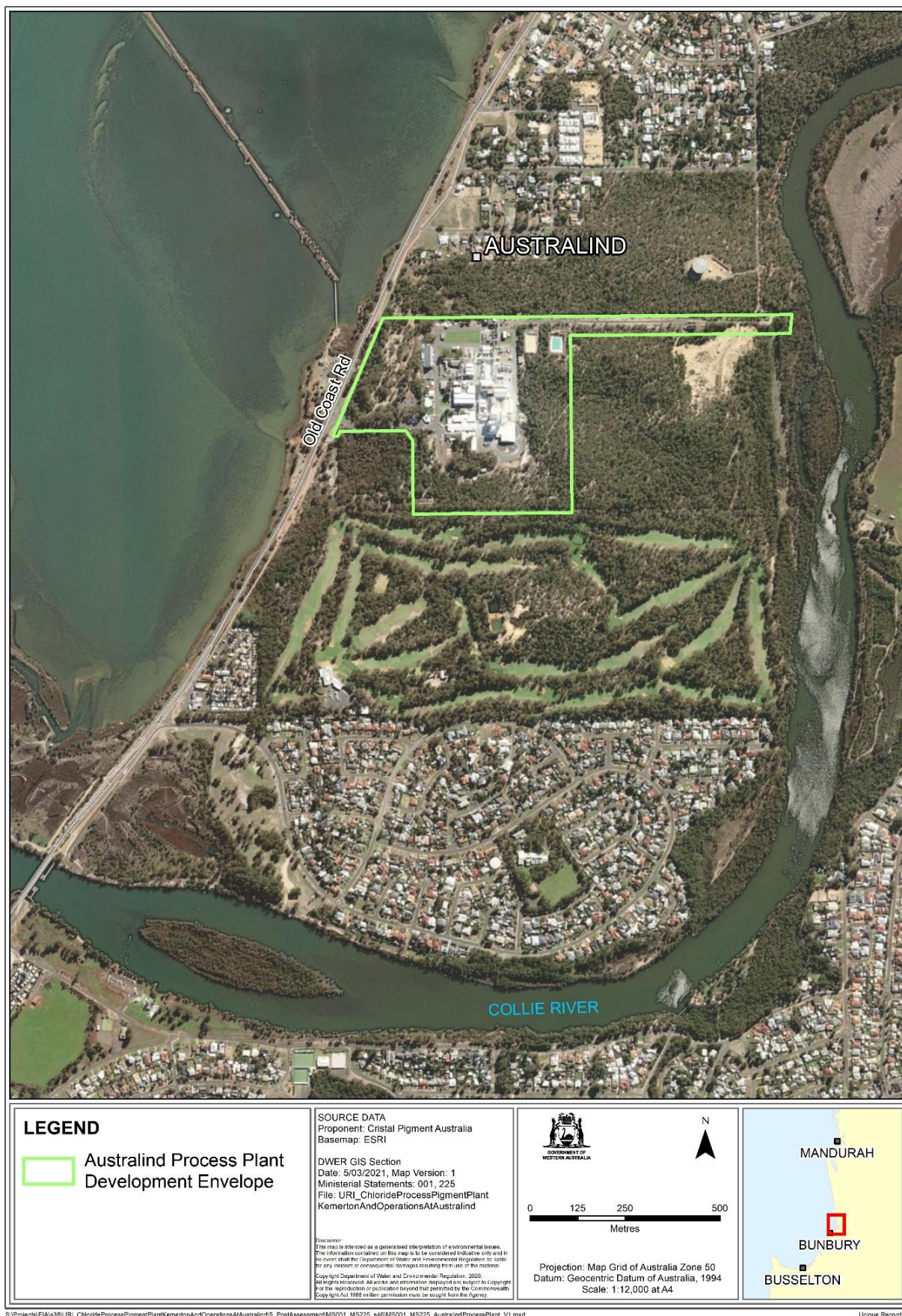
Note: CEO means the Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the *Environmental Protection Act 1986*, or his delegate.





**Figure 1: Regional location**





**Figure 2: Australind Process Plant development envelope**





**Figure 3: Kemerton Process Plant and Ocean Outfall development envelope**

## **Schedule 1**

Coordinates defining the site development envelopes are held by the Department of Water and Environmental Regulation, Document Reference Numbers DWERDT446437, DWERDT446440 and DWERDT446448.



## Appendix B: Identified decision-making authorities

The decision-making authorities (DMAs) in the table below have been identified for the purposes of s. 45 as applied by s. 46(8) of the *Environmental Protection Act 1986*.

Decision-Making Authority	Legislation (and Approval)
1. Minister for State Development	State Agreement Act <i>Pigment Factory (Australind) Act 1986</i>
2. Minister for Water	<i>Rights in Water and Irrigation Act 1914</i> (5C water abstraction license)
4. Chief Dangerous Goods Officer Department of Mines, Industry Regulation and Safety	<i>Dangerous Goods Safety Act 2004</i> Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007 Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007
3. Chief Executive Officer Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i> (Part V works approval and licence)
5. Secretary Radiological Council of Western Australia	<i>Radiation Safety Act 1975</i> (Radiation Management Plan)

Note: In this instance, agreement is only required with DMA 1 and 2 since these DMAs are Ministers.

## **Appendix C: Assessment of proposed changes to implementation conditions of Ministerial Statements 001 and 225**

Ministerial condition	Environmental factor	Proposed change	Assessment and evaluation of proposed changes
<b>Ministerial Statement 001</b>			
1:M1 as amended through Ministerial Statement 225	Not Applicable (NA)	Delete condition and replace with a consolidated contemporary style condition	<p>Condition 1 relates to environmental management commitments as amended on 8 January 1992 and attached to Ministerial Statement (MS) 225.</p> <p>The EPA has reviewed each proponent commitment and considers that they fall into four categories:</p> <ul style="list-style-type: none"> <li>• are not relevant to environmental management and therefore are redundant</li> <li>• duplicate requirements addressed by the proposed implementation conditions 1 to 9</li> <li>• have been fully implemented</li> <li>• are managed under another regulatory instrument such as the Environmental Licence issued under Part V of the <i>Environmental Protection Act 1986</i> (EP Act), Water Licence issued under the <i>Rights in Water and Irrigation Act 1914</i>.</li> </ul>
1:M2.1, 2.2 and 2.3 HAZOP study, risk analysis and hazard analysis update	NA	Delete condition	<p>The former Department of Environment and Conservation (DEC) confirmed in a letter of 5 June 2009 (Ref A610039) that the requirements of this condition were complete.</p> <p>Safety Requirements for the operations are regulated under 'Worksafe' and administered by Department of Mines Industry Regulation and Safety (DMIRS) through the <i>Mines Safety and Inspection Act 1994</i>.</p>
1:M2.4 Audit of risks and hazards	NA	Delete condition	Hazard Management is administered by DMIRS through the <i>Dangerous Goods and Safety Act 2004</i> and is no longer relevant to the MS.
1:M3,4,5,6 and 10	NA	Removed by MS 225	These conditions were transferred to the Chlor Alkali Facility – Kemerton, MS 066 and are no longer relevant to this operation.
1:M7.1 and 7.2 Emergency plan and fire management	NA	Delete condition	DEC confirmed in a letter of 5 June 2009 (Ref A610039) the requirements of this condition were complete.

Ministerial condition	Environmental factor	Proposed change	Assessment and evaluation of proposed changes
1:M8 Underflow from the thickener at the Kemerton site be treated in such a manner so as to prevent groundwater contamination	Inland waters	Delete condition	Discharges from the operations are now regulated under Part V of the EP Act, through licences L6046/1967/15 and L8870/2014/1.
1:M9 No wastewater discharge to the Wellesley River. Submit a proposal for discharge of wastewater to the ocean	Inland waters	Delete condition	The EPA confirmed in a letter of 7 May 1993 (Ref A610009) the requirements of this condition were complete.  Discharges from site are managed through the Environmental Licence issued under Part V of the EP Act.
1:M11 Submit a proposal for solid waste management and disposal from both sites	Terrestrial environmental quality	Delete condition	DEC confirmed in a letter of 5 June 2009 (Ref A610039) the requirements of this condition were complete.  Solid wastes from the operations are disposed to a licenced land fill and regulated under Part V of the EP Act.
1:M12 Disposal sites for solid waste must be approved by appropriate Government Agencies prior to completion of construction of the Kemerton Plant	Terrestrial environmental quality	Delete condition	Disposal of solid waste is currently undertaken off site at a separate licenced landfill. Solid wastes from the operations are disposed to a licenced land fill and regulated under Part V of the EP Act.
1:M13 A radiation management programme shall be developed for the commissioning and operation of the Kemerton plant	Social surroundings	Delete condition	The EPA confirmed in a letter of 28 February 1994 (Ref A610018) the requirements for the development of a radiation monitoring programme for the commissioning of the Kemerton plant were completed.  The responsibility for preparation and implementation of a Radiation Management Plan is regulated through the <i>Radiation Safety Act 1975</i> administered by the Radiological Council of WA.  The Radiological Council has provided advice to the EPA that it supports the removal of these conditions from the Ministerial Statement (Letter from H Upton 7 March 2017 (DWERT241712))

Ministerial condition	Environmental factor	Proposed change	Assessment and evaluation of proposed changes
1:M14 Refer a detailed water supply proposal to the EPA for assessment prior to commencement of construction	Inland waters	Delete condition	An audit by the Office of the Environmental Protection Authority (OEPA) (1 September 2013) (2013-0000343474) confirmed the requirements of this condition are complete.  Water supply is managed through Groundwater licences (GWL61063(4), GWL61062(3), GWL161768(3) and GWL 164348(2)) issued under section 5C of the <i>Rights in Water and Irrigation Act 1914</i> .
1:M15 Prepare a contingency plan for the transport of reagents.	NA	Delete condition	The EPA confirmed in a letter of 28 February 1994 (Ref A610018) the requirements of this condition were complete.  Transport of dangerous reagents is managed through the <i>Dangerous Goods Safety Act 2004</i> .
1:M16 The safeguards for storage of titanium tetrachloride should be taken into account in a HAZOP analysis	NA	Delete condition	The EPA confirmed in a letter of 28 February 1994 (A610018) the requirements of this condition were completed.  Management of hazardous substances is regulated through the <i>Dangerous Goods Safety Act 2004</i> .
1:M17 Wastewater discharge to the Collie River should conform with the marine and estuarine water quality criteria for the maintenance and preservation of aquatic ecosystems (Australind)	Inland waters Marine environmental quality	Delete condition	Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.
1:M18.1 Wastewater monitoring should include temperature of wastewater discharge and of the surface water of the Collie river	Inland waters	Delete condition	The EPA confirmed in a letter of 28 February 1994 (Ref A610018) the requirements of this condition were complete.  Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.
1:M18.2, 18.3 and 18.4 Implement a wastewater monitoring programme for the Australind site	Inland waters	Delete condition	Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.

Ministerial condition	Environmental factor	Proposed change	Assessment and evaluation of proposed changes
1:M19 Prepare a contingency plan for both the Australind and Kemerton sites	NA	Delete condition	The EPA confirmed in a letter of 7 May 1993 (A610009) the requirements of this condition were complete.
1:M20 Maintain the pipeline for effluent discharge until monitoring results confirm that unacceptable environmental impacts have not occurred	Inland waters	Delete condition	The EPA confirmed in a letter of 1 March 1994 (A610004) the requirements of this condition were complete.  Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.
1:M21 The sulphuric acid and sulphate process plants at Australind shall not operate beyond 30 June 1990 unless criteria are met as detailed in Ministerial condition 21	NA	Delete condition	The EPA confirmed in a letter of 1 March 1994 (A610004) the requirements of this condition were completed.  Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.
1:M22 The management strategy for liquid effluent disposal shall maximise the use of existing lagoons and the reactivation of old lagoons so as to avoid further degradation of the northern end of the Peninsula	Inland waters	Delete condition	The EPA confirmed in a letter of 1 March 1994 (A610004) the requirements of this condition were complete.  Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.
1:M23 Ensure the company's operation and management programme for the Kemerton plant site are compatible with the management objectives developed for the Kemerton Community Park	NA	Delete condition	The EPA confirmed in a letter of 1 March 1994 (A610004) the requirements of this condition were complete.
1:M24	Inland waters	Delete condition	Construction phases were completed in 1989. The proponent is undertaking monitoring of the environmental performance of the

Ministerial condition	Environmental factor	Proposed change	Assessment and evaluation of proposed changes
Meet the costs associated with the monitoring of environmental performance of the construction and operational phases of the Australind and Kemerton plants			operational phase for the Australind and Kemerton plants, regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.
1:P1 Construction	NA	Delete condition	Construction of the plant has been completed and this condition is no longer relevant.
1:P2 Operations P2.1 Wastewater	Inland waters	Delete condition	Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.
1:P2.2 Aesthetics/Noise Odour	Social surroundings		Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.  Noise emissions are regulated under the Environmental Protection (Noise) Regulations 1997.
1:P2.3 General	NA	Delete condition	Condition is related to plant maintenance, disposal of waste, hazard and risk analysis, radiation safety, policy, groundwater abstraction and operator. These issues are regulated under other instruments and are not relevant to a contemporary Ministerial Statement.
1:P3 Safety Features	NA	Delete condition	Condition relates to operation of particular plant equipment, maintenance and process control systems which are not relevant to a contemporary Ministerial Statement.
1:P3.1 Chloride Process Plant	NA	Delete condition	DEC confirmed in a letter of 5 June 2009 (Ref A610039) the requirements of this condition were complete.  The condition relates to the design, maintenance and operation of process plant equipment and is not relevant to a contemporary Ministerial Statement.
1:P3.2 Chlor Alkali Plant	NA	Delete condition	Now regulated under MS 066.

Ministerial condition	Environmental factor	Proposed change	Assessment and evaluation of proposed changes
1:P3.3 Storage	NA	Delete condition	Storage of hazardous goods is regulated under the Licence issued under Part V of the EP Act (L6046/1967/15 and L8870/2014/1) and under the <i>Dangerous Goods Safety Act 2004</i> .
1:P3.4 Layout	NA	Delete condition	DEC confirmed in a letter of 5 June 2009 (Ref A610039) the requirements of this condition were complete.  Layout of the site is not relevant to a contemporary Ministerial Statement.
1:P3.5 - Maintenance	NA	Delete condition	Plant maintenance is not relevant to a contemporary Ministerial Statement.
1:P3.6 General	NA	Delete condition	Condition relates to the types of fuel used and the operation of the site. These requirements are not relevant to a contemporary Ministerial Statement.
1:P4 Emergency Plan	NA	Delete condition	This is managed by DMIRS under the <i>Dangerous Goods Safety Act 2004</i> and is not relevant to a contemporary Ministerial Statement.
1:P5 Monitoring and Auditing	NA	Delete condition	DEC confirmed in a letter of 5 June 2009 (Ref A610039) the requirements of this condition were complete.  Condition relates to safety monitoring and auditing This is managed by DMIRS under the <i>Dangerous Goods Safety Act 2004</i> and is not relevant to a contemporary Ministerial Statement.
1:P6 Training	NA	Delete condition	DEC confirmed in a letter of 5 June 2009 (Ref A610039) the requirements of this condition were complete.
1:P7 Decommissioning	Terrestrial environmental quality	Retain and contemporise condition	It is recommended that a contemporary condition regarding closure be added to the new Ministerial Statement to ensure the appropriate decommissioning of the plant is undertaken.
<b>Ministerial Statement 225</b>			
225:A1 Compliance auditing	NA	Delete condition and replace with a consolidated	The requirements of this condition are still relevant and will be retained but expressed in contemporary wording and format without changing the intent.



Ministerial condition	Environmental factor	Proposed change	Assessment and evaluation of proposed changes
Submit progress reports and compliance reports that address each of the audit elements in this table		contemporary style condition	
225:M25 Seek approval for nomination of a replacement proponents	NA	Delete condition and replace with a consolidated contemporary style condition	The requirements of this condition are still relevant and will be retained but expressed in contemporary wording and format without changing the intent.
225:P1 Construction	NA	Delete condition	Construction has been completed and this condition is no longer relevant to a contemporary Ministerial Statement.
225:P2 Operation P2.1 Wastewater	Inland waters	Delete condition	Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1.
225:P2.2 Aesthetic/Noise/Odour	Social surroundings	Delete condition	Discharges from the operations are now regulated under Part V of the EP Act through licences L6046/1967/15 and L8870/2014/1. Management of noise emissions is regulated via the Environmental Protection (Noise) Regulations 1997.
225:P2.3 General	NA	Delete condition	Condition relates to the types of fuel used and the operation of the site. These requirements are not relevant to a contemporary Ministerial Statement.
225:P3, 3.1 Chloride Process plant	NA	Delete condition	Condition relates to the design, maintenance and operation of process plant equipment and is not relevant to a contemporary Ministerial Statement.
225:P3.2 Layout	NA	Delete condition	Layout of the site is not relevant to a contemporary Ministerial Statement.
225:P3.3 Maintenance	NA	Delete condition	Plant maintenance is not relevant to a contemporary Ministerial Statement.

Ministerial condition	Environmental factor	Proposed change	Assessment and evaluation of proposed changes
225:P3.4 General	NA	Delete condition	Condition relates to the types of fuel used and the operation of the site. These requirements are not relevant to a contemporary Ministerial Statement.
225:P4 Emergency Plan	NA	Delete condition	This is covered under other regulations and is not relevant to a contemporary Ministerial Statement.
225:P5 Monitoring and Auditing	NA	Delete condition	Condition relates to safety monitoring and auditing. This is managed by DMIRS under the <i>Dangerous Goods Safety Act 2004</i> and is not relevant to a contemporary Ministerial Statement.
225:P6 Training	NA	Delete condition	This is not relevant to a contemporary Ministerial Statement.
225:P7 Decommissioning	Terrestrial environmental quality	Delete condition and replace with a consolidated contemporary style condition	It is recommended that a contemporary condition be added to the new Ministerial Statement to ensure the appropriate decommissioning of the plant is undertaken.

## References

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EPA 2020c, *Statement of Environmental Principles, Factors and Objectives*, Environmental Protection Authority, Perth, WA.

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