

Permit

Environmental Protection Act 1994

Environmental authority EPPR00742313

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPPR00742313

Environmental authority takes effect on 1 March 2017

Environmental authority holder(s)

Name(s)	Registered address
Southern Cross Fertilisers Pty Ltd	Level 8, 28 Freshwater Place SOUTHBANK VIC 3006

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
7(6)(d) Chemical manufacturing >100000 t/a 8(5) Chemical storage – storing 200m ³ or more of chemicals that are liquids, in containers of at least 10m ³	Acid Plant, Railway Avenue, Mt Isa Lot 7 on SP128450 (formerly Lot 7 on FTY1417)

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

AS

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days)

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

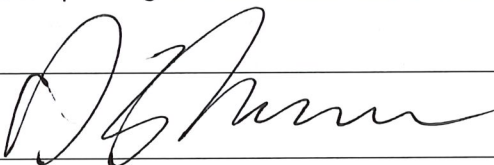
Please note that, in accordance with section 200 of the EP Act, an EA has effect:

- a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or
- b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or
- c) otherwise- one the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Sustainable Planning Act 2009* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

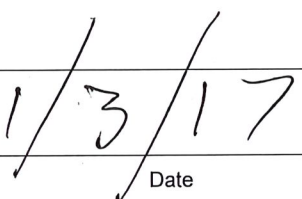
If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.



Signature

Dean Sharpe
Department of Environment and Heritage Protection
Delegate of the administering authority
Environmental Protection Act 1994



Date

Enquiries:
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Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Natural Resources and Mines (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Conditions of environmental authority

This environmental authority is issued subject to the conditions set out in the schedules attached.

Schedule A - General

Schedule B - Air

Schedule C - Water

Schedule D - Land

Schedule E - Noise

Schedule F - Waste

Schedule G - Definitions

Schedule H - Maps

SCHEDULE A – GENERAL

Prevent and/or Minimise Likelihood of Environmental Harm

- A1** In carrying out an activity to which this environmental authority relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.

Activity

- A2** This environmental authority does not authorise environmental harm unless a condition within this environmental authority explicitly authorises that harm. Where there is not a condition or the environmental authority is silent on a matter, the lack of a condition or silence shall not be constructed as authorising harm.

Maintenance of Measures, Plant and Equipment

- A3** The holder of this environmental authority must:
- (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority;
 - (b) maintain such measures, plant and equipment in a proper and efficient condition;
 - (c) operate such measures, plant and equipment in a proper and efficient manner;
 - (d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are calibrated, and appropriately operated and maintained.
- A4** No change, replacement or alteration of any plant or equipment is permitted if the change, replacement or alteration materially increases, or is likely to materially increase, the risk of environmental harm caused by carrying out an activity to which this environmental authority relates.

Monitoring

- A5** When monitoring is required by this environmental authority it must be:
- (a) performed by a person or body possessing appropriate experience and qualifications to perform the required sample collection, measurements and determinations;
 - (b) conducted in accordance with methods prescribed in the latest edition of the Administering Authority's monitoring and sampling manual;
 - (c) conducted at monitoring locations identified within this environmental authority; and
 - (d) carried out on representative samples identified within this environmental authority.
- A6** All analyses, monitoring and tests required to be conducted under this environmental authority must be carried out by a laboratory that has NATA certification for such analyses, monitoring and tests.
- A7** The holder of this environmental authority must record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority.

Spill Kit Training

- A8** Anyone operating under this environmental authority must be trained in the use of the spill kit.

Site Based Management Plan

- A9** A site based management plan (SBMP) must be developed and implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all ERA's that are carried out.

The SBMP must address the following matters at a minimum:

- (a) Environmental commitments - a commitment by senior management to achieve specified and relevant environmental goals defined in legislation.
- (b) Identification of environmental values and potential impacts on those values.
- (c) Control measures for routine operations to minimise likelihood of environmental harm.
- (d) Control strategies and measures to achieve the air quality objectives defined in this environmental authority.
- (e) Contingency plans and emergency procedures for non-routine situations.
- (f) Organisational structure and responsibility.
- (g) Effective communication.
- (h) Monitoring of contaminant releases.
- (i) Conducting environmental impact assessments.
- (j) Staff training.
- (k) Record keeping.
- (l) Periodic review of environmental performance and continual improvement

- A10** The site based management plan must not be implemented or amended in a way that contravenes any condition of this environmental authority.

Emergency Response/Contingency

- A11** An emergency response/contingency plan must be developed and implemented by to respond to emergency events and incidents.

- A12** The emergency response/contingency plan required under condition A11 must address the following matters as a minimum:

- a) Response procedures to be implemented to prevent or minimise the risk of environmental harm arising from incidents;
- b) Response procedures to minimise the extent and duration of environmental harm caused by an incident;
- c) The practices and procedures to be employed to restore the environment or mitigate any environmental harm caused;
- d) The resources to be used in response to an incident;
- e) Procedures to investigate the cause of any incidents, including releases, and where necessary, implement remedial actions to reduce the likelihood of recurrence of similar events;
- f) The provision and availability of documented procedures to staff attending any incident to enable them to effectively respond;
- g) Training of staff that will be called upon to respond to incidents to enable them to effectively respond;
- h) Timely and accurate reporting of the circumstance and nature of incidents to the administering authority in accordance with conditions of this environmental authority;
- i) Procedures for accessing monitoring points during incidents; and
- j) Procedures to notify any potentially impacted stakeholder who may be affected by the event.

Notification of Emergencies, Incidents and Exceptions

- A13** The holder of this environmental authority must notify the administering authority by telephone as soon as practicable but no more than forty-eight (48) hours after becoming aware of any release of contaminants not in accordance with the conditions of this environmental authority.
- A14** The holder of this environmental authority must notify the administering authority either by telephone, email or facsimile telephone as soon as practicable but within forty-eight (48) hours, after becoming aware of any monitoring result that demonstrates an exceedance of any limit imposed in this environmental authority.
- A15** The notification required under condition A13 must include, but not be limited to, the following:
- a) the name of the operator, including their environmental authority / registration number;
 - b) the name and telephone number of a designated contact person;
 - c) the location of the incident;
 - d) the date and time of the incident;
 - e) the time the holder of the environmental authority became aware of the incident;
 - f) the estimated quantity and type of substances involved in the incident;
 - g) the cause of the incident if known;
 - h) a description of the nature and effects of the incident including environmental risks, and any risks to public health or livestock;
 - i) any sampling conducted or proposed, relevant to the incident;
 - j) immediate actions taken to prevent or mitigate any further environmental harm caused by the incident;
 - k) what notification to person or persons who may be affected by the incident has occurred/is being undertaken.
- A16** Within fifteen (15) business days, or a timeframe otherwise agreed between the holder of this environmental authority and the administering authority, following the initial notification of an incident, or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following:
- a) results and interpretation of any samples taken and analysed;
 - b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm; and
 - c) proposed actions to prevent a recurrence of the incident.
- A17** The holder of this environmental authority must notify any potentially impacted stakeholder by telephone, email or facsimile as soon as practicable but within twenty four (24) hours after becoming aware of any emergency or incident that has the potential to impact on environmental values or breaches any condition of this environmental authority concerning releases of contaminants to the environment.
- A18** The notification in condition A17 must include the following:
- a) The location of the release;
 - b) The date and time of the release;
 - c) The estimated quantity and type of any substances involved in the incident;
 - d) The potential impacts to environmental values caused by the release; and
 - e) Where there is potential impact on livestock or human health, precautionary measures that should be taken.

Complaints and Community

A19 Records must be kept of all environmental complaints received about the plant operations including the following details:

- a) Name, address and contact number for complainant;
- b) Time and date of complaint;
- c) Reasons for the complaint;
- d) Investigations undertaken;
- e) Conclusions formed;
- f) Actions taken to resolve complaint;
- g) Any abatement measures implemented; and
- h) Person responsible for resolving the complaint.

This information must be made available for inspection by the administering authority on request.

A20 When requested by the administering authority, undertake relevant specific monitoring within a timeframe nominated by the administering authority to investigate any complaint of environmental harm. The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures implemented must be provided to the administering authority within fourteen (14) days of completion of the investigation, and no later than fourteen (14) days after the end of the timeframe nominated by the administering authority to undertake the investigation.

Third Party Auditing

A21 Compliance with the conditions of this environmental authority must be audited by an appropriately qualified third party auditor, nominated by the holder, within two years of the amendment date of this authority, and then at regular intervals not exceeding three years.

A22 Within one month of completing the audit, the holder of this environmental authority must provide an audit report to the administering authority addressing the:

- (a) Actions taken (or being taken) by the holder to ensure compliance with this environmental authority; and
- (b) Actions taken (or being taken) to prevent a recurrence of any non-compliance issues identified.

A23 The third party auditor must certify the independent findings of the audit in the report.

A24 The financial cost of the third party audit is the responsibility of the holder of this environmental authority.

A25 The holder of this environmental authority must act as soon as practicable upon any recommendations arising from the audit by:

- a) Investigating any non-compliance issues identified; and
- b) Implementing measures or taking necessary action to ensure compliance with the requirements of this environmental authority.

Risk Management

A26 The holder of this environmental authority must develop and implement within 6 months from the date this environmental authority takes effect an environmental risk management system for the acid plant operations which conforms to a recognised Standard for Environmental Risk Management.



Standards and Guidelines

- A27** Where a condition of this environmental authority requires compliance with a standard, guideline or manual published externally to this environmental authority and the standard, guideline or manual is amended or changed subsequent to the issue of this environmental authority, the holder must:
- a) comply with the amended or changed standard, guideline or manual:
 - i. within twelve (12) months of the amendment or change being made, unless a different period is specified in the amended standard, guideline, manual or relevant legislation; or
 - ii. a timeframe otherwise agreed between the holder of this environmental authority and the administering authority;
 - b) until compliance with the amended or changed standard, guideline or manual is achieved, continue to remain in compliance with the standard, guideline or manual that was current immediately prior to the relevant amendment or change.

Definitions

- A28** Words and phrases used throughout the environmental authority are defined in Schedule G - Definitions. Where a definition for a term used in the environmental authority is sought and the term is not defined within the environmental authority, the definitions in the *Environmental Protection Act 1994*, its Regulations and Environmental Protection Policies must be used.

END OF CONDITIONS FOR SCHEDULE A

SCHEDULE B – AIR

General

B1 Unless authorised by this environmental authority, the release of noxious or offensive odours or any other airborne contaminants from the activities must not cause environmental harm at any sensitive place or commercial place.

Point source releases to air

B2 Point source emissions released to the atmosphere must only be released from the release point specified in Schedule B - Table 1 (Point Source Air Emissions) and identified in Schedule H - Figure 2 (Authorised Point Source Air Emissions) and must be monitored at the frequencies and for the contaminants specified in Schedule B - Table 1.

B3 The releases from a release point shown in Schedule B - Table 1 (Point Source Air Emissions) must be directed vertically upwards, with no impedence or hindrance and in accordance with Schedule B – Table 1 (Point Source Air Emissions).

Schedule B - Table 1 (Point Source Air Emissions)

Release point	Release Height (m)	Coordinates (GDA94, MGA, Zone 54)		Contaminant	Monitoring Frequency
		Easting	Northing		
Acid Plant Stack	110	342015	7706754	Sulfur dioxide	Continuous ¹

¹ Monitoring which provides data equal to at least 75 percent of the total possible data required in any period of:

- (a) twelve (12) calendar months; and
 - (b) three (3) calendar months,
- satisfies this requirement.

B4 The holder of this environmental authority must conduct and keep records of a monitoring program of the concentrations of contaminants specified in Schedule B - Table 1 (Point Source Air Emissions) released to the atmosphere at the release points and at the frequency specified in Schedule B - Table 1 (Point Source Air Emissions). This program must comply with the following:

- (a) monitoring for the release points specified in Schedule B - Table 1 (Point Source Air Emissions) must comply with the Australian Standard AS 4323.1 - 1995 "Stationary source emissions Method 1: Selection of sampling provisions";
- (b) all determinations of contaminant releases to the atmosphere must be made in accordance with methods prescribed in the most recent version of the administering authority's *Air Quality Sampling Manual*;
- (c) the following determinations must also be made for each monitoring event specified in Schedule B – Table 1 (Point Source Air Emissions):
 - (i) gas velocity and volume flow rate;
 - (ii) temperature and pressure; and
 - (iii) water vapour.

Ambient Air Quality Monitoring Program

B5 The holder of this environmental authority must carry out an ambient air quality monitoring program for the air quality indicators at the monitoring locations and at the frequency specified in Schedule B – Table 2 (Ambient Air Quality Monitoring Program) and Schedule H – Figure 2 (Ambient Air Quality Monitoring Program Locations), unless alternative locations are agreed to in writing by the administering authority.

Schedule B – Table 2 (Ambient Air Quality Monitoring Program)

Monitoring Location ²	Air quality indicators	Coordinates (GDA94, MGA, Zone 54)		Monitoring Frequency - Method
		Easting	Northing	
Spinifex State School	Sulfur dioxide	342565	7706466	Continuous ¹
Nineteenth Ave, Parkside	Sulfur dioxide	342643	7705595	

- 1 Monitoring which provides data equal to at least 75 percent of the total possible data required in any period of:
- twelve (12) calendar months; and
 - three (3) calendar months,
- satisfies this requirement.
- 2 The holder of this environmental authority may use data from a third party monitoring station to achieve compliance with these requirements.

Ambient Air Quality - Sulfur Dioxide

- B6** The carrying out of the activities to which this environmental authority relates must not cause the maximum concentrations specified in Schedule B - Table 3 (Ambient Air Quality - Maximum Sulfur Dioxide Concentrations) to be exceeded when measured at any commercial or sensitive place.

Schedule B – Table 3 (Ambient Air Quality - Maximum Sulfur Dioxide Concentrations)

Averaging Time	Maximum Sulfur Dioxide Concentration (µg/m ³)
Annual (Calendar Year)	57
24 hours	230 ¹
1 hour	570 ¹

- 1 – The maximum 1 day and 1 hour concentration of sulfur dioxide is authorised to be exceeded for not more than one (1) day each calendar year.
- 2 – The 1 hourly average for SO₂ during the period up to 31 December 2016 is based on the SO₂ concentration when measured at 25°C

- B7** Condition B8 applies whilst the Mount Isa Copper Smelter is operational, up to 31 December 2022. If any part of condition B8 is inconsistent with condition B6, then condition B8 prevails to the extent of the inconsistency.
- B8** The carrying out of the activities to which this environmental authority relates must not cause the maximum concentrations specified in Schedule B - Table 4 (Sulfur Dioxide Concentrations) to be exceeded when measured at each monitoring location specified in Schedule B – Table 2 (Ambient Air Quality Monitoring Program) or at any commercial or sensitive place.

Schedule B – Table 4 (Ambient Air Quality - Maximum Sulfur Dioxide Concentrations)^{1,2}

Averaging Time	98 th Percentile	99 th Percentile	99.6 th Percentile
	Maximum Sulfur Dioxide Concentration (µg/m ³)		
1 day	N/A	230	N/A
1 hour	570	N/A	1140

- 1 Percentile values to be calculated at each monitoring location on a calendar year basis with averaging times based on whole clock hours and calendar days.
- 2 Monitoring data will be adjusted to 0°C and 1 atmosphere pressure.

Ambient Air Quality Monitoring Program Requirements

- B9** Samples taken for the ambient air quality monitoring program must be collected and analysed in accordance with the requirements of the administering authority's latest edition of the *Air Quality Sampling Manual*, or more recent editions or supplements to that document as are published by the administering authority, unless otherwise agreed by the administering authority in writing.

Air Quality Control System

- B10** The holder of this environmental authority must either:
- (a) Take operational instructions from an Air Quality Control System operated by the holder of the environmental authority for activities at Mount Isa Mines on Mining Lease 8058; or
 - (b) Implement and maintain an independent Air Quality Control System which includes:
 - i. development and implementation of enhanced operating protocols, including mandatory requirements for a reduction or cessation of operations if the hourly and daily sulfur dioxide levels specified in this environmental authority are likely to be reached or exceeded;
 - ii. access to relevant meteorological information available from the Bureau of Meteorology or an equivalent provider, including vertical profile of wind speed and direction indicators, air temperature, relative humidity or related parameter;
 - iii. the ability to predict ground level ambient SO₂ concentrations at sensitive receptor locations; and
 - iv. the ability to provide an estimated breakdown of the percentage contribution from the main SO₂ sources in Mount Isa when SO₂ is measured at the continuous sulfur dioxide monitoring stations specified in this development authority.

Accreditation of monitoring program

- B11** Within twelve (12) months of commencement of this environmental authority, the ambient and point source monitoring program under this environmental authority must be:
- (a) accredited by the National Association of Testing Authorities; or
 - (b) accredited in an alternate manner agreed to in writing by the administering authority.

Reporting Requirements

- B12** The holder of this environmental authority must ensure all information recorded in the monitoring programs specified in this Schedule B is reviewed by an appropriately qualified person.
- B13** The holder of this environmental authority must ensure all information recorded in the monitoring programs specified in Schedule B is supplied to the administering authority:
- (a) at the intervals of time specified in Schedule B - Table 5 (Reporting Requirements);
 - (b) in the format specified by the administering authority; and
 - (c) except for information that is required hourly, by the last day of the month following the end of the period to which the information relates.

Schedule B – Table 5 (Reporting Requirements)

Parameter Description	Subject	Reporting Frequency
Ambient Continuous Sulfur Dioxide (Schedule B – Table 2)	Sulfur dioxide – continuous	Hourly, Monthly
Point Source Emissions (Schedule B – Table 1)	Sulfur dioxide – continuous	Monthly

END OF CONDITIONS FOR SCHEDULE B

SCHEDULE C – WATER

General

- C1** Contaminants that will, or have the potential to cause environmental harm, must not be released directly or indirectly to any waters except as permitted under the conditions of this environmental authority.
- C2** The release of contaminants directly or indirectly to waters must not:
- (a) Produce any visible discolouration of receiving waters; or
 - (b) Produce any slick or other visible or odorous evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter or other objectionable matter.
- C3** All determinations of water quality must be:
- (a) Performed by a person or body possessing appropriate experience and qualifications to perform the required measurements;
 - (b) Made in accordance with methods prescribed in the latest edition of the Administering Authority's monitoring and sampling manual;
 - (c) Collected from the monitoring locations identified within this environmental authority, within 12 hours of each other (reference/downstream) where possible;
 - (d) Carried out on representative samples; and,
 - (e) Laboratory testing must be undertaken using a laboratory accredited (e.g. NATA) for the method of analysis being used.
- C4** The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority in the specified format when requested:
- (a) The date on which the sample was taken;
 - (b) The time at which the sample was taken;
 - (c) The monitoring point at which the sample was taken;
 - (d) The measured or estimated daily quantity of the contaminants released from all release points;
 - (e) The release flow rate at the time of sampling for each release point;
 - (f) The results of all monitoring and details of any exceedances with the conditions of this environmental authority; and
 - (g) Water quality monitoring data must be provided to the administering authority in the specified electronic format upon request.

Contaminant Release to Waters

- C5** Unless otherwise permitted under the conditions of this environmental authority, the release of contaminated water from the site must only occur from the release points specified in Schedule C - Table 1 (Contaminant Release Points) and depicted in Schedule H – Figure 3 (Contaminant Release Points).

Schedule C - Table 1 (Contaminant Release Points)

Release Point	Coordinates (GDA94, MGA, Zone 54)		Receiving Waters
	Easting	Northing	
Retention Pond 1 Spillway	342115	7706520	Leichhardt River
Retention Pond 2 Spillway	342084	7706218	Leichhardt River



- C6** The release of contaminated water from the release points specified in Schedule C - Table 1 (Contaminant Release Points) must be monitored against the frequency and quality characteristics, and must not exceed the contaminant release limits specified in Schedule C - Table 2 (Contaminant Release Monitoring and Limits).

Schedule C - Table 2 (Contaminant Release Monitoring and Limit)

Quality Characteristic	Unit	Contaminant Release Limit	Monitoring Frequency ³
Electrical conductivity	µS/cm	1000	Event based sampling⁵ of discharge: One sample must be taken within 12 hours of a discharge event ⁵ commencing. A second sample must be taken between 12 and 24 hours after the discharge event ⁵ commences. Where a discharge event ⁵ has a duration of 24 hours or greater, samples must be taken daily for one week, and once a week thereafter until discharge ceases.
pH	pH units	6.0 - 8.5	
Total Suspended Solids	mg/L	50 or the reference site data, whichever is the lowest.	
Sulphate	mg/L	1000	
Arsenic ^{2, 4}	mg/L	0.5 or 95th percentile of reference ¹ , whichever is lowest.	
Cadmium ^{2, 4}	mg/L	0.01 or 95th percentile of reference, whichever is lowest.	
Copper ^{2, 4}	mg/L	1 or 95th percentile of reference ¹ , whichever is lowest.	
Lead ^{2, 4}	mg/L	0.1 or 95th percentile of reference ¹ , whichever is lowest.	
Nickel ^{2, 4}	mg/L	0.15 or 95th percentile of reference ¹ , whichever is lowest.	
Zinc ^{2, 4}	mg/L	20 or 95th percentile of reference ¹ , whichever is lowest.	

- 1 Reference sites are the relevant reference sites in Schedule C – Table 3 (Receiving Water Reference Sites and Downstream Monitoring Points).
- 2 Grab sampling is the preferred method for sampling collection, however the use of remote sampling techniques such as automated methods is acceptable.
- 3 Monitoring during discharge events will only be conducted where safe access can be gained.
- 4 For grab samples, all metals and metalloids must be measured as total (unfiltered) and dissolved (filtered) – filtering must be conducted in the field.
- 5 Discharge event is a release of water from a release point as specified in Schedule C - Table 1 (Contaminant Release Points).

Receiving Waters Monitoring

- C7** The quality of the receiving waters must be monitored at the locations specified in Schedule C - Table 3 (Receiving Water Reference Sites and Downstream Monitoring Points) and Schedule H – Figure 4 (receiving Water Monitoring Locations) must be monitored against the frequency and quality characteristics, and must not exceed the contaminant limits specified in Schedule C - Table 4 (Receiving Waters Contaminant Limits and Trigger Levels).
- C8** If the water quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in Schedule C - Table 4 (Receiving Waters Contaminant Limits and Trigger Levels), the holder of this environmental authority must compare the downstream results to the reference site results in the receiving waters and:
- (a) where the downstream result in the same or a lower value than the reference site value for the quality characteristic during the same sampling event then no action is to be taken; or
 - (b) where the downstream results exceed the reference site, complete an investigation in accordance with the ANZECC & ARMCANZ 2000 methodology, into the potential for environmental harm and

provide a written report to the administering authority within three (3) months of receipt of the monitoring results, outlining:

- (i) details of the investigations carried out; and
- (ii) actions taken to prevent environmental harm.

Note: Where an exceedance of a trigger level has occurred and is being investigated, in accordance with C8(b) of this environmental authority, no further reporting is required for subsequent trigger events for that quality characteristic.

Schedule C - Table 3 (Receiving Water Reference Sites and Downstream Monitoring Points)

Monitoring Points	Receiving Waters Location Description	Coordinates (GDA94, MGA, Zone 54)	
		Easting	Northing
Reference Monitoring Points			
Leichhardt Reference	Leichardt River	342764	7706456
Death Adder Gully Reference	Leichardt River	342480	7706960
Downstream Monitoring Points			
Lease Boundary	Leichardt River	342190	7706559
Death Adder Gully/Leichardt Downstream	Leichardt River	342612	7706964

Schedule C - Table 4 (Receiving Waters Contaminant Limits and Trigger Levels)

Quality Characteristic	Unit	Trigger Level	Contaminant Limit	Monitoring Frequency
Electrical conductivity	µS/cm	435	1000	Event based sampling² of discharge: One sample must be taken within 15 hours of a discharge event ² commencing. A second sample must be taken between 15 and 30 hours after the discharge event ² commences. Where a discharge event ² has a duration of 30 hours or greater, samples must be taken daily for one week, and once a week thereafter until discharge ceases.
pH	pH units	6 to 8.5	6 to 8.5	
Total Suspended Solids	mg/L		69	
Sulphate (SO ₄ ²⁻)	mg/L	250	1000	
Total Arsenic ³	mg/L	N/A	0.013	
Total Cadmium	mg/L	0.0002	0.0125	
Total Copper	mg/L	0.0014	0.086	
Total Lead	mg/L	0.0034	0.067	
Total Nickel	mg/L	0.011	0.02	
Total Zinc	mg/L	0.008	0.0416	

1 Reference sites are the relevant reference sites in Schedule C - Table 3 (Receiving Water Reference Sites and Downstream Monitoring Points)

2 Discharge event is a release of water from a release point as specified in Schedule C - Table 1 (Contaminant Release Points).

3 Speciated arsenic concentrations can be included from the outset, or alternatively, an arsenic (total species) sample can be determined with analysis for As (III) and As (V) only required if 13 µg/L is exceeded - note that the sample bottle requirements for As (total species) and As (speciated) may differ.

Onsite Water Storages

- C9** Water storages stated in Schedule C - Table 5 (Water Storage Monitoring) must be monitored for the water quality characteristics, at the monitoring frequency specified in Schedule C - Table 5 (Water Storage Monitoring).

Schedule C – Table 5 (Water Storage Monitoring)

Water Storage Description	Coordinates (GDA94, MGA, Zone 54)		Monitoring Frequency	Quality Characteristics
	Easting	Northing		
Retention Pond 1	342115	7706520	Annually	Electrical conductivity pH Total Suspended Solids Sulphate Total Arsenic Total Cadmium
Retention Pond 2	342100	7706210	Annually	Total Copper Total Lead Total Nickel Total Zinc

Water Management Plan

- C10** The holder of this environmental authority must develop and implement a water management plan.
- C11** Each year the holder of the environmental authority must undertake a review of the water management plan prior to the wet season (and no later than 1st November) to ensure that proper and effective measures, practices or procedures are in place so that the site is operated in accordance with the conditions of this environmental authority and that environmental harm is prevented or minimised.
- C12** A copy of the water management plan and/or review of the water management plan must be provided to the administering authority on request.

Stormwater, Sediment and Erosion Controls

- C13** The holder of this environmental authority must implement and maintain erosion protection and sediment control measures to minimise erosion and the release of sediment and contamination of storm water.
- C14** The maintenance and cleaning of any vehicles, plant or equipment must not be carried out in areas from which contaminants can be released into any receiving waters.
- C15** Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable to minimise the release of wastes, contaminants or materials to any stormwater drainage system or receiving waters

Groundwater

- C16** The holder of this environmental authority must not release contaminants to groundwater.

END OF CONDITIONS FOR SCHEDULE C

SCHEDULE D – LAND

General

- D1** Contaminants that will or may cause environmental harm must not be directly or indirectly released to land except as permitted under this environmental authority.

Chemicals and Flammable or Combustible Liquids

- D2** All explosives, hazardous chemicals, corrosive substances, toxic substances, gases, flammable or combustible liquids and dangerous goods must be stored and handled in accordance with the current, relevant Australian Standard where such is applicable.
- D3** Notwithstanding the requirements of any Australian Standard, any liquids stored on site that have the potential to cause environmental harm must be stored in or serviced by an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to waters or land.
- D4** Where no relevant Australian Standard is available, the following must be applied:
- (a) storage tanks must be bunded so that the capacity and construction of the bund is sufficient to contain at least 110% of a single storage tank or 100% of the largest storage tank plus 10% of the second largest storage tank in multiple storage areas; and
 - (b) drum storages must be bunded so that the capacity and construction of the bund is sufficient to contain at least 25% of the maximum design storage volume within the bund.
- D5** All containment systems must be designed to minimise rainfall collection within the system.

Sulfur Management

- D6** Storage, handling and transfer of sulfur on site must be carried out in a manner which minimises the release of dust and particulate matter, and prevents or minimises the contamination of land and stormwater.

END OF CONDITIONS FOR SCHEDULE D



SCHEDULE E – NOISE

Noise Nuisance

- E1** Unless otherwise authorised by this environmental authority, noise from the environmentally relevant activities must not cause environmental harm at any sensitive place or commercial place.
- E2** In the event of a complaint made to the administering authority (which is neither frivolous or vexatious or based on mistaken belief) about noise generated in carrying out the environmentally relevant activities, the holder of this environmental authority must undertake noise monitoring and recording within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint of environmental nuisance at any sensitive place or commercial place, and the results must be notified within fifteen (15) business days to the administering authority following completion of monitoring.
- E3** Noise generated by the environmentally relevant activities will not be considered environmental harm if it complies with the limits detailed in Schedule E – Table 1 (Noise Limits).

Schedule E - Table 1 (Noise Limits)

Noise level dB(A) measured as:	Place of measurement	Monday to Sunday		
		7am to 6pm	6pm to 10pm	10pm to 7am
L _{Aeq,adj,1hour}	External noise limit	Background + 3	Background + 3	Background + 3
L _{A1,adj,1hour}	Internal noise limit	45	45	45

- E4** The method of measurement and reporting of noise levels must comply with the most recent edition of the administering authority's *Noise Measurement Manual* or the most recent version of AS1055 *Acoustics – Description and measurement of environmental noise*.

END OF CONDITIONS FOR SCHEDULE E

SCHEDULE F – WASTE

Waste Management Program

- F1** A waste management program in accordance with Part 5 of the *Environmental Management (Waste Management) Policy 2000* must be developed, implemented and maintained for the site. The waste management program must include:
- a) A description of the plant activities that may generate waste;
 - b) Waste management control strategies including:
 - i. The types and amounts of wastes generated by the plant activities;
 - ii. Segregation of the wastes;
 - iii. Storage of the wastes;
 - iv. Transport of the wastes;
 - v. Monitoring and reporting matters concerning the wastes.
 - c) The hazardous characteristics of the wastes generated including disposal procedures for hazardous wastes;
 - d) A program for reusing, recycling or disposing of all wastes;
 - e) How the waste will be dealt with in accordance with the waste management hierarchy, including a description of the types and amounts of waste that will be dealt with under each of the waste management practices in the waste management hierarchy (*i.e.* avoidance, reuse, recycling, energy recovery, disposal);
 - f) Procedures for identifying and implementing opportunities to minimise the amount of waste generated, promote efficiency in the use of resources and improve the waste management practices employed;
 - g) Procedures for dealing with accidents, spills and other incidents;
 - h) Details of any accredited management system employed, or planned to be employed, to deal with waste;
 - i) How often the performance of the waste management program will be assessed;
 - j) The indicators or other criteria on which the performance of the waste management program will be assessed; and
 - k) Staff training and induction to the waste management program.

Waste Disposal

- F2** All general and regulated waste must be removed from the site to a facility that is lawfully able to accept the waste under the *Environmental Protection Act 1994*.
- F3** Unless otherwise permitted by the conditions of this environmental authority, waste must not be burnt or taken offsite and burnt by the holder of this environmental authority.
- F4** Regulated waste generated in the plant activity can be temporarily stored on site awaiting removal provided it is stored to ensure there is minimal risk of causing fire or contamination to land or waters.
- F5** Each container of regulated waste stored awaiting movement off-site must be clearly marked to identify the contents.

END OF CONDITIONS FOR SCHEDULE F

SCHEDULE G – DEFINITIONS

Words and phrases used throughout this permit are defined below. Where a definition for a term used in this permit is sought and the term is not defined within this permit the definitions provided in the relevant legislation shall be used.

"administering authority" means the Department of Environment and Heritage Protection (the department) or its successor.

"ANZECC" means Australian and New Zealand Environment and Conservation Council.

"appropriate qualified person" means any person who conforms to the DERM operational policy for an "appropriately qualified person (analyst)" in accordance with Section 490 (7) of the *Environmental Protection act 1994*.

"environmental authority" means 'notice of development application decision' or 'notice of concurrence agency response' under the *Integrated Planning Act 1997*.

"approved plans" means the plans and documents listed in the approved plans section in the notice attached to this environmental authority.

"ARMCANZ" means Agriculture and Resource Management Council of Australia and New Zealand

"authorised place" means the place authorised under this environmental authority for the carrying out of the specified environmentally relevant activities.

"commercial place" means a place used as an office or for business or commercial purposes.

"dwelling" means any of the following structures or vehicles that is principally used as a residence –

- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land;
- a water craft in a marina.

"hazardous waste" means any substance, whether liquid, solid or gaseous, derived by or resulting from, the processing of minerals that tends to destroy life or impair or endanger health.

" $L_{A1,adj,1hour}$ " means the A-weighted sound pressure level, adjusted for tonal character or impulsiveness, that is exceeded for 1% of a 1 hour period when measured using time-weighting 'F'.

" $L_{Aeq,adj,1hour}$ " means an A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within a 1 hour period has the same mean square sound pressure of a sound that varies with time.

"land" in the "land schedule" of this document means land excluding waters and the atmosphere.

"measures" includes any measures to prevent or minimise environmental impacts of the activity such as bunds, sound attenuation barrier, diversion drains and containment systems.

"mg/L" means milligrams per litre.

"NATA" means National Association of Testing Authorities (Australia).

"noxious" means harmful or injurious to health or physical wellbeing.

"nuisance (including dust, odour, noise) sensitive place" includes –

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

"offensive" means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.



"protected area" means –

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 1992*; or
- a World Heritage Area.

"regulated waste" means non-domestic waste mentioned in Schedule 7 of the *Environmental Protection Regulation 2008* (whether or not it has been treated or immobilised), and includes –

- for an element – any chemical compound containing the element; and
- anything that has contained the waste.

"site" means land on which the activities approved under this environmental authority is carried out.

"watercourse" means a river, creek or stream in which water flows permanently or intermittently–

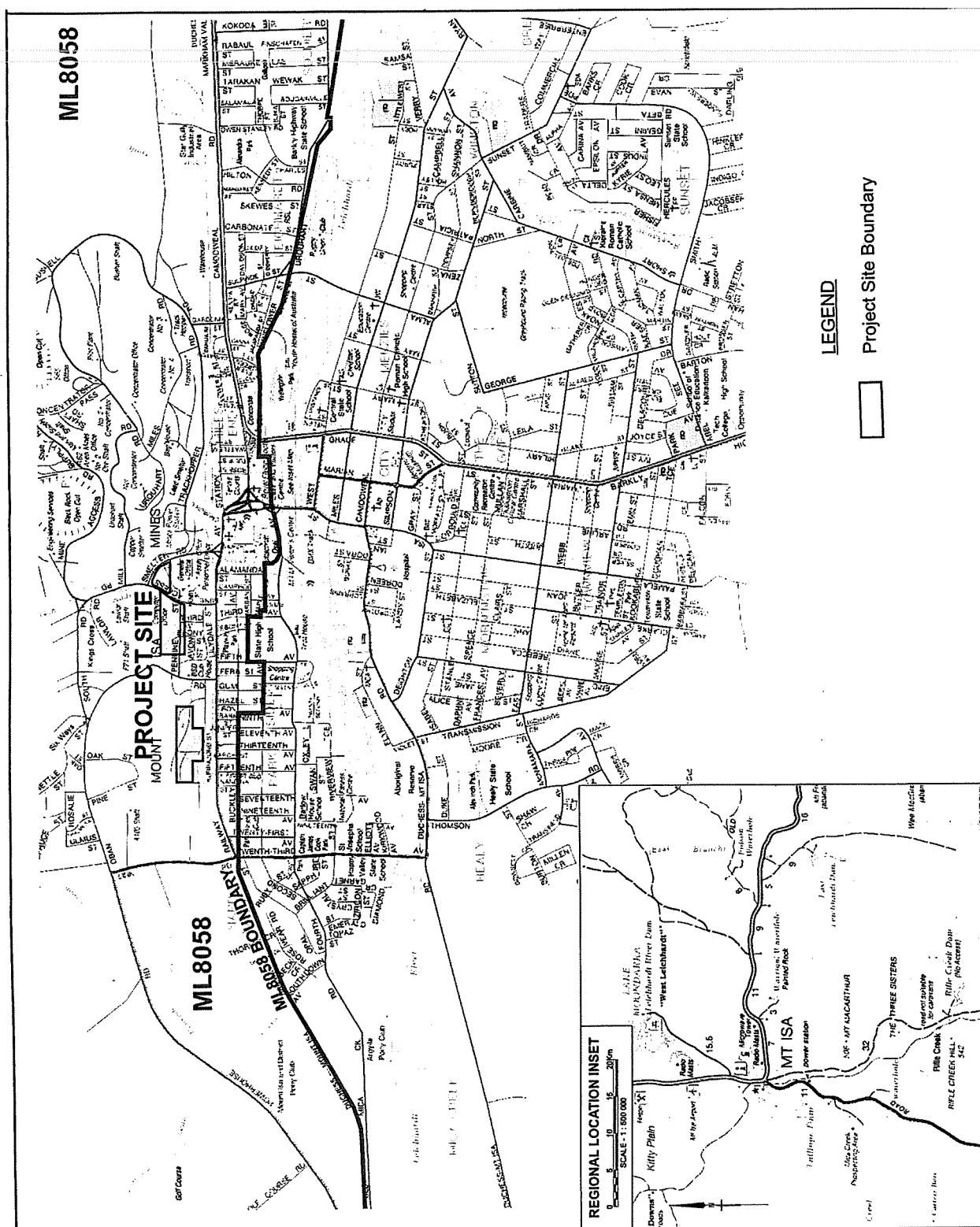
- in a natural channel, whether artificially improved or not; or
- in an artificial channel that has changed the course of the watercourse.

"waters" includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

"works" or "operation" means the development approved under this development permit.

END OF CONDITIONS FOR SCHEDULE G

SCHEDULE H – MAPS



Schedule H – Figure 1 (General Location of the IPL Acid Plant on ML8508 in Mt Isa)

OS



Schedule H - Figure 2 (Authorised Point Source Air Emission and Ambient Air Quality Monitoring Program Locations)

DS



Schedule H – Figure 3 (Contaminant Release Points)

DG



Schedule H – Figure 4 (Receiving Water Reference Sites and Downstream Monitoring Points)

END OF PERMIT