

# Permit

*Environmental Protection Act 1994*

## Environmental authority EPML00707713

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

**Environmental authority number: EPML00707713**

**Environmental authority takes effect on 6 January 2022.**

The anniversary date of this environmental authority is 6 March each year.

An annual return will be due each year on 01 April.

### Environmental authority holder(s)

Name(s)	Registered address
QCoal Sonoma Pty Ltd	Level 15, 40 Creek Street BRISBANE CITY QLD 4000
CSC Sonoma Pty Ltd	Level 7, 300 Queen Street BRISBANE CITY QLD 4000
JS Sonoma Pty Ltd	Suite 3B, Level 33, 52 Martin Place SYDNEY NSW 2000
Watami (QLD) Pty Ltd	Level 2, 262 Adelaide Street BRISBANE CITY QLD 4000

### Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 13 - Mining black coal	ML10325 ML10326 ML10327
Ancillary 08 - Chemical Storage 1 - Storing a total of 50t or more of chemicals of dangerous goods class 1 or class 2, division 2.3 under subsection (1)(a)	ML10325 ML10326 ML10327
Ancillary 08 - Chemical Storage 3 - Storing more than 500 cubic metres of chemicals of class C1 or C2 combustible liquids under AS 1940 or dangerous goods class 3 under subsection (1)(c)	ML10325 ML10326 ML10327

## Environmental authority EPML00707713

Environmentally relevant activity/activities	Location(s)
Ancillary 31 - Mineral processing 2(b) - Processing, in a year, the following quantities of mineral products, other than coke - more than 100,000t	ML10325 ML10326 ML10327
Ancillary 60 - Waste disposal 2(e) - Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(b) - more than 20,000t but not more than 50,000t	ML10325 ML10326 ML10327
Ancillary 62 - Resource recovery and transfer facility operation 1(c) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing category 2 regulated waste	ML10325 ML10326 ML10327
Ancillary 62 - Resource recovery and transfer facility operation 1(d) - Operating a facility for receiving and sorting, dismantling, baling or temporarily storing category 1 regulated waste	ML10325 ML10326 ML10327
Ancillary 63 - Sewage Treatment 1(a-i) - Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of 21 to 100EP - if treated effluent is discharged from the works to an infiltration trench or through an irrigation scheme	ML10325 ML10326 ML10327

**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:

## Environmental authority EPML00707713

- 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](http://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 – on 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 *Planning Act 2016* 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.

The anniversary day of this environmental authority is the same day each year as the effective date. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

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

6 January 2022

Date

Luke Johnston  
Department of Environment and Science

Delegate of the administering authority  
*Environmental Protection Act 1994*

### **Enquiries:**

Business Centre Coal

PO Box 3028, EMERALD QLD 4720

Phone: (07) 4987 9320

Email: [CRMining@des.qld.gov.au](mailto:CRMining@des.qld.gov.au)

**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 Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

**Obligations under the *Mining and Quarrying Safety and Health Act 1999***

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the *Mining and Quarrying Safety and Health Act 1999*. For more information on your obligations under this legislation contact Mine Safety and Health at [www.resources.qld.gov.au](http://www.resources.qld.gov.au), or phone 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

**Development Approval**

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of Environment and Science to ensure that you have the most current version of the environmental authority relating to this site.

Agency interest: General	
Condition number	Condition
<b>A1</b>	<p><b>Coal extraction</b></p> <p>The environmental authority holder is approved for an extraction rate of up to <b>6.5 Mtpa (million tonnes per annum) of ROM (run-of-mine) coal.</b></p>
<b>A2</b>	<p>This environmental authority authorises environmental harm referred to in the conditions. Where there is no condition or this environmental authority is silent on a matter, the lack of a condition or silence does not authorise environmental harm.</p>
<b>A3</b>	<p>In carrying out the mining activity authorised by this environmental authority, disturbance of land on <b>Figure 1- Site map, domains and groundwater monitoring locations:</b></p> <ul style="list-style-type: none"> <li>a) may occur in the areas marked 'A';</li> <li>b) must not occur in the areas marked 'B'; and</li> <li>c) may occur in the areas marked 'C', but only in accordance with <b>Condition A4.</b></li> </ul>
<b>A4</b>	<p>Any disturbance within the areas marked 'C' on <b>Figure 1- Site map, domains and groundwater monitoring locations:</b></p> <ul style="list-style-type: none"> <li>a) is only authorised to the extent reasonably necessary for exploration activities roads, fences, underground services, low-impact telecommunications facilities, electrical sub-stations, transmission grid works and supply network works, storage depots, similar minor infrastructure and ancillary facilities for any of the above; and</li> <li>b) any disturbance within areas marked 'A' or 'C' is not to impact adversely on areas marked 'B'.</li> </ul>
<b>A5</b>	<p>The holder of this environmental authority must:</p> <ul style="list-style-type: none"> <li>a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority;</li> <li>b) maintain such measures, plant and equipment in a proper and efficient condition;</li> <li>c) operate such measures, plant and equipment in a proper and efficient manner; and</li> <li>d) ensure all instruments and devices used for the measurement or monitoring of any parameter under any condition of this environmental authority are properly calibrated.</li> </ul>
<b>A6</b>	<p><b>Monitoring</b></p> <p>Except where specified otherwise in another condition of this environmental authority, all monitoring records or reports required by this environmental authority must be kept for a period of not less than <b>five (5) years.</b></p>

## Environmental authority EPML00707713

<b>A7</b>	<p><b>Risk management</b></p> <p>The holder of this environmental authority must develop and implement a risk management system for mining activities which mirrors the content requirements of the Standard for Risk Management (ISO31000:2009), or the latest edition of an Australian Standard for risk management, to the extent relevant to the environmental management, prior to the commencement of mining activities.</p>
<b>A8</b>	<p><b>Notification of emergencies, incidents and exceptions</b></p> <p>The holder of this environmental authority must notify the administering authority by written notification within <b>24 hours</b>, after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with, the conditions of this environmental authority.</p>
<b>A9</b>	<p>Within <b>ten (10) business days</b> following the initial notification of an emergency or incident, or receipt of monitoring results, whichever is the latter, further written advice must be provided to the administering authority, including the following:</p> <ul style="list-style-type: none"> <li>a) results and interpretation of any samples taken and analysed;</li> <li>b) outcomes of actions taken at the time to prevent or minimise unlawful environmental harm; and</li> <li>c) proposed actions to prevent a recurrence of the emergency or incident.</li> </ul>
<b>A10</b>	<p><b>Complaints</b></p> <p>The holder of this environmental authority must record all environmental complaints received about the mining activities including the following details:</p> <ul style="list-style-type: none"> <li>a) name, address and contact number for/of the complainant;</li> <li>b) time and date of complaint;</li> <li>c) reasons for the complaint;</li> <li>d) investigations undertaken;</li> <li>e) conclusions formed;</li> <li>f) actions taken to resolve the complaint;</li> <li>g) any abatement measures implemented; and</li> <li>h) person responsible for resolving the complaint.</li> </ul>

## Environmental authority EPML00707713

<b>A11</b>	<p>The holder of this environmental authority must, when requested by the administering authority, undertake relevant specified monitoring within a reasonable timeframe nominated or agreed to by the administering authority to investigate any complaint of environmental harm.</p> <p>The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures, where implemented, must be provided to the administering authority within <b>ten (10) business days</b> of completion of the investigation, or no later than <b>ten (10) business days</b> after the end of the timeframe nominated by the administering authority to undertake the investigation.</p>
<b>A12</b>	<p><b>Third Party Reporting</b></p> <p>The holder of this environmental authority must:</p> <ol style="list-style-type: none"> <li>within <b>one (1) year</b> of the commencement of this authority, obtain from a suitably qualified and experienced third party a report on compliance with the conditions of this environmental authority;</li> <li>obtain further such reports at regular intervals not exceeding three years from the completion of the report referred to above; and</li> <li>provide each report to the administering authority within <b>90 days</b> of its completion.</li> </ol>
<b>A13</b>	<p>Where a condition of this environmental authority requires compliance with a standard, policy or guideline published externally to this environmental authority and the standard is amended or changed subsequent to the issue of this environmental authority, the holder of this environmental authority must:</p> <ol style="list-style-type: none"> <li>comply with the amended or changed standard, policy or guideline within <b>two (2) years</b> of the amendment or change being made, unless a different period is specified in the amended standard or relevant legislation, or where the amendment or change relates specifically to regulated structures referred to in <b>Schedule I: Dams and Levees</b> the time specified in that condition; and</li> <li>until compliance with the amended or changed standard, policy or guideline is achieved; continue to remain in compliance with the corresponding provision that was current immediately prior to the relevant amendment or change.</li> </ol>
<b>Agency interest: Air</b>	
<b>Condition number</b>	<b>Condition</b>
<b>B1</b>	<p><b>Dust nuisance</b></p> <p>The release of dust or particulate matter or (both) resulting from the mining activity must not cause an environmental nuisance at any sensitive or commercial place.</p>

<b>B2</b>	<p>When requested by the administering authority or as a result of a complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer), dust and particulate monitoring must be undertaken, and the results thereof notified to the administering authority within <b>14 days</b> following completion of monitoring.</p> <p>Monitoring must be carried out at a place or places relevant to the potentially affected dust sensitive place as agreed upon with the administering authority. Dust and particulate matter must not exceed the following levels when measured at the agreed locations:</p> <p>a) Dust deposition of 120 milligrams per square metre per day, averaged over <b>one (1) month</b>, when monitored in accordance with the most recent version of Australian Standard <i>AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter – Gravimetric method</i>;</p> <p>b) A concentration of total particulate matter suspended in the atmosphere of 90 micrograms per cubic metre over a <b>one (1) year averaging time</b>, when monitored in accordance with the most recent version of <i>AS/NZS3580.9.3:2003 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—Total suspended particulate matter (TSP)—High volume sampler gravimetric method</i>;</p> <p>c) A concentration of particulate matter with an aerodynamic diameter of less than 10 micrometres (PM<sub>10</sub>) suspended in the atmosphere of 50 micrograms per cubic metre over a <b>24-hour averaging time</b>, when monitored in accordance with the most recent version of either:</p> <p>i) Australian Standard <i>AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter— PM<sub>10</sub> high volume sampler with size-selective inlet – Gravimetric method</i>; or</p> <p>ii) Australian Standard <i>AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter— PM<sub>10</sub> low volume sampler— Gravimetric method</i>; or</p> <p>iii) Any alternative method of monitoring PM<sub>10</sub> which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.</p> <p><b>NOTE:</b> The exceedances of PM<sub>10</sub> above 50 micrograms per cubic metre over a 24-hour averaging time as a result of bushfires, dust storms and fuel reduction burning for fire management purposes are not considered a breach of <b>Condition B2 (b)</b>.</p>
-----------	---



## Environmental authority EPML00707713

<b>B3</b>	<p>If the monitoring undertaken as per <b>Condition B2</b> indicates an exceedance of the relevant limits in <b>Condition B2</b>, then the environmental authority holder must</p> <ol style="list-style-type: none"> <li>1) investigate whether the exceedance is due to emissions from the mining activities and if the exceedance is due to mining activities the environmental authority holder must immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance; and</li> <li>2) submit to the administering authority a report detailing the investigation undertaken as per <b>Condition B3(1)</b> within <b>forty (40) days</b> following completion of monitoring. As a minimum, the report must: <ol style="list-style-type: none"> <li>a. provide details of the investigation; and</li> <li>b. detail whether the result is directly associated with mining activities and if so: <ol style="list-style-type: none"> <li>i. any dust abatement measure implemented as per <b>Condition B3(1)</b></li> <li>ii. whether any environmental harm has occurred</li> <li>iii. outline any actions required to mitigate environmental harm.</li> </ol> </li> </ol> </li> </ol>
<b>B4</b>	<p><b>Dust Management Plan</b></p> <p>A Dust Management Plan must be developed and implemented by an appropriately qualified person for all stages of the authorised mining activities. The Dust Management Plan must be submitted to the administering authority for review and comment by <b>30 June 2019</b>.</p>
<b>B5</b>	<p>The Dust Management Plan required by <b>Condition B4</b> must include:</p> <ol style="list-style-type: none"> <li>a) a preventative management system for dust control;</li> <li>b) Trigger Action Response Program;</li> <li>c) Site background (contextual information);</li> <li>d) Proposed works and potential impacts &amp; impact analysis;</li> <li>e) Site risk assessment;</li> <li>f) Design of an internal operational monitoring program including objectives, separate from any compliance monitoring or limits/levels required by <b>Condition B2</b>;</li> <li>g) Performance criteria and monitoring methods;</li> <li>h) Number and location of monitoring sites;</li> <li>i) Quality assurance/quality control (QA/QC) requirements;</li> <li>j) Stakeholder consultation;</li> <li>k) Roles and responsibilities; and</li> <li>l) Reporting</li> </ol>
<b>B6</b>	<p>The dust management plan required by <b>Condition B4</b> must be reviewed annually and submitted to the administering authority upon request.</p>

Agency interest: Waste Management	
Condition number	Condition
<b>C1</b>	<p><b>Burning Waste</b></p> <p>Unless otherwise permitted by the conditions of this environmental authority or with prior approval from the administering authority and in accordance with a relevant standard operating procedure, waste must not be burnt.</p>
<b>C2</b>	<p>The holder of this environmental authority may burn vegetation cleared in the course of carrying out extraction activities provided that the activity does not cause environmental harm at any sensitive place or commercial place.</p>
<b>C3</b>	<p><b>Tailings disposal</b></p> <p>Procedures for managing tailings disposal must be in place and should include:</p> <ul style="list-style-type: none"> <li>a) containment of tailings;</li> <li>b) the management of seepage and leachates both during operation and the foreseeable future;</li> <li>c) the control of fugitive emissions to air;</li> <li>d) a program of progressive sampling and characterisation to identify acid producing potential and metal concentrations of tailings;</li> <li>e) maintaining records of the relative locations of any other waste stored within the tailings;</li> <li>f) rehabilitation strategy; and</li> <li>g) monitoring of rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of tailings, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.</li> </ul>
<b>C4</b>	<p>Disposing of scrap tyres generated from the mining activities undertaken in spoil emplacements located on ML10325, ML10326 and ML10327 is acceptable, provided tyres are placed as deep in spoil located on ML10325, ML10326 and ML10327 as reasonably practicable.</p>
<b>C5</b>	<p>The holder of the environmental authority must keep a record of the number and location of scrap tyres disposed of in accordance with <b>Condition C4</b>.</p>
<b>C6</b>	<p>Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform.</p>

<b>C7</b>	<p><b>Storage of Tyres</b></p> <p>Scrap tyres stored awaiting disposal or transport for take-back and recycling, or waste-to-energy options must be stored in stable stacks and at least <b>ten (10) metres</b> from any other scrap tyre storage area, or combustible or flammable material, including vegetation.</p>
<b>C8</b>	<p>All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a <b>ten (10) metre</b> radius of the scrap tyre storage area.</p>
<b>C9</b>	<p><b>Waste Management</b></p> <p>A Waste Management Plan, in accordance with the <i>Waste Reduction and Recycling Act 2011</i>, must be implemented and must cover:</p> <ul style="list-style-type: none"> <li>a) describe how Sonoma Coal Mine recognise and apply the waste and resource management hierarchy;</li> <li>b) identify the waste streams from the project;</li> <li>c) a program for safe recycling or disposal of all wastes- reusing and recycling where possible;</li> <li>d) the waste management control strategies must consider: <ul style="list-style-type: none"> <li>1. the type of wastes;</li> <li>2. segregation of the wastes;</li> <li>3. storage of the wastes;</li> <li>4. transport of the wastes;</li> <li>5. monitoring and reporting matters concerning the waste;</li> <li>6. emergency response planning;</li> <li>7. disposal, reused and recycling options;</li> </ul> </li> <li>e) detail the hazardous characteristics of the waste generated (if any);</li> <li>f) cover a disposal procedure for hazardous wastes;</li> <li>g) outline the process to be implemented to allow for continuous improvement of the waste management systems</li> <li>h) identify responsible staff (positions) for implementing, managing and reporting the Waste Management Plan; and</li> <li>i) cover a staff awareness and induction program that encourages re-use and recycling.</li> </ul>

## Environmental authority EPML00707713

<b>C10</b>	<p>Regulated waste records must be kept for <b>five (5) years</b>, and must include the following information:</p> <ul style="list-style-type: none"> <li>a) date of pickup of waste;</li> <li>b) description of waste;</li> <li>c) cross reference to relevant waste transport documentation;</li> <li>d) quantity of waste;</li> <li>e) origin of the waste;</li> <li>f) destination of the waste; and</li> <li>g) intended fate of the waste, for example, type of waste treatment, reprocessing or disposal.</li> </ul> <p><b>Note:</b> <i>Records of documents maintained in compliance with a waste tracking system established under the Environmental Protection Act 1994 or any other law for regulated waste will be deemed to satisfy this condition.</i></p>
<b>C11</b>	Records of trade and regulated wastes or material leaving the mining lease for recycling or disposal, including the final destination and method of treatment, must be in accordance with the Waste Reduction and Recycling Act 2011
<b>C12</b>	All regulated waste received at and removed from the site must be transported by a person who holds a current authority to transport such waste under the provisions of the <i>Environmental Protection Act 1994</i> .
<b>C13</b>	Except as otherwise provided by the conditions of this authority, all waste removed from the site must be taken to a facility that is lawfully allowed to accept such waste under the provisions of the <i>Environmental Protection Act 1994</i> .
<b>Agency interest: Noise and Vibration</b>	
<b>Condition number</b>	<b>Condition</b>
<b>D1</b>	<p><b>Noise</b></p> <p>Noise resulting from the authorised mining activities must not cause an environmental nuisance at any sensitive or commercial place.</p>
<b>D2</b>	<p>When requested by the administering authority, or as a result of a complaint noise monitoring must be undertaken and the results must be notified within <b>14 days</b> to the administering authority following completion of monitoring.</p> <p>Monitoring must be carried out at a place or places relevant to the potentially affected noise sensitive place as agreed upon with the administering authority.</p>

<b>D3</b>	<p><b>Low Frequency Noise</b></p> <p>Noise emissions from the activity, when including substantial low frequency noise, must not cause an overall sound pressure level at a noise sensitive place exceeding 55 dB(Z).</p> <p><b>NOTE:</b> “<i>Substantial low frequency noise</i>” means a noise emission that has an unbalanced frequency spectrum shown in a one-third octave band measurements, with a predominant component located within the frequency range 10 to 200 Hz.</p>
<b>D4</b>	<p>All noise monitoring which is conducted as per <b>Condition D2</b> must be completed in accordance with the following noise monitoring requirements:</p> <ol style="list-style-type: none"> <li>All noise monitoring must be conducted in accordance with the administering authority's most recent version of the Noise Measurement Manual.</li> <li>Source noise levels must be expressed as component noise levels for the purposes of comparison with noise limits.</li> <li>All noise monitoring devices must be calibrated in accordance with AS IEC 61672.1-2004.</li> <li>Monitoring location(s) must be relevant to the matter(s) under investigation.</li> </ol>
<b>D5</b>	<p>If the administering authority request for noise monitoring is in relation to a complaint and results exceed the limits in <b>Table D1 - Noise limits</b>, then the environmental authority holder must:</p> <ol style="list-style-type: none"> <li>address the complaint including the use of appropriate dispute resolution if required; and</li> <li>implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance.</li> </ol>
<b>D6</b>	<p><b>Blasting</b></p> <p>Peak particle velocity and/or air blast overpressure resulting from blasting must not cause an environmental nuisance at any sensitive or commercial place.</p>
<b>D7</b>	<p>The holder of this environmental authority must develop and implement a blast monitoring program to monitor compliance with <b>Table D2 – Blasting noise limits</b> for:</p> <ol style="list-style-type: none"> <li>at least 50% of all blasts undertaken on this site in each month at the nearest and most affected sensitive place(s) or commercial place(s).</li> <li>all blasts conducted during any time period specified by the administering authority at the nearest and most affected sensitive place(s) or commercial place(s) or another such place to investigate an allegation of environmental nuisance caused by blasting.</li> </ol>
<b>D8</b>	<p>If the results of blast monitoring undertaken as per <b>Condition D7</b> exceed the limits in <b>Table D2 – Blasting noise limits</b>, then the environmental authority holder must investigate and report to the administering authority within <b>14 days</b> following completion of monitoring.</p>

Table D1 – Noise limits

Noise level measured in dB(A)	Monday to Saturday			Sunday and Public Holidays		
	7am-6pm	6pm-10pm	10pm-7am	9am-6pm	6pm-10pm	10pm-9am
	Noise measured at a nuisance <b>sensitive place</b>					
$LA_{eq,adj,10}$	Background Plus 5	Background Plus 5	Background Plus 0	Background Plus 5	Background Plus 5	Background Plus 0
$LA_{1adj,10}$	Background Plus 10	Background Plus 10	Background Plus 5	Background Plus 10	Background Plus 10	Background Plus 5
Noise measured at a <b>commercial place</b>						
$LA_{eq,adj,10}$	Background Plus 10	Background Plus 10	Background Plus 5	Background Plus 10	Background Plus 10	Background Plus 5
$LA_{1adj,10}$	Background Plus 15	Background Plus 15	Background Plus 10	Background Plus 15	Background Plus 15	Background Plus 10

**NOTE** - Associated notes and requirements:

- "Background" means background noise level, measured in the absence of the noise under investigation, as  $LA_{90,T}$  being the A-weighted sound pressure level exceeded for ninety (90) per cent of the time period of 15 minutes, using Fast response.
- " $LA_{eq,adj,T}$ " means the equivalent continuous A-weighted sound pressure level, adjusted for noise character, measured in the presence of the noise under investigation over a time period of 10 minutes, using Fast response.
- " $LA_{1,adj,T}$ " means the A-weighted sound pressure level, adjusted for noise character, measured in the presence of the noise under investigation and exceeded for one (1) per cent of the time period of 10 minutes, using Fast response.

Table D2 – Blasting noise limits

Blasting noise limits	Sensitive or commercial Blasting noise limits place limits	
	Daytime 7am to 6pm	Evening/Night/Early Morning 6pm to 7am
Airblast overpressure	115 dB (Linear) Peak for nine (9) out of ten (10) consecutive blasts initiated and not greater than 120 dB (Linear) Peak at any time	No blasting is allowed during these times
Ground vibration peak particle velocity	5mm/second peak particle velocity for nine (9) out of ten (10) consecutive blasts and not greater than 10 mm/second peak particle velocity at any time	No blasting is allowed during these times

Agency interest: Groundwater	
Condition number	Condition
E1	The holder of this environmental authority must not release contaminants to groundwater.
E2	<p><b>Groundwater Monitoring</b></p> <p>All determinations of groundwater quality and biological monitoring must be performed by an appropriately qualified person.</p>
E3	<p><b>Groundwater quality</b></p> <p>Groundwater quality and levels must be monitored at the locations and frequencies described in <b>Table E1 - Groundwater monitoring locations and frequency</b> and <b>Figure 1- Site map, domains and groundwater monitoring locations</b> for quality characteristics identified in <b>Table E2 - Groundwater quality triggers</b>.</p>
E4	<p>If quality characteristics of groundwater from compliance and third party groundwater monitoring bores identified in <b>Table E1 - Groundwater monitoring locations and frequency</b> reach any of the trigger levels stated in <b>Table E2 - Groundwater quality triggers</b>, the holder of this environmental authority must:</p> <ol style="list-style-type: none"> <li>1) compare the compliance or third party bore results to the reference bore results</li> <li>2) if the compliance or third party result is less than the reference bore data, then no action is to be taken; or</li> <li>3) if the compliance or third party result is greater than the reference bore data, notify the administering authority via WaTERS within <b>28 days</b> of receiving the result. <ol style="list-style-type: none"> <li>a. Within <b>three (3) months</b> of receiving the result, complete, and submit via WaTERS, an investigation undertaken by a suitably qualified person outlining <ol style="list-style-type: none"> <li>i. Details of the investigations carried out,</li> <li>ii. Whether the result is directly associated with mining activities, and, if so: <ol style="list-style-type: none"> <li>1. Whether environmental harm has occurred, and</li> <li>2. Any action required to mitigate environmental harm.</li> </ol> </li> </ol> </li> </ol> </li> </ol>

<b>E5</b>	<p><b>Groundwater standing water level</b></p> <p>In the event that groundwater fluctuations in excess of two (2) metres per year are detected at the compliance or third party monitoring bores in <b>Table E1 - Groundwater monitoring locations and frequency</b>, the holder of this environmental authority must compare the groundwater fluctuation in compliance or third party bore results to the reference bore results specified in <b>Table E1 - Groundwater monitoring locations and frequency</b> and:</p> <ol style="list-style-type: none"> <li>1) if the compliance or third party result is less than the reference bore data, then no action is to be taken; or</li> <li>2) if the fluctuation in the compliance or third party result is greater than the reference bore data, undertake an investigation within <b>14 days; and</b> <ol style="list-style-type: none"> <li>a) Within <b>ten (10) business days</b> of receiving the result of the investigation, complete, and submit a report via WaTERS outlining:           <ol style="list-style-type: none"> <li>i. Details of the investigations carried out,</li> <li>ii. Whether the result is directly associated with mining activities, and, if so:               <ol style="list-style-type: none"> <li>1. Whether environmental harm has occurred, and</li> <li>2. Any action required to mitigate environmental harm.</li> </ol> </li> </ol> </li> </ol> </li> </ol>
<b>E6</b>	<p><b>Annual Groundwater Monitoring Review</b></p> <p>The groundwater monitoring data must be reviewed on an annual basis. The review must include the assessment of groundwater levels and quality data, and the suitability of the monitoring network. The assessment must be submitted to the administering authority within <b>28 days</b> of receiving the report.</p>
<b>E7</b>	<p><b>Bore construction and maintenance and decommissioning</b></p> <p>The construction, maintenance and management and decommissioning of groundwater bores (including groundwater monitoring bores) must be undertaken in a manner that prevents or minimises impacts to the environment and ensures the integrity of the bores to obtain accurate monitoring.</p>



Table E1 - Groundwater monitoring locations and frequency

Monitoring Point	Location		Aquifer	Screen depth (m)	Surface RL (m) <sup>2</sup>	Monitoring Frequency <sup>1</sup>
	Latitude	Longitude				
Bore 1	-20.609912	147.837415	Alluvium	22.0-25.0	163.339	Quarterly
Bore 2	-20.621701	147.868977	Alluvium	18.5-21.5	176.225	Quarterly
Bore 4	-20.629651	147.862035	Coal measures	66.0-72.0	175.328	Quarterly
Bore 5	-20.622853	147.868034	Coal measures	67.0-73.0	176.589	Quarterly
Bore 6	-20.601383	147.864880	Alluvium	22.0-25.0	170.575	Quarterly
Bore 7B	-20.608149	147.852366	Alluvium	3.7-6.7	166.728	Quarterly
Bore 7C	-20.609006	147.849031	Alluvium	5.0-8.0	163.487	Quarterly
Bore 7E	-20.608528	147.850737	Alluvium	3.1-6.1	166.893	Quarterly
Bore 8	-20.605915	147.830724	Alluvium	18.5-21.5	160.167	Quarterly
Bore 9	-20.609094	147.813765	Alluvium	23.9-26.9	153.199	Quarterly

**NOTE:**

<sup>1</sup>Monitoring is not required where a bore has been removed as a direct result of the mining activity.

<sup>2</sup>RL must be calculated from the nearest 5cm from the top of the bore casing.

Table E2 - Groundwater quality trigger limits

Quality Parameter	Unit	Investigation Trigger Level
pH	pH Units	6.5 – 9.0
Electrical Conductivity	µS/cm	5,970
Calcium	mg/L	1,000
Chloride	mg/L	700
Sodium	mg/L	460
Sulfate	mg/L	1,000

**NOTE:**

- i) The quality characteristics and/or trigger levels as per **Table E2** may be reviewed if sufficient data is available to adequately demonstrate negligible environmental risk, and it may be determined that a reduced monitoring frequency is appropriate or that certain quality characteristics can be removed from **Table E2** by amendment.

Agency interest: Water	
Condition number	Condition
F1	Contaminants that will, or have the potential to cause environmental harm, must not be released directly or indirectly to any waters as a result of the authorised mining activities, except as permitted under the conditions of this environmental authority.
F2	The release of mine affected water to waters must only occur from the release points specified in <b>Table F1- Mine affected water release points, sources and receiving waters</b> and depicted in <b>Figure 2 - Mine affected water release points, sources and receiving waters</b> attached to this environmental authority.
F3	<p>The release of mine affected water to waters from the release points must be monitored at the locations specified in <b>Table F1- Mine affected water release points, sources and receiving waters</b> for each quality characteristic and at the frequency specified in <b>Table F2 Mine affected water release limits</b> and <b>Table F3 - Release contaminant trigger investigation levels, potential contaminants</b>.</p> <p><b>NOTE:</b> The administering authority will take into consideration any extenuating circumstances prior to determining an appropriate enforcement response in the event <b>Condition F5</b> is contravened due to a temporary lack of safe or practical access. The administering authority expects the environmental authority holder to take all reasonable and practicable measures to maintain safe and practical access to designated monitoring locations.</p>
F4	The release of mine affected water to waters in accordance with <b>Condition F2</b> must not exceed the release limits stated in <b>Table F2 - Mine affected water release limits</b> when measured at the monitoring points specified in <b>Table F1- Mine affected water release points, sources and receiving waters</b> for each quality characteristic.

F5	<p>If quality characteristics of the release exceed any of the trigger levels specified in <b>Table F3 - Release contaminant trigger investigation levels, potential contaminants</b> during a release event, the environmental authority holder must compare the downstream results in the receiving waters (<b>Table F6 - Receiving water upstream background sites and downstream monitoring points</b>) to the trigger values specified in <b>Table F3 - Release contaminant trigger investigation levels, potential contaminants</b> and:</p> <ol style="list-style-type: none"> <li>1) where the trigger values are not exceeded then no action is to be taken; or</li> <li>2) where the downstream results exceed the trigger values specified in <b>Table F3 - Release contaminant trigger investigation levels, potential contaminants</b> for any quality characteristic, compare the results of the downstream site to the data from background monitoring sites (<b>Table F6 - Receiving water upstream background sites and downstream monitoring points</b>); and <ol style="list-style-type: none"> <li>a. if the result is less than the background monitoring site data, then no action is to be taken; or</li> <li>b. if the result is greater than the background monitoring site data, notify the administering authority via WaTERS within <b>24 hours</b> of receiving the result, and complete an investigation and provide a written report to the administering authority via WaTERS within <b>28 days</b> of receiving the result, outlining <ol style="list-style-type: none"> <li>i. details of the investigations carried out; and</li> <li>ii. whether the result is directly associated with mining activities, and, if so: <ol style="list-style-type: none"> <li>1. whether environmental harm has occurred, and</li> <li>2. actions taken to prevent environmental harm.</li> </ol> </li> </ol> </li> </ol> <p><b>NOTE:</b> Where an exceedance of a trigger level has occurred and is being investigated, in accordance with <b>F5(2)(b)</b> of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.</p> </li></ol>
F6	<p>Mine affected water release events</p> <p>The holder must ensure a stream flow gauging station/s is installed, operated and maintained to determine and record stream flows at the locations specified in <b>Table F6 - Receiving water upstream background sites and downstream monitoring points</b> and flow recording frequency specified in <b>Table F4 - Mine affected water release during flow events</b>.</p>
F7	<p>The release of mine affected water to waters in accordance with <b>Condition F2</b> must only take place during periods of natural flow in accordance with the receiving water flow criteria for discharge specified in <b>Table F4 - Mine affected water release during flow events</b> for the release point(s) specified in <b>Table F1 - Mine affected water release points, sources and receiving waters</b>.</p>

Table F1 - Mine Affected Water Release Points, Sources and Receiving Waters

Release Point (RP) <sup>1</sup>	Latitude	Longitude	Mine Affected Water Source and Location	Monitoring Point	Receiving waters description
RP1 (SW7)	-20.611277	147.833719	Sediment Dam 3	Spillway	Pelican Creek via Coral Creek
RP2 (SW8)	-20.630111	147.853545	Sediment Dam 5	Spillway	Pelican Creek via Two Mile Creek
RP3 (SW9)	-20.616874	147.837971	Sediment Dam 4	Spillway	Pelican Creek via Coral Creek
RP4 (SW10)	-20.629760	147.832408	Sediment Dam 13	Spillway	Pelican Creek via Two Mile Creek

**NOTE:** Where fixed release infrastructure is not currently installed portable pipes and pumps will be utilised.

## Environmental authority EPML00707713

F8	The daily quantity of mine affected water released from each release point must be measured and recorded.
F9	Releases to waters must be undertaken so as not to cause erosion of the bed and banks of the receiving waters, or cause a material build-up of sediment in such waters.
F10	<p><b>Notification of release event</b></p> <p>The environmental authority holder must notify the administering authority via WaTERS as soon as practicable and no later than <b>24 hours</b> after commencing to release mine affected water to the receiving environment. Notification must include the submission of written advice to the administering authority of the following information:</p> <ul style="list-style-type: none"> <li>a) release commencement date/time;</li> <li>b) release point/s;</li> <li>c) release rate;</li> <li>d) release salinity and/or electrical conductivity;</li> <li>e) receiving water/s including the natural flow rate; and</li> <li>f) details regarding the compliance of the release with the conditions of <b>Schedule F – Water</b>.</li> </ul>
F11	<p>The environmental authority holder must notify the administering authority via WaTERS as soon as practicable, and no later than <b>24 hours</b> after cessation of a release notified under <b>Condition F10</b>. The cessation notification must include the following information:</p> <ul style="list-style-type: none"> <li>a) release cessation date and time;</li> <li>b) release point/s;</li> <li>c) release rate;</li> <li>d) water quality of release;</li> <li>e) total volume of water released;</li> <li>f) natural flow rate in the receiving water; and</li> <li>g) details regarding the compliance of the release with the conditions of this environmental authority.</li> </ul> <p>Note: Successive or intermittent releases from a Release Point occurring within 24 hours of the cessation of any individual release can be considered part of a single release event and do not require individual notification for the purpose of compliance with conditions F10, F11 and F12, provided the relevant details of the release are included within the notification provided in accordance with conditions F10, F11 and F12.</p>
F12	<p>The environmental authority holder must within <b>twenty-eight (28) days</b> after cessation of a release event notified under <b>Condition F10</b> provide a report to the administering authority via WaTERS, which must include the following information:</p> <ul style="list-style-type: none"> <li>a) all continuous and in-situ water quality monitoring results (including laboratory analyses); and</li> <li>b) any further matters pertinent to the water release event.</li> </ul>

## Environmental authority EPML00707713

<b>F13</b>	<p><b>Notification of release event exceedance</b></p> <p>If the release limits defined in <b>Table F2 - Mine affected water release limits</b> are exceeded, the holder of the environmental authority must notify the administering authority within 24 hours of receiving the results.</p>
<b>F14</b>	<p>The environmental authority holder must, within <b>28 days</b> of a release that is not compliant with the conditions of this environmental authority, provide a report to the administering authority via WaTERS detailing:</p> <ul style="list-style-type: none"> <li>a) the reason for the release;</li> <li>b) the location of the release;</li> <li>c) the total volume of the release and which (if any) part of this volume was non-compliant;</li> <li>d) the total duration of the release and which (if any) part of this period was non-compliant;</li> <li>e) all water quality monitoring results (including all laboratory analyses);</li> <li>f) identification of any environmental harm as a result of the non-compliance;</li> <li>g) all calculations;</li> <li>h) any other matters pertinent to the water release event.</li> </ul>
<b>F15</b>	<p><b>Receiving environment monitoring and contaminant trigger levels</b></p> <p>The quality of the receiving waters must be monitored at the locations specified in <b>Table F6 - Receiving water upstream background sites and downstream monitoring points</b> and <b>Figure 2 Mine affected water release points, sources and receiving waters</b> for each quality characteristic and at the monitoring frequency stated in <b>Table F5 - Receiving waters contaminant trigger levels</b>.</p>

## Environmental authority EPML00707713

<b>F16</b>	<p>If quality characteristics of the receiving water at the downstream monitoring points exceed any of the trigger levels specified in <b>Table F5 - Receiving waters contaminant trigger levels</b> during a release event, the environmental authority holder must compare the downstream results to the upstream results in the receiving waters and:</p> <ol style="list-style-type: none"> <li>1) if the result is less than the upstream monitoring data, then no action is to be taken; or</li> <li>2) if the result is greater than the upstream monitoring data, notify the administering authority via WaTERS within <b>24 hours</b> of receiving the result, and complete an investigation and provide a written report to the administering authority via WaTERS within <b>28 days</b> of receiving the result, outlining <ol style="list-style-type: none"> <li>a. details of the investigations carried out; and</li> <li>b. whether the result is directly associated with the release, and, if so: <ol style="list-style-type: none"> <li>i. whether environmental harm has occurred, and</li> <li>ii. actions taken to prevent environmental harm.</li> </ol> </li> </ol> </li> </ol> <p><b>NOTE:</b> Where an exceedance of a trigger level has occurred and is being investigated, in accordance with <b>Condition F16(2)</b> of this condition, no further reporting is required for subsequent trigger events for that quality characteristic.</p>
<b>F17</b>	All determinations of water quality and biological monitoring must be performed by an appropriately qualified person.

**Table F2 - Mine Affected Water Release Limits**

Quality Parameter	Release Limit	Monitoring frequency	Comment
Electrical conductivity ( $\mu\text{S}/\text{cm}$ )	Release limits specified in <b>Table F4</b>	Daily during release (the first sample must be taken within 2 hours of commencement of release)	-
pH (pH Unit)	6.5 (minimum) 9.0 (maximum)	Daily during release (the first sample must be taken within 2 hours of commencement of release)	-
Turbidity <sup>1</sup> (NTU)	300	At commencement and prior to cessation of release (at a minimum) and weekly during a release <sup>3</sup>	Turbidity is required to assess ecosystem impacts and can provide instantaneous results.

**NOTE:**

^ The quality characteristics required to be monitored as per **Table F2** must be reviewed in relation to environmental risk and immediately adjacent operating coal mines by **30 June 2021**.

<sup>1</sup>The determination of suitability for release of water should be informed by monitoring undertaken prior to release.

**Table F3 - Release contaminant trigger investigation levels, potential contaminants**

Quality Parameter	Trigger Levels (µg/L)	Comment on Trigger Level	Monitoring Frequency
Aluminium	82	80 <sup>th</sup> percentile of background	Commencement of release and thereafter weekly during release
Arsenic	13	For aquatic ecosystem protection, based on SMD guideline	
Cadmium	0.2	For aquatic ecosystem protection, based on SMD guideline	
Chromium	1	For aquatic ecosystem protection, based on SMD guideline	
Copper	2	For aquatic ecosystem protection, based on LOR for ICPMS	
Iron	300	For aquatic ecosystem protection, based on low reliability guideline	
Lead	4	For aquatic ecosystem protection, based on SMD guideline	
Mercury	0.2	For ecosystem protection based on LOR for CVFIMS	
Nickel	11	For aquatic ecosystem protection, based on SMD guideline	
Zinc	8	For aquatic ecosystem protection, based on SMD guideline	
Boron	370	For aquatic ecosystem protection, based on SMD guideline	
Cobalt	90	For aquatic ecosystem protection, based on low reliability guideline	
Manganese	1,900	For aquatic ecosystem protection, based on SMD guideline	
Molybdenum	34	For aquatic ecosystem protection, based on low reliability guideline	
Selenium	10	For aquatic ecosystem protection, based on LOR for ICPMS	
Silver	1	For aquatic ecosystem protection, based on LOR for ICPMS	
Uranium	1	For aquatic ecosystem protection, based on LOR for ICPMS	
Vanadium	10	For aquatic ecosystem protection, based on LOR for ICPMS	
Ammonia	900	For aquatic ecosystem protection, based on SMD guideline	
Nitrate	1,100	For aquatic ecosystem protection, based on ambient Qld WQ Guidelines (2006) for TN	
Petroleum hydrocarbons (C6-C9)	20	For aquatic ecosystem protection, based on LOR	
Petroleum hydrocarbons (C10-C36)	100	For aquatic ecosystem protection, based on LOR	
Fluoride (total)	2,000	Protection of livestock and short term irrigation guideline	
Sodium	180,000	Based on Australian Drinking Water Guidelines	

**NOTE:**

- i) All metals and metalloids must be measured as total (unfiltered) and dissolved (filtered). Trigger levels for metal/metalloids apply if dissolved results exceed trigger.
- ii) The quality characteristics required to be monitored as per **Table F3** must be reviewed in relation to environmental risk and immediately adjacent operating coal mines by **30 June 2021**.
- iii) SMD – slightly moderately disturbed level of protection, guideline refers ANZECC & ARMCANZ (2000)
- iv) LOR – typical reporting for method stated. ICPMS/CV FIMS – analytical method required to achieve LOR.



<b>F18</b>	<p><b>Receiving Environment Monitoring Program (REMP)</b></p> <p>The environmental authority holder must develop and implement a Receiving Environment Monitoring Program (REMP) to monitor, identify and describe any adverse impacts to surface water environmental values, quality and flows due to the authorised mining activity. This must include monitoring the effects of the mine on the receiving environment periodically (under natural flow conditions) and while mine affected water is being discharged from the site.</p> <p>For the purposes of the REMP, the receiving environment is the waters of Coral Creek, Two Mile Creek, and Pelican Creek, and connected or surrounding waterways within <b>10km</b> downstream of the release. The REMP should encompass any sensitive receiving waters or environmental values downstream of the authorised mining activity that will potentially be directly affected by an authorised release of mine affected water.</p>
------------	---

## Environmental authority EPML00707713

F19	<p>The REMP must address (but not necessarily be limited to) the following:</p> <ul style="list-style-type: none"> <li>a) description of potentially affected receiving waters including key communities and background water quality characteristics based on accurate and reliable monitoring data that takes into consideration any temporal variation (e.g. seasonality); and</li> <li>b) description of applicable environmental values and water quality objectives to be achieved (i.e. as scheduled pursuant to the Environmental Protection (Water) Policy 2009); and</li> <li>c) any relevant reports prepared by other governmental or professional research organisations that relate to the receiving environment within which the REMP is proposed; and</li> <li>d) water quality targets within the receiving environment to be achieved, and clarification of contaminant concentrations or levels indicating adverse environmental impacts during the REMP.</li> <li>e) monitoring for any potential adverse environmental impacts caused by the release</li> <li>f) monitoring of stream flow and hydrology;</li> <li>g) monitoring of toxicants should consider the indicators specified in <b>Table F3</b> to assess the extent of the compliance of concentrations with water quality objectives and/or the ANZECC and ARMCANZ 2000 guidelines for slightly to moderately disturbed ecosystems;</li> <li>h) monitoring of physico-chemical parameters as a minimum those specified in <b>Table G2</b> (in addition to dissolved oxygen saturation and temperature);</li> <li>i) monitoring biological indicators (for macroinvertebrates in accordance with the AusRivas methodology) and metals/metalloids in sediments (in accordance with ANZECC and ARMCANZ 2000, BATLEY and/or the most recent version of AS5667.1 Guidance on Sampling of Bottom Sediments) for permanent, semi-permanent water holes and water storages</li> <li>j) the locations of monitoring points (including the locations specified in <b>Table F6</b> which are background and downstream impacted sites for each release point);</li> <li>k) the frequency or scheduling of sampling and analysis sufficient to determine water quality objectives and to derive site specific reference values within two (2) years (depending on wet season flows) in accordance with the Queensland Water Quality Guidelines 2006. For ephemeral streams, this should include periods of flow irrespective of mine or other discharges;</li> <li>l) specify sampling and analysis methods and quality assurance and control;</li> <li>m) any historical datasets to be relied upon;</li> <li>n) description of the statistical basis on which conclusions are drawn, and</li> <li>o) any spatial and temporal controls to exclude potential confounding factors.</li> </ul>
F20	<p>A REMP Design Document that addresses the requirements of <b>Conditions F18</b> and <b>F19</b> must be prepared and made available to the administrating authority upon request.</p>

<b>F21</b>	<p>A report outlining the findings of the REMP, including all monitoring results and interpretations in accordance with <b>Condition F19</b> must be prepared and submitted to the administering authority via WaTERS for each year during which a release from a release point occurs. This should include an assessment of background water quality, any assimilative capacity for those contaminants monitored and the suitability of current discharge limits to protect downstream environment values. All REMP water quality data associated with the relevant report must be submitted to the administering authority via WaTERS.</p> <p>Where no releases are made from the release points in any given year (<b>1 November to 31 October</b>), a summary report of the findings of the REMP must be prepared and submitted to the administering authority via WaTERS. The summary report must include the following:</p> <ul style="list-style-type: none"> <li>a) Introduction;</li> <li>b) Rainfall data; and</li> <li>c) Water course flow data.</li> </ul>
------------	---

**Table F4 –Mine affected water release during flow events**

Receiving water/stream	Release Point (RP)	Gauging Station	Gauging Station Latitude	Gauging Station Longitude	Receiving Water Flow Recording Frequency	Receiving Water Flow Criteria for discharge (m <sup>3</sup> /s)	Maximum Release Rate (for all combined RP flows)	Electrical Conductivity and Sulfate Release Limits
Pelican Creek (via Coral and Two Mile Creek)	RP1 SW7 (SD3)	Gauging Station 1	-20.585721	147.851138	Continuous (minimum daily)	Medium flow (low) more than 1.5 m <sup>3</sup> /s	0.5 m <sup>3</sup> /s	Electrical conductivity 1,200 µS/cm
	RP 2 SW8 (SD5)							Sulfate 360 mg/L
	RP3 SW9 (SD4)					5 m <sup>3</sup> /s	Electrical conductivity 2,000 µS/cm	
	RP4 SW10 (SD13)						Sulfate 600 mg/L	

**Table F5 - Receiving waters contaminant trigger levels**

Quality Characteristic <sup>1</sup>	Trigger Level	Monitoring Frequency
pH	6.5 – 8.5	Daily during the release
Electrical Conductivity (µS/cm)	1,000	
Total suspended solids (mg/L)	110	
Sulfate (SO <sub>4</sub> <sup>2-</sup> ) (mg/L)	250	
Sodium (mg/L)	180	

**NOTE:**

<sup>1</sup>The receiving waters trigger level quality characteristics required to be monitored as per **Table F5** must be reviewed in relation to environmental risk and immediately adjacent operating coal mines by **30 June 2021**.

## Environmental authority EPML00707713

<b>F22</b>	<p><b>Water re-use</b></p> <p>Mine affected water may be piped or trucked or transferred by some other means that does not contravene the conditions of this environmental authority and deposited into artificial water storage structures, such as farm dams or tanks, or used directly at properties owned by the environmental authority holder or a third party (with the consent of the third party).</p>
<b>F23</b>	<p>If the responsibility of the water contaminated by mining activities (the water) is given or transferred to another person in accordance with <b>Condition F22</b>, then:</p> <ul style="list-style-type: none"> <li>a) the responsibility of the water must only be given or transferred in accordance with a written agreement (the third party agreement); and</li> <li>b) include in the third party agreement a commitment from the person utilising the water to use water in such a way as to prevent environmental harm or public health incidences and specifically make the persons aware of the General Environmental Duty (GED) under section 319 of the <i>Environmental Protection Act 1994</i>, environmental sustainability of the water disposal and protection of environmental values of waters.</li> </ul>
<b>F24</b>	<p><b>Annual Water Monitoring Data Submission</b></p> <p>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 via WaTERS with each annual return:</p> <ul style="list-style-type: none"> <li>a) the date on which the sample was taken;</li> <li>b) the time at which the sample was taken;</li> <li>c) the monitoring point at which the sample was taken;</li> <li>d) the measured or estimated daily quantity of mine affected water released from all release points;</li> <li>e) the release flow rate at the time of sampling for each release point; and</li> <li>f) the results of all monitoring and details of any exceedances of the conditions of this environmental authority</li> </ul>
<b>F25</b>	<p><b>Water Management Plan</b></p> <p>A Water Management Plan must be developed by an appropriately qualified person and implemented for all stages of mining activities.</p>

## Environmental authority EPML00707713

<b>F26</b>	<p>The Water Management Plan must:</p> <ul style="list-style-type: none"> <li>a) provide for effective water management of actual and potential environmental impacts resulting from water management associated with the mining activities carried out under this environmental authority; and</li> <li>b) be developed in accordance with the administering authority's most recent version of the guideline for 'Preparation of water management plans for mining activities' (EM324) or any updates that become available from time to time and must include at least the following components: <ul style="list-style-type: none"> <li>i. a study of the source on contaminants;</li> <li>ii. a water balance model for the site;</li> <li>iii. a map showing the water management system for the site;</li> <li>iv. measures to manage and prevent saline drainage;</li> <li>v. measures to manage and prevent acid rock drainage; and</li> <li>vi. contingency procedures for incidents and emergencies.</li> </ul> </li> </ul>
<b>F27</b>	<p>On an annual basis the Water Management Plan must be updated and re-issued (in accordance with the requirements of <b>Conditions F25 and F26</b>) or reviewed. The update or review must be commenced by <b>30 November</b> each calendar year. Where a review is undertaken, the review must:</p> <ul style="list-style-type: none"> <li>a) include a statement that the review has been undertaken by an appropriately qualified person;</li> <li>b) assess the plan against the requirements under <b>Condition F25 and F26</b>;</li> <li>c) identify any actual or potential environmental impacts which are not effectively managed by the Water Management Plan; <ul style="list-style-type: none"> <li>vii. if required make recommendations to ensure actual or potential environmental impacts are effectively managed</li> <li>viii. if required provide details and timelines to implement the recommendations; and</li> </ul> </li> <li>d) make recommendations to amend the Water Management Plan, where required..</li> </ul>
<b>F28</b>	<p><b>Stormwater and water sediment controls</b></p> <p>An Erosion and Sediment Control (ESC) Plan must be developed by an appropriately qualified person and implemented for all stages of the mining activities.</p>

<b>F29</b>	<p>The ESC Plan must:</p> <ul style="list-style-type: none"> <li>a) demonstrate how ESC control measures adequately minimise the release of sediment to receiving waters and must include at least the following:</li> <li>b) assessment of all catchment areas;</li> <li>c) assessment of soil types, including sodic dispersive soils;</li> <li>d) specify design criteria for ESC structures;</li> <li>e) detail the locations and descriptions of all ESC measures;</li> <li>f) provide an audit schedule to ensure ESC controls are being maintained.</li> </ul>
<b>F30</b>	<p>A revision or review of the Erosion and Sediment Control Plan must be undertaken by <b>30 November</b> for each calendar year. The revision must:</p> <ul style="list-style-type: none"> <li>a) include a statement that the Erosion and Sediment Control Plan has been prepared by an appropriately qualified person;</li> <li>b) assess the plan against the requirements under <b>Condition F29</b>;</li> <li>c) include recommended actions to ensure actual and potential environmental impacts are effectively managed;</li> <li>d) provide details and timelines of the actions to be taken; and</li> <li>e) identify any amendments made to the Erosion and Sediment Control Plan.</li> </ul>
<b>F31</b>	<p>A copy of the Erosion and Sediment Control Plan must be provided to the administering authority on request.</p>
<b>F32</b>	<p>Stormwater, other than mine affected water, is permitted to be released to waters from:</p> <ul style="list-style-type: none"> <li>a) erosion and sediment control structures that are installed and operated in accordance with the erosion and sediment control plan required by <b>Condition F28</b>;</li> <li>b) water management infrastructure that is installed and operated, in accordance with a water management plan that complies with <b>Condition F25</b>, for the purpose of ensuring water does not become mine affected water.</li> </ul>

Table F6 - Receiving water upstream background sites and downstream monitoring points

Monitoring Points	Receiving Waters Location Description	Latitude	Longitude
Upstream Background Monitoring Points			
SW2	Coral Creek 3,330 metres upstream of release point SW7 and 3,170 metres upstream of release point SW9	-20.602263	147.864223
SW6	Two Mile Creek 1,140 metres upstream of release point SW8	-20.629549	147.864357
BG1	Upstream of confluence of Coral and Pelican Creeks	-20.585721	147.851147
Downstream Monitoring Points			
SW1	Coral Creek 2,065 metres downstream of release point SW7 and 2,800 metres downstream of release point SW9	-20.612250	147.817112
SW5	Two Mile Creek 4,280 metres downstream of release point SW8	-20.632465	147.835302
PC1	Downstream of confluence of Two Mile and Coral Creeks with Pelican Creek at upstream side of Myuna Road Crossing	-20.598503	147.756536

**NOTE:** The data from background monitoring points must not be used where they are affected by releases from other mines.

Agency interest: Sewage Treatment	
Condition number	Condition
<b>G1</b>	Treated sewage effluent may only be released to land in accordance with the conditions of this approval at the following locations: <ul style="list-style-type: none"> <li>a) within the nominated area(s) identified in <b>Figure 2</b> (irrigation areas);</li> <li>b) haul roads and areas of mining activity for the purpose of dust suppression;</li> <li>c) re-use in coal processing;</li> <li>d) firefighting.</li> </ul>
<b>G2</b>	All effluent released from the treatment plant into the nominated irrigation area identified in <b>Condition G1</b> must be monitored at the frequency and for all the parameters specified in <b>Table G1 - Contaminant release limits to land..</b>
<b>G3</b>	Irrigation with treated effluent must be carried out in a manner such that:

	<ul style="list-style-type: none"> <li>a) vegetation is not damaged;</li> <li>b) there is no surface ponding of effluent; and</li> <li>c) there is no run-off of effluent.</li> </ul>
<b>G4</b>	If irrigation areas are accessible to employees or the general public, prominent signage must be provided advising that effluent is present and care should be taken to avoid consuming or otherwise coming into unprotected contact with the effluent.
<b>G5</b>	The daily volume of treated effluent used for irrigation must be measured and records kept of the volumes of effluent released.
<b>G6</b>	When circumstances prevent the irrigation or beneficial reuse of treated sewage effluent such as during or following rain events, waters must be directed to a wet weather storage or alternative measures must be taken to store/lawfully dispose of effluent.
<b>G7</b>	Water or stormwater contaminated by irrigation activities must not be released to any waters or the bed and banks of any waters.
<b>G8</b>	A minimum area of <b>one (1) ha</b> of land, excluding any necessary buffer zones, must be utilised for the irrigation of treated sewage effluent.
<b>G9</b>	<p>Treated sewage effluent must only be supplied to another person or organisation that has a written plan detailing how the user of the treated sewage effluent will comply with their general environmental duty under section 319 of the Act whilst using the treated sewage effluent.</p> <p><b>NOTE:</b> The supply of treated wastewater for re-use is regulated under <i>the Water Supply (Safety and Reliability) Act 2008</i>.</p>

**Table G1 - Contaminant release limits to land**

Contaminant	Unit	Release limit	Limit type	Monitoring Frequency
5 day Biochemical oxygen demand (BOD)	mg/L	20	Maximum	Monthly
Total suspended solids	mg/L	30	Maximum	Monthly
Nitrogen	mg/L	30	Maximum	Monthly
Phosphorus	mg/L	15	Maximum	Monthly
E-coli	Organisms/100ml	1,000	Maximum	Monthly
pH	pH units	6.0 – 9.0.	Range	Monthly



Agency interest: Land and Rehabilitation	
Condition number	Condition
H1	All areas significantly disturbed by mining activities must be rehabilitated to achieve the following rehabilitation goals: a) safe to humans and wildlife; b) stable; c) non-polluting; and d) self-sustaining for the post-mining land use of grazing pasture, with the exception of residual voids
H2	A Rehabilitation Management Plan must be developed by <b>24 April 2020</b> by a suitably qualified person and submitted to the administering authority for review and comment.
H3	Within <b>20 business days</b> of the receipt of comments from the administering authority, the updated Rehabilitation Management Plan must be submitted to the department for approval.
H4	The Rehabilitation Management Plan must include: a) Rehabilitation objectives to achieve the rehabilitation goals for all disturbed areas; b) Detailed rehabilitation methods for each disturbed area; c) Rehabilitation indicators to measure the success of the rehabilitation against the rehabilitation objectives; d) Final completion criteria that will achieve the rehabilitation goals and objectives; e) Details of appropriate monitoring and maintenance of rehabilitation; f) Identification of 3 reference sites to be used to develop rehabilitation success criteria for each disturbance domain; g) A description of monitoring of reference sites inclusive of statistical design; h) For rehabilitation of watercourse diversions, details of the required methods of rehabilitation stated in the relevant approved Design Plans; and i) A description of progressive rehabilitation planning.
H5	All areas significantly disturbed by mining activities must be rehabilitated in accordance with the Rehabilitation Management Plan to achieve the final completion criteria.
H6	The environmental authority holder must notify the administering authority of any changes to the Rehabilitation Management Plan, and submit the updated document to the administering authority.

H7	<p><b>Mining waste management</b></p> <p>A waste rock and spoil disposal plan must be developed and include, where relevant, at least:</p> <ul style="list-style-type: none"> <li>a) effective characterisation of the waste rock and spoil to predict under the proposed placement and disposal strategy the quality of runoff and seepage generated concerning potentially environmentally significant effects including salinity, acidity, alkalinity and dissolved metals, metalloids and non-metallic inorganic substances;</li> <li>b) a program of progressive sampling and characterisation to identify dispersive and non-dispersive spoil and the salinity, acid and alkali producing potential and metal concentrations of waste rock;</li> <li>c) a materials balance and disposal plan demonstrating how potentially acid forming and acid forming waste rock will be selectively placed and/or encapsulated to minimise the potential generation of acid mine drainage;</li> <li>d) where relevant, a sampling program to verify encapsulation and/or placement of potentially acid-forming and acid-forming waste rock;</li> <li>e) how often the performance of the plan will be assessed;</li> <li>f) the indicators or other criteria on which the performance of the plan will be assessed;</li> <li>g) rehabilitation strategy; and</li> <li>h) . identification of areas proposed to contain tailings.</li> </ul> <p>Monitoring or rehabilitation, research and/or trials to verify the requirements and methods for decommissioning and final rehabilitation of the placed materials, including the prevention and management of acid mine drainage, erosion minimisation and establishment of vegetation cover.</p>
H8	<p><b>Contaminated Land</b></p> <p>Before applying for surrender of a mining lease, the holder must (if applicable) provide to the administering authority a site investigation report under the Act, in relation to any part of the mining lease which has been used for notifiable activities or which the holder is aware is likely to be contaminated land, and also carry out any further work that is required as a result of that report to ensure that the land is suitable for its final land use.</p>
H9	<p>Before applying for progressive rehabilitation certification for an area, the holder must (if applicable) provide to the administering authority a site investigation report under the Act, in relation to any part of the area the subject of the application which has been used for notifiable activities or which the holder is aware is likely to be contaminated land, and also carry out any further work that is required as a result of that report to ensure that the land is suitable for its final land use under the approved Rehabilitation Management Plan as per <b>Condition H3</b>.</p>
H10	<p>Minimise the potential for contamination of land by hazardous contaminants.</p>

<b>H11</b>	<p><b>Chemicals and flammable or combustible liquids</b></p> <p>All flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm and maintained in accordance with the current edition of <i>AS 1940 – Storage and Handling of Flammable and Combustible Liquids</i>.</p>
<b>H12</b>	<p>All chemicals and flammable or combustible 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. Where no relevant Australian standard exists store such materials within an effective on-site containment system, the environmental authority holder must, at a minimum:</p> <ul style="list-style-type: none"> <li>a) minimise the potential for contamination of land and waters by diverting stormwater around contaminated areas and facilities used for the storage of chemicals and flammable or combustible liquids.</li> </ul>
<b>H13</b>	<p><b>Residual void outcome</b></p> <p>Residual voids must comply with the following outcomes:</p> <ul style="list-style-type: none"> <li>a) Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifers, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority;</li> <li>b) Residual voids must comply with <b>Table H1 – Residual void outcomes</b>; and</li> <li>c) At the completion of decommissioning and rehabilitation, all residual voids must demonstrably have the appropriate level of flood protection from nearby watercourses as approved by the administering authority, such that the protection is sustainable for the foreseeable future.</li> </ul>
<b>H14</b>	<p>All reasonable and practical measures must be taken to minimise the size of the void remaining after mining activities cease.</p>

<b>H15</b>	<p><b>Weed Management</b></p> <p>A weed management plan must be developed and implemented for this site outlining:</p> <ul style="list-style-type: none"> <li>a) areas of control priority and the methods used to determine such areas;</li> <li>b) strategies to promote dense grass growth (which out-competes weeds) through reduced disturbance;</li> <li>c) monitoring methodologies that document the spread of weeds and any new outbreaks;</li> <li>d) methods for the control of weeds. These methods should include best practice management;</li> <li>e) stringent wash-down and inspection procedures for both machinery involved in clearing/construction activities and those operating outside of designated roads during mine operation; and</li> <li>f) promotion of the awareness of weed management issues at the site.</li> </ul>
<b>H16</b>	<p><b>Exploration</b></p> <p>Land subject to exploration activities previously approved under EPC586 that subsequently became ML10325, ML10326, and ML10327 must be rehabilitated in accordance with the <i>Code of Environmental Compliance for Exploration and Mineral Development Projects</i>.</p>
<b>H17</b>	<p>Land subject to exploration activities carried out on ML10325, ML10326, and ML10327 subsequent to the grant of the relevant mining lease, must be rehabilitated in accordance with the <i>Code of Environmental Compliance for Exploration and Mineral Development Projects</i>.</p>

Table H1 – Residual Void Outcomes

Residual Void	Void wall – competent rock max slope (percent)	Void wall – incompetent rock max slope (percent)	Void Maximum Surface Area
Sonoma Main Pit	High wall – Maximum slope of 70° with the top 10m having a maximum of 45° including a 1m bund	Low wall – 17°-37°	120 ha
Sonoma East Pit 1			14 ha
Sonoma East Pit 2			15 ha
Sonoma Q-Pit	n/a – backfilled	n/a – backfilled	n/a – backfilled
Sonoma B-Pit	n/a – backfilled	n/a – backfilled	n/a – backfilled

Agency interest: Dams and Levees	
Condition number	Condition
<b>I1</b>	<p><b>Consequence Category</b></p> <p>The consequence category of any structure must be assessed by a suitably qualified and experienced person in accordance with the <i>Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)</i> at the following times:</p> <ul style="list-style-type: none"> <li>a) prior to the design and construction of the structure, if it is not an existing structure; or</li> <li>b) prior to any change in its purpose or the nature of its stored contents.</li> </ul>
<b>I2</b>	A consequence assessment report and certification must be prepared for each structure assessed and the report may include a consequence assessment for more than one structure.
<b>I3</b>	Certification must be provided by the suitably qualified and experienced person who undertook the assessment, in the form set out in the <i>Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)</i> .
<b>I4</b>	<p><b>Design and Construction of a Regulated Structure</b></p> <p>All regulated structures must be designed by, and constructed under the supervision of, a suitably qualified and experienced person in accordance with the requirements of the <i>Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)</i>.</p>
<b>I5</b>	<p>Construction of a regulated structure is prohibited unless:</p> <ul style="list-style-type: none"> <li>a) the holder has submitted a consequence category assessment report and certification to the administering authority; and</li> <li>b) certification of the design plan and operating procedures (except where the structure does not require operating procedures such as for levees) has been certified by a suitably qualified and experienced person for compliance with the relevant condition of this authority.</li> </ul>
<b>I6</b>	Certification must be provided by the suitably qualified and experienced person who oversees the preparation of the design plan in the form set out in the <i>Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)</i> , and must be recorded in the Register of Regulated Structures.
<b>I7</b>	Regulated structures must:

## Environmental authority EPML00707713

	<p>a) be designed and constructed in accordance with and conform to the requirements of the <i>Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)</i>;</p> <ol style="list-style-type: none"> <li>1. be designed and constructed with due consideration given to ensuring that the design integrity would not be compromised on account of:</li> <li>2. floodwaters entering the regulated dam from any watercourse or drainage line; and</li> </ol> <p>b) wall failure due to erosion by floodwaters arising from any watercourse or drainage line.</p> <p>c) for dams associated with a failure to contain; have the floor and sides of the dam designed and constructed to prevent or minimise the passage of the wetting front and any entrained contaminants through either the floor or sides of the dam during the operational life of the dam and for any period of decommissioning and rehabilitation of the dam.</p>
<b>I8</b>	<p>Certification by the suitably qualified and experienced person who supervises the construction must be submitted to the administering authority on the completion of construction of the regulated structure, and state that:</p> <ol style="list-style-type: none"> <li>a) the 'as constructed' drawings and specifications meet the original intent of the design plan for that regulated structure;</li> <li>b) construction of the regulated structure is in accordance with the design plan.</li> </ol>
<b>I9</b>	<p><b>Operation of a regulated structure</b></p> <ol style="list-style-type: none"> <li>a) Operation of a regulated structure, except for an existing structure, is prohibited unless: <ol style="list-style-type: none"> <li>i. the holder has submitted to the administering authority:</li> <li>ii. one paper copy and one electronic copy of the design plan and certification of the 'design plan' in accordance with <b>Conditions I4 to I6</b>;</li> <li>iii. a set of 'as constructed' drawings and specifications;</li> <li>iv. certification of those 'as constructed drawings and specifications' in accordance with <b>Condition I8</b>;</li> <li>v. where the regulated structure is to be managed as part of an integrated containment system for the purpose of sharing the Design Storage Allowance (DSA) volume across the system, a copy of the certified system design plan;</li> <li>vi. the requirements of this authority relating to the construction of the regulated structure have been met;</li> <li>vii. the holder has entered the details required under this authority, into a Register of Regulated Structures; and</li> <li>viii. there is a current operational plan for the regulated structure (except where the structure does not require operating procedures such as for levees).</li> </ol> </li> </ol>
<b>I10</b>	<p>Each regulated structure must be maintained and operated, for the duration of its operational life until decommissioned and rehabilitated, in a manner that is consistent with the current</p>

## Environmental authority EPML00707713

	operational plan and, if applicable, the current design plan and associated certified 'as constructed' drawings.
<b>I11</b>	<b>Mandatory Reporting Level</b> <b>Conditions I12 to I15</b> inclusive only apply to Regulated Structures which have not been certified as low consequence category for 'failure to contain – overtopping'.
<b>I12</b>	The Mandatory Reporting Level (the MRL) must be marked on a regulated dam in such a way that during routine inspections of that dam, it is clearly observable.
<b>I13</b>	The holder must, as soon as practical and within <b>forty-eight (48) hours</b> of becoming aware, notify the administering authority when the level of the contents of a regulated dam reaches the MRL.
<b>I14</b>	The holder must immediately on becoming aware that the MRL has been reached, act to prevent the occurrence of any unauthorised discharge from the regulated dam.
<b>I15</b>	The holder must record any changes to the MRL in the Register of Regulated Structures.
<b>I16</b>	<b>Design storage allowance</b> The holder must assess the performance of each regulated dam or linked containment system over the preceding November to May period based on actual observations of the available storage in each regulated dam or linked containment system taken prior to <b>1 July</b> of each year.
<b>I17</b>	By <b>1 November</b> of each year, storage capacity must be available in each regulated dam (or network of linked containment systems with a shared DSA volume), to meet the DSA volume for the dam (or network of linked containment systems).
<b>I18</b>	The holder must, as soon as possible, and within <b>forty-eight (48) hours</b> of becoming aware that the regulated dam (or network of linked containment systems), will not have the available storage to meet the DSA volume on <b>1 November</b> of any year, notify the administering authority.
<b>I19</b>	The holder must, immediately on becoming aware that a regulated dam (or network of linked containment systems) will not have the available storage to meet the DSA volume on <b>1 November</b> of any year, act to prevent the occurrence of any unauthorised discharge from the regulated dam or linked containment systems.
<b>I20</b>	<b>Annual Inspection</b> Each regulated structure must be inspected each calendar year by a suitably qualified and experienced person.
<b>I21</b>	At each annual inspection, the condition and adequacy of all components of the regulated structure must be assessed and a suitably qualified and experienced person must prepare an annual inspection report containing details of the assessment and include recommended

## Environmental authority EPML00707713

	<p>actions to ensure the integrity of the regulated structure. Regulated structures must be assessed:</p> <ul style="list-style-type: none"> <li>a) against the most recent hazard assessment report and design plan (or system design plan);</li> <li>b) against recommendations contained in previous annual inspections reports;</li> <li>c) against recognised dam safety deficiency indicators;</li> <li>d) for changes in circumstances potentially leading to a change in hazard category;</li> <li>e) for conformance with the conditions of this authority;</li> <li>f) for conformance with the 'as constructed' drawings;</li> <li>g) for the adequacy of the available storage in each regulated dam, based on an actual observation or observations taken after <b>31 May</b> each year but prior to <b>1 November</b> of that year, of accumulated sediment, state of the containment barrier and the level of liquids in the dam (or network of linked containment systems); and</li> <li>h) for evidence of conformance with the current operational plan.</li> </ul>
<b>I22</b>	The suitably qualified and experienced person who prepared the annual inspection report must certify the report in accordance with the <i>Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/1933)</i> .
<b>I23</b>	<p>The environmental authority holder must:</p> <ul style="list-style-type: none"> <li>a) within <b>twenty (20) business days</b> of receipt of the annual inspection report, provide to the administering authority: <ul style="list-style-type: none"> <li>1. the recommendations section of the annual inspection report; and</li> <li>2. if applicable, any actions being taken in response to those recommendations; and</li> </ul> </li> <li>b) if, following receipt of the recommendations and (if applicable) actions, the administering authority requests a full copy of the annual inspection report from the holder, provide this to the administering authority within <b>ten (10) business days</b> of receipt of the request.</li> </ul>
<b>I24</b>	<p><b>Transfer arrangements</b></p> <p>The holder must provide a copy of any reports, documentation and certifications prepared under this authority, including but not limited to any Register of Regulated Structures, consequence assessment, design plan and other supporting documentation, to a new holder on transfer of this authority.</p>
<b>I25</b>	<p><b>Register of Regulated Structures</b></p> <p>A Register of Regulated Structures must be established and maintained by the holder for each regulated dam.</p>
<b>I26</b>	The holder must provisionally enter the required information in the Register of Regulated Structures when a design plan for a regulated dam is submitted to the administering authority.



## Environmental authority EPML00707713

<b>I27</b>	The holder must make a final entry of the required information in the Register of Regulated Structures once compliance with <b>Conditions I9</b> and <b>I10</b> has been achieved.
<b>I28</b>	The holder must ensure that the information contained in the Register of Regulated Structures is current and complete on any given day.
<b>I29</b>	All entries in the Register of Regulated Structures must be approved by the chief executive officer for the holder of this authority, or their delegate, as being accurate and correct.
<b>I30</b>	The holder must, at the same time as providing the annual return, supply to the administering authority a copy of the records contained in the Register of Regulated Structures, in the electronic format required by the administering authority.

<b>Agency interest: Watercourse Diversions</b>	
<b>Condition number</b>	<b>Condition</b>
<b>J1</b>	<p><b>Permanent watercourse diversions</b></p> <p>Permanent watercourse diversions, or the re-establishment of a pre-existing watercourse where a temporary watercourse diversion is being replaced, must be designed and constructed to:</p> <ol style="list-style-type: none"> <li>incorporate natural features (including geomorphic and vegetation) present at the location of the diversion</li> <li>maintain the pre-existing hydrologic characteristics of surface water and groundwater systems for the area in which the watercourse diversion is located</li> <li>maintain the hydraulic characteristics of the permanent watercourse diversion that are equivalent to other local watercourses and are suitable for the area in which the diversion is located without using artificial structures that require ongoing maintenance</li> <li>maintain sediment transport and water quality regimes that allow the diversion to be self-sustaining, while minimising any impacts to upstream and downstream water quality, geomorphology or vegetation</li> <li>maintain equilibrium and functionality in all substrate conditions at the location of the diversion</li> </ol>
<b>J2</b>	<p><b>Temporary watercourse diversions</b></p> <p>Temporary watercourse diversions must be designed and constructed to:</p> <ol style="list-style-type: none"> <li>maintain the pre-existing hydrologic characteristics of surface water systems for the area in which the watercourse diversion is located</li> <li>maintain the hydraulic characteristics of the watercourse diversion that are equivalent to other local watercourses and are suitable for the area in which the diversion is located. Where structures that require ongoing maintenance are used, they must not compromise the equilibrium and performance of the temporary watercourse diversion and adjoining watercourses</li> </ol>

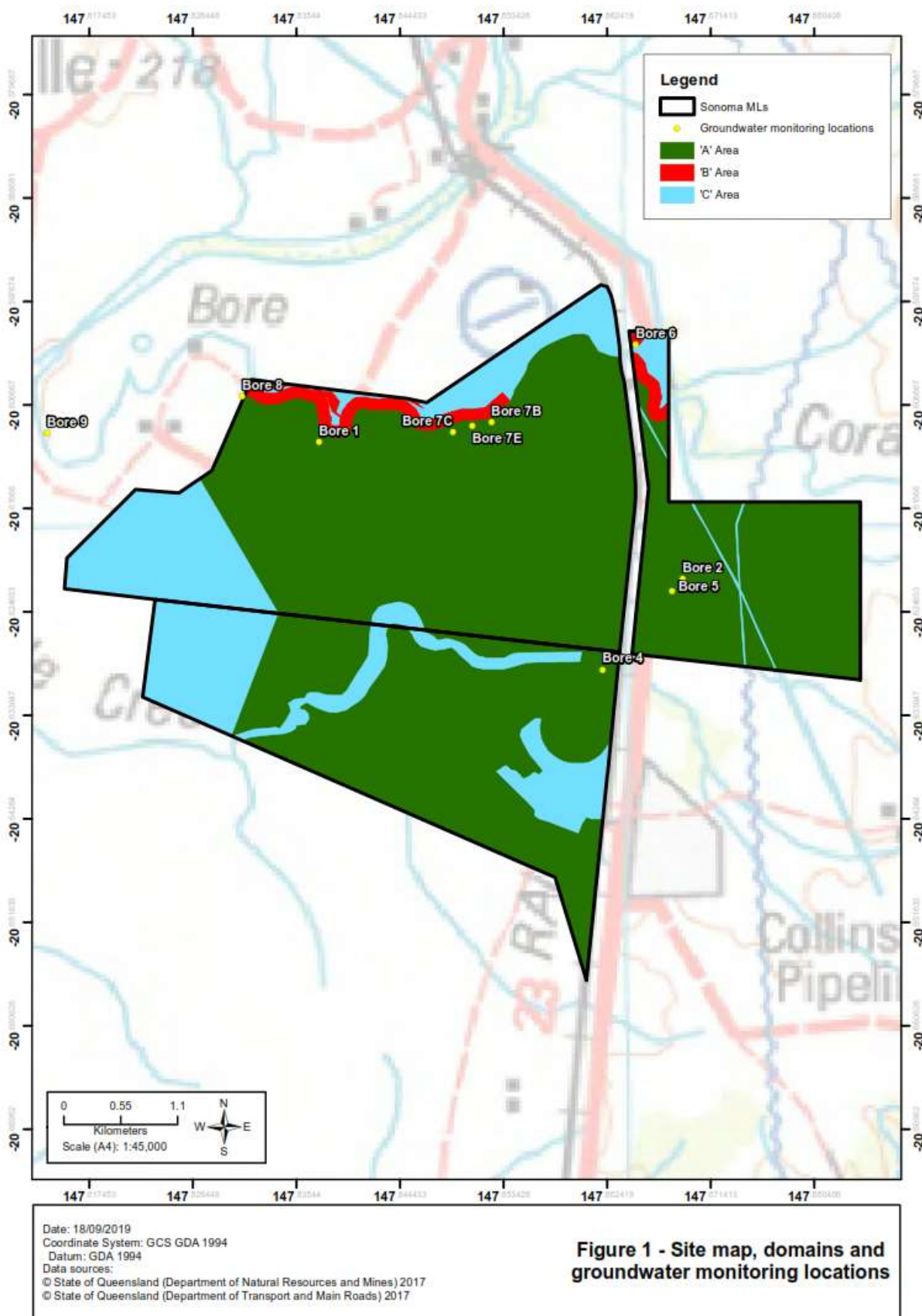
## Environmental authority EPML00707713

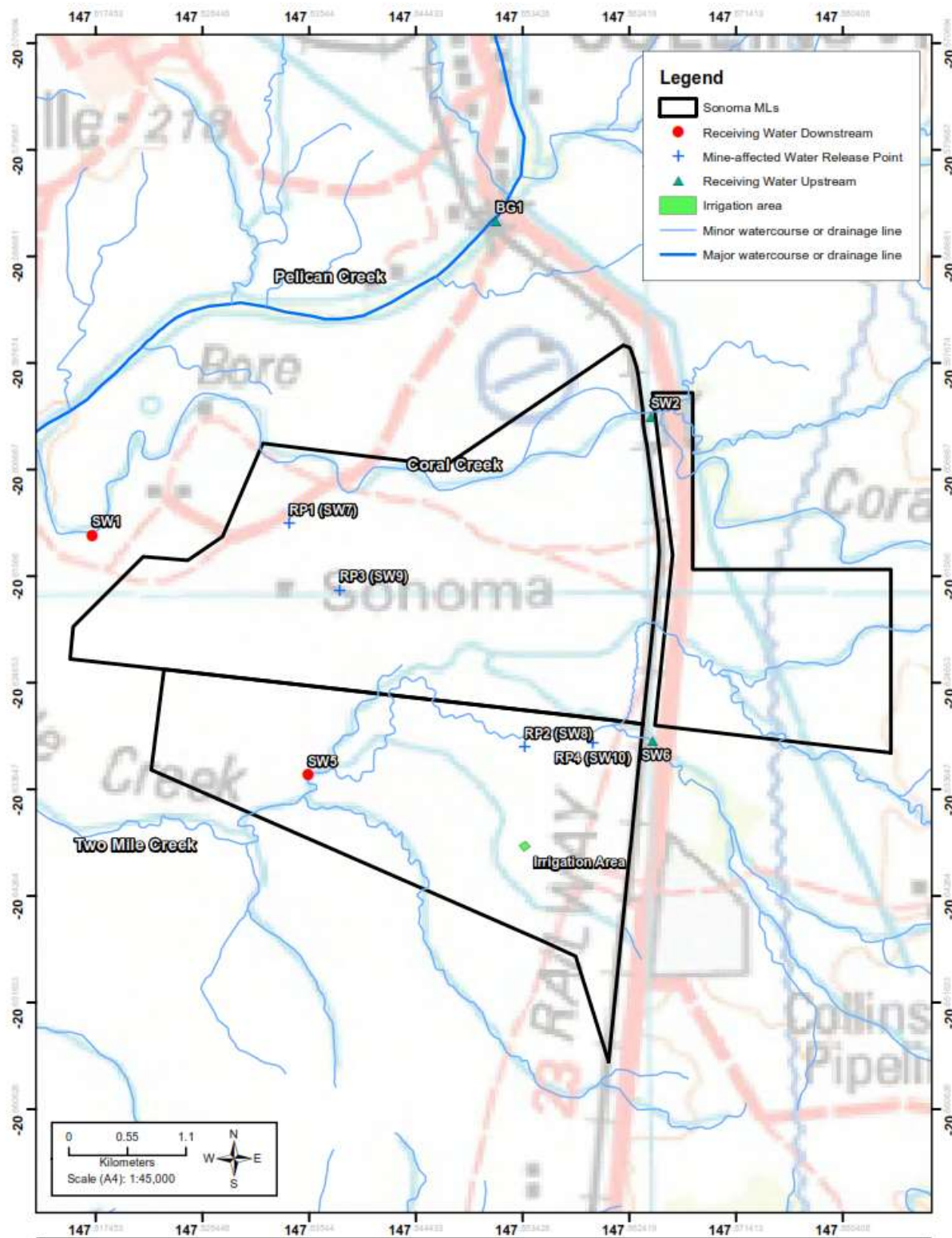
	<p>c) maintain sediment transport and water quality regimes that minimise any impacts to upstream and downstream water quality, geomorphology or vegetation</p> <p>d) maintain equilibrium and functionality at all substrate conditions at the location of the diversion.</p>
<b>J3</b>	<p><b>Design plan – All diversion</b></p> <p>For all watercourse diversions other than for Two Mile Creek and Coral Creek a Design Plan certified by an RPEQ that achieves <b>Condition J1</b> for permanent watercourse diversions and <b>Condition J2</b> for temporary watercourse diversions must be submitted to the administering authority for approval at least <b>10 business days</b> before commencing construction of the diversion.</p>
<b>J4</b>	<p>Watercourse diversion authorised by this environmental authority must be rehabilitated in accordance with the approved Rehabilitation Management Plan (as per <b>Condition H3</b>)</p>
<b>J5</b>	<p><b>Construction and operation – All diversions</b></p> <p>A certified set of ‘as constructed’ drawings and specification must be submitted to the administering authority within <b>60 business days</b> from the completion of construction of the temporary or permanent watercourse diversion, or re-establishment of the pre-existing watercourse. These drawings and specifications must state:</p> <p>a) that the ‘as constructed’ drawings and specifications meet the original intent of the approved Design Plan for the watercourse diversion</p> <p>b) construction of the watercourse diversion is in accordance with the approved Design Plan</p>
<b>J6</b>	<p><b>Register – All diversions</b></p> <p>The details of watercourse diversions planned and constructed under an environmental authority must be accurately recorded on the Register of Regulated Structures kept by the holder of the authority. An electronic copy must be provided to the administering authority on request.</p>
<b>J7</b>	<p>The older of this authority is required to monitor the performance of all diversions by way of a performance report prepared for each diversion by a registered professional engineer (RPEQ) at the following times:</p> <p>e) April of each year; and</p> <p>f) At any time when poor performance and/or potential failure of the diversion are observed.</p> <p>Monitoring of the works must include recommendations as per ACARP Project C9068 “Monitoring and Evaluation Program for Bowen Basin River Diversions”. Two (2) hard copies and an electronic copy shall be furnished to the Chief Executive by <b>30 June</b> each year.</p>
<b>J8</b>	<p>The performance report must detail the following:</p> <p>a) The performance of the diversion by way of comparison with the relevant approved Design Plans, specifications and monitoring/maintenance strategies therein;</p> <p>b) Surveys to identify and quantify any changes to the channel bed and permanent corridor width subjected to settlement;</p>

Environmental authority EPML00707713

	<p>c) Detail any remedial works to be undertaken including a timetable for completion of proposed works; and</p> <p>d) Any recommendations on measures to be taken to ensure the physical integrity of the works.</p>
<b>J9</b>	<p>The holder of this authority must maintain to the satisfaction of the administering authority the diversion in accordance with the conditions of this environmental authority. Where the operation of the diversion channel in the opinion of the administering authority has demonstrated that acceptable channel stability cannot be achieved the administering authority may direct the holder to take whatever approved measure and modifications are considered necessary by the administering authority for the protection and proper maintenance of the inference.</p>

**END OF CONDITIONS**





Date: 18/09/2019  
 Coordinate System: GCS GDA 1994  
 Datum: GDA 1994  
 Data sources:  
 © State of Queensland (Department of Natural Resources and Mines) 2017  
 © State of Queensland (Department of Transport and Main Roads) 2017

**Figure 2 - Mine-affected water release points, sources and receiving waters**

## Definitions

Words and phrases used throughout this environmental authority are defined below. Where a definition for a term used in this environmental authority is not provided within this environmental authority, but is provided in the EP Act 1994 or subordinate legislation, the definition in the EP Act or subordinate legislation must be used.

**'acid mine drainage'** means any contaminated discharge emanating from a mining activity formed through a series of chemical and biological reactions, when geological strata is disturbed and exposed to oxygen and moisture.

**'affected person'** is someone whose drinking water can potentially be impacted as a result of discharges from a dam or their life can be put at risk due to dwellings or workplaces being in the path of a dam break flood.

**'airblast overpressure'** means energy transmitted from the blast site within the atmosphere in the form of pressure waves. The maximum excess pressure in this wave, above ambient pressure is the peak airblast overpressure measured in decibels linear (dBL).

**'annual exceedance probability or AEP'** the probability that at least one event in excess of a particular magnitude will occur in any given year.

**'annual inspection report'** means an assessment prepared by a suitably qualified and experienced person containing details of the assessment against the most recent consequence assessment report and design plan (or system design plan);

- against recommendations contained in previous annual inspections reports;
- against recognised dam safety deficiency indicators;
- for changes in circumstances potentially leading to a change in consequence category;
- for conformance with the conditions of this authority;
- for conformance with the 'as constructed' drawings;
- for the adequacy of the available storage in each regulated dam, based on an actual observation or observations taken after 31 May each year but prior to 1 November of that year, of accumulated sediment, state of the containment barrier and the level of liquids in the **dam** (or network of linked containment systems);
- for evidence of conformance with the current operational plan.

**'appropriately qualified person'** means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis on performance relating to the subject matter using the relevant protocols, standards, methods or literature.

**'approved design plans' are defined as:**

- Design of Two Mile Creek Diversion, Brisbane Stormwater Management Pty Ltd, 30 March 2012
- Design of Two Mile Creek Diversion Addendum Report, Brisbane Stormwater Management Pty Ltd, 17 September 2012
- Design of Coral Creek Diversion, Brisbane Stormwater Management Pty Ltd, May 2011

- Design of Coral Creek Diversion Addendum Report, Brisbane Stormwater Management Pty Ltd, November 2011
- North Sonoma Creek Diversion Design Plan, Engeny Water Management Pty Ltd, May 2018

**‘assessed or assessment’** by a suitably qualified and experienced person in relation to a consequence assessment of a dam, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit of the assessment:

- a) exactly what has been assessed and the precise nature of that determination;
- b) the relevant legislative, regulatory and technical criteria on which the assessment has been based;
- c) the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- d) the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

**‘associated works’** in relation to a dam, means:

- 1) operations of any kind and all things constructed, erected or installed for that dam; and
- 2) any land used for those operations.

**‘authority’** means an environmental authority or a development approval.

**‘background’**, with reference to the water schedule means the average of samples taken prior to the commencement of mining from the same waterway that the current sample has been taken.

**‘certification’, ‘certifying’ or ‘certified’** by an appropriately qualified and experienced person in relation to a design plan or an annual report regarding dams/structures, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

- a) exactly what is being certified and the precise nature of that certification;
- b) the relevant legislative, regulatory and technical criteria on which the certification has been based;
- c) the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- d) the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

**‘blasting’** means the use of explosive materials to fracture:

- a) rock, coal and other minerals for later recovery; or
- b) structural components or other items to facilitate removal from a site or for reuse.

**‘certification’** means assessment and approval must be undertaken by a suitably qualified and experienced person in relation to any assessment or documentation required by this Manual, including design plans, ‘as constructed’ drawings and specifications, construction, operation or an annual report regarding regulated

structures, undertaken in accordance with the Board of Professional Engineers of Queensland Policy Certification by RPEQS (ID: 1.4 (2A)).

**'certifying, certify or certified'** have a corresponding meaning as 'certification'.

**'chemical'** means:

- a) an agricultural chemical product or veterinary chemical product within the meaning of the *Agricultural and Veterinary Chemicals Code Act 1994* (Commonwealth); or
- b) a dangerous good under the Australian Code for the Transport of Dangerous Goods by Road and Rail approved by the Australian Transport Council; or
- c) a lead hazardous substance within the meaning of the *Workplace Health and Safety Regulation 1997*;
- d) a drug or poison in the Standard for the Uniform Scheduling of Drugs and Poisons prepared by the Australian Health Ministers' Advisory Council and published by the Commonwealth; or
- e) any substance used as, or intended for use as:
  - i. a pesticide, insecticide, fungicide, herbicide, rodenticide, nematocide, miticide, fumigant or related product; or
  - ii. a surface active agent, including, for example, soap or related detergent; or
  - iii. a paint solvent, pigment, dye, printing ink, industrial polish, adhesive, sealant, food additive, bleach, sanitiser, disinfectant, or biocide; or
  - iv. a fertiliser for agricultural, horticultural or garden use; or
  - v. a substance used for, or intended for use for mineral processing or treatment of metal, pulp and paper, textile, timber, water or wastewater; or
  - vi. manufacture of plastic or synthetic rubber.

**'commercial place'** means a workplace used as an office or for business or commercial purposes, which is not part of the mining activity and does not include employees' accommodation or public roads.

**'consequence'** in relation to a structure as defined, means the potential for environmental harm resulting from the collapse or failure of the structure to perform its primary purpose of containing, diverting or controlling flowable substances.

**'consequence category'** means a category, either low, significant or high, into which a dam is assessed as a result of the application of tables and other criteria in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635)*.

**'construction'** or **'constructed'** in relation to a regulated structure includes building a new regulated structure and lifting or otherwise modifying an existing regulated structure, but does not include investigations and testing necessary for the purpose of preparing a design plan.

**'dam'** means a land-based structure or a void that contains, diverts or controls flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and **associated works**.



**'dam crest volume'** means the volume of material (liquids and/or solids) that could be within the walls of a dam at any time when the upper level of that material is at the crest level of that dam. That is, the instantaneous maximum volume within the walls, without regard to flows entering or leaving (for example, via spillway).

**'design plan'** is a document setting out how all identified consequence scenarios are addressed in the planned design and operation of a regulated structure.

**'design storage allowance or DSA'** means an available volume, estimated in accordance with the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635)* published by the administering authority, must be provided in a dam as at 1 November each year in order to prevent a discharge from that dam to an **annual exceedance probability (AEP)** specified in that Manual.

**'designer'** for the purposes of a regulated dam, means the certifier of the design plan for the regulated dam.

**'disturbance'** of land includes:

- a) compacting, removing, covering, exposing or stockpiling of earth;
- b) removal or destruction of vegetation or topsoil or both to an extent where the land has been made susceptible to erosion;
- c) carrying out mining within a watercourse, waterway, wetland or lake;
- d) the submersion of areas by tailings or hazardous contaminant storage and dam/structure walls;
- e) temporary infrastructure, including any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be removed after the mining activity has ceased; or
- f) releasing of contaminants into the soil, or underlying geological strata.

However, the following areas are not included when calculating areas of 'disturbance':

- a) areas off lease (e.g. roads or tracks which provide access to the mining lease);
- b) areas previously disturbed which have achieved the rehabilitation outcomes;
- c) by agreement with the administering authority, areas previously disturbed which have not achieved the rehabilitation objective(s) due to circumstances beyond the control of the mine operator (such as climatic conditions);
- d) areas under permanent infrastructure. Permanent infrastructure includes any infrastructure (roads, tracks, bridges, culverts, dam/structures, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads etc) which is to be left by agreement with the landowner; or
- e) disturbance that pre-existed the grant of the tenure.

**'effluent'** treated waste water released from sewage treatment plants.

**'emergency action plan'** means documentation forming part of the operational plan held by the holder or a nominated responsible officer, that identifies emergency conditions that sets out procedures and actions that will be followed and taken by the dam owner and operating personnel in the event of an emergency. The actions are to minimise the risk and consequences of failure, and ensure timely warning to downstream

communities and the implementation of protection measures. The plan must require dam owners to annually update contact information.

**‘existing structure’** means a structure that prior to 18 September 2014 meets any or both of the following, a structure:

- a) with a design that is in accordance with the *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams* and that is considerably in progress;
- b) that is under considerable construction or that is constructed.

**‘extreme storm storage’** – means a storm storage allowance determined in accordance with the criteria in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635)* published by the administering authority.

**‘flowable substance’** means matter or a mixture of materials which can flow under any conditions potentially affecting that substance. Constituents of a flowable substance can include water, other liquids fluids or solids, or a mixture that includes water and any other liquids fluids or solids either in solution or suspension.

**‘hazard category’** means a category, either low significant or high, into which a dam is assessed as a result of the application of tables and other criteria in *‘Manual for Assessing Hazard Categories and Hydraulic Performance of Dams’*.

**‘holder’** means:

- a) where this document is an environmental authority, any person who is the holder of, or is acting under, that environmental authority; or
- b) where this document is a development approval, any person who is the registered operator for that development approval.

**‘hydraulic performance’** means the capacity of a regulated dam to contain or safely pass flowable substances based on the design criteria specified for the relevant consequence category in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635)*.

**‘infrastructure’** means water storage dams, levees,, roads and tracks, buildings and other structures built for the purpose of the mining activity.

**‘land’** in ‘Schedule H – Land and rehabilitation’ of this document means land excluding waters and the atmosphere, that is, the term has a different meaning from the term as defined in the *Environmental Protection Act 1994*. For the purposes of the *Acts Interpretation Act 1954*, it is expressly noted that the term ‘land’ in this environmental authority relates to physical land and not to interests in land.

**‘land use’** –means the selected post mining use of the land, which is planned to occur after the cessation of mining operations.

**‘leachate’** means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the operational land which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

**‘levee’** means an embankment that only provides for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from

releases from other works, during the progress of those stormwater or flood flows or those releases; and does not store any significant volume of **water** or **flowable substances** at any other times.

**'low consequence dam'** means any dam that is not a high or significant consequence category as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635)*.

**'m'** means metres.

**'mandatory reporting level or MRL'** means a warning and reporting level determined in accordance with the criteria in the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/933)* published by the administering authority.

**'manual'** means the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635)* published by the administering authority.

**'measures'** includes any measures to prevent or minimise environmental impacts of the mining activity such as bunds, silt fences, diversion drains, capping, and containment systems.

**'mine affected water':**

- a) means the following types of water:
- i) pit water, tailings dam water, processing plant water;
  - ii) water contaminated by a mining activity which would have been an environmentally relevant activity under Schedule 2 of the *Environmental Protection Regulation 2008* if it had not formed part of the mining activity;
  - iii) rainfall runoff which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated, excluding rainfall runoff discharging through release points associated with erosion and sediment control structures that have been installed in accordance with the standards and requirements of an Erosion and Sediment Control Plan to manage such runoff, provided that this water has not been mixed with pit water, tailings dam water, processing plant water or workshop water;
  - iv) groundwater which has been in contact with any areas disturbed by mining activities which have not yet been rehabilitated;
  - v) groundwater from the mine's dewatering activities;
  - vi) a mix of mine affected water (under any of paragraphs i)-v) and other water.
- b) does not include surface water runoff which, to the extent that it has been in contact with areas disturbed by mining activities that have not yet been completely rehabilitated, has only been in contact with:

- i) land that has been rehabilitated to a stable landform and either capped or revegetated in accordance with the acceptance criteria set out in the environmental authority but only still awaiting maintenance and monitoring of the rehabilitation over a specified period of time to demonstrate rehabilitation success; or
- ii) land that has partially been rehabilitated and monitoring demonstrates the relevant part of the landform with which the water has been in contact does not cause environmental harm to waters or groundwater, for example:
  - 1. areas that are been capped and have monitoring data demonstrating hazardous material adequately contained with the site;
  - 2. evidence provided through monitoring that the relevant surface water would have met the water quality parameters for mine affected water release limits in this environmental authority, if those parameters had been applicable to the surface water runoff; or
- iii) both.

**'mining waste'** means waste rock, spoil, overburden and interburden.

**'modification or modifying'** (see definition of 'construction').

**'natural flow'** means the flow of water through waters caused by nature.

**'non polluting'** means having no adverse impacts upon the receiving environment.

**'operational plan'** includes:

- a) normal operating procedures and rules (including clear documentation and definition of process inputs in the DSA);
- b) contingency and emergency action plans including operating procedures designed to avoid and/or minimise environmental impacts including threats to human life resulting from any overtopping or loss of structural integrity of the regulated structure.

**'register of regulated structure'** includes:

- a) date of entry in the register;
- b) name of the structure, its purpose and intended/actual contents;
- c) the consequence category of the dam as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures* (EM635);
- d) dates, names, and reference for the design plan plus dates, names, and reference numbers of all document(s) lodged as part of a design plan for the dam;
- e) name and qualifications of the suitably qualified and experienced person who certified the design plan and 'as constructed' drawings;
- f) for the regulated dam, other than in relation to any levees –
  - a. the dimensions (metres) and surface area (hectares) of the dam measured at the footprint of the dam;

- b. coordinates (latitude and longitude in GDA94) within five metres at any point from the outside of the dam including its storage area
- c. dam crest volume (megalitres);
- d. spillway crest level (metres AHD).
- e. maximum operating level (metres AHD);
- f. storage rating table of stored volume versus level (metres AHD);
- g. design storage allowance (megalitres) and associated level of the dam (metres AHD);
- h. mandatory reporting level (metres AHD);
- g) the design plan title and reference relevant to the dam;
- h) the date construction was certified as compliant with the design plan;
- i) the name and details of the suitably qualified and experienced person who certified that the constructed dam was compliant with the design plan;
- j) details of the composition and construction of any liner;
- k) the system for the detection of any leakage through the floor and sides of the dam;
- l) dates when the regulated dam underwent an annual inspection for structural and operational adequacy, and to ascertain the available storage volume for 1 November of any year;
- m) dates when recommendations and actions arising from the annual inspection were provided to the administering authority;
- n) dam water quality as obtained from any monitoring required under this authority as at 1 November of each year.

**‘peak particle velocity (ppv)’** means a measure of ground vibration magnitude which is the maximum rate of change of ground displacement with time, usually measured in millimetres/second (mm/s).

**‘permanent watercourse diversion’** is a man-made structure that incorporates the geomorphologic, hydraulic, hydrologic and ecological components of a local watercourse and is designed, constructed, operated and maintained according to an engineering standard that ultimately achieves a self-sustaining watercourse able to function without features or characteristics that rely on ongoing maintenance or that impose a financial or other burden on the proponent, government or the community.

**‘protected area’** means – a protected area under the *Nature Conservation Act 1992*; or

- a) a marine park under the *Marine Parks Act 1992*; or
- b) a World Heritage Area.

**‘receiving environment’** in relation to an activity that causes or may cause environmental harm, means the part of the environment to which the harm is, or may be, caused. The receiving environment includes (but is not limited to):

- a) a watercourse;

- b) groundwater; and
- c) an area of land that is not specified in of this environmental authority.

The term does not include land that is specified in Authorised Activities of this environmental authority.

**'receiving waters'** means the waters into which this environmental authority authorises releases of mine affected water.

**'regulated structure'** means any structure in the significant or high consequence category as assessed using the *Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635)* published by the administering authority. A regulated structure does not include:

- a) a fabricated or manufactured tank or container, designed and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container;
- b) a sump or earthen pit used to store residual drilling material and drilling fluid only for the duration of drilling and well completion activities;
- c) a flare pit.

**'rehabilitation'** the process of reshaping and revegetating land to restore it to a stable landform.

**'release event'** means a surface water discharge from mine affected water storages or contaminated areas on the licensed place meaning the mining activities carried out at the mining tenements detailed in **Figure 1 – Site map, domains and groundwater monitoring locations** of this environmental authority.

**'residual drilling material'** means waste drilling materials including muds and cuttings or cement returns from well holes and which have been left behind after the drilling fluids are pumped out.

**'RL'** means reduced level, relative to mean sea level as distinct from depths to water.

**'representative'** means a sample set which covers the variance in monitoring or other data either due to natural changes or operational phases of the mining activities.

**'sensitive place'** means:

- a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- b) a motel, hotel or hostel; or
- c) an educational institution; or
- d) a medical centre or hospital; or
- e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 1992* or a World Heritage Area; or
- f) a public park or gardens.

**Note:** The definition of 'sensitive place' and 'commercial place' is based on Schedule 1 of EPP Noise. That is, a sensitive place is inside or outside on a dwelling, library & educational institution, childcare or kindergarten, school or playground, hospital, surgery or other medical institution, commercial & retail activity, protected area or an area identified under a conservation plan under *Nature Conservation Act 1992* as a

critical habitat or an area of major interest, marine park under *Marine Parks Act 2004*, park or garden that is outside of the mining lease and open to the public for the use other than for sport or organised entertainment. A commercial place is inside or outside a commercial or retail activity.

A mining camp (i.e., accommodation and ancillary facilities for mine employees or contractors or both, associated with the mine the subject of the environmental authority) is not a sensitive place for that mine or mining project, whether or not the mining camp is located within a mining tenement that is part of the mining project the subject of the environmental authority. For example, the mining camp might be located on neighbouring land owned or leased by the same company as one of the holders of the environmental authority for the mining project, or a related company. Accommodation for mine employees or contractors is a sensitive place if the land is held by a mining company or related company, and if occupation is restricted to the employees, contractors and their families for the particular mine or mines which are held by the same company or a related company.

For example, a township (occupied by the mine employees, contractors and their families for multiple mines that are held by different companies) would be a sensitive place, even if part or all of the township is constructed on land owned by one or more of the companies.

**'spillway'** means a weir, channel, conduit, tunnel, gate or other structure designed to permit discharges from the dam, normally under flood conditions or in anticipation of flood conditions.

**'structure'** means dam or levee.

**'suitably qualified and experienced person'** in relation to regulated structures means a person who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the *Professional Engineers Act 2002*, and has demonstrated competency and relevant experience:

- a) for regulated dams, an RPEQ who is a civil engineer with the required qualifications in dam safety and dam design.
- b) for regulated levees, an RPEQ who is a civil engineer with the required qualifications in the design of flood protection embankments.

Note: It is permissible that a suitably qualified and experienced person obtain subsidiary certification from an RPEQ who has demonstrated competence and relevant experience in either geomechanics, hydraulic design or engineering hydrology.

**'system design plan'** means a plan that manages an integrated containment system that shares the required DSA and/or ESS volume across the integrated containment system.

**'temporary watercourse diversion'** is a man-made structure that may incorporate geomorphologic, hydraulic, hydrologic and ecological components of a local watercourse and is designed, constructed, operated and maintained according to an engineering standard that ensures the diversion does not compromise the equilibrium and performance of the diversion and adjoin watercourses. A temporary diversion is replaced by a permanent diversion, or the re-establishment of the pre-existing watercourse, within the timeframe specified in the design plan.

**'the Act'** means the *Environmental Protection Act 1994*.

**'µS/cm'** means micro siemens per centimetre.

**'void'** means any constructed, open excavation in the ground.

**'watercourse'** has the same meaning given in the *Water Act 2000*.

**'water quality'** means the chemical, physical and biological condition of water.

**'water year'** means the 12-month period from 1 July to 30 June.

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

**'WaTERS'** means the Queensland Government's WaTERS database system.

**'wet season'** means the time of year, covering one or more months, when most of the average annual rainfall in a region occurs. For the purposes of DSA determination this time of year is deemed to extend from 1 November in one year to 31 May in the following year inclusive.

**END OF PERMIT**