

# Environment Protection Licence

Licence - 767

## Licence Details

Number:	767
Anniversary Date:	01-January

## Licensee

METROPOLITAN COLLIERIES PTY. LTD.

PO BOX 402

HELENSBURGH NSW 2508

## Premises

METROPOLITAN COLLIERY

PARKES STREET

HELENSBURGH NSW 2508

## Scheduled Activity

Coal works

Mining for coal

## Fee Based Activity

## Scale

Coal works	> 2000000-5000000 T annual handling capacity
Mining for coal	> 2000000-3500000 T annual production capacity

## Contact Us

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## Information about this licence

### Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

### Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

### Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

### Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

### Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

### Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).



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The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

## Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

## Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

## This licence is issued to:

<b>METROPOLITAN COLLIERIES PTY. LTD.</b>
<b>PO BOX 402</b>
<b>HELENSBURGH NSW 2508</b>

subject to the conditions which follow.

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## 1 Administrative Conditions

### A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Coal works	Coal works	> 2000000 - 5000000 T annual handing capacity
Mining for coal	Mining for coal	> 2000000 - 3500000 T annual production capacity

### A2 Premises or plant to which this licence applies

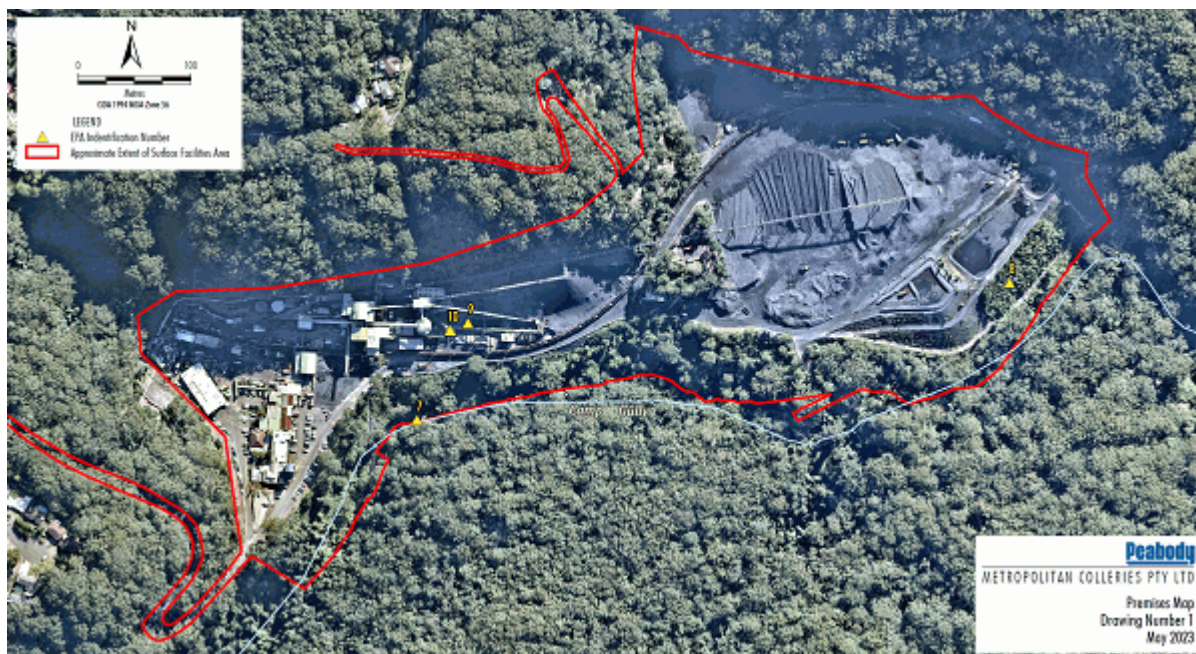
A2.1 The licence applies to the following premises:

Premises Details
<b>METROPOLITAN COLLIERY</b>
<b>PARKES STREET</b>
<b>HELENSBURGH</b>
<b>NSW 2508</b>
<b>LOT 1 DP 229817, LOT 342 DP 752033, LOT 617 DP 752033</b>
<b>MINING PURPOSES LEASE 276, 725 AND 1344. THE PREMISES BOUNDARY IS MARKED IN RED ON THE MAP TITLED, "PREMISES MAP, DRAWING NUMBER 1, MAY 2023" LOCATED ON EPA FILE DOC23/357066.</b>

A2.2 The premises location is shown on the map below.

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### A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

## 2 Discharges to Air and Water and Applications to Land

### P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

<i>Air</i>			
EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Dust Monitoring		Dust gauge located at 136 The Crescent labelled "1" on the "Discharge & Monitoring Points" Map.



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2	Dust Monitoring	Dust gauge located at 28 Old Station Rd labelled as "2" on the "Discharge & Monitoring Points" Map.
3	Dust Monitoring	Dust gauge located at the Mine entrance labelled as "3" on the "Discharge & Monitoring Points" Map.
4	Dust Monitoring	Dust gauge located at Helensburgh Golf Club labelled as "4" on the "Discharge & Monitoring Points" Map.
5	Dust Monitoring	Dust gauge located at 83 Parkes Street labelled as "5" on the "Discharge & Monitoring Points" Map.
11	Dust Monitoring	Dust gauge located at 59 Parkes Street labelled as "11" on the "Discharge & Monitoring Points" Map.
12	Dust Monitoring	Dust gauge located at 32 Old Station Road labelled as "12" on the "Discharge & Monitoring Points" Map.
13	Dust Monitoring	Dust gauge located at 88 Parkes Street labelled as "13" on the "Discharge & Monitoring Points" Map.
14	Dust Monitoring	Dust gauge located at Helensburgh Public School labelled as "14" on the "Discharge & Monitoring Points" Map.
15	Dust Monitoring	Dust gauge located at Helensburgh Private School labelled as "15" on the "Discharge & Monitoring Points" Map.
16	Ambient Air Monitoring	PM10 monitor located at 12 Robertson Street labelled as "16" on the "Discharge & Monitoring Points" Map.

P1.2 All Points are marked on the map titled "Discharge & Monitoring Points, Drawing Number 2, May 2023" held on EPA file DOC23/357066-1.

Note: The above points may be revised as an outcome of the Air Monitoring Review.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

P1.4 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

### *Water and land*

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
7		Discharge to Waters	The outlet of the concrete flume from the Water Treatment Plant to Camp Gully Creek and labelled "7" on the Premises Map. Lat. long -34.188148, 150.993095.



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8	Discharge to Waters Volume Monitoring	Discharge to Waters Volume Monitoring	The overflow weir on the spillway at the Turkey's Nest Dam flowing to Camp Creek and labelled "8" on the Premises Map. Lat. long -34.187060, 150.998842
9	Discharge Water Quality Monitoring		The sampling tap at the clean water tank of the Water Treatment Plant and labelled "9" on the Premises Map. Lat. long. -34.187527, 150.993675
10	Volume Monitoring		The flowmeter on the pipeline discharging from the clean water tank in the Water Treatment Plant and labelled "10" on the Premises Map. Lat. long -34.187476, 150.993682
18	Discharge Water Quality Monitoring		Monitor located in Water Treatment Plant, Point 7). Lat. Long. -34.188189, 150.993081
19	Discharge Water Quality Monitoring		Monitor located in Camp Gully Creek near Point 8 spillway discharge drain outlet. Lat. Long. -34.187371, 150.999236
20	Ambient Water Quality Monitoring		Monitor located in Camp Gully Creek upstream of Metropolitan Colliery. Lat. Long. -34.188780, 150.992719
21	Ambient Water Quality Monitoring		Monitor located in Camp Gully Creek downstream of Metropolitan Colliery. Lat. Long. -34.187897, 151.001583

Note: The "Premises Map" is the document titled, "METROPOLITAN COLLIERIES PTY. LTD. Premises Map. Drawing Number 1. May 2023" and held on EPA file DOC23/357066.

P1.5 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

### *Noise/Weather*

EPA identification no.	Type of monitoring point	Location description
17	Meteorological Station	Weather station at 12 Robertson Street Helensburgh labelled as "17" on the "Discharge & Monitoring Points" Map.

## 3 Limit Conditions

### L1 Pollution of waters



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- L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

## L2 Concentration limits

- L2.1 For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.
- L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L2.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.
- L2.4 Water and/or Land Concentration Limits

### POINT 7

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH					6.5 - 8.5
Total suspended solids	milligrams per gram				30

Note: The monitoring at Point 9 required by condition M2 is to be conducted by the licensee to determine compliance with the limits specified for Points 7 in condition L2.4. A non-compliance is only taken to have occurred if the results of water quality monitoring required by the licence at point 9 are greater than the limits in L2.4 and there is a discharge occurring from Points 7 at the time of sampling.

Note: Additional pollutants may be added to the above table as an outcome of Condition U1: *Water Discharge Impact Assessment*.

## 4 Operating Conditions

### O1 Activities must be carried out in a competent manner

- O1.1 Licensed activities must be carried out in a competent manner.  
This includes:
- the processing, handling, movement and storage of materials and substances used to carry out the activity;
  - and

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b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

## O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

## O3 Dust

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

## O4 Other operating conditions

### O4.1 Sediment Basin Management

The licensee must:

- I. maintain sediment accumulated in the Turkey's Nest Dam and Settling Pond below 25% of the total volume of each storage, averaged over 12 months.
- II. empty the Turkey's Nest Dam of accumulated sediment & water every second year for inspection and maintenance.
- III. empty the Settling Pond of accumulated sediment & water every second (alternate) year for inspection and maintenance
- IV. until the completion of the condition *Storage Dam Capacity Monitoring System*, monitor the volume of sediment and percentage of the total volume in Turkey's Nest Dam fortnightly and provide the results available to the EPA upon request.
- V. maintain wet weather storages at the premises to retain 160 millimetres of rainfall over any consecutive five-day period,
- VI. report the relevant monitoring data, verification information, and a short explanation on each of the above in the Annual Return Supplement.

Note: The EPA will give consideration to extreme rainfall events should there be any non compliance with the above requirements.

Note: These conditions may change as an outcome of one of the Pollution Reduction Programs on this licence or as other relevant information becomes available.

## 5 Monitoring and Recording Conditions

### M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

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M1.2 All records required to be kept by this licence must be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least 4 years after the monitoring or event to which they relate took place; and
- produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- the date(s) on which the sample was taken;
- the time(s) at which the sample was collected;
- the point at which the sample was taken; and
- the name of the person who collected the sample.

## M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Air Monitoring Requirements

### POINT 1,2,3,4,5

Pollutant	Units of measure	Frequency	Sampling Method
Ash	grams per square metre per month	Monthly	Australian Standard 3580.10.1-2003
Combustible solids	grams per square metre per month	Monthly	Australian Standard 3580.10.1-2003
Insoluble solids	grams per square metre per month	Monthly	Australian Standard 3580.10.1-2003

### POINT 11,12,13,14,15

Pollutant	Units of measure	Frequency	Sampling Method
Ash	grams per square metre per month	Monthly	Australian Standard 3580.10.1-2003
Combustible solids	grams per square metre per month	Monthly	Australian Standard 3580.10.1-2003
Insoluble solids	grams per square metre per month	Monthly	Australian Standard 3580.10.1-2003

### POINT 16

Pollutant	Units of measure	Frequency	Sampling Method
PM10	micrograms per cubic metre	Monthly	AS/NZS 3580.9.6:2003

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## M2.3 Water and/ or Land Monitoring Requirements

### POINT 9

Pollutant	Units of measure	Frequency	Sampling Method
Alkalinity (as calcium carbonate)	milligrams per litre	Monthly during discharge	Grab sample
Aluminium (dissolved)	micrograms per litre	Monthly during discharge	Grab sample
Antimony (dissolved)	micrograms per litre	Monthly during discharge	Grab sample
Arsenic (dissolved)	micrograms per litre	Monthly during discharge	Grab sample
Bicarbonate alkalinity	milligrams per litre	Monthly during discharge	Grab sample
Chromium (dissolved)	micrograms per litre	Monthly during discharge	Grab sample
Electrical conductivity	microsiemens per centimetre	Monthly during discharge	Grab sample
Molybdenum (dissolved)	micrograms per litre	Monthly during discharge	Grab sample
Nickel (dissolved)	micrograms per litre	Monthly during discharge	Grab sample
Nitrogen (total)	micrograms per litre	Monthly during discharge	Grab sample
Nitrogen Oxides	micrograms per litre	Monthly during discharge	Grab sample
pH	pH	Monthly during discharge	Grab sample
Phosphorus (total)	micrograms per litre	Monthly during discharge	Grab sample
Reactive Phosphorus	micrograms per litre	Monthly during discharge	Grab sample
Total suspended solids	milligrams per litre	Monthly during discharge	Grab sample
Turbidity	nephelometric turbidity units	Monthly during discharge	Grab sample
Vanadium (dissolved)	micrograms per litre	Monthly during discharge	Grab sample

### POINT 18,19,20,21

Pollutant	Units of measure	Frequency	Sampling Method
Electrical conductivity	microsiemens per centimetre	Continuous	In situ
pH	pH	Continuous	In situ
Temperature	Celsius	Continuous	In situ
Turbidity	nephelometric turbidity units	Continuous	In situ

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- M2.4 All continuous monitoring equipment must be operated and maintained to achieve an availability of 90% during the reporting period.
- M2.5 The licensee must provide public access on its website to the real time monitoring data collected under the licence for points 8, 10, 18, 19, 20 and 21.
- M2.6 The Point 19, "Monitor located in Camp Gully Creek near Point 8 spillway" must be reading continuously by 29 February 2024.

## M3 Testing methods - concentration limits

- M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
- any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
  - if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or
  - if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2022* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

- M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

## M4 Weather monitoring

- M4.1 At the point(s) identified below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively.

### POINT 17

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Rainfall	Continuously	millimetres	24 hours	Continuous



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## M5 Recording of pollution complaints

- M5.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M5.2 The record must include details of the following:
  - a) the date and time of the complaint;
  - b) the method by which the complaint was made;
  - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
  - d) the nature of the complaint;
  - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
  - f) if no action was taken by the licensee, the reasons why no action was taken.
- M5.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M5.4 The record must be produced to any authorised officer of the EPA who asks to see them.

## M6 Telephone complaints line

- M6.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M6.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M6.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

## M7 Requirement to monitor volume or mass

- M7.1 For each discharge point or utilisation area specified below, the licensee must monitor:
  - a) the volume of liquids discharged to water or applied to the area;
  - b) the mass of solids applied to the area;
  - c) the mass of pollutants emitted to the air;
 at the frequency and using the method and units of measure, specified below.

### POINT 8

Frequency	Unit of Measure	Sampling Method
Continuous	kilolitres per day	Electronic level sensor and continuous logger

### POINT 10

Frequency	Unit of Measure	Sampling Method
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Continuous

kilolitres per day

Flow meter and continuous logger

## M8 Other monitoring and recording conditions

M8.1 The licensee must monitor and record the following information in relation to discharges that occur through point 8:

- a) the time, date and length of time that a discharge occurs;
- b) the daily volume of discharge;
- c) the cumulative rainfall total for the preceding 5 days up to the time of discharge; and
- d) the quantity of sediment and water stored in both dams prior to, during, and following the rainfall and discharge events.

The information above must be reported in the Annual Return Supplement.

M8.2 All continuous monitoring equipment must be operated and maintained to achieve an availability of 90% of the time during the reporting period.

## 6 Reporting Conditions

### R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and

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b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or

b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

a) the licence holder; or

b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.8 Annual Return Supplement

The licensee must submit an Annual Return Supplement to the EPA for each reporting period with the Annual Return.

The Supplement must include the following information:

a) All monitoring data collected for Point 9 excluding data collected by continuous monitoring.

b) Any monitoring data or information required under condition O4.1 and M8.1 in this licence.

## R2 Notification of environmental harm

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident.

## R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

a) where this licence applies to premises, an event has occurred at the premises; or

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b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:

- a) the cause, time and duration of the event;
- b) the type, volume and concentration of every pollutant discharged as a result of the event;
- c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
- d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
- g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

## 7 General Conditions

### G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

### G2 Other general conditions

#### G2.1 Completed Programs

Program	Description	Completed Date
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PRP1: Wastewater Collection and Treatment System	Wastewater collection and treatment system installed to collect and treat contaminated surface stormwater runoff from the coal and coal waste stockpile area catchments.	30-June-1997
PRP2: Turkeys Nest Pond and Pumping System Upgrade	Turkeys Nest Pond and Pumping System upgrade to ensure no discharge of contaminated runoff into Camp Creek.	31-October-2000
PRP3: Settlement Pond Upgrade	Settlement Pond upgrade to enhance the collection and treatment of contaminated stormwater from the upper catchment of the premises	31-December-2000
PRP4: Taj Mahal Upgrade	Taj Mahal upgrade to facilitate the use of stormwater for operational purposes and to provide a means of underground disposal of excess contaminated stormwater from significant rainfall events.	31-January-2001
PRP5: Dust Monitoring Program	Install dust deposition monitoring network. Assess the impact of dust from coal mine on local community	31-March-2003
PRP6: Surface Dust Action Plan	Complete a surface dust action plan. Minimise the impact of dust from coal mine	30-June-2003
PRP7: Surface Water Assessment	Prepare a surface water management plan including surveys of all water containment structures and determine storm event (24hr) that site can capture and treat. Protect Hacking River Catchment and make licence more enforceable by determining capacity of site to capture and treat stormwater run off.	31-August-2004
PRP8: Improvement to Dust Suppression Systems	Prepare and submit a report investigating installation of additional stockpile sprays. Installation of sprays to reduce impact of dust on community	31-August-2004
PRP9: Noise Assessment Report	Assess noise from the premises in accordance with INP and determine if they meet requirements of the policy. Eliminate public concern caused by machinery operations at night and prepare noise limits for licence	31-October-2004
PRP10: Improvements to Rail Line Dust Suppression	Install six additional dust suppression sprays along the rail line near the stockpile. Reduce dust emissions from the stockpile and during rail loading operations	31-December-2005
PRP11: Noise Emission Reduction Program	Noise Emission Reduction Program Report. Investigate measures to reduce noise emissions from the premises with the aim of meeting the noise criteria outlined.(+)	30-April-2006
PRP12: Stage 2 Noise Investigation and Mitigation	Stage 2 Noise Investigation and Mitigation Program. Identify reasonable and feasible noise controls and management measures for the premises.(+)	31-March-2008
PRP13: Coal Mine Particulate Matter Control Best Practice	Requires licensee to conduct a site specific Best Management Practice (BMP) determination to identify ways to reduce particle emissions	21-September-2012
EIP 1: Rail Wagon Profiler	Installation of a rail noise profiler to reduce noise and dust emissions	30-June-2018

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## 8 Pollution Studies and Reduction Programs

### U1 Water Discharge Impact Assessment

#### U1.1 Discharge Impact Assessment Monitoring Program

The Licensee must engage a suitably qualified and experienced person to prepare and undertake an assessment of the environmental impact of discharges from the premises on Camp Gully Creek (Camp Creek) and the Hacking River.

The assessment must include at a minimum the following.

#### *Water Quality Impact Assessment*

Identification of all potential pollutants which may be present in discharges from the water treatment plant point 7 (LDP 7) and overflows from the Turkey's Nest Dam LDP 8 that pose a risk of nontrivial harm to human health or the environment. The list of potential pollutants is expected to include but not necessarily be limited to:

pH, turbidity, total suspended solids, EC, dissolved oxygen (% saturation), alkalinity (speciated), hardness, total and filtered metals (ICPMS & ICPAES), major cations and anions, nutrients (ammonia, oxides of nitrogen, total nitrogen, filterable reactive phosphate, total phosphorus).

Sampling of discharges from LDP 7 and LDP 8, and at sites on Camp Creek (upstream and downstream of the discharges), and the Hacking River for identified potential pollutants of concern on at least seven independent sampling dates.

- I. The licensee must consult with the EPA regarding the locations of the proposed sampling sites.
- II. Sampling of sites in Camp Creek must be undertaken to reflect the maximum concentration of potential pollutants caused by discharge from LDP 7.
- III. Sampling may be undertaken from LDP 9 to determine water quality for LDP 7 due to the difficulty of access to point 7.
- IV. If during the sampling period, a discharge of water does not occur from LDP 8, the licensee must take representative water samples from the turkey's nest dam and/or settling pond.
- V. The sampling should attempt to capture the full variability of water quality discharged including average and worst-case scenarios for the range of operational processes and rainfall conditions that may materially impact discharge water quality.
- VI. The level of reporting for concentrations of pollutants should be sensitive enough to detect pollutants at levels related to their environmental risk and ANZG default guideline value for high conservation value ecosystems (where available) while having regard to the best available analytical practical quantification limits using available technology.
- VII. Reference to ANZG in this licence is a reference to the current online version of the Australian & New Zealand Guidelines for Fresh & Marine Water Quality.

#### *Flow Assessment*

Determination of flow rates and volumes in Camp Creek below the discharge points during the assessment period in order to determine the dilution of discharges under varying climatic conditions.

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Details of number and volume of discharges occurring from the premises during the assessment period, including the times, flow rates and volumes of discharges.

## *Macroinvertebrate Assessment*

Quantitative sampling and analysis of macroinvertebrates at sampling locations along Camp Creek and the Hacking River upstream and downstream of the discharges. There must be at least four sampling events with one sampling event undertaken during Autumn of 2023. The sampling events may include surveys already undertaken by the licensee in 2022.

## *Toxicity testing*

Toxicity testing on at least three sampling occasions using the test species and methodology given below.

Testing must be carried out at LDP7 and LDP8 as well as at an upstream sampling point and the nearest downstream sampling point(s) representative of fully mixed conditions.

Toxicity testing should be undertaken using receiving water as the diluent.

Species	Sampling Method	Sampling Frequency
Ceriodaphnia dubia	Chronic toxicity US EPA Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition (2002), EPA-821-R-02-013.)	Three times (minimum of 30-day intervals)
Melenotaenia duboulayi (Crimson spotted rainbowfish) or Melanotaenia splendida (Eastern Rainbowfish)	96-hour larval imbalance test US EPA (2002). Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. 5 ed. EPA-821-R-02-012. Washington DC, USA	Three times (minimum of 30-day intervals)
Raphidocelis subcapitata (Selenastrum capricornutum)	Growth test method US EPA Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition (2002), EPA-821-R-02-013.)	Three times (minimum of 30-day intervals)

## U1.2 *Sediment Assessment*

Identification of potential pollutants from LDP 7 and LDP 8 that can accumulate in sediment, and which may pose a risk of nontrivial harm to human health or the environment.

Collection and analysis of sediment samples for identified potential pollutants of concern. The samples should be taken from locations in Camp Creek and the Hacking River at sampling sites to characterise the extent of potential impacts from the discharge at LDP 7 and LDP 8.

The sample design should take consideration of recommendations in ANZG for assessment against

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“Toxicant default guideline values for sediment quality”. Where no default guideline values are available for a pollutant of concern, a natural background reference site should be used.

The licensee must submit a draft Discharge Impact Assessment plan for the discharge impact assessment program to the EPA for review by **28 February 2023**.

Received by EPA on 28 February 2023 (SF23/56811).

- U1.3 The licensee must submit a Discharge Impact Assessment Report per the approved plan / scope of works by 30 September 2023.

**Due Date:** 30 September 2023

## U2 Real Time Water Quality & Flow Monitoring

### U2.1 Background

The premises currently has 2 licensed discharge points to Camp Gully Creek: the water treatment plant (LDP7) and the Turkey’s Nest Dam spillway (LDP8). Camp Gully Creek flows through the adjacent Royal National Park before joining the Hacking River. The pre-existing licence monitoring requirements were limited to simple water quality parameters intended to verify the performance of the treatment plant. The monitoring occurred monthly and did not match the intermittent nature of discharges, or account for the sensitive receiving water catchment.

The aim of this PRP is for the licensee to develop a contemporary, real time monitoring system that can detect variations in ambient water quality caused by discharges from the mine. This will enable the licensee to rapidly detect and manage potential water quality incidents, provide information on the effect of the discharge on water quality under varying river flow conditions, and make the information publicly available on the licensee’s website.

### Requirements

Unless otherwise agreed in writing by the EPA:

1. By 19 May 2023 the licensee must submit a scoping document (including timelines) for the installation of new water quality and flow monitoring systems at the premises to the EPA. The system must include continuous real time monitoring at the following locations:

- a. upstream of the mine in Camp Gully Creek;
- b. downstream of the mine in Camp Gully Creek (in the vicinity of the railway corridor);
- c. at the water treatment plant LDP7; and
- d. at the spillway LDP8.

The Scoping Document must be accompanied by a revised Premises Map incorporating the new monitoring locations (a and b above).

The system must provide continuous real time readings for the following parameters:

- a. water quality (electrical conductivity, turbidity, temperature and pH); and
- b. water flowrates from LDP 7 and LDP 8.



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2. By 15 July 2023 the licensee must have installed and commenced operation of the monitoring system.
3. By 31 August 2023 the licensee must develop and submit a Trigger Action Response Plan (TARP) that includes water quality and water flow trigger levels at which actions and responses will be implemented.

The system must have the capability of notifying appropriate site personnel(s) in real time of potential water pollution in Camp Gully Creek as a result of incidents at the premises. The licensee must make the data publicly available in real time on the Licensee's website.

4. By 31 June 2024, the licensee must review the effectiveness of the entire system including real time monitoring, notifications, publicly available data and trigger levels and submit a report on the outcomes of the review. The report must include an evaluation of performance and provide recommendations about the ongoing usage of real time monitors for water quality and water flow.

## Due Dates:

1. Water quality real-time monitoring methodology – 19 May 2023
2. System install and commissioning – 15 July 2023
3. Trigger Action Response Plans – 31 August 2023
4. System Review - 31 June 2024

## U3 Storage Dam Capacity Monitoring System

### U3.1 Background

The premises water management system includes two sediment retention dams: the "Settling Pond" and the "Turkey's Nest Dam" (the Dams). Contaminated water from the mine, coal processing areas, stockpiles and stockpiling areas report to the dams. The water management system was unable to consistently manage the water flows and sediment loads during wet weather in 2021 and 2022. Coal accumulating in the dams reduced the available storage volume and increased the number of discharge events during 2021 and 2022. This condition requires the licensee to propose a sediment and water monitoring system to inform and help facilitate improved dam management practices.

### Requirements

Unless otherwise agreed in writing by the EPA:

1. By 15 June 2023 the licensee must develop and submit a proposal for a dam capacity monitoring system to the EPA. The proposal must include a methodology to determine the available dam volume for capture and storage of water in real time. The methodology must be able to continuously monitor the depth and quantity of solids and water in both Dams. The methodology must account for providing representative information on sediment levels across both dams.
2. A due date for the operational system will be added to this licence following submission of the above methodology.

### Notes:

1. The EPA anticipates this system will be integrated with other existing and proposed real time monitoring

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systems at the premises and will be utilised in broader management plan(s) for water management at the premises.

2. The EPA proposes to add further conditions in relation to dam management following the completion of other PRPs at the premises.

## Due Dates:

1 System Methodology: 15 June 2023

2 System Commissioning: 31 August 2023

3 Integration with Real Time Monitoring System: 30 September 2023

## U4 Options Assessment - Prevent or Minimise Turkey's Nest Dam Discharges

### U4.1 Background

The water management system at the premises captures contaminated stormwater that runs off coal stockpiles and coal handling areas. The stormwater collection system includes two main catchment areas with 6 stockpiles and 2 sediment retention basins: the "Settling Pond" and the "Turkey's Nest Dam" (the Dams). Contaminated water from coal processing areas, stockpiles, and stockpiling areas reports to the dams. Contaminated water from the mine's underground workings is also pumped to the dams.

Stormwater runoff water and underground water contain suspended solids (herein called coal fines) and dissolved salts including dissolved metals and bicarbonate. Contaminated water in the dams is treated by filtration to remove suspended solids before discharge from LDP 7. During wet weather, untreated water may overflow from the Turkey's Nest Dam spillway (LDP 8) to Camp Gully Creek.

The Turkey's Nest Dam discharged during wet weather periods in 2021 and 2022. Coal fines that had deposited in the dams reduced the volume of stormwater runoff that was able to be captured and treated prior to discharge. The removal of coal fines from the dams was limited by the ability of the washery plant to accept and process the fines. The result was a series of discharges where quantities of coal material entered Camp Gully Creek and the Hacking River. The EPA contends that actions could have been taken to reduce the level of coal fines in the dams and prevent or minimise the incidents.

The aim of this PRP is to engage a suitably qualified and experienced professional or company to investigate all reasonable and feasible options to avoid discharges occurring through point 8 in the first instance and then if discharges are unavoidable, to reduce the frequency of any discharges.

### Requirements

Unless otherwise agreed in writing by the EPA:

1. By the 23 June 2023 the licensee must propose a suitably qualified professional/s or company/ies (expert/s) to the EPA with experience in mine stockpile and stormwater management to undertake the required investigations.
2. The approved expert/s must investigate all reasonable and feasible options to avoid discharges and if discharges are unavoidable, reduce the frequency of discharges that occur from the Turkey's Nest Dam (point 8) during wet weather events.

The options examined must include but not be limited to the following:

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a) Increased capacity to capture and store rainfall runoff.

The expert/s must assess options to increase the water storage capacity to capture a greater volume of run-off. This must include, but may not be limited to, expanding or deepening the existing storage basins, finding new areas for water storage, and maintaining contingency storage in the old mine workings.

b) Reduction in coal fines runoff and contaminated stormwater generated.

The expert/s must assess options for each stockpile to minimise the generation of water contaminated with coal fines when exposed to rainfall or stormwater runoff.

The options must include, but are not limited to, diverting or piping stormwater flows around stockpiles, covering or installing roofs over stockpiles (particularly highly ranked stockpiles), constructing enclosures or sheds, applying binders to any longer term or less active stockpiles, and installing stormwater diversions around stockpiles.

The licensee must also assess options to minimise the volume of contaminated water that reports to the dams. The options must include but may not be limited to direct reuse in surface equipment, retention underground, diversion back to mine workings, or treatment prior to storage in the dams.

The licensee must assess the feasibility of each option with consideration of factors including reduced sediment load, cost, and impediment to site operations.

c) Increased rate of removal of water and coal fines from the dams.

The expert/s must assess options to increase the rate of removal and processing of coal fines and water from the dams. The options must include but are not limited to: coal handling plant upgrade(s) to increase the maximum slurry transfer rate; examination of the increased rate of transfer of contaminated water from the dams for treatment in the water treatment plant; processing systems that are separate to the coal handling plant to remove and dewater coal fines and combine them with exported product coal. These should include, for example, belt presses and drying beds used in combination with mixing mill(s).

### 3. Water Balance Model

A water balance model using a daily timestep analysis must be prepared to compare the effectiveness of the options identified (above 2a – 2c) with:

- The baseline water management system that was in place on 31 December 2022
- A type D sediment basin in a sensitive receiving catchment following 'Managing Urban Stormwater: Soils and Construction (vol 1)' and 'Mines and Quarries (vol 2E)'.

A report which details the above works and assesses the feasibility of implementing the identified options must be submitted to the EPA by the due date.

**Due Date:** To be determined with consideration of Expert advice.

## U5 Options Assessment - Storm water Treatment to Remove Coal Fines

### U5.1 Background

Stormwater from the pit top area and some groundwater from mining activities are stored in the 2 retention basins at the premises: the Settling Pond and the Turkey's Nest Dam (the dams). The dams rely on settling to

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remove coal particles and suspended material (coal fines) prior to reuse on site or discharge.

Discharges can contain elevated levels of coal fines.

The aim of this PRP is to assess options to upgrade dam infrastructure and stored water treatment to improve the quality of any discharges.

Note: The requirements of this PRP may be varied with consideration of the outcomes of the *Options Assessment – Prevent of Minimise Turkey’s Nest Dam Discharges* condition.

## Requirements

Unless otherwise agreed in writing by the EPA:

1. By the due date the licensee must propose a suitably qualified and experienced professional (expert) to the EPA with experience in designing and implementing treatment systems which remove coal fines from stormwater.

The approved expert must undertake an options assessment of upgraded dam infrastructure and retained water treatment and propose some conceptual designs for systems which could be implemented at the premises. The system should be designed to maximise the removal of coal fines of any discharge.

2. By the due date the EPA approved professional must undertake an options assessment and submit a report to the EPA for treatment system/s options.

3. The system assessment report must include, but may not be limited to,

- chemical flocculation and / or coagulation at one or both of the 2 dams. This must include High Efficiency Sediment (HES) Basins and associated infrastructure (forebay, dosing system, level spreader, decanting system, and spillway discharge) the premises, and physical treatment.

b) physical treatment systems such as filtration and gravity separation

The options report must assess, but may not be limited to the following the following considerations: available space, design options and configurations for both dams; infrastructure locations, costs, appropriate dosing systems, suitable chemicals and potential toxicity, expected improvements to discharge water quality, the frequency of discharges, and operation with current management systems e.g. offtake to the washery

4. The report must include potential conceptual design configurations on site.

**Due Date:** To be determined with consideration of Condition U4 outcomes and Expert advice. (Anticipated Q4 2023)

## U6 Ongoing Waterway Monitoring and Coal Removal Program

### U6.1 Background

In response to discharges of coal sediment from the premises in July and September 2022 (the incidents) the EPA issued legal notices requiring the removal of the coal from Camp Gully Creek and the Hacking River.

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These clean up activities required planning approval from the National Parks and Wildlife Service and were undertaken in accordance with approved protocols and with ecological oversight.

While the main clean up of material from these incidents has been completed, coal material has reappeared periodically in these waterways, usually after rainfall. It is possible that rainfall and elevated water levels remobilise some deposited coal remaining in the waterways.

## Aim

The aim of this condition is to oversee the development and implementation of an ongoing monitoring and clean up response program to any remobilised coal from the 2022 incidents.

## Requirements

Unless otherwise agreed in writing by the EPA:

1. By 1 June 2023, the licensee must submit a draft Ongoing Monitoring and Clean up Response Program methodology to the EPA. The program must include, but may not be limited to:

- The geographical extent to the monitoring;
- The monitoring locations in Camp Gully Creek and the Hacking River;
- Ecological oversight;
- The triggers which will prompt monitoring e.g. time period, rainfall quantity;
- The criteria which will prompt clean up e.g. scale of deposited material;
- The clean up response including size of clean up crew, clean up methods, site access, liaison with landowners, removal of material, management of collected coal; and
- Proposed program length and review steps.

Complete (DOC23/528729)

2. By 30 June 2023, the licensee must implement the program.
3. By 30 November 2023, the licensee must submit an Interim (6 monthly) Report which includes a summary of inspections and clean up works undertaken to date.
4. By 30 May 2024, the licensee must submit a Final Report on the program which includes all inspection reports, a summary of activities including clean up events, and recommendations (supported by an ecologist) for any ongoing monitoring and clean up.

**Due Date:** 30 May 2024

## U7 Coal Discharge Monitoring and Response Plan

### U7.1 Background

The clean up response to discharges of coal from the premises in 2022 was slowed by the development of monitoring & clean up protocols, contractor & specialist acquisition, planning approvals, and on site resourcing.

## Aim

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The aim of this condition is to develop and maintain a response plan to:

1. enable the detection of,
2. facilitate an immediate and structured response to, and
3. facilitate a prompt clean up of any incidents involving the discharge of coal from the premises.

## Requirements

Unless otherwise agreed in writing by the EPA:

By 30 July 2023 the licensee must develop and maintain a Coal Discharge Response Plan.

The plan must:

- account for a range of pollution scenarios, scales of events, locations, extents (distance from the premises), and necessary responses.
- incorporate a monitoring program to immediately detect incidents involving coal discharges and an associated trigger action response.
- Prompt an immediate on ground assessment / identification process.
- Result in the activation of an incident management team at the premises.
- Maintain planning approval/s for access and clean up protocols / methodologies / activities on all relevant downstream properties. For example REFs with National Parks, Crown Lands, NSW Fisheries, Transport for NSW.
- Involve consultation, input, or approvals from other relevant stakeholders e.g. aboriginal or community groups.
- Include notification protocols to regulatory bodies, landowners and stakeholders.
- Maintain access to resources dedicated to incident response, coordination, and clean up. This must include on site personnel, specialists (technical and environmental), contractors, and equipment.
- Detail response, coordination, and clean up actions.
- Be incorporated into the Pollution Incidents Response and Management Plan.

**Due Date:** 30 July 2023

## U8 Discharges from LDP7 - Improved Water Management System Report

### U8.1 Discharges from LDP7 - Improved Water Management System Report

#### Aim

The aim of this condition is to identify improvements to the premises water management systems to contribute to achieving the following water quality targets in Camp Gully Creek.

#### Toxicants

- ANZG default guideline values for water quality that meet 99 percentile species level protection.

#### Physical and Chemical Stressors

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- pH 7.3 – 7.7
- Electrical conductivity (specific conductance) 270  $\mu\text{s}/\text{cm}$ .
- Turbidity 3 NTU
- Total alkalinity 50 mg/L
- Total nitrogen 450  $\mu\text{g}/\text{L}$
- Total phosphorus 30  $\mu\text{g}/\text{L}$

Note:

The ANZG “high conservation value” level of protection applies to Camp Gully Creek because it flows into Garrawarra State Conservation Area and Royal National Park immediately downstream of the premises. This is consistent with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2018) and the approach adopted by the licensee’s Discharge Impact Assessment report.

The criteria for Physical and Chemical Stressors are the estimated 80th percentile values measured at a site in Camp Gully Creek upstream of the premises (for pH, 20% and 80% values are given). This method for determining guideline values for stressors is recommended in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018 (ANZG). The Licensee may continue to monitor the upstream reference site to refine these site-specific guideline values. However approval must be sought from the EPA to modify the values for use in the condition below.

## Requirements

1. By 5pm, 1 July 2024, the Licensee must propose a suitably qualified consultant or company, with experience in coal mine water management and treatment to the EPA for approval to engage the proposed consultant or company to complete the report listed below.

Note: The EPA will take consideration of any recommendations made by the expert consultant on the scope of requirements and timing for delivery of reports under this condition.

2. By 5pm, 30 September 2024, the Licensee must install additional continuous monitor/s to record:

- a. water quality and discharges from LDP 7 along Camp Gully Creek in respect of physical and chemical stressors (immediately downstream of LDP 7): and
- b. the flow in Camp Gully Creek downstream of LDP 7:

The objective of this requirement is to account for the LDP 7 discharges, and upstream and downstream locations, to the extent reasonably possible.

3. By 5pm, 30 September 2024, the Licensee must make the results of the additional continuous monitoring available and accessible to the EPA.

Note: These results should be used by the licensee, and will be used by the EPA, to monitor discharges from LDP 7 to Camp Gully creek as well as assess the effectiveness of water management improvements.



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Monitoring requirements may be varied if considered appropriate by the EPA.

4. By 5pm, 28 February 2025, the approved consultant or company must submit an Improved Water Management System Report (Report 1) to the EPA which contains a Water Management and Treatment Options Assessment and a Potential Water Management System to achieve the above aim.

5. The Water Management and Treatment Options Assessment section of Report 1 must include, at minimum:

a. An assessment of reasonable and feasible options available to:

- i. Increase water storage capacity and retain water on the premises to avoid or minimise LDP 7 discharges;
- ii. Improve water management to prevent discharges during periods of low flow in Camp Gully Creek;
- iii. Install water treatment system/s or other practical measures to improve the quality of discharges;

b. The assessment of each option must contain the following information. The level of detail to be provided must be sufficient to allow comparison of options at a strategic level.

- i. A description of the option.
- ii. For options to avoid and minimise discharges, sub-daily time step water balance model to assess effectiveness.
- iii. An assessment of the water quality outcomes for Camp Gully Creek and the Hacking River. This assessment should predict the concentrations of key pollutants of concern at sites in Camp Gully Creek and the Hacking River under a range of operational and creek flow conditions from typical through to worst case. This should include sites in Camp Gully Creek immediately upstream and downstream of LDP7, sites at the current continuous monitoring sites, and sites in the Hacking River immediately upstream and downstream of the confluence with Camp Gully Creek.
- iv. Indicative and relative costs, and indicative timeframes.
- v. The level of technical expertise needed for operation and maintenance.
- vi. The ease of adaptation into existing processes.
- vii. Other environmental considerations, including noise impacts, air emissions, electricity use, and waste generation and disposal.
- viii. Examples of application in relevant industrial settings.

c. The overall effectiveness of the options set out in a. when implemented together as a combined system.

6. The Potential Water Management System section of Report 1 must detail possible improvements to the Water Management System that could be implemented identifying (and justifying) the most suitable option or suite of preferred options.

Note: The EPA proposes to consider issuing further requirements to implement improvements to the water management system with consideration of Report 1 and any other relevant information.

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## U9 Water Seepage/Groundwater Options Assessment

### U9.1 Water Seepage/Groundwater Options Assessment

#### Aim

The aims of this investigation and report are to:

- a. Identify the points from which groundwater seepage from the premises enters Camp Gully Creek.
- b. Identify options to minimise seepage of polluted groundwater from the premises to Camp Gully Creek where the source of the pollution is determined to be from the premises.
- c. Contribute to achieving the electrical conductivity (specific conductance) target in Camp Gully Creek of 270  $\mu\text{s}/\text{cm}$ .

#### Requirements

1. By 5pm, 1 July 2024, the Licensee must propose a suitably qualified professional or company with experience in shallow groundwater investigation and management at mine sites to the EPA for approval to engage the proposed consultant or company to carry out the requirements below.

2. By 5pm, 2 December 2024, undertake an investigation and submit a Shallow Groundwater Seepage Investigation & Mitigation Report (Report 2).

3. Report 2 must include at minimum, the following information:

- a. A detailed seepage assessment and monitoring survey to identify area of seepage along sections of the pit top adjacent to Camp Gully Creek.
- b. A conceptual model, or mapped inventory of sources of shallow groundwater inputs and outputs which could contribute to shallow groundwater flows to Camp Gully Creek. This must take account of the monitoring undertaken above.
- c. A list of shallow groundwater inputs and outputs ranked by flow rate and electrical conductivity.
- d. Where the source is determined to be, or is likely to be from the premises, an impact mitigation options study to identify reasonable and feasible options to prevent, reduce, intercept, recover, return, and treat polluted groundwater seepage to Camp Gully Creek in order to reduce the level of pH and electrical conductivity discharged from the premises. Options must include, but not be limited to:
  - i. diverting upstream drainage courses around the premises,
  - ii. piping or lining drainage courses to prevent sub-surface water flows coming into contact with materials with potential to increase electrical conductivity,
  - iii. lining the Sediment Pond to prevent potential leakage,
  - iv. interception & return of seepage to the premises water management system.
- e. The available option or suite of options including estimated environmental benefit and draft timeframe for implementation.

Note: The EPA proposes to consider issuing further requirements to implement improvements to the water management system, having regard to the findings of Report 2.

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## 9 Special Conditions

### E1 Air Monitoring Network Review

#### E1.1 Aim

To review the current Air Quality Management Plan (AQMP) and the associated air quality monitoring network to ensure the monitoring equipment, locations, and the data collected is accurate, representative, and suitable for the intended use (fit for purpose).

#### Background

The effectiveness of dust controls in coal mining is an important aspect of environmental performance. Dust generated from coal mining has the potential to cause impacts, including amenity impacts to surrounding residential areas. Ambient air monitoring is an important component of an overall air quality management system and should form an integral part of a licensee's environmental management strategy. Monitoring networks should be fit for purpose and suitably time-resolved to ensure the data collected can be used in an effective and timely manner. This condition requires the licensee to review the current the AQMP, specific site dust controls, past monitoring data and the current air quality monitoring network to ensure they remain fit for purpose.

#### Requirements

Unless otherwise agreed in writing by the EPA:

1. Undertake a comprehensive review of the existing AQMP, specific site air quality controls and the current air monitoring network. The review should include but may not be limited to:
  - a) an assessment of the objectives and the adequacy of the plan to effectively monitor, detect and respond to ongoing emissions, day to day mine activities and potential environmental incidents.
  - b) a review of historical air monitoring data collected over the past 10 years to assess trends.
  - c) consideration of the existing monitoring equipment including a replacement of dated technology with contemporary real-time devices that are able to inform trigger action response plans (TARPS) .
  - d) consideration of the monitor locations to ensure they effectively assess emissions from the premises and impacts to the surrounding residential areas.
2. By 15 December 2023 submit a revised AQMP and a proposal with suggested modifications to the current site air quality controls and air quality monitoring network based on the outcome of the review.

Note: The EPA proposes to add further conditions to implement the approved changes.

**Due date:** 15 December 2023

### E2 Update Surface Water Management Plan

#### E2.1 Requirements

Unless otherwise agreed in writing by the EPA, by 30 November 2023 the licensee must update the Surface Facilities Water Management Plan (dated August 2019) by the due date below. The updated plan must reflect the current operation and include revised maps and/or photographs, facility description, storage capacity, monitoring program, management measures, and licence monitoring and discharge points.

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**Due Date:** 30 November 2023

## **E3 Water Treatment Plant Performance Monitoring**

### **E3.1 Background**

A water pollution impact assessment provided by the licensee indicates that discharges from LDP7 are impacting water quality in Camp Gully Creek and posing a risk to aquatic ecosystem health. The assessment shows that the discharges are increasing aluminium concentrations and electrical conductivity in Camp Gully Creek to above ANZG guideline values. Ecotoxicity testing presented in the assessment indicates that downstream of LDP7 the creek water is toxic to aquatic organisms during certain discharge conditions.

The EPA is aware that the licensee is upgrading parts of Water Treatment Plant (WTP). To understand how these changes affect the performance of the WTP and discharge quality, this condition requires monitoring of the quality of the water treatment plant influent and treated effluent.

### **Requirements**

By 14 June 2024, the licensee must:

- a) Sample the WTP influent and treated effluent twice weekly.
- b) Where possible, sampling must be timed to coincide with discharges from LDP 7.
- c) Where there are fewer than two discharges in a week, sampling must occur at times when LDP7 is not discharging.
- d) Samples must be analysed for the analytes listed for Point 9 under condition M2.3 of the licence.
- e) Report results monthly to the EPA. Reported results must distinguish between samples taken during discharge and non-discharge from LDP7.

Note: The EPA will review these requirements subject to the monitoring results.

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## Dictionary

### General Dictionary

<b>3DGM [in relation to a concentration limit]</b>	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
<b>Act</b>	Means the Protection of the Environment Operations Act 1997
<b>activity</b>	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
<b>actual load</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>AM</b>	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
<b>AMG</b>	Australian Map Grid
<b>anniversary date</b>	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
<b>annual return</b>	Is defined in R1.1
<b>Approved Methods Publication</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>assessable pollutants</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>BOD</b>	Means biochemical oxygen demand
<b>CEM</b>	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
<b>COD</b>	Means chemical oxygen demand
<b>composite sample</b>	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
<b>cond.</b>	Means conductivity
<b>environment</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>environment protection legislation</b>	Has the same meaning as in the Protection of the Environment Administration Act 1991
<b>EPA</b>	Means Environment Protection Authority of New South Wales.
<b>fee-based activity classification</b>	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
<b>general solid waste (non-putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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<b>flow weighted composite sample</b>	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
<b>general solid waste (putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>grab sample</b>	Means a single sample taken at a point at a single time
<b>hazardous waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>licensee</b>	Means the licence holder described at the front of this licence
<b>load calculation protocol</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>local authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>material harm</b>	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
<b>MBAS</b>	Means methylene blue active substances
<b>Minister</b>	Means the Minister administering the Protection of the Environment Operations Act 1997
<b>mobile plant</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>motor vehicle</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>O&amp;G</b>	Means oil and grease
<b>percentile [in relation to a concentration limit of a sample]</b>	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
<b>plant</b>	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
<b>pollution of waters [or water pollution]</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>premises</b>	Means the premises described in condition A2.1
<b>public authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>regional office</b>	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
<b>reporting period</b>	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
<b>restricted solid waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>scheduled activity</b>	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
<b>special waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>TM</b>	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .

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<b>TSP</b>	Means total suspended particles
<b>TSS</b>	Means total suspended solids
<b>Type 1 substance</b>	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
<b>Type 2 substance</b>	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
<b>utilisation area</b>	Means any area shown as a utilisation area on a map submitted with the application for this licence
<b>waste</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>waste type</b>	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste
<b>Wellhead</b>	Has the same meaning as in Schedule 1 to the Protection of the Environment Operations (General) Regulation 2021.

Ms Debbie Maddison

Environment Protection Authority

(By Delegation)

Date of this edition: 06-April-2000



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## End Notes

- 1 Licence varied by notice V/M upgrade, issued on 07-Aug-2000, which came into effect on 07-Aug-2000.
- 2 Licence varied by notice 1002149, issued on 18-Oct-2000, which came into effect on 12-Nov-2000.
- 3 Licence varied by notice 1009721, issued on 18-Jul-2001, which came into effect on 07-Aug-2001.
- 4 Licence varied by notice 1012601, issued on 19-Nov-2001, which came into effect on 14-Dec-2001.
- 5 Licence varied by notice 1018036, issued on 21-Jun-2002, which came into effect on 27-Jun-2002.
- 6 Licence varied by notice 1025170, issued on 28-Feb-2003, which came into effect on 25-Mar-2003.
- 7 Licence varied by notice 1027944, issued on 21-Aug-2003, which came into effect on 15-Sep-2003.
- 8 Licence varied by notice 1036485, issued on 11-May-2004, which came into effect on 05-Jun-2004.
- 9 Licence varied by notice 1039412, issued on 09-Sep-2004, which came into effect on 04-Oct-2004.
- 10 Licence varied by notice 1042725, issued on 07-Jan-2005, which came into effect on 01-Feb-2005.
- 11 Licence varied by notice 1048913, issued on 28-Jun-2005, which came into effect on 23-Jul-2005.
- 12 Licence varied by notice 1052262, issued on 02-Dec-2005, which came into effect on 27-Dec-2005.
- 13 Licence varied by change to DEC Region allocation, issued on 16-Mar-2006, which came into effect on 16-Mar-2006.
- 14 Licence varied by notice 1060175, issued on 12-Dec-2006, which came into effect on 12-Dec-2006.
- 15 Licence varied by notice 1079812, issued on 05-Dec-2007, which came into effect on 05-Dec-2007.
- 16 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 17 Licence varied by notice 1104121, issued on 02-Oct-2009, which came into effect on 02-Oct-2009.
- 18 Licence varied by notice 1501798 issued on 01-Nov-2011
- 19 Licence varied by notice 1502957 issued on 19-Dec-2011

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20	Licence varied by notice	1508753 issued on 11-Sep-2012
21	Licence varied by notice	1515088 issued on 11-Dec-2013
22	Licence varied by notice	1526235 issued on 21-Nov-2014
23	Licence varied by notice	1532622 issued on 04-Aug-2015
24	Licence varied by notice	1561733 issued on 12-Mar-2018
25	Licence varied by notice	1574620 issued on 11-Jan-2019
26	Licence varied by notice	1621831 issued on 19-Aug-2022
27	Licence varied by notice	1624411 issued on 08-Feb-2023
28	Licence varied by notice	1627339 issued on 09-May-2023
29	Licence varied by notice	1629027 issued on 16-May-2023
30	Licence varied by notice	1630682 issued on 06-Jul-2023
31	Licence varied by notice	1634054 issued on 25-Jan-2024
32	Licence varied by notice	1639202 issued on 31-May-2024