

Environment Protection Licence

Licence - 640

Licence Details	
Number:	640
Anniversary Date:	01-April

Licensee
HV OPERATIONS PTY LTD
PO BOX 315
SINGLETON NSW 2330

Premises
HUNTER VALLEY OPERATIONS
LEMINGTON RD
SINGLETON NSW 2330

Scheduled Activity
Coal works
Crushing, grinding or separating
Extractive activities
Mining for coal

Fee Based Activity	Scale
Coal works	> 5000000 T annual handling capacity
Crushing, grinding or separating	> 2000000 T annual processing capacity
Land-based extractive activity	> 50000-100000 T annual capacity to extract, process or store
Mining for coal	> 5000000 T annual production capacity

Region
Regional North - Newcastle
Ground Floor, NSW Govt Offices, 117 Bull Street
NEWCASTLE WEST NSW 2302
Phone: (02) 4908 6800
Fax: (02) 4908 6810
PO Box 488G
NEWCASTLE NSW 2300



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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:

HV OPERATIONS PTY LTD
PO BOX 315
SINGLETON NSW 2330

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	> 5000000 T annual handing capacity
Crushing, grinding or separating	Crushing, grinding or separating	> 2000000 T annual processing capacity
Extractive activities	Land-based extractive activity	> 50000 - 100000 T annual capacity to extract, process or store
Mining for coal	Mining for coal	> 5000000 T annual production capacity

Note: In relation to this licence, the licensee must comply with:

- the activity scale limits imposed by this licence;
- the activity scale limits which apply for the reporting period specified in this licence; and
- the activity scale limits imposed by other legal instruments, such as approvals currently in force under the *Environmental Planning and Assessment Act 1979*.

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
HUNTER VALLEY OPERATIONS
LEMINGTON RD
SINGLETON
NSW 2330
PREMISES DEFINED BY PLAN TITLED "HVO EPL 640" DATED 17/2/2020 AND SHAPE FILES EPA REFERENCE DOC20/126645.

A3 Other activities

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A3.1 This licence applies to all other activities carried on at the premises, including:

Ancillary Activity
Sewage Treatment Systems

A4 Information supplied to the EPA

A4.1 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:

- 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
- 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
13	Particulate Matter Monitoring		PM10 TEOM "Howick" at co-ordinates 308512 6411424 (Easting Northing) shown as 13 on Figure 1.
15	Particulate Matter Monitoring		PM10 TEOM "Wandewoi" at co-ordinates 306985 6402010 (Easting Northing) shown as 15 on Figure 1.
16	Particulate Matter Monitoring		PM10 TEOM "Knodlers Lane" at co-ordinates 317939 6397821 (Easting Northing) shown as 16 on Figure 1.
17	Particulate Matter Monitoring		PM10 TEOM "Golden Highway" at co-ordinates 317439 6393199 (Easting Northing) shown as 17 on Figure 1.
20	Particulate matter monitoring		PM10 TEOM "HVS Proposed" at co-ordinates 310286 6406178 (Easting, Northing) shown as Proposed 14 on Figure 1.

Note: The EPA notes that Licensee will also use monitoring data from the Upper Hunter Air Quality Monitoring

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Network monitors at Maison Dieu and Warkworth when deriving a differential between upwind and downwind PM₁₀ concentrations.

P1.2 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.

P1.3 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
3	Discharge of saline water under the Hunter River Salinity Trading Scheme (HRSTS) Discharge Quality Volume Monitoring	Discharge of saline water under the Hunter River Salinity Trading Scheme (HRSTS) Discharge Quality Volume Monitoring	HRSTS discharge pipe from Dam 11 at co-ordinates 312977 6403914 (Easting Northing) shown as 3 on Figure 1.
4	Discharge of saline water under the Hunter River Salinity Trading Scheme (HRSTS) Discharge Quality Volume Monitoring	Discharge of saline water under the Hunter River Salinity Trading Scheme (HRSTS) Discharge Quality Volume Monitoring	Discharge end of outlet pipe on Parnell's Dam at co-ordinates 305730 6407150 (Easting, Northing) shown as 4 on Figure 1.
5	Alluvial Lands Discharge Point; Discharge quality and volume monitoring	Alluvial Lands Discharge Point; Discharge quality and volume monitoring	At the discharge end of the alluvial lands discharge pipeline at co-ordinates 310188 6400941 (Easting, Northing) shown as 5 on Figure 1.
8	Discharge of saline water under the Hunter River Salinity Trading Scheme Discharge Quality Volume Monitoring	Discharge of saline water under the Hunter River Salinity Trading Scheme Discharge Quality Volume Monitoring	Outlet of discharge pipe from Lake James storage dam at co-ordinates 317013 6400200 (Easting, Northing) shown as 8 on Figure 1.
23	Effluent quality monitoring Discharge to utilisation area	Effluent quality monitoring Discharge to utilisation area	Howick STP at co-ordinates 308701 6411439 (Easting, Northing) shown as 19 on Figure 2.
24		Discharge to utilisation area	Howick primary lagoon at co-ordinates 308736 6411486 (Easting, Northing) shown as 20 on Figure 2.
25	Effluent quality monitoring Discharge to utilisation area	Effluent quality monitoring Discharge to utilisation area	Howick secondary lagoon at co-ordinates 308786 6411432 (Easting, Northing) shown as 21 on Figure 2.
26	Effluent quality monitoring Discharge to utilisation area	Effluent quality monitoring Discharge to utilisation area	HVO North STP at co-ordinates 310586 6405945 (Easting, Northing) shown as 22 on Figure 2.

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27		Discharge to utilisation area	HVO South STP at co-ordinates 316314 6399296 (Easting, Northing) shown as 26 On Figure 2.
28		Discharge to utilisation area	HVO South Primary Lagoon at co-ordinates 316450 6399332 (Easting, Northing) shown as 27 on Figure 2.
29	Effluent quality monitoring Discharge to utilisation area	Effluent quality monitoring Discharge to utilisation area	HVO South secondary lagoon at co-ordinates 316483 6399328 (Easting, Northing) shown as 28 on Figure 2.

P1.4 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
9	Air blast overpressure & ground vibration peak particle velocity monitoring	Blast monitor at co-ordinates 303675 6402725 (Easting, Northing) shown as 9 on Figure 1.
11	Air blast overpressure & ground vibration peak particle velocity monitoring	Blast monitor at co-ordinates 314317 6394906 (Easting, Northing) shown as 11 on Figure 1.
18	Air blast overpressure & ground vibration peak particle velocity monitoring	Blast monitor at co-ordinates 305930 6399599 (Easting, Northing) shown as 18 on Figure 1.
19	Meteorological Station – to determine meteorological conditions for noise monitoring	Meteorological Station at HVO Corporate at co-ordinates 310315, 6406189 (Easting, Northing) identified as Yellow Square at HVO Corporate on Figure 1.
21	Air blast overpressure & ground vibration peak particle velocity monitoring	Blast monitor at co-ordinates 317913 6399741 (Easting, Northing) shown as TBA on Figure 1.
22	Meteorological Station – to determine meteorological conditions for noise monitoring	Meteorological station in Cheshunt Pit at co-ordinates 314770 6398500 (Easting, Northing) shown as Yellow Square in Cheshunt Pit on Figure 1.
36	Noise monitoring	NMP 1A at co-ordinates 317994 6399021 (Easting, Northing) shown as NM1A on Figure 3.
37	Noise monitoring	NMP 1B at co-ordinates 318535 6398157 (Easting, Northing) shown as NM1B on Figure 3.
38	Noise monitoring	NMP 1C at co-ordinates 318570 6399332 (Easting, Northing) shown as NM1C on Figure 3.
39	Noise monitoring	NMP 2 at co-ordinates 321128 6396863 (Easting, Northing) shown as NM2 on Figure 3.

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40	Noise monitoring	NMP 3 at co-ordinates 306014 6399906 (Easting, Northing) shown as NM3 on Figure 3.
41	Noise monitoring	NMP 4 at co-ordinates 305485 6401177 (Easting, Northing) shown as NM4 on Figure 3.
42	Noise monitoring	NMP 5 at co-ordinates 303718 6402475 (Easting, Northing) shown as NM5 on Figure 3.
43	Noise monitoring	NMP 6 at co-ordinates 303120 6403452 (Easting, Northing) shown as NM6 on Figure 3.

- P1.5 For the purposes of Condition P1.1, P1.3 and P1.4 Figure 1 refers to the plan titled "HVO EPL 640 Monitors" dated 17/2/2020 EPA Reference DOC20/126645.
- P1.6 For the purposes of Condition P1.1, P1.3 and P1.4 Figure 2 refers to the plan titled "HVO EPL640 Sewage Treatment Points and Mine Water Transfer Points" dated 17/2/2020 EPA Reference DOC20/126645.
- P1.7 For the purposes of Condition P1.4 Figure 3 refers to the plan titled "HVO EPL 640 Receptors" dated 17 February 2020, EPA Reference DOC20/126645.
- P1.8 The datum for grid references in this Licence is the Geodetic Datum of Australia 1994 (GDA94), Zone 56.
- P1.9 The Licensee is authorised to transfer saline mine water to United Colliery, Wambo Mine, Liddell Coal Mine, Ravensworth Mine and Warkworth Coal Mine.

3 Limit Conditions

L1 Pollution of waters

- 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\ 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\.

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L2.4 Water and/or Land Concentration Limits

POINT 3,4

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.5 - 9.5
Total suspended solids	milligrams per litre				120

POINT 5

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Conductivity	microsiemens per centimetre				400

POINT 8

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.5 - 9.5
Total suspended solids	milligrams per litre				120

L2.5 In addition to the concentration limit specified against Point 5 in the table above, waste water must not be discharged from Point 5 if the conductivity of the waste water is greater than the conductivity of the receiving waters in the Hunter River at the time of discharge.

L3 Volume and mass limits

L3.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
 a) liquids discharged to water; or;
 b) solids or liquids applied to the area;
 must not exceed the volume/mass limit specified for that discharge point or area.

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Point	Unit of Measure	Volume/Mass Limit
3	megalitres per day	100
4	megalitres per day	130
5	megalitres per day	7
8	megalitres per day	120

L4 Waste

L4.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	Compost (The compost exemption 2016-NSW EPA)	Application of compost as soil ameliorant for mine rehabilitation.	As specified in each particular resource recovery exemption	The Licensee must comply with The compost exemption 2016.
NA	Gypsum plaster board	Application of recovered plasterboard as soil ameliorant for mine rehabilitation	As specified in each particular resource recovery exemption	The Licensee must comply with The recovered plasterboard exemption 2014

L4.2 The Licensee must not dispose of any waste on the premises unless authorised to do so by a condition the Licence.

L4.3 The Licensee is authorised to receive saline mine water transfers from Liddell Coal Mine, Wambo Coal Mine, Ravensworth Mine and Warkworth Coal Mine for storage and use in activities authorised by this Licence.

L4.4 The Licensee is authorised to transfer coal tailings to Ravensworth Mine and must comply with the Coal Washery Reject (coal mine void) Resource Recovery Order 2014.

L5 Noise limits

L5.1 Noise generated at the premises must not exceed the noise limits presented in the table below.

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Location	Day LAeq(15min)	Evening LAeq(15min)	Night LAeq(15min)	Night LA1(1min)
EPA Point 36 in NMG 1A			41	46
EPA Point 37 in NMG 1B			40	46
EPA Point 38 in NMG 1C			39	46
EPA Point 39 in NMG 2			37	46
EPA Point 40 in NMG 3			39	46
EPA Point 41 in NMG 4			39	46
EPA Point 42 in NMG 5			40	46
EPA Point 43 in NMG 6			40	46
Residence 160 - Bowman in NMG 1A	41	41	41	45
Residence 256 - Moxey in NMG 1A	41	41	41	45
Residence 161 - Shearer in NMG 1A	41	41	41	45
Residence 162, 163, 258, 260 & 261 on Shearers Lane in NMG 1A	41	41	41	45
Residence 121 - Ernst in NMG 1B	40	40	40	45
Residence 123 - Nelson in NMG 1B	40	40	40	45
Residence 120 - Clifton and Edwards in NMG 1B and residences within 250m of this residence, not otherwise listed in this table	40	40	40	45
Maison Dieu residences 244, 245, 246 & 247 in NMG 1C within 1km of Shearers Lane, not otherwise listed in this table	39	39	39	45
Residence 127 - Riley in NMG 2	37	37	37	45

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All other Maison Dieu residences not listed in this table	35	35	35	45
Residence 323 - Bennett in NMG 4	40	40	40	46
Residence 322 - Nichols in NMG 4	40	40	40	46
Residence 308 - Cooper in NMG 4	39	39	39	46
Residence 310 - Northcote in NMG 4	39	39	39	45
Residence 311 - Elisnore in NMG 4	39	39	39	46
Residence 317 - Gee in NMG 4	39	39	39	46
Residence 434 - Murphy in NMG 4	39	39	39	46
Residence 436 - Skinner in NMG 4	39	39	39	46
Residence 321 - Hayes in NMG 4	40	40	40	46
Jerrys Plains Village and Jerrys Plains West residences 399, 379, 376, 378, 380-383, 387-409, 411, 413-415, 419-423, 362 - 375, 377, 384, 385, 417, 418, 424, 354, 339-353, 355-361, 334, 328, 329, 331-333, 335-338, 326, 327, 330, 437 & 438	40	40	40	46
All Jerrys Plains Road residences not otherwise listed in this table	35	35	35	46
All other privately owned land in Warkworth Village	43	43	43	45
All other privately owned land	35	35	35	45

L5.2 For the purposes of Condition L5.1:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays,
- Evening is defined as the period from 6pm to 10pm, and
- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays

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- L5.3 The noise limits set out in condition L5.1 apply under all meteorological conditions except for the following:
- a) Wind speeds greater than 3 metres/second at 10 metres above the ground level;
 - b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level;
 - c) Stability category G temperature inversion conditions; or
 - d) During periods of rain or hail.
- L5.4 For the purposes of condition L5.3:
- a) Data recorded by the meteorological station installed on the premises at EPA Identification Point 19 or 22, which ever is more representative, must be used to determine meteorological conditions; and
 - b) Temperature inversion conditions (stability category) are to be determined by the methods referred to in Fact Sheet D of the Noise Policy for Industry (2017).
- L5.5 For the purposes of Condition L5.1 noise limits and sensitive receiver numbers have been consolidated from HVO North DA 450-10-2003 Modification 7 dated July 2017, HVO South PA 06_0261 Modification 5 dated 28 February 2018 and the report titled "*Hunter Valley Operations Noise Management Groups for Environment Protection Licence 640*" dated January 202 Revision B prepared by Global Acoustics Pty Ltd (EPA Reference DOC20/126645-7).

L6 Blasting

- L6.1 Blasting in or on the premises must only be carried out between 0700 hours and 1800 hours, Monday to Saturday. Blasting in or on the premises must not take place on Sundays or Public Holidays without the prior approval of the EPA.
- L6.2 The airblast overpressure level from blasting operations in or on the premises must not exceed: 115 dB (Lin Peak) for more than 5% of the total number of blasts during each reporting period; at either monitoring point 9, 11, 18 or 21 in Condition P1.4.
- L6.3 The airblast overpressure level from blasting operations in or on the premises must not exceed: 120 dB (Lin Peak) at any time; at either monitoring point 9, 11, 18 or 21 in Condition P1.4.
- L6.4 The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: 5 mm/second for more than 5% of the total number of blasts during each reporting period; at either monitoring point 9, 11, 18 or 21 in Condition P1.4.
- L6.5 The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: 10 mm/second at any time; at either monitoring point 9, 11, 18 or 21 in Condition P1.4.
- L6.6 Offensive blast fume must not be emitted from the premises.

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Definition:

Offensive blast fume means post-blast gases from the detonation of explosives at the premises that by reason of their nature, duration, character or quality, or the time at which they are emitted, or any other circumstances:

1. *are harmful to (or likely to be harmful to) a person that is outside the premises from which it is emitted, or*
2. *interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted.*

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:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- 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.

Sewage Treatment System

O2.2 The licensee is responsible for the correct operation of the sewage treatment system on the premises.

O2.3 Correct operation involves regular supervision and system maintenance. The licensee must be aware of the system management requirements and must ensure that the necessary service contracts are in place.

O2.4 The sewage treatment system must be serviced by a suitably qualified and experienced wastewater technician at least once in each quarterly period and a minimum of four times per year.

O2.5 The licensee must record each inspection and any actions required or recommended by the technician including all results of tests performed on the sewage treatment system by the technician as required in Condition O2.4.

O2.6 The licensee must prepare a sewage treatment system maintenance program. The program must include:

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- a) Certification from the system provider that the sewage treatment system is operating within its capacity;
- b) Date, time and results of all routine maintenance procedures undertaken to the sewage treatment system; and
- c) Provide written records of each quarterly inspection.

O3 Dust

- O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.
- O3.2 Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.
- O3.3 All trafficable areas, coal storage areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.
- O3.4 Trucks transporting coal from the premises must be covered immediately after loading to prevent wind blown emissions and spillage. The covering must be maintained until immediately before unloading the trucks.
- O3.5 The tailgates of all haulage trucks leaving the premises must be securely fixed prior to loading or immediately after unloading to prevent loss of material.

O4 Effluent application to land

- O4.1 The licensee must ensure that the effluent discharge utilisation area perimeter is fenced and signposted and controlled in a manner to ensure exclusion of persons from that area.
- O4.2 The licensee must ensure that sprays or mists from irrigation do not drift beyond the boundary of the effluent discharge utilisation area and that no ponding occurs.
- O4.3 Application of wastewaters must only be applied at a rate that can be assimilated by the effluent discharge utilisation area and its evapotranspiration capacity.

O5 Emergency response

Note: The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The licensee must keep the incident response plan on the premises at all times. The incident response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. The licensee must develop a Pollution Incident Response Management Plan in accordance with the requirements in Part 5.7A of the Protection of the Environment Operations (POEO) Act 1997 and POEO regulations.

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O6 Waste management

Heavy Plant-Tyre Disposal

O6.1 The Licensee is authorised to dispose of heavy Plant-tyre waste generated on the premises, in the pit. The Licensee must:

- a) ensure that heavy Plant waste tyres are re-used on the premises as much as practical;
- b) ensure that any surplus heavy Plant waste tyres can be emplaced by being spread out on the pit-floor and buried as deep as practical, but, covered by at least 20m of inert material beneath any final rehabilitated surface;
- c) place heavy Plant waste tyres at least 10m away from coarse reject material or tailings emplacement areas;
- d) not place any heavy Plant waste tyres near heated material;
- e) not place any heavy Plant waste tyres in an area likely to leach to any water-course.

O7 Other operating conditions

- O7.1 There must be no incineration or open burning of any material(s) on the premises, except as specifically authorised by the EPA.
- O7.2 All above-ground tanks containing material that is likely to cause environmental harm must be bunded or have an alternative spill containment system in place.

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.
- M1.2 All records required to be kept by this licence must be:
- a) in a legible form, or in a form that can readily be reduced to a legible form;
 - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - c) 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:
- a) the date(s) on which the sample was taken;
 - b) the time(s) at which the sample was collected;
 - c) the point at which the sample was taken; and
 - d) the name of the person who collected the sample.

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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 13,15,16,17,20

Pollutant	Units of measure	Frequency	Sampling Method
PM10	micrograms per cubic metre	Continuous	AM-22

M2.3 The Licensee must undertake continuous monitoring at point 13 and 20 using an e-sampling device to measure upwind and downwind particulates until commissioning of the tapered element oscillating microbalance station at point 20, unless otherwise authorised in writing by the EPA.

PM10 monitoring according to EPA Approved Method AM22 at Point 20 as required by Condition M2.2 is not required by Condition M2.2 until the TEOM is operating.

The Licensee must notify the EPA in writing when the TEOM at EPA Point 20 has been installed and commissioned.

M2.4 Water and/ or Land Monitoring Requirements

POINT 3,4

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	microsiemens per centimetre	Continuous during discharge	A probe designed to measure the range 0 to 10,000 uS/cm
pH	pH	Daily during any discharge	Grab sample
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample

POINT 3,4,8

Pollutant	Units of measure	Frequency	Sampling Method
Turbidity	nephelometric turbidity units	Continuous during discharge	Probe

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POINT 5

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	microsiemens per centimetre	Special Frequency 1	Probe

POINT 8

Pollutant	Units of measure	Frequency	Sampling Method
Conductivity	microsiemens per centimetre	Continuous during discharge	A probe designed to measure the range 0 to 10,000 uS/cm
pH	pH	Daily during any discharge	Grab sample
Total suspended solids	milligrams per litre	Daily during any discharge	Grab sample

POINT 23,25,26,29

Pollutant	Units of measure	Frequency	Sampling Method
Faecal Coliforms	colony forming units per 100 millilitres	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample

Note: Special Frequency 1 means:

"at least once every 10 minutes during discharge"

Note: The requirement for turbidity monitoring at point 3, 4 and 8 will be reviewed by the EPA after review of data obtained during HRSTS discharge events.

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.

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Note: The *Protection of the Environment Operations (Clean Air) Regulation 2010* 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.

M3.3 Sampling, storage and analysis of electrical conductivity by grab sample is permitted to be undertaken in accordance with AECOM Australia Method: Conductivity by classical using APHA 2510 B (EPA approval DOC18/17513-08).

M3.4 Sampling, storage and analysis of pH by grab sample is permitted to be undertaken in accordance with AECOM Australia Method: pH by classical using APHA 4500 H+B (EPA Approval DOC18/17513-08).

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 19,22

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Siting	AM-1 & AM-4	-	-	-
Temperature at 10 metres	AM-4	degrees Celsius	10 minutes	Continuous
Relative humidity	AM-4	percent	10 minutes	Continuous
Rainfall	AM-4	millimetres per hour	10 minutes	Continuous
Wind Speed at 10 metres	AM-2 & AM-4	metres per second	10 minutes	Continuous
Wind Direction at 10 metres	AM-2 & AM-4	Degrees	10 minutes	Continuous
Sigma Theta	AM-2 & AM-4	Degrees	10 minutes	Continuous
Total Solar Radiation	AM-4	Watts per square metre	10 minutes	Continuous

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.

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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 3

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	megalitres per day	Flow meter and continuous logger

POINT 4

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	megalitres per day	Weir structure and level sensor

POINT 5

Frequency	Unit of Measure	Sampling Method
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Special Frequency 1	megalitres per day	Special Method 1
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POINT 8

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	megalitres per day	Flow meter and continuous logger

M7.2 Special Frequency 1 means at least once every 10 minutes during discharge.

Special Method 1 means a method approved in writing by the EPA.

M8 Blasting

M8.1 To determine compliance with conditions L6.2, L6.3, L6.4 and L6.5:

- Airblast overpressure and ground vibration levels must be measured and electronically recorded for monitoring points 9, 11, 18 and 21 for the parameters specified in Column 1 of the table below; and
- The licensee must use the units of measure, sampling method, and sample at the frequency specified opposite in the other columns.

Parameter	Units of Measure	Frequency	Sampling Method
Airblast Overpressure	Decibels (Linear Peak)	All blasts	Australian Standard AS 2187.2-2006
Ground Vibration Peak Particle Velocity	millimetres/second	All blasts	Australian Standard AS 2187.2-2006

M9 Other monitoring and recording conditions

HRSTS Monitoring

M9.1 The licensee must continuously operate and maintain communication equipment which makes the conductivity and flow measurements, taken at Point 3, 4 and 8 available to the "Service Coordinator" within one hour of those measurements being taken and makes them available in the format specified in the "Hunter River Salinity Trading Scheme Discharge Point Telemetry Specification - Rev V1.0" released 4 October 2018 by Water NSW.

M9.2 The licensee must ensure that all monitoring data is within a margin of error of 5% for conductivity measurements and 10% for discharge flow measurement.

M9.3 The licensee must mark monitoring point(s) 3, 4 and 8 with a sign which clearly indicates the name of the licensee, whether the monitoring point is up or down stream of the discharge point(s) and that it is a monitoring point for the Hunter River Salinity Trading Scheme.

Requirement to Monitor Particulate Matter

M9.4 The Licensee must record the average PM₁₀ concentration at monitoring points 13, 15, 16 17 and 20 at intervals of 10 minutes. This data must be made available upon request by any Authorised Officer of the

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EPA who asks to see them.

M10 Noise monitoring

M10.1 To assess compliance with the noise limits specified within this licence, the licensee must undertake operator attended noise monitoring at each specified noise monitoring point in accordance with the table below.

POINT 36,37,38,39,40,41,42,43

Assessment period	Minimum frequency in a reporting period	Minimum duration within assessment period	Minimum number of assessment period
Night	Monthly	15 minutes	1 operation day

M10.2 To assess compliance with condition L5.1, attended noise monitoring must be undertaken in accordance with Conditions L5.2 to L5.4:

- at EPA points 36, 37, 38, 39, 40, 41, 42 and 43 identified in P1.4; and
- occur every calendar month in a reporting period; and
- occur during one night time period as defined in the Noise Policy for Industry 2017 for a minimum of 15 minutes at each location from a).

M10.3 Where required in writing by the EPA, the Licensee must carry out attended monitoring at any sensitive receivers referred to in condition L5.1 in addition to the monitoring required by Condition M10.1.

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:

- a Statement of Compliance,
- a Monitoring and Complaints Summary,
- a Statement of Compliance - Licence Conditions,
- a Statement of Compliance - Load based Fee,
- a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
- a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
- 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.

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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
- 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.

R2 Notification of environmental harm

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 the incident occurred.

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.

R3 Written report

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- 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
 - 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.

R4 Other notifications

Notification of Pollution of Waters

- R4.1 The Licensee must notify the EPA by telephoning the Environment Line service on 131555 immediately after the Licensee becomes aware of any contravention or potential contravention of Condition L1 of the Licence.
- R4.2 The Licensee must provide written details of the notification to the EPA within seven days of the date of the notification.

Blast Exceedance Notification and Reporting

- R4.3 The Licensee must report any exceedance of Licence blasting limits to the EPA by telephoning the Environment Line service on 131555 or emailing info@epa.nsw.gov.au as soon as practicable after the exceedance becomes known to the Licensee or to one of the Licensee's employees or agents.
- R4.4 Within seven days of notifying the EPA of an exceedance of Licence blast limits, the Licensee must

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provide the EPA a report in writing that explains the cause of the exceedance and the actions taken to prevent future exceedances of blast limits.

Noise Exceedance Notification and Reporting

- R4.5 The Licensee must report any exceedance of Licence noise limits to the EPA by telephoning the Environment Line service on 131555 or emailing info@epa.nsw.gov.au as soon as practicable after the exceedance becomes known to the Licensee or to one of the Licensee's employees or agents.
- R4.6 Within seven days of notifying the EPA of an exceedance of Licence noise limits, the Licensee must provide the EPA a report in writing that explains the cause of the exceedance and the actions taken to prevent future exceedances of noise limits.
- R4.7 An authorised officer of 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 at Condition R4.6. The Licensee must provide such further details to the EPA within the time specified in the request.

R5 Other reporting conditions

HRSTS Reporting

- R5.1 The Licensee must compile a written report of the activities under the Scheme for each scheme year. The scheme year shall run from 1 July to 30 June each year. The written report must be submitted to the EPA's regional office within 60 days after the end of each scheme year and be in a form and manner approved by the EPA. The information will be used by the EPA to compile an annual scheme report.

Turbidity Report

- R5.2 The Licensee must provide a Report to the EPA with the Annual Return that shows graphical analysis of continuous turbidity against continuous discharge volume measured at EPA Point 3 and 4 for the length of any discharges from EPA Point 3 and 4.

Blast Monitoring Report

- R5.3 The results of the blast monitoring required by the licence must be submitted to the EPA, with each Annual Return, at the end of each reporting period. The monitoring results must identify any exceedance of licence limits.

Noise Monitoring Report

- R5.4 The Licensee must provide the EPA with its Annual Return an annual noise compliance assessment report prepared by an appropriately qualified acoustic consultant. The report must include an assessment of any exceedance of noise limits and justification that the noise monitoring points identified in Condition P1.4 are still representative of the sensitive receivers within the noise monitoring groups on Figure 2.

Sewage Treatment Systems

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R5.5 The sewage treatment system maintenance program required by Condition O2.6 must be submitted annually to the EPA with the Annual Return.

R5.6 The licensee must retain a copy of each report required by Condition O2.5 for 3 years from the date each record is made.

Heavy Plant-Tyre Disposal Report

R5.7 The Licensee must provide the EPA with the Annual Return a Heavy Plant-Tyre Disposal Report. The Report must include:

a) a plan of the disposed heavy plant waste tyres on the premises for the period that includes:

- (i) each tyre serial number;
- (ii) supplier of each tyre;
- (iii) purchase date of each tyre;
- (iv) disposal date of each tyre;
- (v) co-ordinates (easting and northings) of the disposal of each tyre;
- (vi) the Real Level (RL) in metres AHD of each tyre placed in the pit;
- (vii) the number of tyres buried in a particular area; and
- (viii) the total number of tyres and tonnage of tyres disposed of at the premises in each annual return year.

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
Saline Discharge Dispersion Investigation	Saline Discharge Dispersion Investigation. Minimise risk of saline discharge to downstream irrigators.(@)	18-June-2008

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High Level Alarm and Interlocks - Dam 17N and associated water management system	Install and operate High Level Alarm and interlock on water management systems associated with Dam 17N . Upgraded system will allow for the better management of mine water and prevent unauthorised discharges to local creek system.(@)	29-April-2011
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.	13-July-2012
Particulate Matter Control Best Practice Implementation – Wheel Generated Dust	Implementation of particulate matter best management practices to address wheel-generated dust.	15-August-2014
Particulate Matter Control Best Practice Implementation – Disturbing and Handling Overburden under Adverse Weather Conditions	Implementation of particulate matter best management practices to address the handling of overburden during adverse weather.	15-August-2014
Particulate Matter Control Best Practice Implementation – Trial of Best Practice Measures for Disturbing and Handling Overburden	Investigation to establish best practice measures for the handling of overburden.	30-July-2014
Coal Mine Wind Erosion of Exposed Land Assessment	Assessment of predicted vs actual exposed lands	31-March-2015
North Void Tailings Facility Seepage Study	Investigation into the North Void Tailings Facility Groundwater Seepage (30 March 2020 has been completed) and Options Report to mitigate and manage environmental impacts (30 Nov 2019 has been completed). Ongoing annual pollution study requirements - into perpetuity until the issues has been mitigated	30-March-2020
Water Management Infrastructure Upgrade Assessment and Report	Audit of water management infrastructure and Reporting	27-September-2019

8 Pollution Studies and Reduction Programs

U1 Newdell Load Point Water Containment Upgrade

U1.1 The Licensee must design, install and commission upgrades to the Newdell Load Point Water Management system to mitigate overflows from water storages and pipe leakages to Pikes Creek and Bayswater Creek. The works must be designed, installed and commissioned by appropriately qualified and experienced persons and:

a) include the high risk priority outcomes of the report titled "HV Operations Pty Ltd Water Management

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Infrastructure Upgrade Assessment Hunter Valley Operations" dated September 2019 by Engeny; and
b) be completed by 31 December 2022.

U1.2 The Licensee must provide the EPA with a design report prior to installation and commissioning of the upgrade. The report must be prepared by an appropriately qualified and experienced person and:

- a) include details of the increased capacity of water storage on the site (and design rainfall capacity) compared to existing; and
- b) a description of the upgrades and how they will deliver better environmental outcomes to mitigate water discharges off the premises.

The design report must be provided to the EPA by 31 December 2022.

U1.3 A report upon completion of the upgrade and commissioning of the site must be provided to the EPA by 31 March 2023. The report must include:

- a) descriptions of the increased capacity of water storage on the site (and design rainfall capacity) compared to existing; and
- b) a description of the upgrades, including photos.

U2 Hunter Valley Load Point Water Containment Upgrade

U2.1 The Licensee must design, install and commission upgrades to the Hunter Valley Load Point Water Management system to mitigate overflows from water storages and pipe leakages to Pikes Creek and Bayswater Creek. The works must be designed, installed and commissioned by appropriately qualified and experienced persons and:

- a) include the high risk priority outcomes of the report titled "HV Operations Pty Ltd Water Management Infrastructure Upgrade Assessment Hunter Valley Operations" dated September 2019 by Engeny; and
- b) be completed by 31 December 2022.

U2.2 The Licensee must provide the EPA with a design report prior to installation and commissioning of the upgrade. The report must be prepared by an appropriately qualified and experienced person and:

- a) include details of the increased capacity of water storage on the site (and design rainfall capacity) compared to existing; and
- b) a description of the upgrades and how they will deliver better environmental outcomes to mitigate water discharges off the premises.

The design report must be provided to the EPA by 31 December 2022.

U2.3 A report upon completion of the upgrade and commissioning of the site must be provided to the EPA by 31 March 2023. The report must include:

- a) descriptions of the increased capacity of water storage on the site (and design rainfall capacity) compared to existing; and
- b) a description of the upgrades, including photos.

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9 Special Conditions

E1 Hunter River Salinity Trading Scheme

- E1.1 This licence authorises the discharge of saline water into the Hunter River Catchment from an authorised discharge point (or points), in accordance with the *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002*.
- E1.2 For the purposes of Clauses 23 and 29 of the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002 the licensee must apply the conversion factor of 0.6.
- E1.3 The licensee must not exceed the hourly volume discharge limit calculated using the following formula, at all discharge point(s) on this licence titled "Discharge of saline water under the Hunter River Salinity Trading Scheme (HRSTS)":

$$H = V / RRT$$

Where:

H is the hourly volume discharge limit (in megalitres per hour);

V is the licence holder's volume discharge limit for the block (in megalitres) calculated in accordance with clause 23 of the Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation (2002); and

RRT is the difference between the discharge stop and start times shown on the river register for that block (in hours)

Note 1: The intent of this condition is to prevent spikes of saline water in the Hunter River as a result of discharges of less than the duration permitted by the river register.

Note 2: A river register is issued by the Service Co-ordinator and allows participants of the Hunter River Salinity Trading Scheme (HRSTS) to discharge saline to the Hunter River during a discharge period.

E2 Ambient Water Quality Monitoring

- E2.1 The Licensee must provide the EPA by 1 October 2020:

- a) a plan of the premises with the location of ambient surface water quality monitoring sites. The plan must contain the location of the monitoring sites in easting and northings and a legend referencing the sites; and
- b) a list of the ambient surface water quality analysis undertaken by the Licensee that includes the monitoring intervals.

(note: The Licensee does not need to supply the location of rain event monitoring sites, but the list must be consistent with the approved water management plan in place at the time for the premises.)

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E3 Mine Water Pipelines Burst Detection

E3.1 The Licensee must install and commission burst detection monitoring on pipelines that are located within the premises boundary but outside of the mine water containment system by 31 July 2021. The burst detection monitoring system must be installed by an appropriately qualified and experienced person.

a) The Licensee must provide written notification to the EPA on completion of the works by 31 July 2021 and provide a description of the extent of the works.

Note: Upon installation of burst detection, the Licensee must consider secondary containment of pipelines in areas at high risk of polluting waters, in the event of break.

E4 Dam Water Level Monitoring

E4.1 The Licensee must install and commission water level sensors on erosion and sediment control dams and mine water dams that are located within the premises boundary and which have the potential to overflow or spill into areas that are outside the mine water containment system by 31 July 2021. The water level sensors:

a) must be installed by appropriately qualified and experienced persons; and

b) be incorporated into an upgrade of the water management system to prevent discharges of mine water from the premises, and prevent or mitigate discharges from sediment control dams from the premises; and

c) the Licensee must provide written notification to the EPA upon completion of the works, that include a description of the extent of the works including photos.

E5 Down-wind PM10 monitor investigation

E5.1 The Licensee must investigate and finalise a report to the EPA by 1 October 2020 on a location suitable for a tapered element oscillating microbalance to replace the TEOM that was formerly located at EPA Point 14.

Note: The Licensee is to engage in communications with the EPA until a suitable location can be determined, by the 1 September 2020.

E6 North Void Tailings Facility Seepage Monitoring

E6.1 The Licensee must implement a North Void Tailings Facility monitoring program. This monitoring program must be implemented and undertaken by a suitably qualified and experienced person. The program must include:

(i) installation of a groundwater and surface water monitoring network to monitor the extent of the plume of polluted water to estimate the volume of seepage from the North Void Tailings Facility and the flux of salt and sulphate difference from baseline alluvial groundwater and to monitor seepage changes;

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- (ii) a groundwater surface water model to demonstrate attenuation time and mixing if the polluted groundwater is not remediated;
- (iii) development of milestones or thresholds that would trigger consideration for the introduction of works or other options to mitigate seepage from the North Void Tailings Facility;
- (iv) an ecological risk assessment;
- (v) an assessment of tailings consolidation, permeability and strength testing;
- (vi) likely timeframes involved for filling, capping and rehabilitating of the North Void Tailings Facility;
- (vii) daily rainfall;
- (viii) estimates of rainfall ingress into the North Void Tailings Facility; and
- (ix) volumetric monitoring of the decant of surface waters from the North Void Tailings Facility.

The Licensee must provide an analysis report of this monitoring data and any modelling prepared by an appropriately qualified and experienced person. The Licensee must submit this report to the EPA by 30 March 2020 and annually thereafter. The report must demonstrate progress in mitigating seepage from the North Void Tailings Facility. The report must report against the following objectives:

- a) prevent pollution of waters at all times;
- b) mitigate degradation of groundwater beneficial use;
- c) prevent impact to endangered ecological communities; and
- d) capping and rehabilitation to produce a free draining final landform.

E6.2 The Licensee must submit an interim report to the EPA at each quarter, within one month of the completion of quarterly monitoring required by Condition U1.1. The interim report must be prepared by an appropriately qualified and experienced person and include:

- a) an assessment of rainfall data for the quarterly period;
- b) an estimate of rainfall ingress to the North Void Tailings Facility for the quarterly period; and
- c) the volume of decant water removed from the North Void Tailings Facility in the quarterly period.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	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
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	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> .
AMG	Australian Map Grid
anniversary date	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.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	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> .
COD	Means chemical oxygen demand
composite sample	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.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	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.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	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.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	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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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Mr Mitchell Bennett

Environment Protection Authority

(By Delegation)

Date of this edition: 29-September-2000

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End Notes

- 1 Licence varied by notice 1003056, issued on 06-Dec-2000, which came into effect on 31-Dec-2000.
- 2 Licence transferred through application 140323, approved on 17-Apr-2001, which came into effect on 01-Apr-2001.
- 3 Licence varied by notice 1013521, issued on 07-Dec-2001, which came into effect on 01-Jan-2002.
- 4 Licence varied by Change of Contact details, issued on 07-Feb-2002, which came into effect on 07-Feb-2002.
- 5 Licence varied by notice 1024752, issued on 27-Feb-2003, which came into effect on 27-Feb-2003.
- 6 Licence varied by notice 1026218, issued on 31-Mar-2003, which came into effect on 31-Mar-2003.
- 7 Licence varied by notice 1033325, issued on 22-Jan-2004, which came into effect on 23-Jan-2004.
- 8 Licence transferred through application 142538, approved on 05-Apr-2004, which came into effect on 01-Apr-2004.
- 9 Licence varied by notice 1040579, issued on 16-Nov-2004, which came into effect on 11-Dec-2004.
- 10 Licence varied by notice 1044536, issued on 18-Mar-2005, which came into effect on 07-Apr-2005.
- 11 Licence varied by correction to EPA object data record, issued on 15-Jun-2005, which came into effect on 15-Jun-2005.
- 12 Licence varied by notice 1058366, issued on 18-May-2006, which came into effect on 18-May-2006.
- 13 Licence varied by Internal Testing Only - No Changes, issued on 15-Jun-2007, which came into effect on 15-Jun-2007.
- 14 Licence varied by notice 1074619, issued on 26-Jun-2007, which came into effect on 26-Jun-2007.
- 15 Licence varied by notice 1088104, issued on 18-Jun-2008, which came into effect on 18-Jun-2008.
- 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 1104190, issued on 26-Nov-2009, which came into effect on 26-Nov-2009.

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18	Licence varied by notice 1110518, issued on 08-Jan-2010, which came into effect on 08-Jan-2010.
19	Licence varied by notice 1122039, issued on 21-Dec-2010, which came into effect on 21-Dec-2010.
20	Licence varied by notice 1501227 issued on 08-Dec-2011
21	Licence varied by notice 1505777 issued on 21-May-2012
22	Licence varied by notice 1506486 issued on 30-Nov-2012
23	Licence varied by notice 1510522 issued on 21-Mar-2013
24	Licence varied by notice 1513861 issued on 24-May-2013
25	Licence varied by notice 1516195 issued on 05-Sep-2013
26	Licence varied by notice 1517166 issued on 13-Dec-2013
27	Licence varied by notice 1522185 issued on 16-Oct-2014
28	Licence varied by notice 1526186 issued on 24-Feb-2015
29	Licence varied by notice 1529862 issued on 13-Apr-2015
30	Licence varied by notice 1530433 issued on 12-Jun-2015
31	Licence varied by notice 1533166 issued on 20-Aug-2015
32	Licence transferred through application 1536756 approved on 04-Jan-2016 , which came into effect on 30-Dec-2015
33	Licence transferred through application 1537115 approved on 12-Jan-2016 , which came into effect on 31-Dec-2015
34	Licence transferred through application 1538331 approved on 23-Feb-2016 , which came into effect on 24-Feb-2016
35	Licence varied by notice 1543170 issued on 23-Aug-2016
36	Licence varied by notice 1544314 issued on 05-Sep-2016
37	Licence varied by notice 1545411 issued on 11-Oct-2016
38	Licence varied by notice 1549584 issued on 29-Mar-2017
39	Licence varied by notice 1553538 issued on 16-Aug-2017
40	Licence varied by notice 1570164 issued on 18-Oct-2018
41	Licence varied by notice 1576904 issued on 26-Apr-2019
42	Licence varied by notice 1578894 issued on 01-May-2019
43	Licence varied by notice 1581234 issued on 16-Aug-2019

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44 Licence varied by notice 1587261 issued on 10-Sep-2020
