

Environment Protection Licence

Licence - 1429



<u>Licence Details</u>	
Number:	1429
Anniversary Date:	01-July

<u>Licensee</u>
ORIGIN ENERGY ERARING PTY LTD
PO BOX 5044
DORA CREEK NSW 2264

<u>Premises</u>
ERARING POWER STATION
ROCKY POINT ROAD
ERARING NSW 2264

<u>Scheduled Activity</u>
Chemical storage
Coal works
Crushing, grinding or separating
Electricity generation
Sewage treatment

<u>Fee Based Activity</u>	<u>Scale</u>
Coal works	> 5000000 T annual handling capacity
Crushing, grinding or separating	> 2000000 T annual processing capacity
General chemicals storage	0-5000 kL storage capacity
Generation of electrical power from coal	> 4000 GWh annual generating capacity
Generation of electrical power otherwise than from coal, diesel or gas	0-250 GWh annual generating capacity
Petroleum products storage	0-5000 kL storage capacity
Sewage treatment processing by small plants	0-20 ML annual maximum volume of discharge

Environment Protection Licence

Licence - 1429



Region
North - Hunter
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

Environment Protection Licence

Licence - 1429



INFORMATION ABOUT THIS LICENCE	5
Dictionary	5
Responsibilities of licensee	5
Variation of licence conditions	5
Duration of licence	5
Licence review	5
Fees and annual return to be sent to the EPA	5
Transfer of licence	6
Public register and access to monitoring data	6
1 ADMINISTRATIVE CONDITIONS	7
A1 What the licence authorises and regulates	7
A2 Premises or plant to which this licence applies	7
A3 Information supplied to the EPA	8
2 DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND	8
P1 Location of monitoring/discharge points and areas	8
3 LIMIT CONDITIONS	10
L1 Pollution of waters	10
L2 Load limits	10
L3 Concentration limits	11
L4 Volume and mass limits	13
L5 Waste	13
L6 Potentially offensive odour	14
4 OPERATING CONDITIONS	14
O1 Activities must be carried out in a competent manner	14
O2 Maintenance of plant and equipment	14
O3 Dust	14
O4 Effluent application to land	14
O5 Emergency response	15
O6 Processes and management	15
O7 Waste management	15
O8 Other operating conditions	15
5 MONITORING AND RECORDING CONDITIONS	19
M1 Monitoring records	19
M2 Requirement to monitor concentration of pollutants discharged	19

Environment Protection Licence



Licence - 1429

M3	Testing methods - concentration limits	23
M4	Testing methods - load limits	23
M5	Environmental monitoring	24
M6	Weather monitoring	24
M7	Recording of pollution complaints	25
M8	Telephone complaints line	25
M9	Requirement to monitor volume or mass	26
6	REPORTING CONDITIONS	26
R1	Annual return documents	26
R2	Notification of environmental harm	28
R3	Written report	28
R4	Other reporting conditions	29
7	GENERAL CONDITIONS	29
G1	Copy of licence kept at the premises or plant	29
G2	Other general conditions	29
8	SPECIAL CONDITIONS	30
E1	Discharge of Cooling Waters into Lake Macquarie	30
E2	Seagrass Monitoring Program	31
E3	Continuous Emissions Monitoring Instruments	31
E4	Emergency Groundwater Discharge	31
DICTIONARY		33
	General Dictionary	33

Environment Protection Licence

Licence - 1429



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).

Environment Protection Licence



Licence - 1429

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:

ORIGIN ENERGY ERARING PTY LTD
PO BOX 5044
DORA CREEK NSW 2264

subject to the conditions which follow.

Environment Protection Licence

Licence - 1429



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
Chemical storage	General chemicals storage	0 - 5000 kL storage capacity
Electricity generation	Generation of electrical power from coal	> 4000 GWh annual generating capacity
Electricity generation	Generation of electrical power otherwise than from coal, diesel or gas	0 - 250 GWh annual generating capacity
Chemical storage	Petroleum products storage	0 - 5000 kL storage capacity
Sewage treatment	Sewage treatment processing by small plants	0 - 20 ML annual maximum volume of discharge

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
ERARING POWER STATION
ROCKY POINT ROAD
ERARING
NSW 2264
PREMISES MARKED AND SHOWN BOUNDED BY THE AREAS "OPERATIONAL LAND" AND "EASEMENTS", BUT EXCLUDING "NON-OPERATIONAL LAND", ON THE PLAN TITLED "PLAN SHOWING THE LOCATION OF AIR AND WATER MONITORING SITES", DRAWING NO. 245481-0000-DRG-0004-F, PREPARED BY AURECON, DATED 28/11/2016 (EPA REFERENCE DOC16/616587) ("THE PLAN").

Environment Protection Licence

Licence - 1429



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
11	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Discharge to air from Boiler No. 1, marked and shown as "EPA 11/12" on the Plan.
12	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Discharge to air from Boiler No. 2, marked and shown as "EPA 11/12" on the Plan.
13	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Discharge to air from Boiler No. 3, marked and shown as "EPA 13/14" on the Plan.
14	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Discharge to air from Boiler No. 4, marked and shown as "EPA 13/14" on the Plan.
15	Ambient air monitoring		Ambient air monitoring station at Marks Point Primary School, marked and shown as "EPA 15 on the Plan.
16	Ambient air monitoring		Ambient air monitoring station alongside the oval at Dora Creek, marked and shown as "EPA 16" on the Plan.
18	Ambient air monitoring		Dust deposition gauge, marked and shown as "EPA 18b" on the Plan.
19	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Discharge to air from the Emergency Turbine Generator Stack, marked and shown as "EPA 19" on the Plan.
25	Ambient air monitoring		Dust deposition gauge, marked and shown as "EPA 18d" on the Plan.
26	Ambient air monitoring		Dust deposition gauge, marked and shown as "EPA 18f" on the Plan.
27	Ambient air monitoring		Dust deposition gauge, marked and shown as "EPA U06" on the Plan.

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.

Environment Protection Licence

Licence - 1429



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
1	Discharge to waters Effluent quality and volume monitoring	Discharge to waters Effluent quality and volume monitoring	Cooling water outlet canal to Myuna Bay, marked and shown as "EPA 01" on the Plan.
2	Discharge to waters Effluent quality monitoring	Discharge to waters Effluent quality monitoring	The emergency ash dam outlet at the culvert under Main Road 217, marked and shown as "EPA 02" on the Plan.
3		Discharge to utilisation area	Discharge from the Final Pond in Pasveer Sewage System to the utilisation area adjacent to sewage treatment works, marked and shown as "EPA 03" on the Plan.
4	Ambient water monitoring		The waters of Lake Macquaire located midway between cooling water inlet and Hungary Point, marked and shown as "EPA 04" on the Plan.
5	Ambient water monitoring		The waters of Lake Macquaire located off the old Wangi Power Station inlet point in Myuna Bay, marked and shown as "EPA 05" on the Plan.
6	Ambient water monitoring		The waters of Lake Macquaire located at the Eraring/Vales Point mixing zone off Fishery Point, marked and shown as "EPA 06" on the Plan.
7	Ambient water monitoring		The northern waters of Lake Macquarie east of Lake Macquarie Yacht Club, marked and shown as "EPA 07" on the Plan.
8	Ambient water monitoring		Inlet canal of the cooling water intake from Lake Macquarie, marked and shown as "EPA 08" on the Plan.
10	Discharge to waters Effluent quality monitoring	Discharge to waters Effluent quality monitoring	Ash Dam discharge after the Siphon Pond Weir, marked and shown as "EPA 10" on the Plan.
17	Discharge to waters Discharge quality monitoring	Discharge to waters Discharge quality monitoring	Emergency discharge from the Toe Drain Collection Pond, marked and shown as "EPA 17" on the Plan.
20	Volume monitoring		Ash Dam discharge pipe to the Outlet Canal (Tunnel Spillway), marked and shown as "EPA 20" on the Plan.

Environment Protection Licence

Licence - 1429



21	Groundwater monitoring	Groundwater Monitoring Well 01, marked and shown as "EPA 21" on the Plan.
22	Groundwater monitoring	Groundwater Monitoring Well 02, marked and shown as "EPA 22" on the Plan.
23	Groundwater monitoring	Groundwater Monitoring Well 06, marked and shown as "EPA 23" on the Plan.
24	Groundwater monitoring	Groundwater Monitoring Well D26, marked and shown as "EPA 24" on the Plan.

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 Load limits

- L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.
- L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
Arsenic (Air)	
Benzene (Air)	
Benzo(a)pyrene (equivalent) (Air)	
Coarse Particulates (Air)	
Fine Particulates (Air)	
Fluoride (Air)	
Lead (Air)	
Mercury (Air)	
Nitrogen Oxides (Air)	
Salt (Estuarine Water)	
Selenium (Estuarine Water)	
Sulfur Oxides (Air)	

Environment Protection Licence

Licence - 1429



Total suspended solids (Estuarine Water)

Volatile organic compounds (Air)

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L3 Concentration limits

- L3.1 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.
- L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.
- L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\.
- L3.4 In accordance with section 33(3) of the Protection of the Environment (Clean Air) Regulation 2010 the emission units corresponding to Points 11, 12, 13 and 14 are taken to belong to Group 3. However under section 37(3) of the Protection of the Environment (Clean Air) Regulation 2010 the EPA has imposed more stringent emission standards at Points 11, 12, 13 and 14 for pollutants detailed in limit condition L3.5 of this licence.

L3.5 Air Concentration Limits

POINT 11,12,13,14

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Hydrogen chloride	milligrams per cubic metre	100			
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	100			
Nitrogen Oxides	milligrams per cubic metre	1100			
Cadmium	milligrams per cubic metre	0.2			
Mercury	milligrams per cubic metre	0.2			
Solid Particles	milligrams per cubic metre	50			
Chlorine	milligrams per cubic metre	200			

Environment Protection Licence

Licence - 1429



Total Fluoride	milligrams per cubic metre	50
Type 1 and Type 2 substances in aggregate	milligrams per cubic metre	1

POINT 19

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Nitrogen Oxides	milligrams per cubic metre	86			
Solid Particles	milligrams per cubic metre	20			

L3.6 Water and/or Land Concentration Limits

POINT 1

Pollutant	Units of Measure	50%Limit	90%Limit	98.5%Limit	100 percentile concentration limit
Copper	micrograms per litre				5
Iron	micrograms per litre				300
Selenium	micrograms per litre				2
Temperature	degrees Celsius			35	37.5

POINT 2

Pollutant	Units of Measure	50%Limit	90%Limit	98.5%Limit	100 percentile concentration limit
pH	pH				6.5-9.5
Total suspended solids	milligrams per litre				50

Note: (1)

The 98.5% limit specified for the pollutant 'Temperature' at Point 1 means during normal electricity supply conditions, cooling water may be discharged over 35°C but up to a maximum temperature of 37.5°C for up to 131 hours over the reporting period.

Environment Protection Licence

Licence - 1429



(2)

An additional 69 hours are allocated under the shortfall of electricity supply conditions as per Special Condition E1.3.

(3)

The 100% limit specified for the pollutant 'Temperature' at Point 1 means cooling waters may never exceed a maximum temperature of 37.5°C without the consent of AEMO as per Special Condition E1.6.

- L3.7 The reference basis for all the air pollutants specified in condition L3.5 for points 11, 12, 13 and 14 are: dry, 273 K, 101.3 kPa and 7% O₂.

L4 Volume and mass limits

- L4.1 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.

Point	Unit of Measure	Volume/Mass Limit
1	megalitres per day	11000
3	kilolitres per day	250
20	megalitres per day	150

L5 Waste

- L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.
- L5.3 The following wastes generated on the premises may be disposed of to the ash dam or within the ash dam catchment:
- a) ash;
 - b) dead sea grass and silt, natural lake silt and shells, silt removed from settlement basins on the premises, coal, fines from settlement basins and conveyor wash-down on the premises, boiler chemical cleaning residues and rinse water, saline solutions from the water reclamation plant (including ferrous chloride used for phosphorous removal), water polishing plant residues and rinse waters, de-oiled fresh water, used fabric filters, mine dewatering from Awaba State Mine;
 - c) any material approved in writing by the EPA to control dust emission from the ash dam; and
 - d) any material approved in writing by the EPA.

Environment Protection Licence

Licence - 1429



L6 Potentially offensive odour

- L6.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

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.

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 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.
- O3.3 Trucks entering and leaving the premises that are carrying loads of dust generating materials must have their loads covered at all times, except during loading and unloading.

O4 Effluent application to land

- O4.1 Effluent application must not occur in a manner that causes surface runoff.
- O4.2 Spray from effluent application must not drift beyond the boundary of the premises.

Environment Protection Licence

Licence - 1429



- O4.3 Adequate notices, warning the public not to drink or otherwise use the treated effluent, must be erected on the site. These notices must be legible English and in any other languages as may be necessary, and must indicate at least that the water in use is "Reclaimed Water - Unfit for Drinking".
- O4.4 The quantity of effluent/solids applied to the utilisation area must not exceed the capacity of the area to effectively utilise the effluent/solids.

For the purpose of this condition, 'effectively utilise' include the use of the effluent/solids for pasture or crop production, as well as the ability of the soil to absorb the nutrient, salt, hydraulic load and organic material.

O5 Emergency response

- O5.1 The licensee must maintain, and implement as necessary, a current emergency response plan for the premises. The licensee must keep the emergency response plan on the premises at all times. The emergency 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. If a current emergency response plan does not exist at the date on which this condition is attached to the licence, the licensee must develop an emergency response plan within three months of that date.

O6 Processes and management

- O6.1 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.
- O6.2 Bunds must:
- a) have walls and floors constructed of impervious materials;
 - b) be of sufficient capacity to contain 110% of the volume of the tank (or 110% volume of the largest tank where a group of tanks are installed);
 - c) have floors graded to a collection sump; and
 - d) not have a drain valve incorporated in the bund structure,

or be constructed and operated in a manner that achieves the same environmental outcome.

O7 Waste management

- O7.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the EPA's Waste Classification Guidelines as in force from time to time.
- O7.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O8 Other operating conditions

Environment Protection Licence

Licence - 1429



- O8.1 Only Silifax D1760 or anti-foaming agent(s) approved in writing by the EPA may be used to control floating foam on the cooling water discharge canal.
- O8.2 Ferrous chloride may be added to the condenser cooling water.
- O8.3 Sawdust derived from untreated timber may be added to the condenser cooling water at a rate not exceeding 10 cubic meters per year.
- O8.4 Except under emergency conditions, any overflow from the ash dam must be discharged via the cooling water outlet canal to Discharge Point 1.
- O8.5 Boiler blowdown may be discharged to the cooling water system.
- O8.6 Uncontaminated surface runoff from the site may be discharged to the cooling water system.
- O8.7 Overflow from the coal fines settling pond as a result of rainfall may discharge to the cooling water system.
- O8.8 Under emergency conditions the overflow from the ash dam may be discharged via Crooked Creek and Discharge Point 2. Any such discharge must be reported to the EPA as soon as practicable after the discharge commences and the licensee must provide a written report that addresses the requirements of condition R3.3 of this licence within seven days of the date on which the discharge commenced.
- O8.9 Water from the ash dam toe drains must be collected and returned to the ash dam. Under emergency conditions the toe drain water may be discharged via Discharge Point 17. Any such discharge must be reported to the EPA as soon as practicable after the discharge commences and the licensee must provide a written report that addresses the requirements of condition R3.3 of this licence within seven days of the date on which the discharge commenced.
- O8.10 Effluent from the Myuna Bay Sport and Recreation Camp may be received for treatment at the sewage treatment plant located on the premises.
- O8.11 Treated sewage effluent may be received for processing at the water reclamation plant located on the premises for the purpose of meeting the power station's water requirements.
- O8.12 The following fuels may be used in the power station for station start-up and combustion support provided that they comply with the specification set out in this licence:
 - a) Distillate / heating oils
 - b) Distillate / heating oils blended with refined oil additives
- O8.13 The licensee must sample and analyse sufficient samples of fuel received on the premise to assess whether the fuel complies with the specifications in this licence.
- O8.14 Fuel oils containing Polychlorinated biphenyls (PCB's) are not permitted to be used in the power station.
- O8.15 Coal and alternative liquid fuels must not be burnt in the electricity generating works unless they comply with the specifications below:
 - a) Coal fuels must not be burnt in the electricity generating works unless they contain concentrations of Sulphur that do not exceed the 100 percentile Concentration Limit of 0.5 (% by weight) as a monthly

Environment Protection Licence

Licence - 1429



average (8% H₂O).

b) Alternative liquid fuels must not be burnt in the electricity generating works unless they contain concentrations of Sulphur that do not exceed the 100 percentile Concentration Limit of 0.5 (% by weight) as a monthly average.

O8.16

COAL - Impurity	Units of measure	100% Concentration Limit (Monthly Av. 8% H ₂ O)
Sulphur	% by weight	0.5

O8.17

LIQUID FUELS -Impurity	Units of measure	100% Concentration Limit(Monthly Average)
Sulphur	% by weight	0.5

O8.18 Distillate / heating oils and distillate refined oil blends burnt in the power station must comply with the specifications in Table 1.

TABLE 1.-Characteristic of Fuel	Limit	Test Method
AG	less than 10ppm by weight	
As	less than 10ppm by weight	Pre-treatment method USEPA
Be	less than 10ppm by weight	200.2(waters)
CD	less than 5ppm by weight	
Cr(total)	less than 30ppm by weight	Pre-treatment method
Co	less than 10ppm by weight	HNO ₃ /H ₂ O ₂ (Oils/Organic matrices)
Cu	less than 50ppm by weight	
Hg	less than 10ppm by weight	
Mn	less than 50ppm by weight	
Mo	less than 50ppm by weight	
Ni	less than 50ppm by weight	Analysis
Pb	less than 50ppm by weight	ALPHA 20th Ed under part 3000
Sb	less than 15ppm by weight	
Se	less than 15ppm by weight	
Sn	less than 40ppm by weight	
V	less than 40ppm by weight	
Polychlorinated biphenyls	less than 2ppm by weight	USEPA 8081A
Energy	10 - 48 MJ per Kg	AS1038.5

Environment Protection Licence

Licence - 1429



Sulphur (total)	less than 0.5% by weight	AS1038.6.2
Flourine (total)	less than 0.05% by weight	AS1038.10.4D(2001)
Chlorine (total)	less than 0.50% by weight	AS1038.8.2

O8.19 Alternative Fuel Burning Trial – Source Emission Testing

Any distillate / heating oil or distillate refined oil blend that complies with the specifications in Table 2 may be burnt for the purpose of undertaking emission monitoring trials in accordance with monitoring specified in this licence.

TABLE 2. - Characteristic of Fuel	Limit	Test Method
Ag	less than 10ppm by weight	Pre-treatment method USEPA
As	less than 50ppm by weight	200.2 (waters)
Be	less than 50ppm by weight	
Cd	less than 20ppm by weight	Pre-treatment method HNO ₃ /H ₂ O ₂ (Oils/Organic matrices)
Cr (total)	less than 100ppm by weight	
Co	less than 50ppm by weight	
Cu	less than 100ppm by weight	
Hg	less than 20ppm by weight	
Mn	less than 250ppm by weight	Analysis
Mo	less than 200ppm by weight	ALPHA 20th Ed under part 3
Ni	less than 250ppm by weight	
Pb	less than 200ppm by weight	
Sb	less than 50ppm by weight	
Se	less than 50ppm by weight	
Sn	less than 100ppm by weight	
V	less than 150ppm by weight	
Polychlorinated biphenyls	less than 2ppm by weight	USEPA 8081A
Energy	10 - 48 MJ per Kg	AS1038.5
Sulphur (total)	less than 1.10% by weight	AS1038.6.3.2
Flourine (total)	less than 0.05% by weight	AS1038.10.4 (2001)
Chlorine (total)	less than 0.50% by weight	AS1038.8.2 (1996)

O8.20 Distillate may be used for the firing of the emergency turbine generator for the purpose of:

- a) Providing black-start capability to Eraring Power Station or at the direction of the Australian Electricity Market Operator (currently AEMO); and
- b)

Environment Protection Licence

Licence - 1429



Operating the emergency turbine generator up to a maximum of 200 hours per year

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.

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 11,12,13,14

Pollutant	Units of measure	Frequency	Sampling Method
Cadmium	milligrams per cubic metre	Yearly	TM-14
Carbon dioxide	percent	Yearly	TM-24
Carbon monoxide	parts per million	Yearly	OM-1
Chlorine	milligrams per cubic metre	Yearly	TM-7 & TM-8
Copper	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14
Dry gas density	kilograms per cubic metre	Yearly	TM-23
Hazardous substances	milligrams per cubic metre	Yearly	TM-12, TM-13 & TM-14
Hydrogen chloride	milligrams per cubic metre	Yearly	TM-8
Mercury	milligrams per cubic metre	Yearly	TM-14

Environment Protection Licence

Licence - 1429



Moisture	percent	Yearly	TM-22
Molecular weight of stack gases	grams per gram mole	Yearly	TM-23
Nitrogen Oxides	milligrams per cubic metre	Continuous	CEM-2
Solid Particles	milligrams per cubic metre	Yearly	TM-15
Sulphur dioxide	milligrams per cubic metre	Continuous	CEM-2
Temperature	degrees Celsius	Yearly	TM-2
Total Fluoride	milligrams per cubic metre	Yearly	TM-9
Undifferentiated Particulates	milligrams per cubic metre	Continuous	CEM-1
Velocity	metres per second	Yearly	TM-2
Volatile organic compounds	parts per million	Yearly	TM-34
Volumetric flowrate	cubic metres per second	Yearly	TM-2

POINT 15

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen dioxide	parts per hundred million	Continuous	AM-12
Sulphur dioxide	parts per hundred million	Continuous	AM-20

POINT 16

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen dioxide	parts per hundred million	Continuous	AM-12
Sulphur dioxide	parts per hundred million	Continuous	AM-20

POINT 18,25,26,27

Pollutant	Units of measure	Frequency	Sampling Method
Particulates - Deposited Matter	grams per square metre per month	Continuous	AM-19

POINT 19

Pollutant	Units of measure	Frequency	Sampling Method
Carbon dioxide	percent	Yearly	TM-24
Dry gas density	kilograms per cubic metre	Yearly	TM-23
Moisture	percent	Yearly	TM-22
Molecular weight of stack gases	grams per gram mole	Yearly	TM-23
Nitrogen Oxides	milligrams per cubic metre	Continuous	CEM-2

Environment Protection Licence

Licence - 1429



Oxygen (O ₂)	percent	Yearly	TM-25
Solid Particles	milligrams per cubic metre	Yearly	TM-15
Velocity	metres per second	Yearly	TM-2
Volumetric flowrate	cubic metres per second	Yearly	TM-2

M2.3 Ambient air monitoring of pollutants for reporting purposes must include "averaging periods" as stipulated at Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (2005).

M2.4 Water and/ or Land Monitoring Requirements

POINT 1

Pollutant	Units of measure	Frequency	Sampling Method
Copper	micrograms per litre	Quarterly	Grab sample
Iron	micrograms per litre	Quarterly	Grab sample
Selenium	micrograms per litre	Quarterly	Grab sample
Temperature	degrees Celsius	Continuous	In line instrumentation

POINT 2

Pollutant	Units of measure	Frequency	Sampling Method
pH	pH	Each overflow event	Grab sample
Selenium	micrograms per litre	Each overflow event	Grab sample
Total suspended solids	milligrams per litre	Each overflow event	Grab sample

POINT 8

Pollutant	Units of measure	Frequency	Sampling Method
Copper	micrograms per litre	Quarterly	Grab sample
Iron	micrograms per litre	Quarterly	Grab sample
Selenium	micrograms per litre	Quarterly	Grab sample
Temperature	degrees Celsius	Daily	In line instrumentation

POINT 10

Pollutant	Units of measure	Frequency	Sampling Method
Cadmium	micrograms per litre	Quarterly	Grab sample
Copper	micrograms per litre	Quarterly	Grab sample
Iron	micrograms per litre	Quarterly	Grab sample
Lead	micrograms per litre	Quarterly	Grab sample
Manganese	micrograms per litre	Quarterly	Grab sample

Environment Protection Licence

Licence - 1429



Nitrate + nitrite (oxidised nitrogen)	micrograms per litre	Monthly	Grab sample
pH	pH	Quarterly	Grab sample
Phosphorus (total)	micrograms per litre	Monthly	Grab sample
Reactive Phosphorus	micrograms per litre	Monthly	Grab sample
Selenium	micrograms per litre	Quarterly	Grab sample
Total suspended solids	milligrams per litre	Monthly	Grab sample
Zinc	micrograms per litre	Quarterly	Grab sample

POINT 17

Pollutant	Units of measure	Frequency	Sampling Method
Cadmium	micrograms per litre	Quarterly	Grab sample
Copper	micrograms per litre	Quarterly	Grab sample
Iron	micrograms per litre	Quarterly	Grab sample
Lead	micrograms per litre	Quarterly	Grab sample
Manganese	micrograms per litre	Quarterly	Grab sample
Nitrate + nitrite (oxidised nitrogen)	micrograms per litre	Monthly	Grab sample
pH	pH	Quarterly	Grab sample
Phosphorus (total)	micrograms per litre	Monthly	Grab sample
Selenium	micrograms per litre	Quarterly	Grab sample
Zinc	micrograms per litre	Quarterly	Grab sample

POINT 21,22,23,24

Pollutant	Units of measure	Frequency	Sampling Method
Arsenic	micrograms per litre	Every 6 months	Representative sample
Cadmium	micrograms per litre	Every 6 months	Representative sample
Calcium	micrograms per litre	Every 6 months	Representative sample
Chromium	micrograms per litre	Every 6 months	Representative sample
Copper	micrograms per litre	Every 6 months	Representative sample
Electrical conductivity	microsiemens per centimetre	Every 6 months	Representative sample
Iron	micrograms per litre	Every 6 months	Representative sample
Lead	micrograms per litre	Every 6 months	Representative sample
Magnesium	micrograms per litre	Every 6 months	Representative sample
Manganese	micrograms per litre	Every 6 months	Representative sample
Nickel	micrograms per litre	Every 6 months	Representative sample
pH	pH	Every 6 months	Representative sample
Potassium	micrograms per litre	Every 6 months	Representative sample
Selenium	micrograms per litre	Every 6 months	Representative sample
Standing Water Level	metres	Every 6 months	In situ
Zinc	micrograms per litre	Every 6 months	Representative sample

Environment Protection Licence

Licence - 1429



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:
- a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
 - b) 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
 - c) 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 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 **Division 3** of the **Protection of the Environment Operations (General) Regulations 2009** requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the testing methods set out in relevant load calculation protocol for the fee-based activity classification listed in condition A1.1.
- M3.4 Samples taken pursuant to a requirement in this licence to monitor the volume, mass or concentration of pollutants, must be analysed and reported in accordance with the laboratory accreditation requirements set out in section 2.1.3 of the Load Calculation Protocol.

The Load Calculation Protocol is the Protocol referred to in Division 3 of the Protection of the Environment Operations (General) Regulation 2009. A copy of the Protocol was published in the Government Gazette on 26 June 2009 and can be purchased from the EPA or viewed at <http://www.environment.nsw.gov.au/licensing/lblprotocol/index.htm>

M4 Testing methods - load limits

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.

Environment Protection Licence

Licence - 1429



M5 Environmental monitoring

M5.1 Not less than two (2) water quality surveys, as specified below, must be conducted in Lake Macquarie during each quarter of the reporting period. The surveys must be scheduled so that there are at least two (2) surveys in each season. For each of the points 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 and sample at the frequency specified opposite in the other columns.

POINTS 4,5,6,7 - POLLUTANT	FREQUENCY	SAMPLING METHOD
Dissolved Oxygen	At least two (2) surveys per three (3) month period with a minimum of four (4) weeks between each survey.	Measured at 0.1 metres below the surface, 0.5 metres below the surface and thereafter at 1.0 metre intervals to the bottom.
Temperature	At least two (2) surveys per three (3) month period with a minimum of four (4) weeks between each survey.	Measured at 0.1 metres below the surface, 0.5 metres below the surface and thereafter at 1.0 metre intervals to the bottom.
Salinity	At least two (2) surveys per three (3) month period with a minimum of four (4) weeks between each survey.	Measured at 0.1 metres below the surface, 0.5 metres below the surface and thereafter at 1.0 metre intervals to the bottom.
Water Quality	At least two (2) surveys per three (3) month period with a minimum of four (4) weeks between each survey.	Using a Secchi disk.
Zooplankton - total count	At least two (2) surveys per three (3) month period with a minimum of four (4) weeks between each survey.	Sampling may be preserved and counted annually. Samples must be preserved and retained for species identification if required by EPA.

M6 Weather monitoring

M6.1 For each monitoring point specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other column.

POINT 16 - Parameter	Units of Measure	Averaging Period	Frequency	Sampling Method
Wind Speed @ 10m	m/s	1 hour	Continuously	AM-2 & AM-4
Wind Direction @ 10m	°	1 hour	Continuously	AM-2 & AM-4
Sigma Theta @ 10m	°	1 hour	Continuously	AM-2 & AM-4
Ambient Temperature @ 2m	° C	1 hour	Continuously	AM-4

Environment Protection Licence

Licence - 1429



Ambient Temperature @ 10m	° C	1 hour	Continuously	AM-4
Rainfall	mm/hr	1 hour	Continuously	AM-4
Solar Radiation	W/m ²	1 hour	Continuously	AM-4
Additional Requirements				
Sitting				AM-1 & AM-4
Measurement				AM-2 & AM-4

M7 Recording of pollution complaints

- M7.1 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.
- M7.2 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.
- M7.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M7.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M8 Telephone complaints line

- M8.1 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.
- M8.2 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.
- M8.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.
- M8.4 The licensee must nominate to the EPA a single telephone number for the purpose of the EPA contacting the licensee to provide immediate assistance or response during emergencies or any other incidents at the premises. The telephone number must be current at all times.
The nomination must be provided to the EPA's Director - Hunter at PO Box 488G, Newcastle NSW 2300.
Note: This condition does not apply until two (2) weeks after the date of issue of the Notice adding this condition to the licence.

Environment Protection Licence

Licence - 1429



M9 Requirement to monitor volume or mass

M9.1 For each discharge point or utilisation area specified below, the licensee must monitor:

- the volume of liquids discharged to water or applied to the area;
- the mass of solids applied to the area;
- the mass of pollutants emitted to the air;

at the frequency and using the method and units of measure, specified below.

POINT 1

Frequency	Unit of Measure	Sampling Method
Continuous	megalitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 17

Frequency	Unit of Measure	Sampling Method
Continuous	megalitres per day	Special Method 1

POINT 20

Frequency	Unit of Measure	Sampling Method
Daily	megalitres per day	In line instrumentation

M9.2 For the purpose of the table(s) above, Special Method 1 means "In Line Instrumentation". If In Line Instrumentation is not available, alternative "By Calculation".

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 a copy of the form that must be completed and returned to the EPA.

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.

Environment Protection Licence

Licence - 1429



- 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 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:
- a) the assessable pollutants for which the actual load could not be calculated; and
 - b) the relevant circumstances that were beyond the control of the licensee.
- R1.7 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.
- R1.8 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.
- R1.9 The information collected in accordance with condition M4.1 of this licence must be submitted to the EPA with the Annual Return for the reporting period.
- R1.10 The licensee must submit a report to the EPA's Manager Hunter Region that outlines each occurrence of operation of the emergency turbine generator and the reason for each occurrence of operation. This report must be submitted as part of the Annual Return.
- R1.11 The licensee must report with the Annual Return what volume of distillate was burnt at the Emergency Turbine Generator during the reporting period.
- R1.12 For any specified pollutant required to be continuously monitored for points 11, 12, 13 and 14 the licensee must produce an air emission exceedence report if the concentration of that pollutant any anytime exceeds the following level.

Sulphur dioxide at any time exceeds 600 ppm.

Environment Protection Licence

Licence - 1429



Within seven (7) days of the licensee becoming aware of the exceedence of the limits specified in this condition, a written report must be sent to the EPA's Regional Manager Hunter and must include the following:

- a)
details of the date and time of the exceedence;
- b)
the duration of the exceedence; and
- c)
the reason(s) for the exceedence.

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 the incident occurred.

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
 - 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

Environment Protection Licence

Licence - 1429



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 reporting conditions

- R4.1 The licensee must submit a detailed report to the EPA's Manager Hunter Region that outlines the results of an investigation into providing gas fuel for the emergency turbine generator. While distillate fuel is used, the licensee must clearly justify in the report why gas is not a practical or economically viable alternative.

Submission Date: With the annual return on a two-yearly frequency. The first report is to be submitted with the annual return for the 2011/12 reporting period.

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
Civil diversion works	Civil diversion works to reduce stormwater flows into the ash dam. Reduced possibility of overflows and resultant discharges of selenium.	30-June-2006
Audit of emission monitoring points	Audit of emission monitoring points. Improved reliability of reported monitoring results.	31-December-2003
PRP 3 - Replace CEMS with Complying Instruments	Replace CEMS with complying instruments. Improved reliability of reported monitoring results.	31-December-2004

Environment Protection Licence

Licence - 1429



PRP 4 - Seagrass Monitoring Program	Seagrass monitoring program with primary aim to monitor seagrass distribution in southern end of Lake Macquarie (Mynua Bay) and determine if any thermal effects of cooling water discharge impacts seagrass community.	31-August-2016
-------------------------------------	---	----------------

8 Special Conditions

E1 Discharge of Cooling Waters into Lake Macquarie

- E1.1 For the purpose of these special conditions pending shortfall of electricity supply means that the Australian Electricity Market Operator (AEMO) two hour ahead dispatch spot price for electricity in any half hour period exceeds \$300 per megawatt hour.

Normal electricity supply means the Australian Electricity Market Operator (AEMO) two hour ahead dispatch spot price for electricity in any half hour period is less than \$300 per megawatt hour.

- E1.2 In the event that the licensee exceeds the 98.5 percentile temperature limit specified under licence condition L3 of this licence in any reporting period the licensee must advise the EPA. The EPA must be advised on a weekly basis every day such an exceedence occurs.
- E1.3 In the further event of a pending shortfall of electricity supply to meet the demand for electricity, the licensee may exceed the cooling water discharge temperature limit of 35°C at discharge Point 1 for an additional **69** hours per reporting period.
- E1.4 The temperature of cooling water discharged via Point 1 must never exceed 37.5°C.
- E1.5 These special conditions only apply to 31 August 2021.
- E1.6 Not-with-standing the requirements of Special Conditions E1.1, E1.2, E1.3 and E1.4, in the event that the AEMO, or a person authorised by the AEMO, directs the licensee, under the National Electricity Rules, to maintain, increase or be available to increase power generation for system security, the licensee may exceed the maximum operating hours, above 35°C and the maximum temperature specified in condition L3.1 for discharge point 1.

When the direction is revoked by the AEMO, or a person authorised by the AEMO, the licensee must, as soon as practicable, run down the cooling water discharge temperature to within the limits specified in condition L3.1.

In the event that the licensee receives a direction from the AEMO, and exceeds the limits specified in condition L3.1, the licensee must notify the EPA in writing, as soon as practicable, of the time and date the direction was given by the AEMO and the period of time that the limits specified in condition L3.1 were exceeded.

Note: The EPA may vary the licence temperature conditions after 31 August 2021 following its review of the thermal impacts studies required by PRP4 and condition E2.

Environment Protection Licence

Licence - 1429



E2 Seagrass Monitoring Program

- E2.1 The licensee must implement and maintain on a three yearly basis a Seagrass Monitoring Program approved in writing by the EPA.
- E2.2 Every three years, the licensee must submit, with the Annual Return, a Seagrass Monitoring Program Report that includes, but not necessarily limited to:
- (a) Provision of the data, analysis and conclusions of the Seagrass Monitoring Program required under the above condition.
 - (b) Comparison and discussion of data collected since the commencement of the Seagrass Monitoring Program in February 2011, and any other relevant and/or previous studies.
- E2.3 If the Seagrass Monitoring Program required under the above conditions identifies observed changes that indicates a reduction in seagrass areas, where these changes are likely to be attributed to the licensed activities, the licensee must prepare a report that details the following.
- (a) A description of ameliorative measures, including the timeframe for the implementation of management actions; and
 - (b) In the case where impacts are unavoidable, a description of how the impacts will be offset.

The report is to be submitted to the EPA's Director - Hunter at PO Box 488G, Newcastle NSW 2300, or by email to hunter.region@epa.nsw.gov.au, within three months of providing the Seagrass Monitoring Program Report required under the above condition.

E3 Continuous Emissions Monitoring Instruments

- E3.1 Any new continuous emission monitoring instruments installed on the premises for the purpose of monitoring emissions to atmosphere must comply with ***"Approved methods of the sampling and analysis of air pollutants in New South Wales"***, or such other methods that may be approved by the EPA.

E4 Emergency Groundwater Discharge

- E4.1 The licensee may extract groundwater (associated with the seep occurring at the premises, which is understood to be from the Awaba underground colliery) from the groundwater dewatering bores to the west of the High Level Inlet Canal and discharge it to the Outlet Canal during the operation of the power station until FRIDAY 27 OCTOBER 2017.

The licensee must not discharge the extracted groundwater to the Outlet Canal during a Station maintenance outage.

Note: During a Station maintenance outage, extracted groundwater may be discharged to the Ash Dam in accordance with licence condition L5.3(b).

- E4.2 The licensee must monitor the quality of the groundwater it extracts from the dewatering bores (to the

Environment Protection Licence

Licence - 1429



west of the High Level Inlet Canal) and discharges to the Outlet Canal. Monitoring must be undertaken for the parameters listed in Table 6 of the report titled *'Revised Modelling of Seep water Diverted & Discharged to Outlet Canal'*, prepared by Jacobs, dated 11 April 2017 ("the Report"). The monitoring must be undertaken:

- (a) Within two days of first commencing the discharge; and
- (b) Monthly for the duration of the discharge.

The licensee must compare the monitoring results against the average bore results presented in Table 6 of the Report, and notify the EPA's Director - Hunter by email to hunter.region@epa.nsw.gov.au if the monitoring results exceed the average results presented in Table 6 of the Report by more than 20%. The notification must be provided within three days of the licensee obtaining the monitoring results.

Environment Protection Licence

Licence - 1429



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

Environment Protection Licence

Licence - 1429



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> .

Environment Protection Licence

Licence - 1429



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 Grahame Clarke

Environment Protection Authority

(By Delegation)

Date of this edition: 06-June-2000

Environment Protection Licence

Licence - 1429



End Notes

- 1 Licence varied by notice V/M upgrade, issued on 07-Jul-2000, which came into effect on 07-Jul-2000.
- 2 Licence transferred through application 140098, approved on 30-Nov-2000, which came into effect on 02-Aug-2000.
- 3 Licence varied by notice 1003063, issued on 07-Dec-2000, which came into effect on 19-Dec-2000.
- 4 Licence varied by notice 1007825, issued on 18-Jul-2001, which came into effect on 12-Aug-2001.
- 5 Licence varied by notice 1016571, issued on 27-Oct-2003, which came into effect on 21-Nov-2003.
- 6 Licence varied by notice 1042247, issued on 16-Feb-2005, which came into effect on 13-Mar-2005.
- 7 Licence varied by notice 1053525, issued on 05-Dec-2005, which came into effect on 30-Dec-2005.
- 8 Licence varied by notice 1066065, issued on 01-Nov-2006, which came into effect on 01-Nov-2006.
- 9 Licence varied by notice 1067535, issued on 28-Mar-2007, which came into effect on 28-Mar-2007.
- 10 Licence varied by notice 1079689, issued on 01-Nov-2007, which came into effect on 01-Nov-2007.
- 11 Licence varied by notice 1080433, issued on 18-Jan-2008, which came into effect on 18-Jan-2008.
- 12 Licence fee period changed by notice 1082099 approved on .
- 13 Licence varied by notice 1086281, issued on 09-May-2008, which came into effect on 09-May-2008.
- 14 Licence varied by notice 1088978, issued on 01-Aug-2008, which came into effect on 01-Aug-2008.
- 15 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 16 Licence varied by notice 1093910, issued on 13-Nov-2008, which came into effect on 13-Nov-2008.
- 17 Licence varied by notice 1096239, issued on 24-Dec-2008, which came into effect on 24-Dec-2008.
- 18 Licence varied by notice 1098000, issued on 27-Mar-2009, which came into effect on 27-Mar-2009.

Environment Protection Licence

Licence - 1429



- | | |
|----|---|
| 19 | Licence varied by notice 1102931, issued on 30-Jun-2009, which came into effect on 30-Jun-2009. |
| 20 | Licence varied by admin corrections to annual return, issued on 02-Jul-2009, which came into effect on 02-Jul-2009. |
| 21 | Licence varied by correction to Annual Return record, issued on 02-Dec-2009, which came into effect on 02-Dec-2009. |
| 22 | Licence varied by notice 1117447, issued on 22-Nov-2010, which came into effect on 22-Nov-2010. |
| 23 | Licence varied by notice 1128029, issued on 13-Jul-2011, which came into effect on 13-Jul-2011. |
| 24 | Licence varied by notice 1502813 issued on 19-Jan-2012 |
| 25 | Licence varied by notice 1513558 issued on 04-Jul-2013 |
| 26 | Licence format updated on 11-Nov-2015 |
| 27 | Licence varied by notice 1544589 issued on 26-Sep-2016 |
| 28 | Licence varied by notice 1545609 issued on 08-Dec-2016 |
| 29 | Licence varied by notice 1548389 issued on 17-Jan-2017 |
| 30 | Licence varied by notice 1549289 issued on 10-Feb-2017 |
| 31 | Licence varied by notice 1551505 issued on 28-Apr-2017 |