

# Licence Variation

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Licence - 1429



Office of  
Environment  
& Heritage

ERARING ENERGY

ABN 31 357 688 069

PO BOX 5044

DORA CREEK NSW 2264

Attention: Mr John Kennedy

Notice Number      1502813  
File Number        270758  
Date                  19-Jan-2012

## NOTICE OF VARIATION OF LICENCE NO. 1429

### BACKGROUND

- A. ERARING ENERGY ("the licensee") is the holder of Environment Protection Licence No. 1429 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at 3 & 28 ROCKY POINT ROAD AND 45 POINT PIPER ROAD, ERARING, NSW, 2264 ("the premises").
- B. On 30-Sep-2011 the EPA received an application for the variation of the licence.
- C. The licensee has requested a temporary variation to EPL1429 in order to trial a chemical product infusion into condenser cooling waters.  
**Mexel 432® (the product) is a non-oxidant, tensioactive emulsion with dispersant properties. National and International trials have been successful in the prevention of micro and macro fouling, scaling, corrosion, bio-life and mud incursion in saline cooling water power plants.**
- D. The licensee requires variation to condition O3.2 in the form of an approval to inject the product into the Steam Feed Turbine Pump (**SFTP**) condenser cooling water for a trial period of 90 consecutive days.
- E. The licensee will conduct daily grab sampling at the ER03 condenser outlets fifteen(15) minutes after commencing introduction of Mexel 432, this sampling must be analysed for Copper and Mexel 432.
- F. The variation will refer to the rate and method of injection and daily duration of treatment as '*conditions of use*' this is defined by the Australian Pesticides and Veterinary Medicines Authority (APVMA) permit number 13007.
- G. The licensee is to forward a complete assessment of the trial results to EPA Regional Manager – Hunter at PO Box 488G, Newcastle NSW 2300 when determined or otherwise within 1 month of the trial completion date.
- H. The licensee will ensure the process is confined to Generating Unit 3 as defined in variation application dated 30 September 2011.

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- I. The licensee will inform in writing EPA Regional Manager - Hunter at PO Box 488G Newcastle NSW 2300 14 days prior to trial initiation date.
- J. The EPA choose not to vary condition O3.2 but to add condition O5.21.
- K. The computer system used by the EPA to store and process licences has been upgraded. Some changes to the format of the licence may have occurred as a result of the upgrade. Conditions that were previously recorded as "not applicable" have been removed from the licence. These upgrades are not intended to change the substance of the licence.
- L. The variation will not authorise a significant increase in environmental impact by the activity authorised or controlled by the licence.

## VARIATION OF LICENCE NO. 1429

- 1. By this notice the EPA varies licence No. 1429. The attached licence document contains all variations that are made to the licence by this notice.
- 2. The following variation has been made to the licence:
  - Mexel 432 may be added to the condenser cooling water only in accordance with the conditions of O5.21.
  - Emergency response has been included at Condition 04.1.

.....  
**Mark Hartwell**  
**Acting Unit Head**  
**North East - Hunter**  
(by Delegation)

## INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (<http://www.environment.nsw.gov.au/prpoeo/index.htm>) in accordance with section 308 of the Act.

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## **Appeals against this decision**

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

## **When this notice begins to operate**

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

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Licence Details	
Number:	1429
Anniversary Date:	01-July

Licensee
ERARING ENERGY
PO BOX 5044
DORA CREEK NSW 2264

Premises
ERARING POWER STATION
3 & 28 ROCKY POINT ROAD AND 45 POINT PIPER ROAD
ERARING NSW 2264

Scheduled Activity
Electricity Generation

Fee Based Activity	Scale
Generation of electrical power from coal	> 4000 Gwh generated
Generation of electrical power otherwise than from coal, diesel or gas	0-250 Gwh generated

Region
North East - 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

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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); and
- 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:

ERARING ENERGY
PO BOX 5044
DORA CREEK NSW 2264

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
Electricity Generation	Generation of electrical power from coal	> 4000 Gwh generated
Electricity Generation	Generation of electrical power otherwise than from coal, diesel or gas	0 - 250 Gwh generated

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

A2.1 The licence applies to the following premises:

Premises Details
ERARING POWER STATION
3 & 28 ROCKY POINT ROAD AND 45 POINT PIPER ROAD
ERARING
NSW 2264
LOT 3/8 DP 6747, LOT 13/16 DP 6747, PART LOT 13/16 DP 6747, LOT 11 DP 105120, LOT 7/16 DP 262501, LOT 301 DP 806475, LOT 302 DP 806475

### A3 Other activities

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

Ancillary Activity
Chemical Storage Facilities
Coal Works
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:

a) the applications for any licences (including former pollution control approvals) which this licence

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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	Air emissions monitoring - Stack discharge to air	Air emissions monitoring - Stack discharge to air	Boiler 1 stack discharge point
12	Air emissions monitoring - Stack discharge to air	Air emissions monitoring - Stack discharge to air	Boiler 2, stack discharge point
13	Air emissions monitoring - stack discharge to air	Air emissions monitoring - stack discharge to air	Boiler 3 discharge to stack
14	Air emissions monitoring - stack discharge to air	Air emissions monitoring - stack discharge to air	Boiler 4 discharge to stack
15	Ambient air monitoring		Ambient air monitoring station at Marks Point primary school
16	Ambient air monitoring		Ambient air monitoring station at Dora Creek - alongside oval at Dora Creek
18	Ambient air monitoring		Depositional dust monitoring at not less than six sites located within 1 kilometre of coal handling operations having regard to seasonal wind conditions and any sensitive receptors.
19	Air emissions monitoring Discharge to air	Air emissions monitoring Discharge to air	Emergency Turbine Generator Stack

P1.2 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.

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

<i>Water and land</i>			
EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Effluent quality and volume monitoring Discharge to waters	Effluent quality and volume monitoring Discharge to waters	Cooling water outlet canal to Myuna Bay

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2	Emergency discharge to waters	Emergency discharge to waters	The emergency ash dam outlet at the culvert under Main Road 217
3		Discharge to utilisation area	Final pond in Pasveer sewage system discharging to utilisation area adjacent to sewage treatment works
4	Ambient water monitoring		The waters of Lake Macquaire located midway between cooling water inlet and Hungary Point.
5	Ambient water monitoring		The waters of Lake Macquaire located off old Wangi power station inlet point in Myuna Bay
6	Ambient water monitoring		The waters of Lake Macquaire located at the Eraring/Vales Point mixing zone off Fishery Point
7	Ambient water monitoring		The northern waters of Lake Macquarie east of Lake Macquarie Yacht Club
8	Water monitoring		Inlet canal of the cooling water intake from Lake Macquaire
10	Effluent quality monitoring		Discharge point below siphon pond weir at Ash Dam.
17	Effluent quality monitoring Emergency discharge to waters	Effluent quality monitoring Emergency discharge to waters	Emergency discharge to toe drain collection pond
20	Volume monitoring		Discharge pipes from the Ash Dam prior to entering the 'Glory Hole' section of the outlet canal.

## 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)	
Benzo(a)pyrene (equivalent) (Air)	
Coarse Particulates (Air)	

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Fine Particulates (Air)
Fluoride (Air)
Lead (Air)
Mercury (Air)
Nitrogen Oxides (Air)
Salt (Estuarine Water)
Selenium (Estuarine Water)
Sulfur Oxides (Air)
Total suspended solids (Estuarine Water)

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 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 <sub>3</sub> )	milligrams per cubic metre	100			
Nitrogen Oxides	grams per cubic metre	2.5			
Cadmium	milligrams per cubic metre	1.0			
Mercury	milligrams per cubic metre	1.0			
Solid Particles	milligrams per cubic metre	100			

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Chlorine	milligrams per cubic metre	200
Total Fluoride	milligrams per cubic metre	50
Hazardous substances	milligrams per cubic metre	10

## 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			

## L3.5 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.

(2)

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

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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.

- L3.6 The reference basis for the air pollutants specified in condition L3.4 for points 11, 12, 13 and 14 are as follows:

For Solid particles, dry, 273 K, 101.3 kPa, corrected to 12% CO<sub>2</sub> or equivalent oxygen percentage.

For Sulphuric acid mist (H<sub>2</sub>SO<sub>4</sub>) and/or sulphur trioxide (SO<sub>3</sub>), chlorine (Cl<sub>2</sub>), Hydrogen chloride (HCl), Total Fluoride, Hazardous substances, Cadmium (Cd) and Mercury (Hg): dry, 273 K, 101.3 kPa.

## 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
2	megalitres per day	150
3	kilolitres per day	250

## 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 basin 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;

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- 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.

## **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 Effluent application to land**

- O3.1 Effluent application must not occur in a manner that causes surface runoff.
- O3.2 Spray from effluent application must not drift beyond the boundary of the premises.
- O3.3 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".
- O3.4 The quantity of effluent/solids applied to the utilisation area must not exceed the capacity of the area to effectively utilise the effluent/solids.



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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.

## O4 Emergency response

- O4.1 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.

## O5 Other operating conditions

- O5.1 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.
- O5.2 Ferrous chloride may be added to the condenser cooling water.
- O5.3 Sawdust derived from untreated timber may be added to the condenser cooling water at a rate not exceeding 10 cubic meters per year.
- O5.4 Except under emergency conditions, any overflow from the ash dam must be discharged via the cooling water outlet canal to Discharge Point 1.
- O5.5 Boiler blowdown may be discharged to the cooling water system.
- O5.6 Uncontaminated surface runoff from the site may be discharged to the cooling water system.
- O5.7 Overflow from the coal fines settling pond as a result of rainfall may discharge to the cooling water system.
- O5.8 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.
- O5.9 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.
- O5.10 Effluent from the Myuna Bay Sport and Recreation Camp may be received for treatment at the sewage treatment plant located on the premises.



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O5.11 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.

O5.12 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

O5.13 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.

O5.14 Fuel oils containing Polychlorinated biphenyls (PCB's) are not permitted to be used in the power station.

O5.15 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 average (8% H<sub>2</sub>O).
- 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.

O5.16

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

O5.17

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

O5.18 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

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Co	less than 10ppm by weight	HNO3/H2O2 (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
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

## O5.19 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 HNO3/H2O2(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	

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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)

O5.20 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)  
Operating the emergency turbine generator up to a maximum of 200 hours per year

O5.21 Mexel 432 may be added on a trial basis to the condenser cooling water, at Generating Unit 3 only ("ER03"), at the rate, method and duration defined in "conditions of use" as prescribed on the Australian Pesticide and Veterinary Medicines Authority ("APVMA") permit number PER 13007 and in strict accordance with the product label instructions attached to PER 13007 as Attachment 1 for a period not exceeding 90 consecutive days.

- a) EPA Regional Manager Hunter must be notified in writing **14 days prior to trial commencement date**;
- b) This condition is no longer in effect after the (90 day) from the date notified to EPA Regional Manager Hunter as the commencement date in as required by section a) of this condition;
- c) Daily sampling must be conducted at the ER03 condenser outlets fifteen (15) minutes after introduction of MEXEL 432 commences into the condenser cooling water of ER03;
- d) Each sample collected as required by section c) of this condition must be analysed for Copper and Mexel 432;
- e) Each analysis result must be retained by the licensee for 12 months after the completion of the trial; f) The licensee must engage a suitably qualified and experienced person or company to conduct a complete review of the trial and the analysis results of the trial and prepare a report including but not limited to an assessment of any potential environmental impacts from the trial;
- g) The report required by section f) of this condition and the analysis results required by section d) of this condition must be forwarded to the EPA Regional Manager - Hunter at PO Box 488G Newcastle NSW 2300 **no later than one(1) month** after the trial completion date.

## 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.

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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
Moisture	percent	Yearly	TM-22
Molecular weight of stack gases	grams per gram mole	Yearly	TM-23
Nitrogen Oxides	grams 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

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## 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
Fluoride	micrograms per cubic metre	Continuous	AM-8
Nitrogen dioxide	parts per hundred million	Continuous	AM-12
Sulphur dioxide	parts per hundred million	Continuous	AM-20

## POINT 18

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
Oxygen (O2)	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

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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	milligrams 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
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	micrograms 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

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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

## 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 Environmental monitoring

M4.1 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



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(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.

## M5 Weather monitoring

M5.1 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
Ambient Temperature @ 10m	° C	1 hour	Continuously	AM-4
Rainfall	mm/hr	1 hour	Continuously	AM-4
Solar Radiation	W/m <sup>2</sup>	1 hour	Continuously	AM-4



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Additional Requirements	
Sitting	AM-1 & AM-4
Measurement	AM-2 & AM-4

## M6 Recording of pollution complaints

- M6.1 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.
- M6.2 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.
- M6.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M6.4 The record must be produced to any authorised officer of the EPA who asks to see them.

## M7 Telephone complaints line

- M7.1 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.
- M7.2 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.
- M7.3 The preceding two conditions do not apply until 3 months after:
- a) the date of the issue of this licence or
  - b) if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.

## M8 Requirement to monitor volume or mass

- M8.1 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;

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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	By Calculation (volume flow rate or pump capacity multiplied by operating time)

## POINT 20

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

## 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) a Statement of Compliance; and
- b) a Monitoring and Complaints Summary.

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.

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

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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 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 Statement 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 A person who has been given written approval to certify a certificate of compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review of this licence.
- R1.10 The information collected in accordance with condition M8 of this licence must be submitted to the EPA with the Annual Return for the reporting period.
- R1.11 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.
- R1.12 The licensee must report with the Annual Return how many NSW Greenhouse Abatement Certificates were purchased for the reporting period and what volume of distillate was burnt at the Emergency Turbine Generator during the reporting period.
- R1.13 For any specified pollutant required to be continuously monitored for points 11, 12, 13 and 14 the licensee must produce an air emission exceedance report if the concentration of that pollutant at any time exceeds the following level.

Sulphur dioxide at any time exceeds 600 ppm.

Within seven (7) days of the licensee becoming aware of the exceedance 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 exceedance;
- b) the duration of the exceedance; and
- c)

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the reason(s) for the exceedence.

## R2 Notification of environmental harm

**Note:** The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable 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 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

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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.

## 8 Pollution Studies and Reduction Programs

### U1 PRP 4 - Seagrass Monitoring Program

- U1.1 The licensee must implement the Seagrass Monitoring Program as described in the documents titled 'Eraring Power Station – Seagrass Monitoring Methodology' dated 2 May 2011 and 'Revised Proposal – Summary of Sampling Design Proposed to Evaluate the Effects of Changes to Eraring Power Station's Activities on Seagrass and Macroalgae,' dated March 2009.
- U1.2 The licensee must submit on an annual basis 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 carried out in the previous 12 month period; and
- b) Comparison and discussion of data collected since the commencement of the monitoring program in February 2011, and any other relevant and/or previous studies.

The first Seagrass Monitoring Report is to be submitted to the EPA Regional Manager Hunter on the 31 August 2011 and annually up until and including the 31 August 2016.

- U1.3 Should any observed changes indicate a reduction in seagrass areas and the observed changes are likely to be attributable to the operation of the licensed premises, the licensee must submit a report that provides the following:
  - a) a description of ameliorative measures, including timeframe for management actions; and in the case where impacts are considered unavoidable,

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- b)  
a description of how impacts will be offset.

**Submission Date:** within three (3) months of the provision of the Seagrass Monitoring Program Report referred to in condition U1.2.

## 9 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 Eraring Energy exceeds the 98.5 percentile temperature limit specified under licence condition L3.1. of this licence in any reporting period the licensee must advise the EPA. The EPA must be advised 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 discharge point 1 must never exceed 37.5°C.
- E1.5 These special conditions only apply to 30 June 2016.
- 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 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 AEMO, or a person authorised by 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 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 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 30 June 2016 following its review of the thermal impacts studies required by condition U1 PRP4.

### E2 Emergency Turbine Generator - Greenhouse Gas Offset Measures

- E2.1 Annually, sufficient NSW Greenhouse Abatement Certificates (NGAC's), or some other equivalent

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measure, as agreed to in writing by the EPA, must be purchased and surrendered to offset the excess annual CO2 equivalent emissions calculated using the offset calculation procedure agreed to by the licensee on 14 December 2009.

Note: An electronic copy of the offset calculation procedure is saved at the Newcastle Regional Office of the EPA at the following location: N:\MAJOR INDUSTRIES\Power Stations\Eraring\Eraring GHG calculator.

## 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.



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## Dictionary

### General Dictionary

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



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

# Environment Protection Licence

Licence - 1429



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

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.

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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.