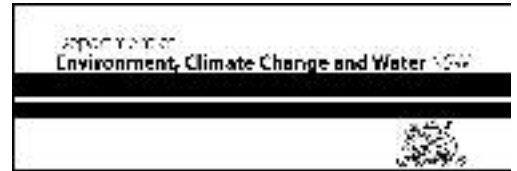


Environment Protection Licence

Licence - 10000



Licence Details

Number:	10000
Anniversary Date:	15-October
Review Due Date:	23-Feb-2015

Licensee

QENOS PTY LTD
 16-20 BEAUCHAMP ROAD
 MATRAVILLE NSW 2036

Licence Type

Premises

Premises

QENOS PTY LTD
 Lot 5 and Lot 10 of Botany Industrial Park, 16-20 Beauchamp
 Road
 MATRAVILLE NSW 2036

Scheduled Activity

Chemical production - petrochemical
 Chemical production - plastic resins

Fee Based Activity

Petrochemical production - Sydney Basin
 Plastics resins production - Sydney Basin

Scale

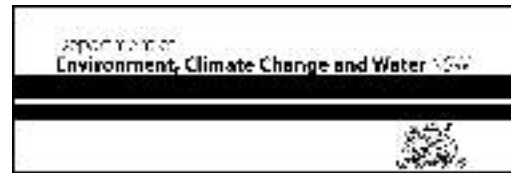
> 200000 - T produced
 > 10000 - T produced and reprocessed

Region

Metropolitan
 Level 3, NSW Govt Offices, 84 Crown Street
 WOLLONGONG NSW 2500
 Phone: 02 4224 4100
 Fax: 02 4224 4110
 PO Box 513 WOLLONGONG EAST
 NSW 2520

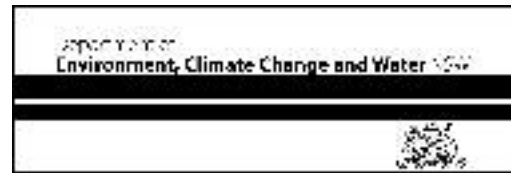
Environment Protection Licence

Licence - 10000



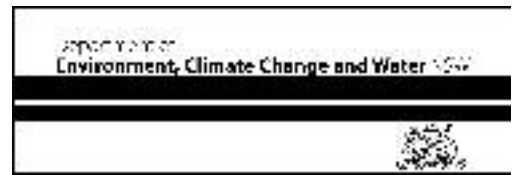
INFORMATION ABOUT THIS LICENCE	4
Dictionary	4
Responsibilities of licensee.....	4
Variation of licence conditions	4
Duration of licence.....	4
Licence review.....	4
Fees and annual return to be sent to the EPA.....	4
Transfer of licence.....	5
Public register and access to monitoring data.....	5
1 ADMINISTRATIVE CONDITIONS	5
A1 What the licence authorises and regulates.....	5
A2 Premises to which this licence applies	7
A3 Other activities	7
A4 Information supplied to the EPA.....	7
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.....	11
L3 Concentration limits.....	11
L4 Volume and mass limits	12
L5 Waste.....	12
L6 Noise Limits	13
L7 Polychlorinated Biphenyls (PCBs).....	14
4 OPERATING CONDITIONS	14
O1 Activities must be carried out in a competent manner.....	14
O2 Maintenance of plant and equipment.....	14
O3 Emergency response.....	14
O4 Processes and management.....	15
O5 Venting.....	15
O6 Ground furnaces and elevated flares.....	15
5 MONITORING AND RECORDING CONDITIONS	15
M1 Monitoring records.....	15
M2 Requirement to monitor concentration of pollutants discharged.....	16
M3 Testing methods - concentration limits	17
M4 Recording of pollution complaints.....	17
M5 Telephone complaints line.....	18
M6 Requirement to monitor volume or mass.....	18
6 REPORTING CONDITIONS	18

Environment Protection Licence



Licence - 10000

R1	Annual return documents	18
R2	Notification of environmental harm	21
R3	Written report	21
R4	Additional reporting requirements.....	21
R5	Requirement to monitor Noise.....	22
GENERAL CONDITIONS.....		22
G1	Copy of licence kept at the premises	22
POLLUTION STUDIES AND REDUCTION PROGRAMS		22
U1	Summary of Pollution Reduction Programs	22
U2	Stormwater Pollution Reduction Program.....	23
U3	PRP 6: Investigation For Replacing The Coal Fired Boilers With A Gas Fired.....	23
U4	PRP 7: Investigations Of VOC Emissions Reductions Options - Alkathene Plant.....	24
U5	PRP 8: Assessment Of Best Practice For Benzene Storage Emissions	25
SPECIAL CONDITIONS		25
E1	Leak Detection and Repair Program	25
E2	Leak Detection and Repair Program Methodology	26
DICTIONARY.....		26
	General Dictionary.....	26



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

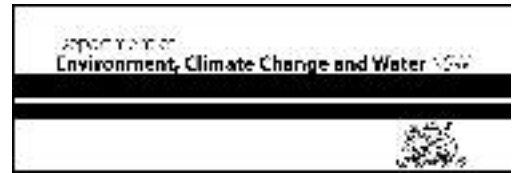
For each licence fee period you must pay:

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

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees.

Environment Protection Licence

Licence - 10000



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:

QENOS PTY LTD
16-20 BEAUCHAMP ROAD
MATRAVILLE NSW 2036

subject to the conditions which follow.

1 Administrative conditions

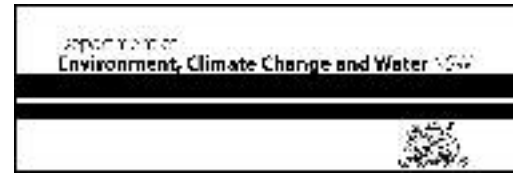
A1 What the licence authorises and regulates

A1.1 Not applicable.

A1.2 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.

Environment Protection Licence

Licence - 10000



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

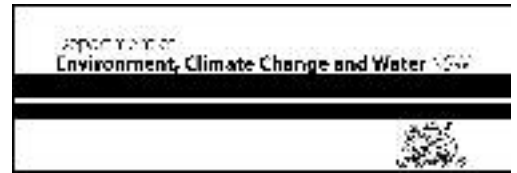
Chemical production - petrochemical

Chemical production - plastic resins

Fee Based Activity	Scale
Petrochemical production - Sydney Basin	> 200000 - T produced
Plastics resins production - Sydney Basin	> 10000 - T produced and reprocessed

A1.3 Not applicable.

Environment Protection Licence



Licence - 10000

- (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.

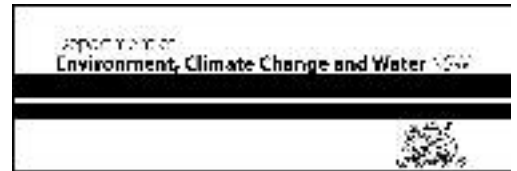
2 Discharges to air and water and applications to land

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.

Environment Protection Licence

Licence - 10000

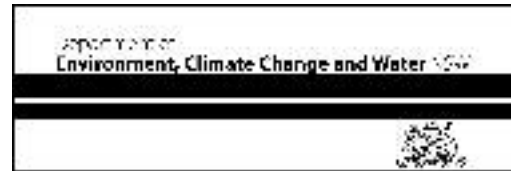


Air

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location
1		Discharge to air	Discharge point located at Alkatuff Plant ground furnace located at North-west corner of Qenos Plant - near other ground furnaces as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.
2		Discharge to air	Discharge point located at Alkatuff Plant flare, north-west corner of Qenos Plant - near other ground furnaces as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.
3		Discharge to air	Discharge point located at Olefines Plant elevated flare, north-west corner of Qenos Plant - near other ground furnaces as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.
4		Discharge to air	Discharge point located at Olefines Plant ground furnace, north-west corner of Qenos Plant - near other ground furnaces as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.
5		Discharge to air	Discharge point located at Olefines Plant ground furnace, north-west corner of Qenos Plant - north of the ground furnace at point 4 as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.

Environment Protection Licence

Licence - 10000



EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location
10	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Point located at fifth of 6 cracking furnaces, parallel to 12th Street as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.
12	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Point located at coal boiler, adjacent to goods railway line as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.
13	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Point located at coal boiler, adjacent to goods railway line - north of the coal boiler at point 12 as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.
14	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Point located at gas boiler, next to coal boilers, adjacent to goods railway line as shown on drawing titled 'Fugitive emission points and stormwater outlets' : Drg No. B92610 rev A 5/99.
15	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Outlet of Lute Vent Stack at the southwestern corner of the "Valve Alley" on the Alkathene Plant: Drg No. B67210 Rev A 11/95

P1.2 Not applicable.

P1.3 Not applicable.

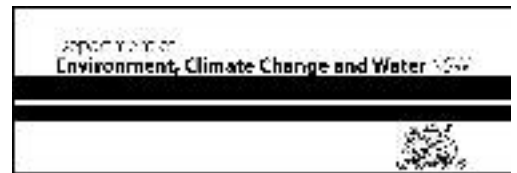
3 Limit conditions

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.

Environment Protection Licence

Licence - 10000



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.

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

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)
Benzene (Air)	6625
Fine Particulates (Air)	53680
Nitrogen Oxides (Air)	860600
Nitrogen Oxides - Summer (Air)	
Volatile organic compounds (Air)	751000
Volatile organic compounds - Summer (Air)	

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.

Air

POINT 1

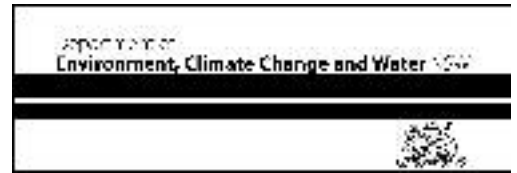
Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	2.5
Total Solid Particles	milligrams per cubic metre	250

POINT 2

Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	2.5
Total Solid Particles	milligrams per cubic metre	250

Environment Protection Licence

Licence - 10000



POINT 3

Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	2.5
Total Solid Particles	milligrams per cubic metre	250

POINT 4

Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	2.5
Total Solid Particles	milligrams per cubic metre	250

POINT 5

Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	2.5
Total Solid Particles	milligrams per cubic metre	250

POINT 10

Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	2.5
Total Solid Particles	milligrams per cubic metre	250

POINT 12

Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	2.5
Total Solid Particles	milligrams per cubic metre	250
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	200

POINT 13

Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	2.5
Total Solid Particles	milligrams per cubic metre	250
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	200

POINT 14

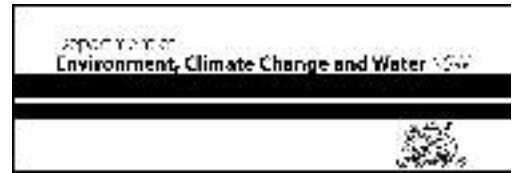
Pollutant	Units of measure	100 percentile concentration limit
Nitrogen Oxides	grams per cubic metre	0.5
Total Solid Particles	milligrams per cubic metre	250
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	100

L4 Volume and mass limits

L4.1 Not applicable.

L5 Waste

Environment Protection Licence



Licence - 10000

L5.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

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

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

Condition L5.1 does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 51A of the <i>Protection of the Environment Operations (Waste) Regulation 2005</i>	As specified in each particular resource recovery exemption.	NA
NA		Any waste received on site that is below licensing thresholds in Schedule 1 of the POEO Act, as in force from time to time		NA

L5.2 The quantity of hazardous and/or liquid waste stored on the premises must not exceed 500 tonnes at any one time.

L6 Noise Limits

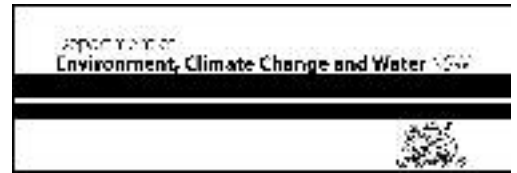
L6.1 Noise emanating from all active plants in the BIP premises, including loading and unloading of material in or above the premises and when determined as a sound level contribution, shall not exceed the following amenity LAeq criteria when measured or computed at any point within one metre of the nearest boundary of any residence in the vicinity of the premises, using the "FAST" response on the sound level meter.

Time of Day	LAeq
Day	65
Evening	55
Night	50

L6.2 To determine compliance with condition L6.1 noise must be measured at, or computed for, any point within one metre of the nearest boundary of the affected noise sensitive locations (such as a residence, school or hospital). A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the "Environmental Noise Management - NSW Industrial Noise Policy (January 2000)".

Environment Protection Licence

Licence - 10000



The intrusive noise criterion for all active plants in the BIP shall be that the LAeq,15minutes noise levels shall not exceed the amenity LAeq noise levels by more than 5 dB(A) when measured or computed at any point within one metre of the nearest boundary of any residence in the vicinity of the premises, using the "FAST" response on the sound level meter.

Each existing BIP Plant shall ensure that new or replacement equipment is selected and/or installed so that no increase in noise emissions is thereby created when measured or computed at any point within one metre of the nearest boundary of any residence in the vicinity of the premises, using the "FAST" response on the sound level meter.

- L6.3 Note: For the purpose of assessing compliance with the conditions in L6, the premises of Botany Industrial Park (BIP) is defined as the total of all Lot and DP references listed in condition A2.1 of the following Environment Protection Licences:
EPL No. 7494 (Hunstman Corporation)
EPL No. 2148 (Orica Pty Ltd) and
EPLNo.10000 (Qenos Pty Ltd)

L7 Polychlorinated Biphenyls (PCBs)

Note: The licensee must comply with the conditions as specified in this licence or where no specific conditions are outlined in this licence, the licensee must comply with the "Chemical Control Order in Relation to Materials and Wastes Containing Polychlorinated Biphenyl, 1997".

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:

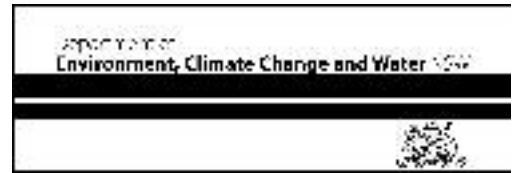
- (a) must be maintained in a proper and efficient condition; and
- (b) must be operated in a proper and efficient manner.

O3 Emergency response

O3.1 The licensee must maintain and update an emergency response plan which documents the procedures to deal with all types of incidents (e.g. spill, explosions or fire) that may occur at the premises or outside of the premises (e.g. during transfer) which are likely to cause harm to the

Environment Protection Licence

Licence - 10000



environment.

O4 Processes and management

- O4.1 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 DECC Waste Classification Guidelines as in force from time to time.
- O4.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O5 Venting

- O5.1 Venting of hydrocarbons from the ethylene sphere to atmosphere is permitted only in emergency situations or when flares are offline and pressure build up requires venting for safety purposes. Venting must occur in a controlled manner and action must be taken to prevent and minimise emissions to atmosphere at all times.

O6 Ground furnaces and elevated flares

- O6.1 The Alkatuff ground-furnace and elevated flare, and Olefines elevated flare and ground-furnaces (with corresponding EPA discharge point identification numbers 1, 2, 3, 4 and 5) must be operated in such a way as to ensure efficient combustion such that there is no smoke or odour associated with their operation.

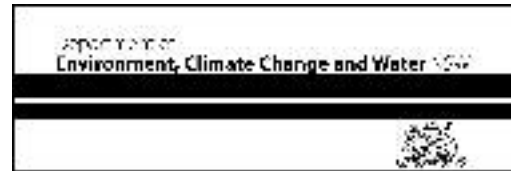
5 Monitoring and recording conditions

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.

Environment Protection Licence

Licence - 10000



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:

Air

POINT 10

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen Oxides	grams per cubic metre	Yearly	TM-11
Total Solid Particles	milligrams per cubic metre	Yearly	TM-15

POINT 12

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen Oxides	grams per cubic metre	Yearly	TM-11
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	Yearly	TM-3
Total Solid Particles	milligrams per cubic metre	Yearly	TM-15

POINT 13

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen Oxides	grams per cubic metre	Yearly	TM-11
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	Yearly	TM-3
Total Solid Particles	milligrams per cubic metre	Yearly	TM-15

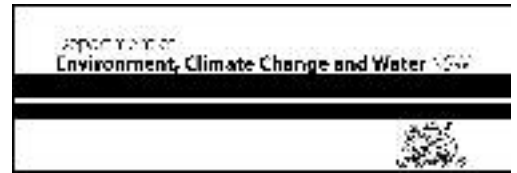
POINT 14

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen Oxides	grams per cubic metre	Yearly	TM-11
Sulfuric acid mist and sulfur trioxide (as SO ₃)	milligrams per cubic metre	Yearly	TM-3
Total Solid Particles	milligrams per cubic metre	Yearly	TM-15

POINT 15

Pollutant	Units of measure	Frequency	Sampling Method
Volatile organic compounds	Kilograms per year	Yearly	Special Method 1

Note: Special Method 1 is listed in the document, *Protocol for Calculating VOC Emissions – Qenos Alkathene Plant* dated November 2002 on EPA file Lic07/1556-01.



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 2002 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 Not applicable.

Note: Testing methods - load limit

Note: Clause 18 (1), (1A) and (2) of the Protection of the Environment Operations (General) Regulation 1998 requires that monitoring of actual loads of assessable pollutants listed in L2.1 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.2.

M4 Recording of pollution complaints

M4.1 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.

M4.2 The record must include details of the following:

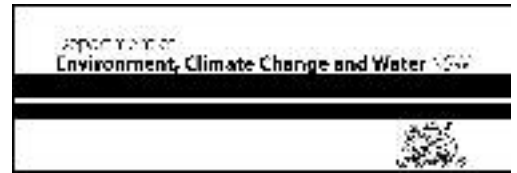
- (a) the date and time of the complaint;
- (b) the method by which the complaint was made;
- (c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- (d) the nature of the complaint;
- (e) the action taken by the 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.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

Environment Protection Licence

Licence - 10000



M5 Telephone complaints line

- M5.1 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.
- M5.2 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.
- M5.3 Conditions M5.1 and M5.2 do not apply until 3 months after:
- the date of the issue of this licence or
 - 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.

M6 Requirement to monitor volume or mass

- M6.1 Not applicable.
- M6.2 Not applicable.

6 Reporting conditions

R1 Annual return documents

What documents must an Annual Return contain?

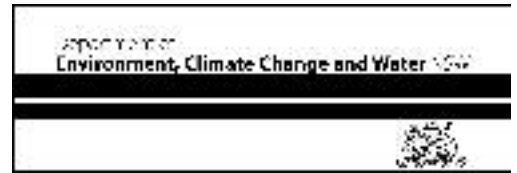
- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
- a Statement of Compliance; and
 - a Monitoring and Complaints Summary.
- A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

Period covered by Annual Return

- 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 - 10000

- 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.

Deadline for Annual Return

- 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').

Notification where actual load can not be calculated

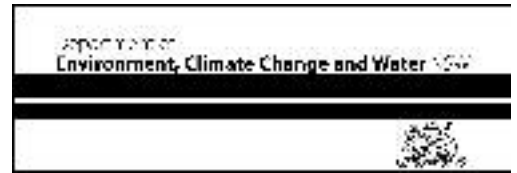
- R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event 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.

Licensee must retain copy of Annual Return

- 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.

Certifying of Statement of Compliance and signing of Monitoring and Complaints Summary

- 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 Leak Detection and Repair Program Summary Report

R1.10.1 The licensee must submit a summary report on the Leak Detection and Repair program with the annual return. The annual summary report must include, but may not be limited to:

- a. the total number of components inspected;
- b. the number and percentage of leaking components found by component types;
- c. the emission level of leaking equipment and the re-checks after leak repairs;
- d. the repair responses and times as listed in the table 1 below;
- e. a comparison between the total VOC load from LDAR components versus the load presented in the previous Annual Return;
- f. a comparison between the total VOC load across the premises versus the load presented in the previous Annual Return.

Table 1: Performance Summary - Repair Responses and Times for the licence year

Scale of leak (ppmv) i.e minor, moderate, major	Component type	Date leak detected	Initial remedial repair response (days)	Date leak repaired	Actual Repair time (days)	Time on delayed repair list (days)

R1.11 LDAR Program Review Report

R1.11.1 The licensee must review the operational effectiveness of the LDAR Program and submit a report with the annual return. The report must provide the following:

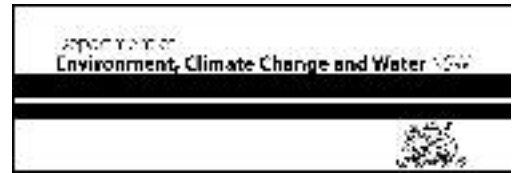
- a) The assessment of the effectiveness of detection and repair elements of the LDAR program in regard to reducing VOC and toxic air pollutants from components at the premises;
- b) Identify the effective detection practices of the LDAR program;
- c) Identify the effective repair practices of the LDAR program;
- d) Identify detection and repair practices of the LDAR program that can be improved and those practices that should be retained;
- e) Provide recommendations that will promote continuous improvements in detection and repair practices in particular on priority components along with a commitment to timeframes for those improvements;
- f) An estimate of the cost savings achieved through the LDAR program including costs associated with retained feedstocks and products as well as reduced maintenance costs.

Note 1: For the licence year 2009 – 2010 this review will be limited to the Olefines Plant LDAR program.

Note 2: The EPA in consultation with the licensee may reassess the need for this condition following the submission of the first two review reports.

Environment Protection Licence

Licence - 10000



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.

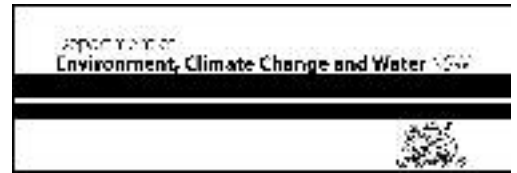
R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Additional reporting requirements

R4.1 The EPA must be notified of hydrocarbon venting from the ethylene sphere, in accordance with

Environment Protection Licence

Licence - 10000



condition O5.1, within 24 hours of the commencement of the occurrence, which shall include the actions taken to minimise the emissions at the time and proposed actions to prevent recurrence of the event.

R4.2 The operation of the Alkatuff and Olefines elevated flares must be reported to the EPA's Pollution Line (telephone number 131555) within 24 hours of their operation.

R5 Requirement to monitor Noise

R5.1 A report for all BIP Licences (L7494 Huntsman Corporation; L 2148 Orica Pty Ltd and L10000 Qenos Pty Ltd), demonstrating compliance with the noise conditions listed at Condition L6, must be appended to the Annual Return for Qenos L10000.

General conditions

G1 Copy of licence kept at the premises

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.

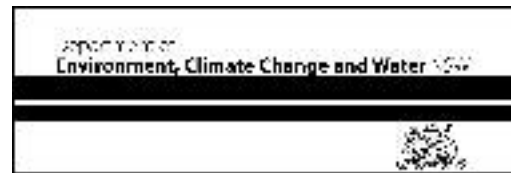
Pollution studies and reduction programs

U1 Summary of Pollution Reduction Programs

PRP No	PRP	Description	Date Issued	Date Completed
1	Stormwater Reduction Plan	Issues programs and progress towards stormwater improvements	April 2000	June 2004 (see PRP4)
2	Noise Reduction Plan	Noise monitoring program	April 2000	June 2004
3	Fugitive Emissions Plan	Continuous improvement to reduce fugitive emissions	April 2000	Yearly reporting, to be submitted with each Annual Return

Environment Protection Licence

Licence - 10000



PRP No	PRP	Description	Date Issued	Date Completed
4	Stormwater Reduction Plan	Amendment to PRP1 to add yearly reporting requirement	June 2004	Yearly reporting, to be submitted with each Annual Return
5	Nant Street Tank Farm	Restoration of the integrity of the bunding system		June 2008

U2 Stormwater Pollution Reduction Program

U2.1 A continuous improvement program must be implemented to address issues associated with the stormwater system on any part of the premises. The stormwater improvement program must be consistent with the Botany Industrial Park stormwater improvement plan, which sets objectives for continuous improvement.

A report must be forwarded to the EPA annually as an attachment to the Qenos P/L (Environment Protection Licence No. 10000) annual return, that details the following:

1. Issues associated with the stormwater system;
2. Achievements in the current Licence period; and
3. Proposals for the next Licence period.

U3 PRP 6: Investigation For Replacing The Coal Fired Boilers With A Gas Fired Cogeneration Facility

Background

The licensee presently operates 2 coal fired boilers which supply the plant, and some neighbouring premises with steam. These units were installed in the 1970s. The licensee has reviewed whether to retrofit or replace these units in the past but the cost benefit analysis has indicated the project is not feasible. The use of a gas fired cogeneration system is likely to present substantial environmental benefits (including reduction in air pollutant emissions and greenhouse gas emissions) and the licensee will assess these against the capital costs and potential impact upon operational costs, operational efficiency and sourcing of fuel.

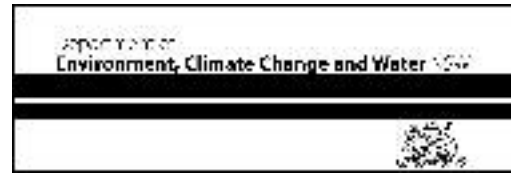
Aim

To undertake a cost benefit analysis of replacing the coal fired boilers with a gas fired cogeneration facility.

Requirements

By 11 September 2010 the licensee must submit a cost benefit analysis report to the EPA which includes, but may not be limited to, consideration of environmental benefits (air emissions, waste generation, water discharge, greenhouse gas and energy consumption), the potential cost implications as well as a simple payback period.

Due Date: 11 September 2010

**U4 PRP 7: Investigations Of VOC Emissions Reductions Options - Alkathene Plant****U4.1 Background and Aim**

The Alkathene plant is the older of the two polyethylene plants at the premises. VOC point source and fugitive emissions are emitted at almost 50 times the rate of the newer Alkatuff plant. This is partly due to the age of the plants and the production process.

Four significant Alkathene plant VOC sources make up over 40% of site wide emissions. The aim of this PRP is to undertake and report on investigations into options to reduce emissions from these sources.

Investigations

By 31 December 2010 the licensee must submit a report to the EPA which details the investigations, the anticipated emissions reductions, and the constraints to implementation. The report must also present a preferred option to prevent, control, or minimise the release of ethylene to atmosphere from the following sources.

Sweetening with ethylene (approx 20% of premises VOC emissions)

When equipment is bought back on line the concentration of ethylene in the equipment is progressively increased by pressurizing the equipment and then venting the ethylene to atmosphere.

Shutdown of reaction lines (approx 4% of emissions)

When the reactors (units 1-3) are depressurised the gas is vented to the atmosphere.

Compressor gland leaks (approx 11% of emissions)

Gas passing through the second ring seal in any of the 17 compressors is vented to atmosphere.

Evolution of ethylene from granules (approx 11% of emissions)

Dissolved ethylene in the polymer granules is released to the atmosphere.

This investigation must include, but may not be limited, the following options to reduce VOC emissions:

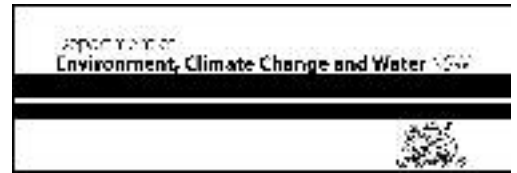
1. improvements to procedures or management practices for the above sources
2. collection or retention of gases in the system
3. transfer of gases to receiver / holding vessel/s
3. gas treatment prior to release to atmosphere e.g. condensation, wet scrubbing, flaring

Also the investigation must report on the following specific reduction options

4. for *Shutdowns of Reaction Lines* - retention of unit 1, 2 and 3 gases in the respective primary receiver i.e. depressurised gas from Unit 4 is stored in the primary receiver and not released.
5. for *Compressor Gland Leaks* - flaring of gas passing through the second seal ring
6. for *Evolution of ethylene from granules* - collection and treatment of exhaust air incorporating measures including a low pressure chamber, nitrogen purge, or vacuum removal

Due Date: 31 December 2010

Note: Pending the outcome of the report, the EPA, in consultation with the licensee may add additional PRP/s requiring the installation of the identified options for each significant source.



U5 PRP 8: Assessment Of Best Practice For Benzene Storage Emissions

Background and Aim

Almost all of benzene emissions from the premises (94%) are from the Pyrolysis gas storage tanks. In order to minimise these emissions the EPA is seeking an assessment of the storage tanks emission control components against industry best practice and an assessment of options to reduce emissions.

Requirements

By 11 September 2010 the licensee must undertake an assessment of the storage tank components against industry best practice. This assessment must include a general description of the tanks.

That is a:

1. discussion of the current inspection and maintenance program
2. the dimensions, volume of the tanks and the vapour pressure of the Pyrolysis gas
3. a description of the rim sealing system as well as the inspection, maintenance, and replacement program
4. report on the implementation of a leak detection and repair program so that it will
 - a. inform long term mitigation measures that will minimise fugitive air emissions of benzene from plant and equipment;
 - b. provide adequate short term protection from benzene air emissions while long term mitigation measures are planned and implemented; and
 - c. be used as a proof of performance of long term mitigation measures that will minimise fugitive benzene air emissions from plant and equipment.

The assessment must also include consideration of the benefits, the feasibility of installation, and the anticipated emissions reductions achieved from:

5. intensifying or modifying the current inspection and maintenance program
6. installing internal floating roof tanks,
7. installing domes or other structures to minimise wind action
8. installing liquid mounted seals
9. installing shoe mounted or rim mounted secondary rim seals
10. fitting rim seal weather shields
11. installing a vapour recovery system
12. applying floats or sleeves and / or socks over any slotted still wells, guide poles and roof legs respectively

Due Date: 11 September 2010

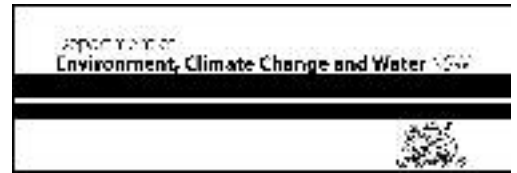
Note: Pending the outcome of the report, the EPA, in consultation with the licensee may add additional PRP/s requiring the installation of the feasible options identified above.

Special conditions

E1 Leak Detection and Repair Program

Environment Protection Licence

Licence - 10000



- E1.1 The licensee must develop, implement, operate, and maintain an LDAR program in accordance with E2 below.

E2 Leak Detection and Repair Program Methodology

- E2.1 By 15 October 2010, the licensee must submit a LDAR Program methodology to the EPA for relevant components at the premises that store, handle or use materials containing Volatile Organic Compounds (VOC). This program must be developed in consultation with the EPA.

The LDAR Program must, unless otherwise approved by the EPA:

- a) include a narrative on the design and priorities of the program which includes but may not be limited to; how the program fits into site wide operations as well as other considerations for developing the program such as the toxicity of the substances, component type, pipe size, gas loads / throughput.
- b) include monitoring for detection of leaks in accordance with US EPA Method 21 – Determination of Volatile Organic Compound Leaks (40 CFR Part 60, Appendix A, Method 21);
- c) include a list and description of all priority components (e.g. valves, flanges, etc) to be included
- d) propose monitoring frequencies and justification of those frequencies for all components
- e) unless otherwise approved by the EPA involve repair of components within a period of :
 - i. 14 days if the concentration of the fugitive VOCs emission is greater than or equal to 1,000 ppmv (minor leak) but not more than 10,000 ppmv, as methane, above background
 - ii. 5 days if the concentration of the fugitive VOCs emission is greater than or equal to 10,000 ppmv (moderate leak) but not more than 50,000 ppmv, as methane, above background
 - iii. 1 day if the concentration of the fugitive VOCs emission is greater than or equal to 50,000 ppmv (major leak > 50,000 ppmv), as methane, above background
- f) consider the use of leakless components in repairing or replacing leaks or in situations where restricted access or other process conditions may reduce the frequency of regular monitoring.

Note 1: Priority components (e.g. valves, flanges) means all components that are likely to emit major fugitive VOC emissions due to their integrity, age, operation type / frequency and/or material throughout. Priority components also means those components that are likely to emit principal toxic air pollutants or individual toxic air pollutants.

Note 2: *Principal Toxic Air Pollutants* or *Individual Toxic Air Pollutants* are those listed in the *DECCW Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*.

Dictionary

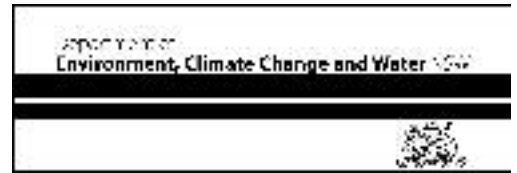
General Dictionary

In this licence, unless the contrary is indicated, the terms below have the following meanings:

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

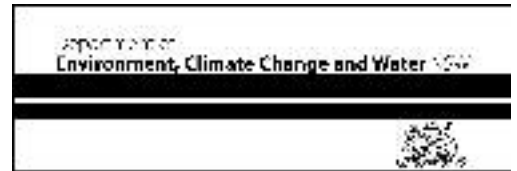
Environment Protection Licence



Licence - 10000

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 1998
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 1998
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
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 1998.
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 (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
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

Environment Protection Licence

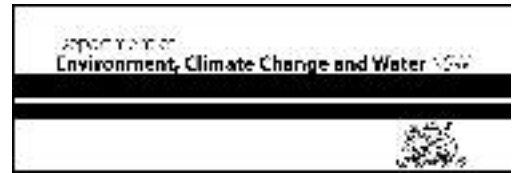


Licence - 10000

load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 1998
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> .
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

Environment Protection Licence

Licence - 10000



waste type

Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste

Mr Paul Elton

Environment Protection Authority

(By Delegation)

Date of this edition - 18-May-2010

End Notes

- 1 Licence varied by Change of Contact, issued on 12-Dec-2001, which came into effect on 12-Dec-2001.
- 2 Licence varied by notice 1033368, issued on 23-Feb-2005, which came into effect on 20-Mar-2005.
- 3 Licence varied by notice 1045897, issued on 02-May-2005, which came into effect on 27-May-2005.
- 4 Licence varied by notice 1066221, issued on 27-Nov-2006, which came into effect on 27-Nov-2006.
- 5 Licence varied by change to legislation, issued on 12-Oct-2007, which came into effect on 12-Oct-2007.
- 6 Licence varied by notice 1082210, issued on 25-Jan-2008, which came into effect on 25-Jan-2008.
- 7 Licence varied by notice 1084479, issued on 13-May-2008, which came into effect on 13-May-2008.
- 8 Licence varied by notice 1089196, issued on 07-Aug-2008, which came into effect on 07-Aug-2008.
- 9 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 10 Licence varied by notice 1098457, issued on 27-Mar-2009, which came into effect on 27-Mar-2009.
- 11 Licence varied by notice 1111842, issued on 18-May-2010, which came into effect on 18-May-2010.