

Licence Variation

Licence - 1695



Office of
Environment
& Heritage

SYDNEY WATER CORPORATION

ABN 49 776 225 038

PO BOX 399

PARRAMATTA NSW 2124

Attention: Sunietha Katupitiya

Notice Number 1504847
File Number LIC08/1580
Date 28-Jun-2012

NOTICE OF VARIATION OF LICENCE NO. 1695

BACKGROUND

- A. SYDNEY WATER CORPORATION ("the licensee") is the holder of Environment Protection Licence No. 1695 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at OFF VALLEY ROAD, HORNSBY, NSW, 2077 ("the premises").
- B. 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 this upgrade. Some conditions have been reordered. These upgrades are not intended to change the substance of the licence. This notice incorporates the new licence issued using the new software;
- C. On 21 February 2012, the EPA received an application for the variation of the licence to amend the pollution reduction program (PRP) for measuring priority endocrine disrupting chemicals (EDCs) in the effluent from the Warriewood, Winmalee, Rouse Hill, St Marys, West Camden and West Hornsby sewage treatment plants. This licence variation application reflects the changes to the PRP agreed to by the EPA following its request that the licensee repeat the PRP due to the objective and requirements of the original PRP not having been adequately met;
- D. A collaborative review of the notification requirements specific to Sydney Water incidents that are not captured by the *Protection of Environment Operations Act 1997* was undertaken in 2011-2012. As a result of this review, the wording of condition R4 has been amended to provide a clear linkage to licence condition O4. In addition, the licence requirement to establish protocols and notify other agencies has been removed, as notification of other agencies is now required by the 2012 amendments to *Protection of Environment Operations Act 1997* and associated Pollution Incident Response Management Plans;
- E. The Dry Weather Leakage Monitoring Program was established in 2006 to detect and rectify leaks identified in the Sydney Water sewerage system. After 5 years of implementation, it was determined that a review of the program should be undertaken to assess the effectiveness of the program in identifying dry weather leakage across the system and driving rectification works. A Pollution

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Reduction Program (PRP700) has been established across the Sydney Water licences to facilitate this review;

- F. The EPA has approved the following variations to the licence having due regard for the considerations required under s45 of the Act.

VARIATION OF LICENCE NO. 1695

1. By this notice the EPA varies licence No. 1695. The attached licence document contains all variations that are made to the licence by this notice.
2. The following variations have been made to the licence:
 - The **Region** has been updated to reflect that it is the Metropolitan EPA region that is responsible for regulation of this licence;
 - Condition **A1.1** has been amended from "Not Applicable" to "This licence authorises the carrying out of scheduled development work listed below at the premises listed in A2: Not applicable";
 - To ensure the numbering is consistent across all of the Sydney Water licences, some "Not applicable" conditions have been entered throughout the licence;
 - The unit of measurement for toxicity at condition **L3.7** has been amended to "percent effluent by volume" for consistency across the Sydney Water licences;
 - Previous condition L1.2 has been removed as they only contained the text: 'Not applicable';
 - Some conditions that were previously individual conditions have been combined into a single condition. These previous conditions are: L7.1 - L7.7 (**now L7.1**), O6.1 - O6.5 (**now O4.9**), M10.1 - M10.6 (**now M5.1**), M13.1 - M13.3 (**now M10.4**) and M13.4 - M13.5 (**now M10.5**);
 - Under the heading '**Annual return documents**' the subheadings previously listed below have been removed. The text/conditions that were underneath these subheadings have not changed;
 - To reflect changes in legislation, the wording of the **Note** at condition **R2** has changed from:

"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." to:

"The licensee or its employees must notify the EPA of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.";
 - Condition **R4** has been amended to reflect negotiated changes to the notification requirements;
 - The heading in the **SCAMP target table** at condition **R5.5** has been amended from "waters" to "waterways" to address an error identified in the licence;
 - Due to inaccuracy the completed Pollution Reduction Programs (PRP) table has been removed from the licence with a view to reinstating it when systems are updated;
 - revising the date of 31 May 2012 for completion of the **PRP400** Endocrine Disrupting Chemicals program at condition **400.2**;
 - removing the requirement to measure nonylphenol diethoxylate, nonylphenol monocarboxylate and nonylphenol dicarboxylate at condition **400.3** due to the very significant technical challenges to undertake analysis of these chemicals;

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- adding a requirement at condition **400.4** to take measurements of priority endocrine disrupting chemicals with a minimum interval of 1 week between effluent sample collections;
- changing the analytical method required to measure the steroid hormones at condition **400.5**;
- **PRP700** Dry Weather Leakage Program Review Pollution Reduction Program has been added to the licences following consultation with Sydney Water.

.....
Gillian Reffell
Unit Head
Metropolitan Infrastructure
(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.

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:	1695
Anniversary Date:	01-July

Licensee

SYDNEY WATER CORPORATION

PO BOX 399

PARRAMATTA NSW 2124

Premises

WEST HORNSBY SEWAGE TREATMENT SYSTEM
INCLUDING THE STP

OFF VALLEY ROAD

HORNSBY NSW 2077

Scheduled Activity

Sewage Treatment

Fee Based Activity

Sewage treatment processing by small plants

Scale

> 5000-10000 ML discharged

Region

Metropolitan Infrastructure

Level 7, 79 George Street

PARRAMATTA NSW 2150

Phone: (02) 9995 6804

Fax: (02) 9995 6902

PO Box 668 PARRAMATTA

NSW 2124

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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:

SYDNEY WATER CORPORATION
PO BOX 399
PARRAMATTA NSW 2124

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 development work listed below at the premises listed in A2: 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.

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
Sewage Treatment	Sewage treatment processing by small plants	> 5000 - 10000 ML discharged

A1.3 Not applicable.

A1.4 The objectives of this licence are to:

- require practical measures to be taken to protect the environment and public health from sewage treatment plant effluent and sewer overflows;
- require proper and efficient management of the sewage treatment system to minimise harm to the environment and public health;
- require no deterioration and continuing improvement in the sewage treatment system environmental performance relative to existing conditions; and
- minimise the frequency and volume of overflows and sewage treatment plant bypasses.

A1.5 This licence is to be construed in a manner that will promote the objectives referred to in A1.4.

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
WEST HORNSBY SEWAGE TREATMENT SYSTEM INCLUDING THE STP
OFF VALLEY ROAD
HORNSBY
NSW 2077
LOT 16 DP 244311

A2.2 The premises also includes the reticulation system owned and operated by the licensee that is associated with the sewage treatment plant(s) identified in condition A2.1.

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A3 Other activities

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

Ancillary Activity
Chemical Storage Facilities
Waste Facilities - waste storage, transfer separating or processing

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 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.

A4.2 Notwithstanding condition A4.1, works and activities carried out by the licensee must not be inconsistent with the EPA's Determining Authority Report for the Sewer Overflow Licensing Program, dated May 2000.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 Air monitoring points - not applicable.

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.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
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1		discharge to waters	STP discharge point located at the effluent outfall to Waitara Creek, and labelled "All Plant Effluent flows to Waitara Creek EPA - No. 1" on the diagram titled "West Hornsby STP Overflow", dated 17/03/2005, submitted to the EPA on 21 June 2005
3		discharge to utilisation area	Irrigation with the fenceline of the STP
5	effluent quality monitoring		effluent quality downstream of the disinfection facilities
7	effluent quality monitoring volume monitoring		Discharges through Point 9 at storm detention basin spillway
8		wet weather discharge	STP discharge point located near the Storm Flow By-Pass Facility to Waitara Creek, and labelled "EPA - No. 8" on the diagram titled "West Hornsby STP Overflow", dated 17/03/2005, submitted to the EPA on 21 June 2005
9		wet weather discharge	STP discharge point located at the spillway from the Stormflow Retention Basin to Waitara Creek, and labelled "EPA - No. 9" on the diagram titled "West Hornsby STP Overflow", dated 17/03/2005, submitted to the EPA on 21 June 2005
10	effluent quality monitoring volume monitoring		discharges through point 8 at the storm screening facilities
13	discharge to utilisation area volume monitoring	discharge to utilisation area volume monitoring	Tanker filling point located at the main reclaimed effluent manifold between the blower building and the tertiary filters, labelled "EPA No. 13" on the diagram titled "West Hornsby STP Overflow", dated 17/03/2005, submitted to the EPA on 21 June 2005
14	Volume monitoring		Downstream of disinfection units

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.
- L1.2 Subject to the conditions of this licence, sewage must not be discharged from the components of the reticulation system except from those components identified on the system map.
- L1.3 Notwithstanding the provisions of the condition above, this licence does not permit the pollution of waters

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at any time during dry weather from:

- a) uncontrolled overflows, or
- b) directed overflows other than from sewage pumping stations,

if a cause of the pollution is failure to:

- i) operate any part of the reticulation system in a proper and efficient manner; or
- ii) maintain any part of the reticulation system in a proper and efficient condition.

- L1.4 This licence does not permit the pollution of water at any time during dry weather from any pumping station. This condition is effective from 1 July 2006.

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)
BOD (Enclosed Water)	79570.00
Nitrogen (total) (Enclosed Water)	80300.00
Oil and Grease (Enclosed Water)	23287.00
Phosphorus (total) (Enclosed Water)	4643.00
Total suspended solids (Enclosed Water)	86140.00

- L2.3 For the purposes of condition L2.1 only, premises means the sewage treatment plant(s) referred to in condition A2.1 of this licence.
- L2.4 For the purposes of condition L2.2 and M1.1 the relevant load calculation protocol is the methodology detailed in the document titled "Development of Load Calculation Method and Trial Calculation" (June 2003) approved by the EPA in September 2003 and any subsequent amendments approved by the EPA in writing.

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.

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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 Water and/or Land Concentration Limits

POINT 1

Pollutant	Units of Measure	Average concentration limit	50 percentile concentration limit	90 percentile concentration limit	100 percentile concentration limit
Aluminium	micrograms per litre	380	-	2300	-
Copper	micrograms per litre	17.3	-	82	-
Cyanide	micrograms per litre	16.5	-	220	-
Hydrogen sulfide (un-ionised)	micrograms per litre	78	-	310	-
Iron	micrograms per litre	620	-	17100	-
Nitrogen (ammonia)	milligrams per litre	-	1	5	-
Nitrogen (total)	milligrams per litre	-	10	15	-
Phosphorus (total)	milligrams per litre	-	0.3	1	-
Zinc	micrograms per litre	40	-	100	-

POINT 3

Pollutant	Units of Measure	Average concentration limit	50 percentile concentration limit	90 percentile concentration limit	100 percentile concentration limit
Nitrogen (ammonia)	milligrams per litre	-	1	5	-
Nitrogen (total)	milligrams per litre	-	10	15	-
Phosphorus (total)	milligrams per litre	-	0.3	1	-

POINT 1 AND 3

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Pollutant	Units of Measure	3DGM concentration limit	50 percentile concentration limit	90 percentile limit
Biochemical oxygen demand	mg/L	30	10	15
Total suspended solids	mg/L	30	10	15
Faecal coliforms	cfu/100mL	-	-	200*

Note: * denotes 80 percentile concentration limit.

POINT 13

Pollutant	Units of Measure	3DGM concentration limit	80 percentile concentration limit
Faecal coliforms	cfu/mL	-	200

L3.5 When a wet weather bypass flow is occurring, exceedances of the 3DGM and the 100 percentile concentration limits in condition L3.3 are permitted at the following point(s) for the duration of the bypass where the bypass was the sole cause of the exceedance: Points 1 and 3.

L3.6 Not applicable.

L3.7 For each monitoring/discharge point specified in the table(s) below (by a point number), the specified toxic effect of the effluent on the specified test organism must be greater than the corresponding limit listed for that organism in the table.

POINT 1

Toxicity	Units of Measure	50 percentile limit
Ceriodaphnia dubia immobilization	% effluent by volume	50

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
13	kilolitres per day	154300
3	kilolitres per day	154300
1	kilolitres per day	154300

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- L4.2 Notwithstanding the volume limits specified in condition L4.1, the combined volume discharged from point(s) 1,3 and 13 must not exceed 154,300 kL/day.

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 licensee may receive and/or transfer sewage generated outside the premises for treatment, processing or reprocessing at the premises. The licensee must take reasonable steps to ensure that sewage received at the premises has been lawfully discharged in accordance with a trade waste agreement or customer contract (as applicable) in force between the licensee and the generator of the waste. The licensee must treat, process or reprocess the sewage in accordance with this licence prior to discharge from the premises.
- L5.4 The licensee may receive, store, treat, process or reprocess and/or transfer at the premises sewage products generated or stored outside the premises by the licensee's other sewage treatment systems. Sewage products must be received, treated, processed or reprocessed in accordance with this licence.

L6 Noise limits

- L6.1 Not applicable.

L7 Other limit conditions

L7.1 Hydraulic Sewer System Model

- a) The licensee must maintain a hydraulic sewer system model which has no temporal or magnitude bias in either flow volume or water levels at the licence gauges as referenced in the document titled "PRP101.1 System Model Performance Indicators, September 2000" and subsequent modifications made by the Criteria Review Committee.
- b) The licensee must undertake an annual Quality System audit of the hydraulic sewer system model to determine if the model used during that reporting period meets the standards set out in condition L7.1(a).
- c) The licensee must prepare a written report on each Quality System audit of any model used to assess sewage system wet weather overflow performance for the purpose of determining compliance with this licence. The report must also include the Pearson's correlation coefficient for the model used during the reporting period.
- d) The licensee must provide a written report with each Annual Return on any Quality System audit of the hydraulic sewer system model stating the methodology and results of the audit.
- e) The licensee must convene an Independent Criteria Review Committee at least once every

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three Reporting Periods to review the methodology and findings of each of the Quality System audits.

- f) The licensee must ensure that the Independent Criteria Review Committee prepares a written report on the review required by condition L7.1(e).
- g) The licensee must submit to the EPA a copy of each Independent Criteria Review Committee report received by the licensee in a particular Reporting Period with the following Annual Sewage Treatment System Performance Report required by condition R5 of this licence.

L7.2 Wet weather overflow limits

The frequency of wet weather overflows from the reticulation system must not exceed 27 overflows per 10 years. Compliance with this condition must be determined at the end of each reporting period against the frequency predicted using the hydraulic sewer system model required by condition L7.1 with the 10 year rainfall time series data.

- L7.3 The licensee must report the number of wet weather overflows per 10 years as determined using the hydraulic sewer system model required by condition L7.1.

L7.4 Dry weather overflow limits

Not applicable.

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.

- O1.2 Biosolids at the premises must be stored, treated, processed, classified, transported and disposed in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

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 In the event of an overflow or bypass that harms or is likely to harm the environment, the licensee must

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use all practicable measures to minimise the impact of the overflow or bypass on the environment and public health.

O4 Processes and management

O4.1 Appropriate treatment processes

Sewage or effluent must not be discharged from points 1, 3, 8 and 9 unless it has been treated in accordance with the requirements of the table below.

The flows specified in the table below are the effluent from the sewage treatment plant.

Required treatment process	Flow range
Screening, degritting, primary and secondary sedimentation, activated sludge treatment, tertiary filtration and disinfection	Less than 463L/sec
Screening, degritting, primary sedimentation and disinfection	463L/sec or more but less than 840L/sec
Screening, ponding, degritting and disinfection	840L/sec or more
Partial disinfection	1200L/sec or more

O4.2 Not applicable.

O4.3 Not applicable.

O4.4 Not applicable.

O4.5 Not applicable.

O4.6 Not applicable.

O4.7 Level of reticulation system management, operations and maintenance activities

The reticulation system must be managed, operated and maintained such that the operational and maintenance works and activities result in ongoing improvement in the system environmental performance, when compared with existing system environmental performance. The system environmental performance must not at any time fall below existing system environmental performance.

O4.8 For the purposes of determining whether the system environmental performance has fallen below existing system environmental performance:

- in relation to chokes, the licensee is to compare the average number of chokes per year per 100km of pipe in the reticulation system of all of the licensee's sewage treatment systems averaged over the period 1 July 1995 to 30 June 2000 to the average annual number of chokes averaged over all of the licensee's sewage treatment systems over the reporting period and the preceding four twelve month periods; and
- in relation to odour complaints, the licensee is to compare the number of odour complaints

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from the reticulation system per year averaged over the period 1 July 1995 to 30 June 2000 to the average annual number of odour complaints over the reporting period and the preceding four twelve month periods.

O4.9 Exceedance of design capacity of primary disinfection processes

- a) The sewage treatment system must be operated and maintained such that the operational and maintenance works and activities must not at any time increase the frequency at which the effluent flow rate exceeds the design capacity of the primary disinfection process.
- b) For the purposes of determining compliance with (a), the licensee must compare the number of times the design capacity of the primary disinfection process is exceeded per 10 years as predicted by the hydraulic sewer system model for 1994 to the number of times the design capacity of the primary disinfection process is exceeded per 10 years as predicted by the hydraulic sewer system model for the reporting period. This comparison must use the 10 year rainfall time series data in each model.
- c) An exceedance of the design capacity of the primary disinfection process occurs when the effluent flow rate of sewage from the sewage treatment plant equals or exceeds 1200 L/s.
- d) When the primary disinfection process is bypassed or otherwise fails, total residual chlorine discharges are permitted at points 1, 3, 8 and 9 until the primary disinfection process is restored.
- e) The licensee must take all actions necessary to restore the operation of the primary disinfection process as soon as practicable after the licensee or one of the licensee's employees or agents becomes aware that the primary disinfection process is being bypassed or has failed.

O5 Other operating conditions

O5.1 Prohibition on acceptance of pesticides

The licensee must not consent to any discharge of organophosphate pesticides (including chlorpyrifos, diazinon, malathion) or organochlorine pesticides (including dieldrin, heptachlor and chlordane) into the sewage treatment system.

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

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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.

M1.4 Changes to the system map must be recorded by reference to the date of the change, description of the change and the name of the person authorising the change.

M1.5 Registers

The licensee must maintain and make available for inspection by the public, at the licensee's Head Office, registers recording the following information, for the sewage treatment system:

- a) a map or maps of the sewage treatment system showing:
 - i) the location of the sewage treatment plant or plants, sewage pumping stations, directed overflow structures, pipes and access chambers in the sewage treatment system, referenced by the licensee's identifier and the EPA point identification number, as applicable;
 - ii) the catchments, sub-catchments and sensitive areas relevant to the sewage treatment system;
- b) the number of chokes within the system reported to the licensee during each reporting period.
This information is also to be included in the licensee's Annual Environment Report required under clause 14(1)(d) of the Sydney Water Act, in addition to the corresponding information from the preceding three years;
- c) a schedule of proposed works to be carried out in relation to the premises during each reporting period;
- d) the works completed in relation to the premises during each reporting period; and
- e) the complaints by type of overflow recorded under M7 during each reporting period.

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 Not applicable.

M2.3 Water and/ or Land Monitoring Requirements

POINT 5

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	micrograms per litre	12 Times a year	Composite sample
Biochemical oxygen demand	milligrams per litre	Special Frequency 1	Composite sample
Copper	micrograms per litre	12 Times a year	Composite sample

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Cyanide	micrograms per litre	12 Times a year	Composite sample
Faecal Coliforms	colony forming units per 100 millilitres	Every 6 days	Grab sample
Hydrogen sulfide (un-ionised)	micrograms per litre	12 Times a year	Grab sample
Iron	micrograms per litre	12 Times a year	Composite sample
Nitrogen (ammonia)	milligrams per litre	Every 6 days	Composite sample
Nitrogen (total)	milligrams per litre	Every 6 days	Composite sample
Phosphorus (total)	milligrams per litre	Every 6 days	Composite sample
Total suspended solids	milligrams per litre	Special Frequency 1	Composite sample
Toxicity	percent effluent by volume	12 Times a year	Grab sample
Zinc	micrograms per litre	12 Times a year	Composite sample

POINT 7

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 2	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 2	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 2	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 2	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 2	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 2	Grab sample

POINT 10

Pollutant	Units of measure	Frequency	Sampling Method
Biochemical oxygen demand	milligrams per litre	Special Frequency 2	Grab sample
Faecal Coliforms	colony forming units per 100 millilitres	Special Frequency 2	Grab sample
Nitrogen (ammonia)	milligrams per litre	Special Frequency 2	Grab sample
Nitrogen (total)	milligrams per litre	Special Frequency 2	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 2	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 2	Grab sample

M2.4 For the purposes of the table(s) above:

a) Special Frequency 1 means:

For the purposes of determining compliance with the average and percentile limits sampling must be undertaken every 6 days. For the purposes of determining compliance with the "3DGM limits" sampling must be undertaken every month over three consecutive days commencing on the day a sample is taken to determine compliance with the average and percentile limits.

b) Special Frequency 2 means the collection of samples daily during any bypass or discharge greater

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than 2 hours, during normal working hours.

M2.5 The following conditions apply in the conditions under M2:

- a) where a monitoring frequency is specified as 2 times a year, monitoring must be undertaken at a minimum of 160 day intervals;
- b) where a monitoring frequency is specified as 4 times a year, monitoring must be undertaken at a minimum of 80 day intervals;
- c) where a monitoring frequency is specified as 6 times a year, monitoring must be undertaken at a minimum of 50 day intervals; and
- d) where a monitoring frequency is specified as 12 times a year, monitoring must be undertaken at a minimum of 25 day intervals.

M2.6 The monitoring results collected in accordance with conditions M2 for point 5 can be used to determine compliance with the limits in condition L3.4 for point 1, 3 and 13.

M3 Testing methods - concentration limits

M3.1 Not applicable.

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 The requirements of condition M3.2 also apply to the monitoring of the concentration of pollutants in waters.

M3.4 Monitoring for effluent toxicity must be conducted in accordance with the relevant testing methods listed below:

Bailey, H.C., Krassoi, R., Elphick, J.R., Mulhall, A-M., Hunt, P., Tedmanson, L. & Lovell, A. (2000), 'Application of Ceriodaphnia dubia for whole effluent toxicity tests in the Hawkesbury-Nepean watershed, New South Wales, Australia: Method development and validation', Environmental Toxicology and Chemistry: Vol. 19, No. 1, pp. 88–93.

Any proposed deviation from the methods listed above must be approved in writing by the EPA prior to the use of any other method.

M4 Testing methods - load limits

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the testing method set out in the relevant load calculation protocol for the fee-based activity classification listed in condition A1.2.

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M5 Environmental monitoring

M5.1 Sewerage Treatment System Impact Monitoring Program

- a) The licensee must undertake the monitoring programs detailed in the Sydney Water publication "Sewerage Treatment System Impact Monitoring Program, December 2010", or in any replacement document approved in writing by the EPA.
- b) The licensee must maintain a database of the results obtained in undertaking monitoring programs specified in the document cited above. Information from the database must be made available to any authorised officer of the EPA on request.
- c) The licensee must provide to the EPA the reports specified in the document cited above.
- d) The "Sewage Treatment System Impact Monitoring Program (STSIMP): Annual Data Report" specified in the document cited above must be submitted not later than 31 October in each year where the "STSIMP: Interpretive Report" is not required.
- e) The "STSIMP: Interpretive Report" specified in the document cited above must be submitted not later than 31 December every third year.
- f) For the purposes of conditions (d) and (e) above, the first "STSIMP: Annual Data Report" must be submitted not later than 31 October 2009, and the first "STSIMP: Interpretive Report" must be submitted not later than 31 December 2011.

NOTE: A copy of the "Sewerage Treatment System Impact Monitoring Program, December 2010" can be found at <http://www.sydneywater.com.au/Publications/Reports.cfm>.

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.

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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:

- 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.

M8 Requirement to monitor volume or mass

M8.1 For each discharge point or utilisation area specified below, the licensee must monitor:

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

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

POINT 7

Frequency	Unit of Measure	Sampling Method
Each overflow event	kilolitres per day	Estimate

POINT 10

Frequency	Unit of Measure	Sampling Method
Each overflow event	kilolitres per day	Estimate

POINT 13

Frequency	Unit of Measure	Sampling Method
Daily during any discharge	kilolitres per day	Estimate

POINT 14

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

M8.2 Not applicable.

M8.3 In the event that the licensee cannot comply with a volume monitoring method as required by this licence solely due to the failure or malfunction of essential monitoring equipment, volume may be calculated using another agreed method approved in writing by the EPA. This provision only applies for the duration of the failure or malfunction and the licensee is to rectify the failure or malfunction as soon as practical.

M9 Requirement to record overflow or bypass incidents

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M9.1 The licensee must record the following details in relation to each bypass from the premises:

- a) the EPA point identification number through which the bypass discharged;
- b) the start time, date and duration of the bypass;
- c) the estimated volume of the bypass;
- d) the level of treatment at the sewage treatment plant prior to discharge;
- e) classification as a dry or wet weather bypass;
- f) the most likely cause of the bypass; and
- g) the name or names of the treatment process or processes bypassed.

M9.2 A dry weather bypass is a bypass that occurs when the effluent flow rate of sewage from the sewage treatment plant does not exceed 400 L/s and a wet weather bypass occurs when this flow is equalled or exceeded.

M10 Other monitoring and recording conditions

M10.1 Continuation of Monitoring Programs

The licensee must conduct the following monitoring:

- a) continuation of all sewage treatment system and environmental monitoring programs related to sewer overflows that are underway as of 30 June 1999; and
- b) that monitoring identified at 2.2.4 in the Sydney Water document "Licensing Sewerage Overflows: Methods" dated June 1998 (a copy of which may be inspected at the EPA's Library), unless varied with the prior written approval of the EPA.

M10.2 Biosolids

Biosolids at the premises must be recorded, monitored and classified in accordance with the Biosolids Guidelines, or as otherwise approved in writing by the EPA.

M10.3 Dry weather leakage monitoring program

The licensee must monitor (using results obtained by sampling and analysis) the concentration of faecal coliforms in samples collected from each sampling point identified on the map titled "Figure A5: Map showing SCAMP boundaries and site locations for Western Sydney" of the document titled "PRP 200 Dry Weather Leakage Pollution Reduction Program" submitted to the EPA on 16 June 2006. The licensee must undertake the monitoring at a frequency approved in writing by the EPA for each sampling point, using sampling method grab sample, units of measure of cfu/100mL.

M10.4 Investigations and remedial action for dry weather leakage

- a) The licensee must investigate the cause of faecal coliform presence in any of the samples collected where the analysis results for any sample collected indicates an exceedance in the threshold of 5000 cfu/100mL ("the threshold"). The investigation must be commenced as soon as the licensee becomes aware of the threshold for faecal coliform being exceeded.
- b) The licensee must take remedial action where any investigation undertaken identifies the reticulation system as the cause of the exceedance of the threshold for faecal coliform specified in condition M10.4(a).
- c) The licensee must record:

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- i) the method, results and conclusions of investigations undertaken in accordance with condition M10.4(a), and
- ii) actions taken by the licensee as a result of the conclusions of the investigations.

M10.5 a) The licensee must undertake the following actions, in addition to the actions set out in condition M10.4, when analysis results of three consecutive samples collected at the same location indicate that the threshold for faecal coliform specified in condition M10.4(a) has been exceeded:

- i) notify the EPA in writing as soon as possible, providing the three sample analysis results, and identifying the relevant SCAMP;
- ii) commission an environmental auditor certified by an independent certification body accredited by the Joint Accreditation System of Australia and New Zealand (JASANZ) to review the three investigations specified in condition M10.4(a). The licensee must commission this review within fourteen days of the completion of the investigation into the third consecutive exceedance of the threshold, unless otherwise approved in writing by the EPA;
- iii) submit the results of the independent review to the EPA within 42 days of the commissioning of the independent review;
- iv) implement the recommendations of the independent review unless otherwise directed in writing by the EPA; and
- v) commence sampling at the relevant sampling location on a quarterly basis, unless otherwise approved in writing by the EPA. Sampling must be undertaken at quarterly intervals until three consecutive samples are below the threshold, at which time the frequency of sampling at the location can revert to the frequency specified in condition M10.3.

b) The independent review required by condition M10.5(a) must examine the three investigations undertaken by the licensee into the relevant exceedances of the threshold and determine:

- i) if the investigations and any actions undertaken as a result of the investigations were appropriate to prevent further exceedances of the relevant threshold; and
- ii) if any additional investigations or actions must be undertaken to prevent further exceedances of the threshold.

M10.6 The licensee must notify the EPA in writing if any sample analysis result obtained from monitoring required by condition M10.3 indicates that the levels of faecal coliform have exceeded 10,000cfu/100mL. The notification must be made as soon as possible after the licensee has obtained the sample result indicating the exceedance. The notification must include the sample results and identify the relevant SCAMP.

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.

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

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

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

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

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

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA 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.

R2 Notification of environmental harm

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

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- 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 Notification of bypass or overflow incidents

- R4.1
- a) Notwithstanding notification requirements under condition R2, the licensee must notify the EPA of incidents where:
 - i. a dry weather sewage overflow from a sewage pumping station has resulted in sewage being discharged to, or being reasonably expected to discharge to, waterways; or
 - ii. a discharge of sewage or effluent not treated in accordance with the requirements of conditions O4.1 and O4.2.
 - b) Notifications must be made to the EPA by contacting the Environment Line as soon as practicable after the licensee becomes aware of the incident.
 - c) The notification should include the relevant information as per s150 of the Protection of Environment Operations Act.

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d) Where an incident has been reported under condition R2 there is no requirement to report it under condition R4 in addition to the report made under condition R2.

Note: Notifications must be made to the other agencies such as Beachwatch, National Parks and NSW Food Authority, where relevant. The requirements for such notifications must be included in Pollution Incident Response Management Plans.

Note: The reporting requirements in condition R4 do not replace any other reporting requirements in the licence or under the Protection of the Environment Operations Act 1997.

R5 Annual system performance report

R5.1 The licensee must supply to the EPA an Annual Sewage Treatment System Performance Report not later than 60 days after the end of each reporting period.

R5.2 The Annual Sewage Treatment System Performance Report is to supplement the Annual Return and must report but not be limited to the following components:

R5.3 Effluent discharged

- a) The percentile values calculated from the monitoring data for each pollutant which has corresponding limits.
- b) The annual load of all assessable pollutants.
- c) An analysis of the STP performance against the concentration, toxicity and load limits specified in the licence.
- d) An assessment of the current year's performance against the previous five year's performance. The assessment must include but not be limited to an explanation of any observed trends in the plant performance, and the reason for such trends.
- e) The load of Phosphorous (total) and Nitrogen (total) discharged from the sewage treatment plant expressed as a percentage of the total load of Phosphorous (total) and Nitrogen (total) directly discharged from all Sydney Water sewage treatment systems to Hawkesbury-Nepean.
- f) The total volume discharged from the plant, and the average volume discharged from the plant during dry weather.
- g) The total volume and percentage volume of effluent recycled.
- h) i) The total number of sewage treatment plant bypasses and the total volume discharged that did not receive full treatment during:
 - AA) dry weather; and
 - BB) wet weather
- ii) A summary report of all bypass events which includes, but is not limited to, the following: dry or wet weather bypass, duration, volume discharged, volume treated, receiving waters, cause, treatment process bypassed and action(s) taken.

R5.4 Biosolids

Reporting requirements in accordance with the Biosolids Guidelines

R5.5 Reticulation System

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- a) Dry weather leakages:
 - i) monitoring results from each SCAMP;
 - ii) outcomes of any investigations; and
 - iii) details of rectification action taken.
- b) Dry weather overflows from chokes and sewage pumping stations:
 - i) including;
 - AA) number of dry weather overflows to waterways, for the whole system and for each SCAMP;
 - BB) total number of dry weather overflows, for the whole system and for each SCAMP;
 - CC) total number of dry weather overflows per 100km for whole system;
 - DD) the name of each sewage treatment system which exceeded the dry weather overflow limit at condition L7.4; and
 - EE) the name of each SCAMP where the number of dry weather overflows reaching waterways in a SCAMP exceeds the target for that SCAMP specified in the SCAMP table below.
 - ii) comparison of the dry weather overflow performance against the previous four twelve month periods for dry weather overflows to waterways and total dry weather overflows.
- c) Where the dry weather overflow sewage treatment system limit at condition L7.4 and/or target in the SCAMP table below was exceeded during the reporting period, the licensee must provide a report to the EPA no later than 30 September each year explaining the reason for the exceedance, which should include but not be limited to:
 - i) an analysis of the exceedances of limit(s) and / or target(s), including the determination of any long-term trends and evaluation of dry weather overflow abatement programs implemented by the licensee;
 - ii) the details of any dry weather overflow abatement investigations, works and activities that were scheduled to be undertaken during the reporting period and which were completed;
 - iii) the details of any dry weather overflow abatement investigations, works and activities that were scheduled to be undertaken during the reporting period and which were not undertaken or not completed;
 - iv) the details of any dry weather overflow abatement investigations, works and activities the licensee will undertake in subsequent reporting periods to minimise the likelihood of the limit(s) and / or target(s) being exceeded in any future reporting period, including the timeframes for those actions to be implemented and the level of prioritisation given to each sewage treatment system and / or SCAMP; and
 - v) an assessment of whether any amendment to the dry weather overflow abatement investigations, works and activities scheduled for the remaining reporting periods to 30 June 2015 is required to achieve the dry weather overflow limits and / or targets at condition L7.4 and in the SCAMP table below.

SCAMP table

SCAMP name	Dry Weather Overflows Reaching Waterways per Annum
S_CHERRYBROOK	6
S_THORNLEIGH	4

R5.6 Wet weather overflow abatement

- a) Wet weather overflow performance relative to the long term wet weather overflow limit

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required by conditions L7.2 or the interim wet weather overflow target required by conditions at PRP302, including whether the wet weather overflow limit or interim wet weather overflow target was achieved.

- b) Where the wet weather overflow limit or the interim wet weather overflow target was not achieved, the licensee must provide a statement explaining the reason for the non-compliance, which includes:
- i) the details of any investigations, works and activities that were scheduled to be undertaken during the reporting period and which were completed;
 - ii) the details of any investigations, works and activities that were scheduled to be undertaken during the reporting period and which were not undertaken or not completed;
 - iii) an assessment of whether any amendment to the investigations, works and activities scheduled for the remaining reporting periods to 30 June 2015 is required to achieve the requirements of conditions L7.2 or PRP302.

R5.7 Complaints and reports

A breakdown of the total number of complaints and reports received by the licensee in relation to the premises into categories of "odours", "water pollution – sewage treatment plant", "water pollution – reticulation system", and any other category indicated by the complaint/report. A brief description of any significant unresolved issues arising out of the complaints and reports must be provided.

- R5.8 The Annual Sewage Treatment System Performance Report must be presented in a format approved in writing by the EPA.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Contact number for incidents and responsible employees

- G2.1 The licensee must operate 24-hour telephone contact lines for the purpose of enabling the EPA to directly contact one or more representatives of the licensee who can:
- a) respond at all times to incidents relating to the premises; and
 - b) contact the licensee's senior employees or agents authorised at all times to:
 - i) speak on behalf of the licensee; and
 - ii) provide any information or document required under this licence.
- G2.2 The licensee is to inform the EPA in writing of the appointment of any contact persons, or changes to the person's contact details as soon as practicable and in any event within fourteen days of the appointment or change.

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G3 Signage

- G3.1 The location of EPA point number(s) listed in tables P1.1, P1.2 & P1.3 must be clearly marked by signs that indicate the point identification number used in this licence and be located as close as practical to the point.

8 Pollution Studies and Reduction Programs

U1 PRP 400: Endocrine disrupting chemicals Pollution Reduction Program

- U1.1 **400.1** The objective of the endocrine disrupting chemicals program is to measure the concentrations of priority endocrine disrupting chemicals in a representative set of STPs to inform potential discussions on this issue.
- U1.2 **400.2** By 31 May 2012 the licensee must report the concentrations of priority endocrine disrupting chemicals in the effluents from the following STPs: Warriewood, Winmalee, Rouse Hill, St Marys, West Camden and West Hornsby.
- U1.3 **400.3** Priority endocrine disrupting chemicals must include at least the steroid hormones (i.e. 17 beta-estradiol, estrone, ethinyl estradiol) and the breakdown products of the nonylphenol ethoxylate surfactants (ie nonylphenol, nonylphenol ethoxylate and nonylphenol diethoxylate).
- U1.4 **400.4** The measurements for priority endocrine disrupting chemicals must be taken from the relevant STP effluent quality monitoring point on at least 3 occasions and at least 1 week apart (Note: the samples could be taken at the same time other routine samples are taken for compliance monitoring).
- U1.5 **400.5** The measurements for 17 beta-estradiol, estrone and ethinyl estradiol for steroid hormones must be undertaken using analytical methods using a GC-MS-MS with a goal detection limit of at least 1 ng/L.
- U1.6 **400.6** The measurements for nonylphenol ethoxylate surfactant breakdown products must have a goal detection limit of 100ng/L (ie 0.1ug/L).
- U1.7 **400.7** The report only needs to include the analytical data and this information will be used to inform discussions.

U2 PRP 700: Review of Dry Weather Leakage Monitoring Program Pollution Reduction Program

- U2.1 **700.1** The objective of this PRP is to improve the effectiveness of the dry weather leakage program by requiring the licensee to:
- review and assess the effectiveness of the program since its commencement in July 2005 in identifying dry weather leakage across the system and driving rectification works;
 - review the current monitoring requirements to develop and recommend a revised monitoring program which factors in the risk of leakage from various parts of the system and that can be tailored to the sewage characteristics of each individual SCAMP or system; and

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c) identify and prioritise SCAMPs known to require intensive catchment investigation / rehabilitation works in order to inform negotiation of further licence specific works based PRPs.

U2.2 700.2 The licensee must undertake a review of the results of the dry weather leakage monitoring program since its commencement in July 2005 and submit a report to the EPA by 31st May 2012. The report must include, but does not need to be limited to:

- i) detailed analysis and interpretation of the sampling data to identify trends in detected dry weather leakage across the system and also to identify the factors that are primarily contributing to the patterns of leakage identified;
- ii) details of responses to the detection of dry weather leakage including a description of investigation and rectification works undertaken to remedy the leakage (including a cost of these works) as well as works identified but not yet undertaken.

U2.3 700.3 The licensee must undertake a review of the effectiveness of the current dry weather leakage monitoring program and submit a recommendation to the EPA for a revised risk based monitoring program for on-going monitoring of SCAMPs across the Sydney Water network by 30th June 2012. This report must include an indication of the implications for the costing of the proposed monitoring program associated with any recommended changes. The proposed monitoring program does not need to be limited to bacterial parameters, but can be extended (with justification based on known sewage characteristics each SCAMP/system) to other parameters that enable the detection of dry weather sewage overflows in receiving waters.

U2.4 700.4 The licensee must undertake a review of all SCAMPs that consistently have sampling results above the investigation threshold of 10 000cfu/100mL and submit a recommendation for an investigation and works prioritisation program to the EPA by 31 July 2012. The review must include but is not limited to:

- i) a framework for prioritising SCAMPs
- ii) timeframes to undertake priority investigations and works identified using the framework established by i) above
- iii) a proposed approach and schedule for undertaking priority works for consideration by the EPA.

Note: The EPA intends to implement further PRPs on the licences to require timely works in the poorest performing SCAMPs as negotiated with the licensee.

9 Special Conditions

E1 Special Dictionary

E1.1

Term	Definition
approved	Means approved in writing by the EPA. The EPA's approval may be given unconditionally, or subject to conditions.
average concentration limit	Means the average of twelve monitoring test results undertaken during the reporting period.
average dry weather flow (ADWF)	Means the average flow at a point calculated or measured over a 24 hour period in dry weather.

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Biosolids	Has the same meaning as in Schedule 1, Part 3 of the Protection of the Environment Operations Act 1997.
Biosolids Guidelines	Means the “Environmental Guidelines: Use and disposal of biosolids products” published by the EPA November 1997, or any subsequently updated guidelines which replace this publication.
Bypass	Means circumstances where sewage has been received at the sewage treatment plant but is discharged from the plant without it being treated, processed or reprocessed by means of any or all of the designed treatment processes of the plant. A new bypass event is defined as a bypass that commences at least 24 hours after the end of the previous bypass.
catchment	Catchment boundaries are marked on the system map.
cfu	Means colony forming units.
choke	Means a full or partial blockage in a sewer pipe that results in sewage being discharged to the environment. A choke may be caused by structural collapse of the sewer pipes, tree roots, debris or siltation.
condition	Means a condition of this licence.
directed overflow	Means a directed overflow structure within the reticulation system.
directed overflow structure	Means a designed structure (excluding access chambers) in the reticulation system which operates as a relief to allow sewage to discharge at a planned location or a sewage pumping station, but does not include a bypass from a sewage treatment plant.
dry weather	Dry weather occurs when less than 10 millimetres of rainfall has been measured at a rain gauge in the catchment of the sewage treatment system during a 24 hour period (where there is no rain gauge in the catchment, at the rain gauge closest to the centre of the catchment). Dry weather SPS discharge occurs when less than 10mm rainfall has been measured at a rain gauge in the catchment of the SPS during a 24 hour period (where there is no rain gauge in the catchment at the rain gauge closest to the SPS).
dry weather overflow	Means an overflow in the reticulation system not caused by wet weather, as determined by the hydraulic sewer system model.
effluent	Means sewage that has received all of the designed treatment processes at the sewage treatment plant.
emission factor	In relation to load-based licensing, means the level of emissions expected to be generated relative to another characteristic of the activity.
harm	Has the same meaning as in the Protection of the Environment Operations Act 1997.
kL	Means kilolitre.
L/s	Means litres per second.
leakage	Overflows caused by the exfiltration of sewage from faults, such as cracks, in sewer pipes to the surrounding environment.
licence issue date	Means 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.
mL	Means millilitres.
ML	Means megalitres.

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node	Is a point in the hydraulic sewer system model that represents one or more overflows in the same catchment.
offensive odour	Has the same meaning as in the Protection of the Environment Operations Act 1997.
overflow	Is a discharge of untreated or partially treated sewage from the sewage treatment system. Overflows may occur as directed overflows or uncontrolled overflows.
Partial disinfection	Means a discharge of sewage or effluent from an STP that occurs when the flow rate of sewage at the influent point of the STP equals or exceeds the rate specified in condition O6.3.
Partial treatment discharge	Means a discharge of sewage or effluent from an STP that occurs when the flow rate of sewage at the influent point of the STP equals or exceeds the rate specified in condition O6.3 for Bondi, Malabar and North Head STPs only.
performance acceptance criteria	In relation to hydraulic sewer stem model, means the standard of accuracy (sometimes called the "goodness of fit") to be achieved when observations of a particular performance indicator are compared to the results predicted by the model.
reticulation system	Means that part of the sewage treatment system which collects and transports sewage to the sewage treatment plant and includes all sewer pipes (whether greater or less than 300mm diameter), access chambers, vent shafts, directed overflow structures and sewage pumping stations, but does not include the sewage treatment plant.
SCAMP	Sewer Catchment Asset Management Plan.
sewage	Means all material received in the reticulation system.
sewage products	Means any by-product of the treatment processes and includes biosolids, raw sludge, liquid sludge, thickened sludge, digested sludge, screenings and grit.
sewage pumping station (SPS)	Is a structure which controls the transport of sewage through the sewer pipes, where steep hills and other variations in the land topography can prevent or limit the gravity flow of sewage to the sewage treatment plant.
sewage treatment plant (STP)	Is a facility at which sewage is stored and treated following delivery from the reticulation system prior to discharge, and includes discharge structures and STP bypass points.
sewage treatment system	Means the reticulation system and the sewage treatment plant used for the transport, treatment and discharge of effluent and sewage.
sub-catchment	Sub-catchment boundaries are marked on the system map.
ten year rainfall time series data	Means the rainfall data for the period 1985 to 1994 as used in the EISs.
Trade waste agreements	Means agreements reached between the licensee and industrial and commercial customers to restrict the amount of toxic and other potentially harmful substances discharged to the sewerage system.
ug/L	Means micrograms per litre.
uncontrolled overflow	Means an overflow from any part of the reticulation system that is not a directed overflow. Leakage or overflows from access chambers are examples or uncontrolled overflows.
waters	Has the same meaning as in the Protection of the Environment Operations Act 1997.

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waterways	Means the whole or any part of any river, stream, lake, lagoon, swamp, wetlands, natural or artificial watercourse, dam or tidal waters (including the sea), but does not include watercourses that are dry at the commencement of the overflow, or underground pipes, channels or gutters designed to receive or pass rainwater.
wet weather	Wet weather occurs when 10 millimetres or more of rainfall has been measured at a rain gauge in the catchment of the sewage treatment system during a 24 hour period (where there is no rain gauge in the catchment, at the rain gauge closest to the centre of the catchment).
wet weather overflow	Means an overflow in the reticulation system caused by wet weather as determined by the hydraulic sewer system model.

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Dictionary

General Dictionary

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

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

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

Mr Warren Hicks

Environment Protection Authority

(By Delegation)

Date of this edition: 25-May-2000

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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 varied by notice 1005320, issued on 22-Oct-2001, which came into effect on 16-Nov-2001.
- 3 Licence varied by notice 1017906, issued on 27-Jun-2002, which came into effect on 28-Jun-2002.
- 4 Licence varied by notice 1018904, issued on 23-Dec-2002, which came into effect on 17-Jan-2003.
- 5 Licence varied by notice 1032533, issued on 24-Nov-2003, which came into effect on 28-Nov-2003.
- 6 Licence varied by notice 1032872, issued on 19-Mar-2004, which came into effect on 02-Apr-2004.
- 7 Licence varied by notice 1047687, issued on 30-Jun-2005, which came into effect on 30-Jun-2005.
- 8 Licence varied by notice 1061418, issued on 29-Jun-2006, which came into effect on 29-Jun-2006.
- 9 Licence varied by notice 1074766, issued on 29-Jun-2007, which came into effect on 29-Jun-2007.
- 10 Licence varied by notice 1081520, issued on 01-Sep-2008, which came into effect on 01-Sep-2008.
- 11 Licence varied by notice 1092480, issued on 04-Nov-2008, which came into effect on 04-Nov-2008.
- 12 Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date>
- 13 Licence varied by admin corrections to annual return, issued on 02-Jul-2009, which came into effect on 02-Jul-2009.
- 14 Licence varied by notice 1116050, issued on 02-Jul-2010, which came into effect on 02-Jul-2010.
- 15 Licence varied by notice 1129010, issued on 23-Jun-2011, which came into effect on 23-Jun-2011.