



THIS IS THE DOCUMENT MARKED ESO-1 REFERRED TO IN THE AFFIDAVIT OF SWORN AT HOBART IN TASMANIA THIS 8<sup>th</sup> DAY OF FEBRUARY 2013 BEFORE ME:

JUSTICE OF THE PEACE NUMBER 4821

*(Signature)*  
A. S. LECTER

## ENVIRONMENT PROTECTION NOTICE No. 8536/1

Issued under the *Environmental Management and Pollution Control Act 1994*

Issued to: **TASMANIAN WATER AND SEWERAGE CORPORATION (SOUTHERN REGION) PTY LIMITED trading as SOUTHERN WATER**  
ACN 133 654 976  
163 - 169 MAIN RD  
MOONAH TAS 7009

Environmentally Relevant Activity: **The operation of a wastewater treatment plant (ACTIVITY TYPE: Wastewater Treatment Works)**  
**GEEVESTON WASTEWATER TREATMENT PLANT, HUON HWY**  
**GEEVESTON TAS 7116**

### GROUND S

I, John Mollison, Acting Director, Environment Protection Authority, being satisfied in accordance with section 44(1)(a), (c), (d) and (e) of the *Environmental Management and Pollution Control Act 1994* (the EMPCA) and in relation to the above-mentioned environmentally relevant activity that:-  
serious or material environmental harm or environmental nuisance is being or is likely to be caused; and  
it is necessary to do so in order to give effect to a State Policy or an environment protection policy; and  
it is desirable to vary the conditions of a permit (see table below); and  
it is necessary to secure compliance with the general environmental duty,  
hereby issue this environment protection notice to the above-mentioned person as the person responsible for the activity.

Permit No.	Date Granted	Granted By
3625	08 December 1992	Director of Environmental Control

### PARTICULARS

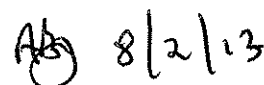
The particulars of the grounds upon which this notice is issued are that:

- 1 Because it is necessary to give effect to the *State Policy on Water Quality Management, 1997*.
- 2 Because the permit conditions need to be varied to reflect current or updated terminology and/or to clarify the meaning of the conditions.
- 3 Because the permit conditions need to be varied to reflect continuous improvement consistent with the objectives of EMPCA.
- 4 Because the permit conditions need to be varied to ensure that there are adequate safeguards against environmental harm or nuisance being caused by the activity.

*(Signature)*

- 5 Because the permit conditions need to be varied to reflect current regulatory practice.
- 6 Because the permit needs to be varied to reflect the change of the person responsible which occurred in July 2009.
- 7 Because a review of bypass arrangements and monitoring of bypass events are practicable steps to prevent or minimise environmental harm.

Further details of the particulars are contained in Schedule 4 of this notice.



**DEFINITIONS**

Unless the contrary appears, words and expressions used in this Notice have the meaning given to them in Schedule 1 of this Notice and in the EMPCA. If there is any inconsistency between a definition in the EMPCA and a definition in this Notice, the EMPCA prevails to the extent of the inconsistency.

**REQUIREMENTS**

In accordance with s.44(3) of the EMPCA, the person responsible for the activity is required to comply with the conditions contained in Schedule 2 of this Notice. These conditions prevail over the terms of the permit to the extent of any inconsistency.

**INFORMATION**

Attention is drawn to **Schedule 3**, which contains important additional information.

**PENALTIES**

If a person bound by an environment protection notice contravenes a requirement of the notice, that person is guilty of an offence and is liable on summary conviction to a penalty not exceeding 1000 penalty units in the case of a body corporate or 500 penalty units in any other case (at the time of issuance of this Notice one penalty unit is equal to \$130.00).

**NOTICE TAKES EFFECT**

**This Notice takes effect on the date on which it is served upon you.**

**APPEAL RIGHTS**

You may appeal to the Appeal Tribunal against this notice, or against any requirement contained in the notice, within 14 days from the date on which the notice is served, by writing to:

The Chairperson  
Resource Management and Planning Appeal Tribunal  
GPO Box 2036  
Hobart TAS 7001

Signed:



ACTING DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY

Date:

31 JAN 2013

AG 8/2/13

**Table Of Contents**

Schedule 1: Definitions..... 6

Schedule 2: Conditions.....8

    Maximum Quantities..... 8

        Q1 Regulatory limits.....8

    General.....8

        G1 Access to and awareness of conditions and associated documents..... 8

        G2 Complaints register..... 8

        G3 Incident response.....8

        G4 No changes without approval.....8

        G5 Change of ownership..... 9

        G6 Annual Environmental Review.....9

        G7 Bypass Review .....9

        G8 Inflow and Infiltration (I&I) Management Plan..... 9

    Decommissioning And Rehabilitation.....10

        DC1 Notification of cessation.....10

        DC2 DRP requirements.....10

        DC3 Rehabilitation following cessation.....10

    Effluent.....10

        EF1 Effluent discharge locations.....10

        EF2 Signage of outfall locations .....10

        EF3 Effluent quality limits for discharge to the Kermandie River.....11

    Effluent Management.....11

        EM1 Effluent Management.....11

        EM2 Effluent reuse feasibility study.....11

        EM3 Emission Limit Guidelines Compliance Plan.....12

        EM4 Discharge Management Plan.....12

        EM5 Ambient monitoring of receiving waters.....13

    Monitoring.....14

        M1 Dealing with samples obtained for monitoring.....14

        M2 Monitoring requirements.....14

        M3 Flow monitoring equipment.....14

        M4 Monitoring reporting and record keeping.....14

        M5 Signage of monitoring points.....15

        M6 Event Recorder for Bypass.....15

    Noise Control.....15

        N1 Noise emission limits.....15

    Operations.....15

        OP1 Operational Procedures Manual.....15

        OP2 Site security.....15

        OP3 Contingency Management .....16

    Waste Management.....16

        WM1 Sewage Sludge Management Plan.....16

        WM2 Controlled Waste Register.....16

Schedule 3: Information.....18

    Legal Obligations.....18

        LO1 Notification of incidents under section 32 of EMPCA.....18

        LO2 EMPCA.....18

        LO3 Storage and handling of Dangerous Goods and Dangerous Substances..... 18

        LO4 Change of responsibility.....19



AS 8/2/13

Policy Requirements..... 19  
 PR1 Policy Framework..... 19  
 PR2 Policy Objectives..... 19  
 Schedule 4: Grounds Matrix.....5 pages

*Attachments*

Attachment 1: Geeveston wwtp site plan EPN 8536 1 (modified: 15/01/2013 17:26)..... 1 page  
 Attachment 2: Geeveston WWTP Table of Monitoring Requirements (modified: 17/01/2013 11:03).....3 pages



AS 8/2/13  
31 JAN 2013

**Schedule 1: Definitions**

**Activity** means any environmentally relevant activity (as defined in Section 3 of EMPCA) to which this document relates, and includes more than one such activity.

**Approved Management Method For Biosolids Reuse** means the document of this title first gazetted by the Director in June 2006 as amended by the Director from time to time.

**Australian Guidelines For Water Quality Monitoring And Reporting** means the document of this title published as part of the *National Water Quality Management Strategy* in 2000, or any subsequent updates.

**Authorized Officer** means an authorized officer under section 20 of EMPCA.

**Average Dry Weather Flow** means the average of the daily flows to a wastewater treatment plant sustained during dry-weather periods with limited infiltration.

**Best Practice Environmental Management** or 'BPEM' has the meaning described in Section 4 of EMPCA.

**Biosolids** means sewage sludge that has been extracted from a wastewater treatment plant and stabilised for beneficial reuse.

**Bypass** means the discharge of untreated or partially treated effluent most commonly as a result of WWTP component failure or increased inflows to the WWTP as a result of high rainfall.

**Director** means the Director, Environment Protection Authority holding office under Section 18 of EMPCA and includes a person authorised in writing by the Director to exercise a power or function on the Director's behalf.

**DRP** means Decommissioning and Rehabilitation Plan

**Effluent** means wastewater discharged from The Land.

**Emission Limit Guidelines** means the *Emission Limit Guidelines for Sewage Treatment Plants that Discharge Pollutants into Fresh and Marine Waters 2001* published by the Department of Primary Industries, Water and Environment, dated June 2001, and includes subsequent versions of this document.

**EMPCA** means the *Environmental Management and Pollution Control Act 1994*.

**Environmental Harm** and **Material Environmental Harm** and **Serious Environmental Harm** each have the meanings ascribed to them in Section 5 of EMPCA.

**Environmental Nuisance** and **Pollutant** each have the meanings ascribed to them in Section 3 of EMPCA.

**Mixing Zone** means a three dimensional area of the receiving waters around a point of discharge of pollutants within which it is recognised that the water quality objectives for the receiving waters may not be achieved.

ABJ 8/2/13

207

**Noise Sensitive Premises** means residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.

**Person Responsible** is any person who is or was responsible for the environmentally relevant activity to which this document relates and includes the officers, employees, contractors, joint venture partners and agents of that person, and includes a body corporate.

**Protected Environmental Value** means a value or use for which it has been determined that a given area of the environment should be protected. There can, and often will be, more than one protected environmental value for a given area. A list of potential protected environmental values is provided in clause 7.1 of the *State Policy on Water Quality Management 1997*.

**Reporting Period** means the financial year ending on 30 June of each calendar year.

**Sewage Sludge** means concentrated solids separated from wastewater during the wastewater treatment process.

**Sewerage System** means a system of pipes, maintenance holes, pumps, treatment facilities and other items for handling wastewater.

**SPWQM** means the *State Policy on Water Quality Management 1997*, as amended from time to time.

**Tasmanian Biosolids Reuse Guidelines** means the document of this title published by the Department of Primary Industries, Water and Environment in August 1999, and includes any subsequent versions of this document.

**Tasmanian Noise Measurement Procedures Manual** means the Noise Measurement Procedures Manual dated July 2004 issued by the Director of Environmental Management in accordance with regulation 25 of the *Environmental Management and Pollution Control (Miscellaneous Noise) Regulations 2004* and includes any subsequent versions of the document.

**The Land** means the land on which the activity to which this document relates may be carried out, and includes: buildings and other structures permanently fixed to the land, any part of the land covered with water, and any water covering the land. The Land is described by Certificate of Title Plan volume 246869 folio 1 with the Property Identification Number 5252944.

**Waste** has the meaning ascribed to it in Section 3 of EMPCA.

**Wastewater** means spent or used water (whether from industrial or domestic sources) containing a pollutant and includes stormwater which becomes mixed with wastewater.

**WWTP** means the Geeveston wastewater treatment plant which includes an intermittent decant extended aeration (IDEA) package plant, effluent clarifier and sodium hypochlorite disinfection and outfall to Kermantie River. Liquid sludge is stored on the Land for short periods (of about a week) before being transported and managed offsite.

AG 8/2/13

PS

**Schedule 2: Conditions****Maximum Quantities****Q1 Regulatory limits**

- 1 The activity must not exceed the following limits:
  - 1.1 300 kilolitres per day of design capacity to treat sewage or wastewater (average dry weather flow). (Annual fees are derived from this figure.)

**General****G1 Access to and awareness of conditions and associated documents**

A copy of these conditions and any associated documents referred to in these conditions must be held in a location that is known to and accessible to the person responsible for the activity. The person responsible for the activity must ensure that all persons who are responsible for undertaking work on The Land, including contractors and sub-contractors, are familiar with these conditions to the extent relevant to their work.

**G2 Complaints register**

- 1 A public complaints register must be maintained and made available for inspection by an Authorized Officer upon request. The public complaints register must, as a minimum, record the following detail in relation to each complaint received in which it is alleged that environmental harm (including an environmental nuisance) has been caused by the activity:
  - 1.1 the time at which the complaint was received;
  - 1.2 contact details for the complainant (where provided);
  - 1.3 the subject-matter of the complaint;
  - 1.4 any investigations undertaken with regard to the complaint; and
  - 1.5 the manner in which the complaint was resolved, including any mitigation measures implemented.
- 2 Complaint records must be maintained for a period of at least 3 years.

**G3 Incident response**

If an incident causing or threatening environmental nuisance, serious environmental harm or material environmental harm from pollution occurs in the course of the activity, then the person responsible for the activity must immediately take all reasonable and practicable action to minimise any adverse environmental effects from the incident.

**G4 No changes without approval**

- 1 The following changes, if they may cause or increase the emission of a pollutant which may cause material or serious environmental harm or environmental nuisance, must only take place in relation to the activity if such changes have been approved in writing by the EPA Board following its assessment of an application for a permit under the *Land Use Planning and Approvals Act 1993*, or approved in writing by the Director:
  - 1.1 a change to a process used in the course of carrying out the activity; or
  - 1.2 the construction, installation, alteration or removal of any structure or equipment used in the course of carrying out the activity; or
  - 1.3 a change in the quantity or characteristics of materials used in the course of carrying out the activity.

AS 8/2/13

27



**G5 Change of ownership**

If the person responsible for the activity is not the owner of The Land upon which the activity is carried out and the owner of The Land changes or is to change, then, as soon as reasonably practicable but no later than 30 days after becoming aware of the change, the person responsible must notify the Director in writing of the change of ownership.

**G6 Annual Environmental Review**

Unless otherwise approved by the Director a publicly available Annual Environmental Review must be submitted each year within 3 months of the end of the Reporting Period. The Annual Environmental Review must be prepared to the satisfaction of the Director using the latest version of the Annual Environmental Review Template which is available on request from the Director.

**G7 Bypass Review**

- 1 Within 12 months of the date on which these conditions take effect, a review of bypass arrangements on The Land must be completed and a report detailing this review ('the Bypass Review') submitted to the Director. The Bypass Review must document:
  - 1.1 the locations that wastewater is most likely to bypass treatment processes and where the untreated or partially treated wastewater discharges to the environment;
  - 1.2 scenarios under which a bypass is likely to occur;
  - 1.3 steps to be taken to prevent discharge of untreated or partially treated wastewater to the environment. This must include consideration of, but not be limited to, an increase of the sewage storage capacity to allow the capture of wet weather flows;
  - 1.4 in the case that not all bypasses are preventable, details of steps to be taken to reduce the frequency and impact of bypasses. In this case, the Bypass Review must also include a description of the circumstances in which bypassing is not preventable and a justification of why prevention is not practicable;
  - 1.5 whether alternative bypass discharge locations (such as discharge to Hospital Bay) will reduce risk to human health and the environment. A determination also must be made on whether the creation of such an alternative bypass discharge point would be a reasonable or practicable step to minimise environmental harm.
- 2 Within 36 months of the date on which these conditions take effect, steps identified in the Bypass Review to prevent environmental harm, or when prevention is not practicable to reduce the impact and frequency of environmental harm, must be implemented.

**G8 Inflow and Infiltration (I&I) Management Plan**

- 1 An Inflow and Infiltration ('I&I') Management Plan must be submitted by the person responsible to the Director for approval within 12 months of the date on which these conditions take effect or by a date otherwise specified in writing by the Director.
- 2 The I&I Management Plan must contain the following:
  - 2.1 Details of surveys or investigations previously undertaken to identify I&I points within the sewerage system including:
    - 2.1.1 summaries of results;
    - 2.1.2 descriptions of the methods used;
    - 2.1.3 identification of sub-catchment I&I rates; and
    - 2.1.4 I&I sources identified.
  - 2.2 An outline of future surveys or investigations to be undertaken to identify I&I points within the sewerage system;
  - 2.3 A strategy for the reduction of I&I into the sewerage system including:

- 2.3.1 specific reduction targets;
  - 2.3.2 a table containing all of the commitments made in the strategy; and
  - 2.3.3 an implementation timetable for the strategy;
- 3 The person responsible must implement and act in accordance with the approved I&I Management Plan.
  - 4 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved I&I Management Plan or approves a new I&I Management Plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

### **Decommissioning And Rehabilitation**

#### **DC1 Notification of cessation**

Within 30 days of becoming aware of any event or decision which is likely to give rise to the permanent cessation of the activity, the person responsible for the activity must notify the Director in writing of that event or decision. The notice must specify the date upon which the activity is expected to cease or has ceased.

#### **DC2 DRP requirements**

Unless otherwise approved in writing by the Director, a draft Decommissioning and Rehabilitation Plan (DRP) for the activity must be submitted for approval to the Director within 30 days of the Director being notified of the planned cessation of operations or by a date specified in writing by the Director. The DRP must be prepared in accordance with guidelines provided by the Director.

#### **DC3 Rehabilitation following cessation**

- 1 Following permanent cessation of the activity, and unless otherwise approved in writing by the Director, The Land must be rehabilitated including:
  - 1.1 stabilisation of any land surfaces that may be subject to erosion;
  - 1.2 removal or mitigation of all environmental hazards or land contamination, that might pose an on-going risk of causing environmental harm; and
  - 1.3 decommissioning of any equipment that has not been removed.
- 2 Where a Decommissioning and Rehabilitation Plan (DRP) has been approved by the Director, decommissioning and rehabilitation must be carried out in accordance with that plan.

### **Effluent**

#### **EF1 Effluent discharge locations**

- 1 Effluent from the activity must only be discharged at the following discharge point:
  - 1.1 Discharge to water: discharge to the Kermadie River at Map Grid of Australia (GDA94) zone 55G 494804.63 metres east and 5221009.41 metres north as depicted on the plan at Attachment 1.

#### **EF2 Signage of outfall locations**

Signage must be installed and maintained near to outfalls to discourage contact with waters near the outfall. This signage must describe the location of the outfall and nature of the discharge.

AB 8/2/13

207

**EF3 Effluent quality limits for discharge to the Kermandie River**

- 1 Effluent discharged to the Kermandie River must comply with the water quality limits set out in the Table of Effluent Quality Limits for discharge to the Kermandie River, at the Effluent Quality monitoring location specified in Attachment 2.
- 2 **Table of Effluent Quality Limits for discharge to the Kermandie River**

Column 1	Column 2	Column 3
Substance or measure	Unit of measurement	Maximum limit or range
Biochemical Oxygen Demand	mg/L	15
Suspended Solids	mg/L	25
Ammonia Nitrogen	mg/L	18.5
Total Nitrogen	mg/L	24
Total Phosphorus	mg/L	5.5
Oil and Grease	mg/L	10
Thermotolerant Coliforms	cfu/100mL	200
Total Residual Chlorine	mg/L	1
pH	pH units	6.5 to 8.5

**Effluent Management****EM1 Effluent Management**

- 1 The person responsible must:
  - 1.1 submit to the Director within 6 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director, a written undertaking to implement full effluent reuse; or
  - 1.2 submit an Emission Limit Guidelines Compliance Plan to the Director for approval within 12 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director; or
  - 1.3 submit a Discharge Management Plan to the Director for approval within 2 years of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director.

**EM2 Effluent reuse feasibility study**

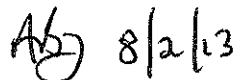
- 1 A feasibility study for reuse of effluent from the activity must be submitted to the Director within 6 months of the date on which these conditions take effect, or a date otherwise specified in writing by the Director. The study must be to the satisfaction of the Director and must include:
  - 1.1 a strategic evaluation of the potential for the establishment of an effluent reuse scheme;
  - 1.2 details of investigations undertaken to maximise the reuse of treated effluent discharged from the activity including identification of potential land areas and uses suitable for reuse and a summary of discussions undertaken with potential end users to enable reuse; and
  - 1.3 where reuse is feasible, a written commitment from the person responsible to implement a reuse scheme including an action plan with timelines for completion of significant actions.

**EM3 Emission Limit Guidelines Compliance Plan**

- 1 For the purposes of these conditions an Emission Limit Guidelines Compliance Plan must, with reference to the *Emission Limit Guidelines*, include:
  - 1.1 confirmation that the volume of effluent discharged from the activity will be less than 500 kL/day average dry weather flow;
  - 1.2 a strategy to ensure that the flow rate of the receiving waters is equal to or greater than 80 times the flow rate of effluent discharged to water during low seasonal water flow conditions;
  - 1.3 a strategy to bring effluent quality into compliance with Accepted Modern Technology emission limits including details of any infrastructure upgrade requirements.
  - 1.4 a table containing all of the major commitments made in the Emission Limit Guidelines Compliance Plan;
  - 1.5 an implementation timetable for key aspects of the Emission Limit Guidelines Compliance Plan; and
  - 1.6 a reporting schedule to regularly advise the Director of progress with the implementation of the Emission Limit Guidelines Compliance Plan.
- 2 The person responsible must implement and act in accordance with the approved Emission Limit Guidelines Compliance Plan.
- 3 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved Emission Limit Guidelines Compliance Plan or approves a new Emission Limit Guidelines Compliance Plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

**EM4 Discharge Management Plan**

- 1 For the purposes of these conditions a Discharge Management Plan must be prepared to the satisfaction of the Director and must include the following:
  - 1.1 an assessment of the available options for improved effluent management in accordance with the hierarchy set out in Division 2: 'Management of Point Sources of Pollution' of the SPWQM;
  - 1.2 a description of the volume and quality of effluent likely to be discharged to the receiving waters with consideration of effluent loads discharged to any approved reuse schemes;
  - 1.3 an assessment of the current impact of effluent discharges from the activity on the receiving environment. The assessment must incorporate and analyse the findings of an Ambient Monitoring Report submitted to the Director in accordance with these conditions;
  - 1.4 measures to ensure that the discharge of effluent to the receiving waters does not prejudice the achievement of the recommended water quality objectives at the discharge point including:
    - 1.4.1 recommended emission limits determined in accordance with the SPWQM;
    - 1.4.2 proposed effluent management measures including alternate discharge point options, seasonal discharge management and / or the establishment of a mixing zone, where necessary; and
    - 1.4.3 details of any upgrades of wastewater treatment infrastructure necessary to achieve the recommended emission limits and implement the discharge management measures.
  - 1.5 a table containing all of the major commitments made in the plan;

- 1.6 an implementation timetable for key aspects of the plan; and
- 1.7 a reporting schedule to regularly advise the Director of progress with implementation of the plan.
- 2 The person responsible must implement and act in accordance with the approved Discharge Management Plan.
- 3 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved Discharge Management Plan or approves a new Discharge Management Plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

#### EM5 Ambient monitoring of receiving waters

- 1 Where an Ambient Monitoring Report is required by these conditions, an ambient monitoring plan for receiving waters must be submitted by the person responsible to the Director for approval within 9 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director.
- 2 The ambient monitoring plan for receiving waters must:
  - 2.1 be consistent with the Australian Guidelines for Water Quality Monitoring and Reporting;
  - 2.2 outline the program scope, methods, locations, parameters, frequency and duration of the proposed monitoring program, including the rationale for design features of the program such as any modelling undertaken;
  - 2.3 be designed to characterise the ambient water quality and biological conditions and to assess the impact of effluent discharged from the activity, taking into account seasonal effects and other variation in the receiving environment;
  - 2.4 be designed to take into account the Protected Environmental Values and identify sensitive receptors within the receiving environment; and
  - 2.5 incorporate an effluent plume dilution study which identifies the behaviour and dimensions of the mixing zone at the authorised discharge point;
  - 2.6 be designed to identify the location and extent of the mixing zone, taking into account seasonal effects and other variation in the receiving environment;
  - 2.7 include an implementation timetable for the plan.
- 3 Unless otherwise approved in writing by the Director, the approved ambient monitoring plan for receiving waters must be implemented within 1 month of the plan being approved in writing by the Director.
- 4 Within 2 months of the completion of ambient monitoring in accordance with the ambient monitoring plan for receiving waters, an Ambient Monitoring Report must be submitted to the Director which must include the following information:
  - 4.1 a description of the quality of the receiving waters environment, both in areas impacted by the discharge and in areas that are not impacted by the discharge, including graphical presentation of monitoring results collected in accordance with these conditions and an analysis of seasonal effects and other variation;
  - 4.2 observations regarding the dilution and dispersion of effluent into the receiving waters in comparison to predictions or findings of previous studies (e.g. plume dilution studies);
  - 4.3 an assessment of the dilution and dispersion patterns achieved in the receiving waters and recommendations regarding the location and extent of the mixing zone;

ABJ 8/2/13

- 4.4 an evaluation of the environmental impacts with consideration of Protected Environmental Values and relevant sensitive receptors, based on the monitoring results and knowledge of seasonal effects and other variation.

### Monitoring

#### **M1 Dealing with samples obtained for monitoring**

- 1 Any sample or measurement required to be obtained under these conditions must be taken and processed in accordance with the following:
  - 1.1 Australian Standards, NATA approved methods, the American Public Health Association Standard Methods for the Analysis of Water and Waste Water or other standard(s) approved in writing by the Director;
  - 1.2 samples must be tested in a laboratory accredited by the National Association of Testing Authorities (NATA), or a laboratory approved in writing by the Director, for the specified test;
  - 1.3 results of measurements and analysis of samples and details of methods employed in taking measurements and samples must be retained for at least three years after the date of collection; and
  - 1.4 noise measurements must be undertaken in accordance with the Tasmanian Noise Measurement Procedures Manual.

#### **M2 Monitoring requirements**

- 1 Unless otherwise specified in writing by the Director, monitoring must be undertaken in accordance with the Table of Monitoring at Attachment 2, as follows:
  - 1.1 the items listed in Column 1 must be sampled or tested at the locations listed in Column 2 for the parameters listed in Column 3 at the frequencies listed in Column 5 using the techniques listed in Column 6; and
  - 1.2 resultant monitoring data must be reported to the Director in accordance with the requirements set out in Column 7 and in the units listed in Column 4.

#### **M3 Flow monitoring equipment**

- 1 Flow monitoring equipment must be calibrated as frequently as recommended by the manufacturer or at least once every 12 months, whichever is the more frequent.
- 2 The dates on which flow monitoring equipment has been calibrated must be recorded and records kept for a minimum of 3 years.

#### **M4 Monitoring reporting and record keeping**

- 1 Unless otherwise specified in writing by the Director, a Monthly Monitoring Report, in an electronic format approved by the Director, must be submitted to the Director within 21 days of completion of laboratory analyses of samples collected for the previous monthly period. As a minimum, the Monthly Monitoring Report must include the following information:
  - 1.1 the laboratories at which sample analyses were carried out;
  - 1.2 contact details for a person responsible for managing monitoring programs;
  - 1.3 the estimated or measured average daily flow to the wastewater treatment plant for the previous monthly period; and
  - 1.4 for each sampling location or site test location:
    - 1.4.1 a location name which allows the location to be clearly identifiable;
    - 1.4.2 the date and time at which each sample was taken or site test conducted;

AS 8/2/13

A7

- 1.4.3 the indicators for which analyses or tests were carried out and the units in which the results are reported; and
  - 1.4.4 the results for all sample analyses and site tests.
- 2 A record of all monthly monitoring reports submitted to the Director must be maintained and copies of all laboratory analysis reports referenced to the relevant Monthly Monitoring Reports kept for a minimum period of three years.

**M5 Signage of monitoring points**

With the exception of open water sampling, all monitoring points must be clearly marked to indicate the location and name of the monitoring point.

**M6 Event Recorder for Bypass**

The person responsible must install, within 12 months of the date on which these conditions take effect, an event recorder at a location which ensures that the date, time and duration of any bypass is recorded.

**Noise Control****N1 Noise emission limits**

- 1 Noise emissions from the activity when measured at any noise sensitive premises in other ownership and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
  - 1.1 50 dB(A) between 0800 hours and 1800 hours (Day time); and
  - 1.2 45 dB(A) between 1800 hours and 2200 hours (Evening time); and
  - 1.3 40 dB(A) between 2200 hours and 0800 hours (Night time).
- 2 Where the combined level of noise from the activity and the normal ambient noise exceeds the noise levels stated above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise levels by at least 5 dB(A).
- 3 The time interval over which noise levels are averaged must be 10 minutes or an alternative time interval specified in writing by the Director.
- 4 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the Tasmanian Noise Measurement Procedures Manual.
- 5 All methods of measurement must be in accordance with the Tasmanian Noise Measurement Procedures Manual.

**Operations****OP1 Operational Procedures Manual**

- 1 An Operational Procedures Manual ('the Manual') must be developed within 12 months of the date on which these conditions take effect or by a date specified in writing by the Director. The Manual must provide detailed information relating to the activity and must detail operational procedures as required to ensure compliance with these conditions.
- 2 The person responsible must take all reasonable and practicable measures to ensure that personnel, including contractors, carry out their duties in accordance with the manual.

**OP2 Site security**

The WWTP must be fenced to prevent entry by unauthorised persons and these fences must be adequately maintained for this purpose.

AJ 8/2/13

7007

**OP3 Contingency Management**

- 1 Unless otherwise approved in writing by the Director, a Contingency Management Plan must be submitted by the person responsible to the Director within 3 months of the date on which these conditions take effect. The plan must detail measures to prevent and mitigate environmental harm if an unplanned event occurs. Unplanned events that must be addressed by the plan include:
  - 1.1 incidents, accidents, power failures and malfunctions with the potential to cause the release of effluent that does not comply with these conditions;
  - 1.2 pipe ruptures leading to discharge of wastewater;
  - 1.3 development of blue green algae (cyanobacteria) concentrations that have the potential to cause environmental harm; and
  - 1.4 fire and flooding.
- 2 The Contingency Management Plan must include communication procedures for ensuring that water users that may be adversely impacted, the general public and relevant government agencies are informed of any unplanned event to the extent necessary to allow them to take precautions against adverse impacts upon the environment, human health and livestock health.
- 3 As far as reasonable and practicable the Contingency Management Plan must include contact details for all water users that may be impacted by an unplanned event and must be kept up to date by the person responsible.
- 4 The person responsible must ensure that all personnel are aware of the Contingency Management Plan and their responsibilities in relation to unplanned events and have access at all times to the Contingency Management Plan.
- 5 The Contingency Management Plan must be implemented if an unplanned event occurs.

**Waste Management****WM1 Sewage Sludge Management Plan**

- 1 A Sewage Sludge Management Plan must be submitted to the Director for approval within 12 months of the date on which these conditions take effect, or by a date specified in writing by the Director.
- 2 The Sewage Sludge Management Plan must be prepared with reference to the Tasmanian Biosolids Reuse Guidelines and must include:
  - 2.1 a monitoring program to ensure the correct testing and classification of sewage sludge; and
  - 2.2 a proposal for the appropriate end use or disposal of sewage sludge.
- 3 The Sewage Sludge Management Plan must contain a description of any onsite containment facility for sewage sludge at the WWTP including measures to prevent environmental nuisance.
- 4 Unless otherwise approved in writing by the Director, sewage sludge must be managed in accordance with the Sewage Sludge Management Plan approved in writing by the Director.

**WM2 Controlled Waste Register**

- 1 A Controlled Waste Register, to document storage and movement of sewage screenings, grit material, sewage sludge and biosolids, must be maintained and made available for inspection by an Authorised Officer upon request;
- 2 The Controlled Waste Register must:

Ab 8/2/13  
31 JAN 2013

27



- 2.1 keep an accurate record of type and quantity of Controlled Wastes stored on The Land; and
- 2.2 record the following detail in relation to Controlled Waste removed from The Land:
  - 2.2.1 the type of Controlled Waste;
  - 2.2.2 the quantity of Controlled Waste;
  - 2.2.3 the Controlled Waste Transporter who moved the Controlled Waste;
  - 2.2.4 the date the Controlled Waste was moved;
  - 2.2.5 the recipient of the Controlled Waste; and
  - 2.2.6 The destination address of the Controlled Waste.
- 3 Controlled Waste records must be maintained for a period of at least 3 years.



ABJ 8/2/13

31 JAN 2013

### Schedule 3: Information

#### Legal Obligations

#### LO1 Notification of incidents under section 32 of EMPCA

- 1 A person responsible for an activity that is not a level 2 activity or a level 3 activity must notify the relevant Council, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as the result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause an environmental nuisance.
- 2 A person responsible for an activity that is a level 2 activity or a level 3 activity must notify the Director, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as a result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause an environmental nuisance.
- 3 A person responsible for an environmentally relevant activity must notify the Director, as soon as reasonably practicable but not later than 24 hours, after becoming aware of the release of a pollutant occurring as a result of any incident in relation to that activity, including an emergency, accident or malfunction, if this release causes or may cause serious or material environmental harm.
- 4 The Director can be notified by telephoning 1800 005 171 (a 24-hour emergency telephone number).
- 5 Any notification given by a person in compliance with this section is not admissible in evidence against the person in proceedings for an offence or for the imposition of a penalty (other than proceedings in respect of the making of a false or misleading statement).
- 6 A person is required to notify the relevant Council or the Director of an incident despite the fact that to do so might incriminate the person or make the person liable to a penalty.
- 7 Any notification referred to in subsection (1), (2) or (3) must include details of the incident, its nature, the circumstances in which it occurred and any action that has been taken to deal with it.
- 8 For the purposes of subsections (1), (2) and (3):
  - 8.1 a person is not required to notify the relevant Council of an incident if the person has reasonable grounds for believing that the incident has already come to the notice of the Council
  - 8.2 a person is not required to notify the Director of an incident if the person has reasonable grounds for believing that the incident has already come to the notice of the Director;

#### LO2 EMPCA

The activity must be conducted in accordance with the requirements of the *Environmental Management and Pollution Control Act 1994* and Regulations thereunder. The conditions of this document must not be construed as an exemption from any of those requirements.

#### LO3 Storage and handling of Dangerous Goods and Dangerous Substances

- 1 The storage, handling and transport of dangerous goods and dangerous substances must comply with the requirements of relevant State Acts and any regulations thereunder, including:
  - 1.1 *Dangerous Goods (Road and Rail Transport) Act 2010*;

- 1.2 *Dangerous Goods (Road and Rail Transport) Regulations 2010;*
- 1.3 *Dangerous Substances (Safe Handling) Act 2005;*
- 1.4 *Dangerous Substances (Safe Handling) Regulations 2009;*
- 1.5 *Workplace Health and Safety Act 1995;* and
- 1.6 *Workplace Health and Safety Regulations 1998.*

**LO4 Change of responsibility**

If the person who is or was responsible for the activity ceases to be responsible for the activity, they must notify the Director in accordance with Section 45 of the EMPCA.

**Policy Requirements****PR1 Policy Framework**

- 1 The policy framework and guidelines relevant to implementation of policy are as follows:
  - 1.1 State Policy on Water Quality Management (SPWQM);
  - 1.2 Emission Limit Guidelines for Sewage Treatment Plants That Discharge Pollutants In To Fresh And Marine Waters, June 2001;
  - 1.3 Approved Management Method For Biosolids Reuse;
  - 1.4 Tasmanian Biosolids Reuse Guidelines; and
  - 1.5 Environmental Guidelines for the Use of Recycled Water in Tasmania, December 2002.

**PR2 Policy Objectives**

- 1 Wastewater Treatment Plants (WWTP) in Tasmania must comply with the requirements for best practice environmental management (BPEM) and move toward implementing accepted modern technology (AMT) under the Environmental Management and Pollution Control Act 1994 (EMPCA) and the State Policy on Water Quality Management 1997 (SPWQM). The management of pollutant discharge from point sources is governed by the principles defined in clause 16.2 of SPWQM, namely:
  - 1.1 pollutant discharges must not prejudice water quality objectives (WQO) defined for the receiving waters; and
  - 1.2 pollutant discharges must be reduced to the maximum extent that is reasonable and practical having regard to Best Practice Environmental Management and in accordance with the hierarchy of waste management.

**Schedule 4: Grounds Matrix**

Text or Condition of this Notice	Corresponding condition in Permit	Further particulars of the grounds
<b>Preamble</b>		
Preamble to permit conditions	Preamble to permit conditions	Varied to replace previous licensee, Municipality of Esperance, with the current person responsible, Tasmanian Water and Sewerage Corporation (Southern Region) Pty Limited.
<b>Definitions</b>		
Schedule 1 Definitions	D1	Definitions, including a definition of "the Land" are provided in Schedule 1 of the EPN. Varied to update terminology reflect current regulatory practice and clarify meaning definitions.
<b>Maximum Quantities</b>		
Q1	Q1	<i>Regulatory Limits:</i> There is no change to the annual dry weather flow volume of wastewater allowed to be treated.
<b>General Conditions</b>		
G1	G5	Access to and awareness of conditions and associated documents. New condition to ensure responsible persons are familiar with these conditions as they relate to their work, as a step to prevent environmental harm.
G2	A1	<i>Complaints register:</i> Varied condition with broader scope than A1. Aims to ensure all complaints received are appropriately addressed as a step to prevent environmental harm.
G3	G3	<i>Incident response.</i> Varied to reflect updated terminology. Varied to reflect current regulatory practice. Varied to clarify meaning. Included as a step to minimise environmental harm.
G4	G2	No change without approval. Varied to ensure environmental harm is not caused as a result of unapproved changes to the activity.
G5	-	<i>Change of Ownership.</i> New condition.

*psj*

*ABJ 8/2/13*

		New condition to ensure the Director is notified of any change in the ownership of this wastewater treatment plant.
G6	-	<i>Annual Environmental Review.</i> New condition to require information relating to environmental performance of the wastewater treatment plant to be provided to the Director on an annual basis.
G7	-	<i>Bypass Review.</i> New condition. Included to ensure there are adequate safeguards to prevent and minimise environmental harm arising from sewage treatment bypass.
G8	-	<i>Inflow and Infiltration (I&amp;I).</i> New condition. Included as a necessary step to ensure there are adequate safeguards to control and prevent environmental harm arising directly or indirectly from inflow and infiltration to the sewerage system.
<b>Decommissioning and Rehabilitation</b>		
DC1	-	<i>Notification of cessation.</i> New condition. Included as a necessary step to ensure there are adequate safeguards against environmental harm arising from residual pollution associated with the wastewater treatment plant upon cessation of the activity.
DC2	-	<i>DRP requirements.</i> New condition. Included as a necessary step to ensure there are adequate safeguards against environmental harm arising from residual pollution associated with the wastewater treatment plant upon cessation of the activity.
DC3	-	<i>Rehabilitation following cessation.</i> New condition. Included as a necessary step to ensure there are adequate safeguards against environmental harm arising from residual pollution associated with the wastewater treatment plant upon cessation of the activity.

Effluent Disposal		
EF1	-	<i>Effluent discharge locations.</i> Included to identify the authorised discharge location to water.
EF2	-	<i>Signage of outfall locations.</i> New Condition. Included to reflect current regulatory practice and as a step to ensure there are adequate safeguards against environmental harm.
EF3	G1	<i>Effluent quality limits for discharge to water.</i> Varied to reflect continuous improvement consistent with EMPCA. Included to reflect current regulatory practice. Varied to reflect the improvement that has occurred to the quality of effluent being discharged.
Effluent Management		
EM1	-	<i>Effluent Management.</i> New condition. Notifies the Director of the intent to either implement full reuse, submit an <i>Emission Limits Guideline Compliance Plan</i> or a <i>Discharge Management Plan</i> . Varied to reflect continuous improvement consistent with EMPCA. Included to reflect current regulatory practice. Included to give effect to the State Policy on Water Quality Management, 1997.
EM2	-	<i>Effluent reuse feasibility study.</i> New condition. New condition to identify opportunities to minimise impact of plant discharge on the environment via the recycling of treated wastewater. Varied to reflect continuous improvement consistent with EMPCA. Included to reflect current regulatory practice. Included to give effect to the State Policy on Water Quality Management, 1997.
EM3	-	<i>Emission Limit Guidelines Compliance Plan.</i> New condition. New condition to provide a plan to the Director detailing a strategy to achieve compliance with the <i>Emission Limit Guidelines for Sewage Treatment Plants That Discharge Pollutants Into Fresh and Marine Waters</i> .

27

		Varied to reflect continuous improvement consistent with EMPCA. Included to reflect current regulatory practice. Included to give effect to the State Policy on Water Quality Management, 1997.
EM4	-	<p><i>Discharge Management Plan.</i></p> <p>New condition to provide a plan on how effluent will be managed in the event that full reuse or compliance with the <i>Emission Limit Guidelines for Sewage Treatment Plants That Discharge Pollutants Into Fresh and Marine Waters</i> are not feasible.</p> <p>Varied to reflect continuous improvement consistent with EMPCA. Included to reflect current regulatory practice. Included to give effect to the State Policy on Water Quality Management, 1997.</p> <p><i>Ambient monitoring of receiving waters.</i></p> <p>New condition to establish conditions in the receiving environment necessary for the development of a <i>Discharge Management Plan.</i></p> <p>Included to reflect current regulatory practice. Included to give effect to the State Policy on Water Quality Management, 1997.</p>
EM5	-	
<b>Monitoring</b>		
M1	M1	<p><i>Dealing with samples obtained for monitoring.</i></p> <p>Condition varied to reflect best practices for the collection and handling of samples obtained for assessment, monitoring and subsequent laboratory analysis.</p> <p>Varied to reflect updated terminology and clarify meaning.</p> <p><i>Monitoring requirements.</i></p> <p>Condition varied to stipulate monitoring requirements and monitoring locations.</p> <p>Varied to reflect updated terminology and clarify meaning. Varied to reflect continuous improvement consistent with EMPCA.</p>
M2 & Attachment 2	M2 & M3	
M3	-	<p><i>Flow monitoring equipment.</i> New condition requiring the maintenance of flow monitoring equipment to ensure accuracy of flow measurements and accurately and reliably inform environmental management.</p>
M4	M4	<p><i>Monitoring reporting and record keeping.</i> Varied to reflect best practice reporting and recording of monitoring data required under other conditions in this EPN and accurately and reliably inform</p>

		environmental management.
		<i>Signage of monitoring points.</i> New condition.
M5	-	Included to reflect current regulatory practice and prevent environmental harm.
		<i>Event Recorder for Bypass.</i> New Condition.
M6	-	Included to reflect current regulatory practice and as a step to ensure there are adequate safeguards against environmental harm. Allows analysis of bypass events including impacts on the environment.
<b>Noise Control</b>		<i>Noise emission limits.</i>
N1	N1	Varied to ensure there are adequate safeguards against environmental harm with regard to noise. Varied to reflect current regulatory practice. Varied to clarify meaning.
<b>Operations</b>		
OP1	-	<i>Operational Procedures Manual.</i> New condition. Included to reflect current regulatory practice and as a step to ensure there are adequate safeguards against environmental harm.
OP2	-	<i>Site Security.</i> New condition. Included to reflect current regulatory practice and as a step to ensure there are adequate safeguards against environmental harm.
OP3	-	<i>Contingency Management.</i> New condition. Included to reflect current regulatory practice and as a step to ensure there are adequate safeguards against environmental harm.
<b>Waste Management</b>		
		<i>Sewage Sludge Management Plan.</i>
WMM1	S1	Varied to reflect continuous improvement consistent with EMPCA. Included to reflect current regulatory practice and as a step to ensure there are adequate safeguards against environmental harm.
		<i>Controlled Waste Register.</i> New Condition.
WMM2	-	Included to reflect current regulatory practice and as a step to ensure there are adequate safeguards against environmental harm.



Attachment 1: Site Plan  
Geveston WWTP EPN 85536 / 1

Effluent discharge location  
(Kermadec River)

Effluent quality monitoring location  
(Contact tanks)

WWTP inflow monitoring location  
(Inlet works)

Kermadec River

Huon Highway



50m

Inset: Regional setting: Geveston WWTP

Huon River

Geveston WWTP

AS 8/24/13 Rev 2 31 JAN 2013

Attachment 2:  
TABLE OF MONITORING REQUIREMENTS

The following definitions apply to this Table of Monitoring Requirements:

1. Flow Meter means an instrument that measures and records a flow or level of liquid and includes any ancillary device attached to or incorporated into the instrument
2. Continuous measurement means automatic ongoing measurement at all times
3. On-line means measurements or analyses are carried out automatically and the results electronically recorded for remote viewing and analysis
4. Field test/ on-site test means either in situ testing or analysis of samples immediately with appropriate instrumentation
5. Grab sample means a discrete sample collected in a manner that ensures it is a representative sample
6. Flow weighted 24 hour composite means a composite sample consisting of grab samples taken and mixed in such a way that the sample volume is proportional to the wastewater flow or a sample collected continuously over a 24 hour period at a rate proportional to wastewater flow.

Item	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Locations	Parameter	Unit	Sampling or testing Frequency	Sampling or testing technique	Reporting requirements		
Wastewater treatment plant inflow	Flow Monitoring Location description: Inlet monitoring point Approximate MGA zone 55 coordinate: 494802.805 m E 5220965.663 m N	Flow	kL/day	Continuous measurement	Flow meter	1. Average daily flow for the month in the Monthly Monitoring Report required by the monitoring conditions. 2. Monthly flows for each calendar month, based on average daily flows for that month to be included in the Annual Environmental Review.	1. To be reported in the Monthly Monitoring Report as an average for the reporting period of daily flow. 2. To be reported in the Annual Environmental Review as monthly flows for each calendar month.
Wastewater treatment plant outflow	Flow Monitoring Location description: Inlet monitoring point (assumes inflow = outflow) Approximate MGA zone 55 coordinate: 494802.805 m E 5220965.663 m N	Flow	kL/day	Continuous measurement	Flow meter	1. To be reported in the Monthly Monitoring Report as an average for the reporting period of daily flow. 2. To be reported in the Annual Environmental Review as monthly flows for each calendar month.	1. To be reported in the Monthly Monitoring Report as an average for the reporting period of daily flow. 2. To be reported in the Annual Environmental Review as monthly flows for each calendar month.

*MSB*  
8/2/13

*PC*  
31 JAN 2015

TABLE OF MONITORING REQUIREMENTS

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7			
Item	Locations	Parameter	Unit	Sampling or testing Frequency	Sampling or testing technique	Reporting requirements			
Effluent quality	Effluent Quality Monitoring Location description: At the end of hypochlorite contact tank  Approximate MGA zone 55 coordinate: 494802.090 m E 5220965.110 m N	pH	-	Monthly	Field test or on-line	1. To be reported in the Monthly Monitoring Report.			
		Temperature	°C	Monthly	Flow proportional composite sample	1. To be reported in the Monthly Monitoring Report. Note that Total Residual Chlorine to be reported as highest result observed in the 24 hour period of the day of the monthly sampling event.  2. To be reported in the Annual Environmental Review.			
		Conductivity	ds/m						
		Biochemical Oxygen Demand	mg/L						
		Suspended Solids	mg/L						
		Ammonia-Nitrogen	mg/L						
		Nitrate-Nitrogen	mg/L						
		Nitrite-Nitrogen	mg/L						
		Total Nitrogen	mg/L						
		Total Phosphorus	mg/L						
		Oil and Grease	mg/L						
		Thermotolerant Coliforms	cfu/100ml						
		Enterococci	cfu/100ml						
		Total Residual Chlorine	mg/L						
		Arsenic	mg/L				Annually	Flow proportional composite sample	1. To be reported in the Annual Environmental Review.
		Barium	mg/L						
		Cadmium	mg/L						
		Chromium (total)	mg/L						
		Chromium VI	mg/L						
		Cobalt	mg/L						
Copper	mg/L								
Lead	mg/L								
Manganese	mg/L								
Mercury	mg/L								
Nickel	mg/L								
Selenium	mg/L								
Silver	mg/L								
Zinc	mg/L								

ASB 8/2/13

Attachment 2:  
TABLE OF MONITORING REQUIREMENTS

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Item	Locations	Parameter	Unit	Sampling or testing Frequency	Sampling or testing technique	Reporting requirements
Wastewater treatment bypass	At a location which complies with the requirements of condition M6	Date and time	Date and time	When bypass occurs	Automated event recorder that logs bypasses.	Report the following in the Annual Environmental Review: 1. Date, volume discharged, discharge location and level of treatment; and 2. Total number of bypasses in the reporting period.
		Duration of bypass	Time (days, hours, minutes)	When bypass occurs	Automated event recorder that logs duration of bypasses.	
		Flow	Kilolitres	When bypass occurs	Automated event recorder that allows the estimation or measurement of the volume of a bypass.	
		Level of treatment prior to discharge	Primary, Secondary or Tertiary	When bypass occurs	Observation during the bypass	
Sludge	Sludge / Biosolids generated on The Land	Moisture	%	Annually	Composite Grab Sample	1. To be reported in the Annual Environmental Review.
		Temperature	°C			
		Conductivity	ds/m			
		Organic matter	%dry matter			
		Ammonia Nitrogen	mg/kg			
		Nitrate Nitrogen	mg/kg			
		Nitrite Nitrogen	mg/kg			
		Total Nitrogen	mg/kg			
		Total Phosphorus	mg/kg			
		Total Polassium	mg/kg			
		Total Arsenic	mg/kg			
		Total Cadmium	mg/kg			
		Total Chromium	mg/kg			
		Total Copper	mg/kg			
		Total Lead	mg/kg			
		Total Mercury	mg/kg			
		Total Nickel	mg/kg			
		Total Selenium	mg/kg			
		Total Zinc	mg/kg			
		DDT	mg/kg			
		DDE	mg/kg			
		DDD	mg/kg			
		Aldrin	mg/kg			
		Dieldrin	mg/kg			
		Chlordane	mg/kg			
		Heptachlor	mg/kg			
		Lindane	mg/kg			
		HCB	mg/kg			
		BHC	mg/kg			
		PCB	mg/kg			

163 8/2/13  
31 JAN 2013