Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L6315/1991/11
Licence holder	Water Corporation
Registered business address	629 Newcastle Street LEEDERVILLE WA 6007
DWER file number	DWERVT16601
Duration	01/11/2011 to 31/10/2027
Date of issue	20/10/2011
Date of amendment	23/10/2024
Premises details	Denmark Water Resource Recovery Facility 33 Hodgson Street DENMARK WA 6333 Lot 965 on Deposited plan 183447

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed design capacity**
Category 54: Sewage facility premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters.	1,200 cubic metres per day.

This licence is granted to the licence holder, subject to the attached conditions, on 23 October 2024, by:

Abbie Crawford

Digitally signed by Abbie Crawford
Date: 2024.10.23 15:46:41 +08'00'

Abbie Crawford
Manager, Waste Industries
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Reference no.	Summary of changes
28/04/2011	W4708/2010/1	New approval to upgrade the treatment plant to an oxidation ditch based system
20/10/2011	L6315/1991/11	Reissue of L6315/1991/10
24/05/2012	W4708/2010/1	Amendment to give effect to Ministers Appeal Determination dated 19/12/2011 for appeals 064 and 065 of 2011
04/04/2014	L6315/1991/11	Amendment of licence to: • Convert to REFIRE format conditions (now superseded) and add discharge target and limits • Clarify and include additional ambient groundwater, process and discharge monitoring • Add the environmental improvement plan condition (4.1.2) consistent with W4708/2010/1
05/02/2015	L6315/1991/11	Amendment for the operation of the upgraded treatment plant constructed under W4708/2021/1
17/03/2016	L6315/1991/11	Administrative amendment
09/06/2022	L6315/1991/11	Amendment for works to install reuse offtake infrastructure
23/10/2024	L6315/1991/11	Amendment of licence to • reduce groundwater monitoring frequency from monthly to quarterly • relocate background monitoring bore • remove construction conditions for reuse offtake infrastructure

Interpretation

In this licence:

(a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this licence:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

The licence holder must ensure that the following conditions are complied with:

Operations

Infrastructure and equipment operational requirements

1. The licence holder must ensure that the site infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirements set out in Table 1.

Table 1: Infrastructure and equipment operational requirements

Site infrastructure and equipment		Operational requirements	Infrastructure location
1.	Oxidation ditch	Impervious concrete vessel	As depicted in Schedule 1, Figure 1 and Figure 2
2.	Secondary clarification tank	Impervious concrete vessel	
3.	Balancing pond (Pond 1)	Clay lined pond	
4.	Emergency storage pond-(Pond 2)	Clay lined pond	
5.	Sludge drying/ storage hardstands	(a) A hardstand area enclosed by bunds capable of preventing surface run-off of leachate and sludge, that returns sludge leachate to the wastewater treatment system. (b) Overtopping of the hardstand for sludge/ geobag dewatering does not occur. (c) Stormwater runoff is prevented from entering the hardstand for sludge/ geobag dewatering. (d) There is no discernible seepage loss from the hardstand.	
6.	All wastewater storage ponds	(a) Overtopping of the ponds does not occur. (b) The integrity of the containment infrastructure is maintained. (c) Trapped overflows are maintained on the outlet of ponds to prevent carry-over of surface floating matter. (d) Vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments.	

Site infrastructure and equipment		Operational requirements	Infrastructure location
7.	Wastewater treatment vessels	(a) Overtopping of the wastewater treatment vessels does not occur. (b) Stormwater runoff is prevented from entering the wastewater treatment vessels. (c) There is no discernible seepage loss from the wastewater treatment vessels. (d) Vegetation and floating debris (emergent or otherwise) is prevented from growing or accumulating in the wastewater treatment vessels.	As depicted in Schedule 1, Figure 1 and Figure 2
8.	Waste water reuse offtake infrastructure	(a) Impervious 11kL reuse transfer tank, with low level float switch, flow meter and pressure transmitter. (b) Reuse transfer pumps (c) U-PVC transfer pipeline and isolation valve.	As depicted in Schedule 1, Figure 1 and Figure 2

Waste acceptance

2. The licence holder must only accept onto the premises waste of a waste type, which does not exceed the corresponding rate at which waste is received, and which meets the corresponding acceptance specification set out in Table 2.

Table 2: Types of waste authorised to be accepted onto the premises

Waste type	Rate at which waste is received	Acceptance specification
Sewage – waste from the reticulated sewerage system	None specified	Accepted through sewer inflow(s); and/ or Accepted through the tankered waste disposal facility

Waste processing

3. The licence holder must ensure that the waste types specified in Table 3 are only subjected to the corresponding process(es), subject to the corresponding process limits and/or specifications.

Table 3: Waste processing

Waste type	Process(es)	Process limits and/or specifications
Odorous air	Odour treatment system	Capture and treat all odorous air from the inlet works, tanker receipt facility and bio-selector prior to discharge.
Sewage	Wastewater treatment system	Treatment of sewage waste shall be targeted at or below the treatment capacity of 1,200 m^3/ day and limited below 3,000 m^3/ day
Sewage sludge	Storage	Hardstand enclosed by bunds
Treated wastewater (wastewater reuse offtake)	Transfer to reuse scheme offsite	30,000kL per year

Emissions and discharges

4. The licence holder must ensure that:

(a) no wastewater gains access to the environment other than the emissions specified in Table 4; and

(b) the emissions specified in Table 4, are discharged only from the corresponding discharge point and only at the corresponding discharge point location.

Table 4: Authorised discharge points

Emission	Discharge point	Discharge/transfer point location
Final treated wastewater discharge point from wastewater treatment system via the flume into the infiltration gallery	L1	As shown in Schedule 1, Figure 1 and Figure 2
Treated wastewater transferred from the premises for reuse.	R1	As shown in Schedule 1, Figure 1 and Figure 2.

5. The licence holder must ensure that emissions from the discharge points listed in Table 5 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with condition 9.

Table 5: Emission and discharge limits

Discharge point	Parameter	Limit	Averaging period
L1 R1	Annual daily average wastewater discharge	600 m^3/ day annual average	Annual
	Ammonium (NH_4-N)	5 mg/L	Spot sample
	Escherichia coli	150 cfu/100 mL	
	pH	6.0 – 9.0 (range)	
	Total aluminium	3 mg/L	
	Total biochemical oxygen demand	20 mg/L	
	Total nitrogen	10 mg/L	
	Total phosphorus	2 mg/L	
	Total suspended solids	30 mg/L	

Monitoring

6. The licence holder must ensure that monitoring is undertaken in each:

(a) weekly period such that there are at least 4 days in between the days on which samples are taken in successive weeks;

(b) monthly period such that there are at least 15 days in between the days on which samples are taken in successive months; and

(c) quarterly period such that there are at least 45 days in between the days on which samples are taken in successive quarters.

7. The licence holder must ensure all monitoring equipment used to comply with conditions 9, 10, 11 and 13 is operated and calibrated in accordance with the manufacturers specifications.

8. The licence holder must ensure that all non-continuous sampling and analysis undertaken pursuant to conditions 9, 11 and 13 is undertaken by a holder of a current accreditation from the National Association of Testing Authorities (NATA) for the methods of sampling and analysis relevant to the corresponding relevant parameter.

Emission and discharge monitoring

9. The licence holder must monitor emissions, discharges and the treated wastewater transferred from the premises in accordance with the requirements specified in Table 6 and record the results of all such monitoring.

Table 6: Emission and discharge monitoring

Discharge point (monitoring locations)	Parameter	Unit	Frequency	Averaging period	Method
L1 R1 (As shown in Schedule 1, Figure 1 and Figure 2)	Volumetric flow rate (cumulative)[1]	L/s m^3/day	Continuous	Monthly	Calibrated flowmeter
	pH[1]	-	Monthly	Spot sample	AS/NZS 5667.1 AS/NZS 5667.10 AS/NZS 2031
	Ammonium (NH_4-N)	mg/L			
	Filtered aluminium				
	Total aluminium				
	Nitrate + nitrite – nitrogen				
	Total biochemical oxygen demand				
	Total dissolved solids				
	Total nitrogen				
	Total phosphorus				
	Total suspended solids				
	Escherichia coli	cfu/100 mL			

[1] In-field non-NATA accredited analysis permitted.

Process monitoring

10. The licence holder must record the total amount of waste accepted onto and transferred from the premises, for each waste type listed in Table 7, in the corresponding unit, and for each corresponding time period, as set out in Table 7.

Table 7: Waste accepted onto and transferred from the premises

Waste/ process type	Monitoring point reference	Unit	Averaging period	Frequency
Sewage received via sewer inflows to the wastewater treatment system	Wastewater inflow monitoring site (IMS)	m^3/ day	Monthly	Continuous
Treated wastewater transferred from the premises for reuse	Water Reuse Facility flow meter sample point (R1) as indicated on Schedule 1, Figure 2			

Ambient environmental monitoring

11. The licence holder must monitor groundwater for concentrations of the identified parameter(s) in accordance with Table 8.

Table 8: Groundwater monitoring of ambient concentrations

Monitoring well location	Parameter	Unit	Frequency	Averaging period	Method
2/20, 2/09 and 3/09	Standing water level[2]	m(AHD)	Quarterly	Spot sample	AS/NZS 5667.1 AS/NZS 5667.11 AS/NZS 2031
	pH[3]	-			
	Ammonium (NH_4-N)	mg/L			
	Nitrate + nitrite – nitrogen				
	Total dissolved solids				
	Total nitrogen				
	Total phosphorus				
	Escherichia coli (E. coli)	cfu/ 100 mL			

12. The licence holder must adhere to the field quality assurance and quality control procedures specified in Schedule 2 for the monitoring required by condition 11.

13. The licence holder must monitor surface water for concentrations of the identified parameter(s) in accordance with Table 9.

Table 9: Surface water monitoring of ambient concentrations

Monitoring well location	Parameter	Unit	Frequency	Averaging period	Method
Pierce Street sample point (PSSP); Hodgson Street sample point (HSSP); and Inlet Drive sample point (IDSP).	pH[3]	-	Monthly	Spot sample	AS/NZS 5667.1 AS/NZS 5667.6 AS/NZS 2031
	Ammonium (NH_4-N)	mg/L			
	Nitrate + nitrite – nitrogen				
	Total biochemical oxygen demand				
	Total dissolved solids				
	Total aluminium				
	Total nitrogen				
	Total phosphorus				
	Total suspended solids				
	Escherichia coli (E. coli)	cfu/ 100 mL			

[2] Standing water level to be taken prior to sampling for water quality.

[3] In-field non-NATA accredited analysis permitted.

Records and reporting

14. The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:

(a) the name and contact details of the complainant, (if provided);

(b) the time and date of the complaint;

(c) the complete details of the complaint and any other concerns or other issues raised; and

(d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

15. The licence holder must:

(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(b) prepare and submit to the CEO by no later than 90 days after the end of that annual period an Annual Audit Compliance Report in the approved form.

16. The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:

(a) the calculation of fees payable in respect of this licence;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 1 of this licence;

(c) monitoring programmes undertaken in accordance with conditions 6 through 13 of this licence; and

(d) complaints received under condition 14 of this licence.

17. The books specified under condition 16 must:

(a) be legible;

(b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;

(c) be retained by the licence holder for the duration of the licence; and

(d) be available to be produced to an inspector or the CEO as required.

18. The licence holder must submit to the CEO by no later than 90 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 10, and which provides information in accordance with the corresponding requirement set out in Table 10.

Table 10: Annual Environmental Report

Condition	Requirement
Conditions 4 and 5	An assessment of the information contained within the Annual Environmental Report against monitoring results limits and/ or targets.
Condition 9	a) Summary of all monitoring data for emissions to land which shall include: i) data in a table format for the annual period; and ii) data in graphical format for trend analysis to include at least the last four years data where available. b) Contaminant load to land for the monitored parameters (except pH and E. coli) as: i) kg/ day monthly average; and ii) total annual loading kg/ year.
Condition 10	Summary of all inputs and outputs monitoring data which shall include: a) data in a table format for the annual period; and b) comment on annual inflow and outflow volumetric trends.
Condition 9 and 10	Summary of monitoring data for treated wastewater transferred from the premises for reuse
Condition 11	Summary of all monitoring data for ambient groundwater quality which shall include: a) data in a table format for the annual period; b) data in graphical format for trend analysis to include at least the last four years data where available; and c) an assessment of ambient groundwater quality monitoring data for the risk and likelihood of seepage from the wastewater treatment system.
Condition 13	Summary of all monitoring data for ambient surface water quality which shall include: a) data in a table format for the annual period; b) data in graphical format for trend analysis to include at least the last four years data where available; and c) an assessment of ambient surface water quality monitoring data for impact on surface water quality.
Condition 14	Complaints summary

Definitions

In this licence, the terms in Table 11 have the meanings defined.

Table 11: Definitions

Term	Definition
AHD	means the Australian height datum.
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 1 July until 30 June of the immediately following year.
AS/NZS 2031	means the Australian Standard AS/NZS 2031 *Water quality – Sampling for microbiological analysis*
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 *Water quality – Sampling – Guidance of the design of sampling programs, sampling techniques and the preservation and handling of samples.*
AS/NZS 5667.6	means the Australian Standard AS/NZS 5667.6 *Water quality – Sampling – Guidance on sampling of rivers and streams.*
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 *Water quality – Sampling – Guidance on sampling of waste waters.*
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 *Water quality – Sampling – Guidance on sampling of groundwaters.*
Assessment of Site Contamination NEPM	means the *National Environment Protection (Assessment of Site Contamination) Measure 1999*
averaging period	means the time over which a limit or target is measured or a monitoring result is obtained;
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au

Term	Definition
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.
discharge point R1	means the treated wastewater discharge point from the Premises authorised under this licence, being the Reuse Transfer Pumps as depicted in Schedule 1.
emission	has the same meaning given to that term under the EP Act.
emission point L1	means the treated wastewater emission point from the Premises authorised under this licence, being the discharge flume from the effluent final polishing pond as depicted in Schedule 1.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
geobag	means a geotextile dewatering bag that allows solids to dewater over time while containing the solid component.
hardstand	means a surface with a permeability of 10^{-9} metres/ second or less.
leachate	means liquid released by or water that has percolated through waste and which contains some of its constituents.
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises maps (Figures 1, 2 and 3) in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
treated wastewater	means wastewater that has been treated by the 'wastewater treatment system'
waste	has the same meaning given to that term under the EP Act.

Term	Definition
wastewater treatment system	means the system for treating wastewater at the Premises which comprises of the elevated inlet works, inlet screens, oxidation ditch, clarification tank, tertiary filtration system, chemical dosing facilities, hardstand for sludge/ geobag dewatering, balancing and emergency storage pond.
wastewater treatment vessels	means any vessel or tank containment infrastructure associated with the treatment of wastewater.

END OF CONDITIONS

Schedule 1: Maps

Premises map

Figure 1: Map of the boundary of the prescribed premises.

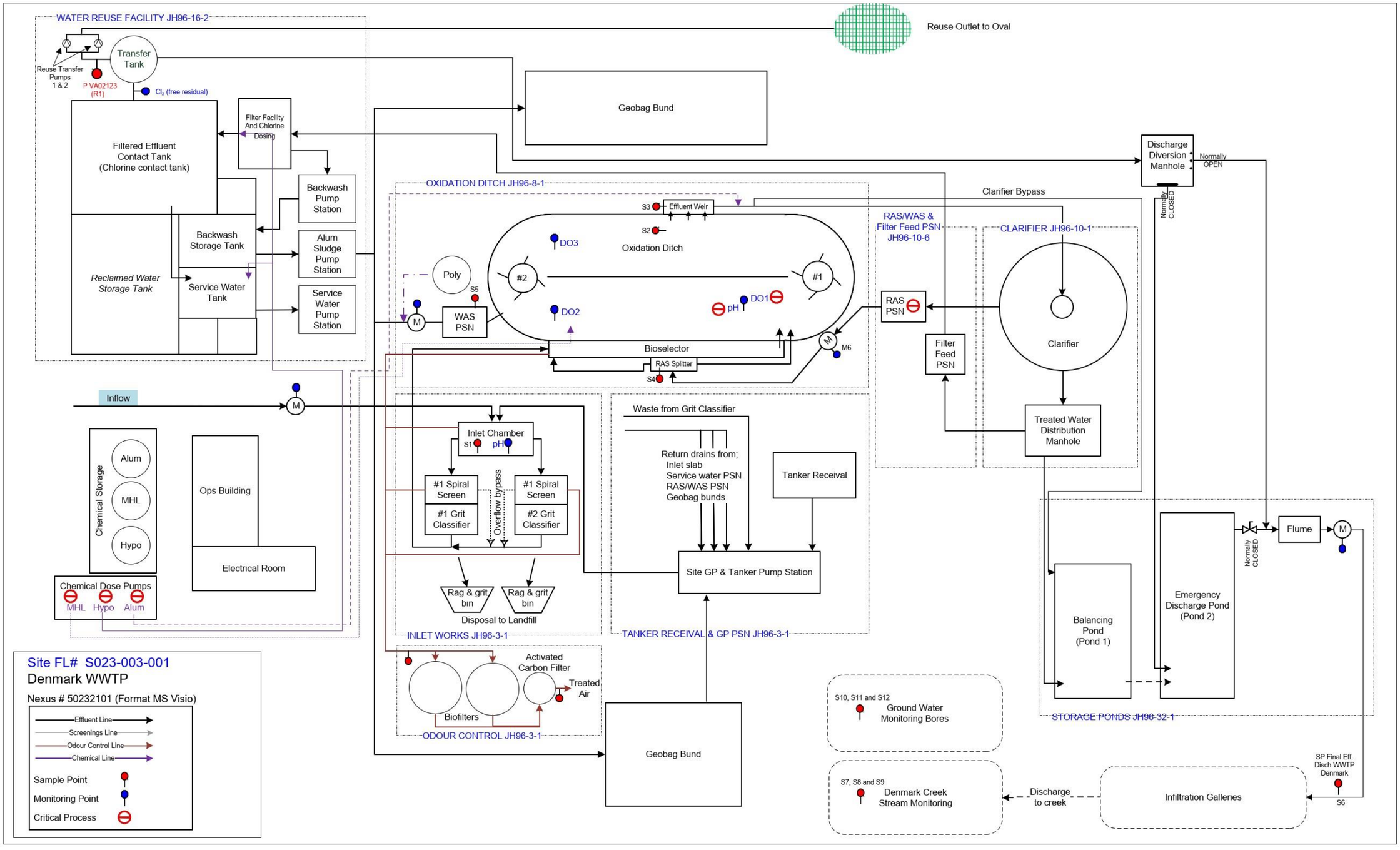

Figure 2: Schematic of the prescribed premises wastewater treatment system.

Schedule 2

Groundwater monitoring: Quality assurance and quality control

The licence holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM, and must include as a minimum:

1. decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;
2. field instrument calibration for instruments used on site;
3. blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;
4. completed field monitoring sheets / sampling logs for each sample collected, showing:
    (i) time of collection;
    (ii) location of collection;
    (iii) initials of sampler;
    (iv) sampling method;
    (v) field analysis results;
    (vi) duplicate type / location (if relevant); and
    (vii) site observations and weather conditions, and
5. chain-of-custody documentation must be completed which details the following information:
    (i) site identification;
    (ii) the sampler;
    (iii) nature of the sample;
    (iv) collection time and date;
    (v) analyses to be performed;
    (vi) sample preservation method;
    (vii) departure time from site;
    (viii) dispatch courier(s); and
    (ix) arrival time at the laboratory.