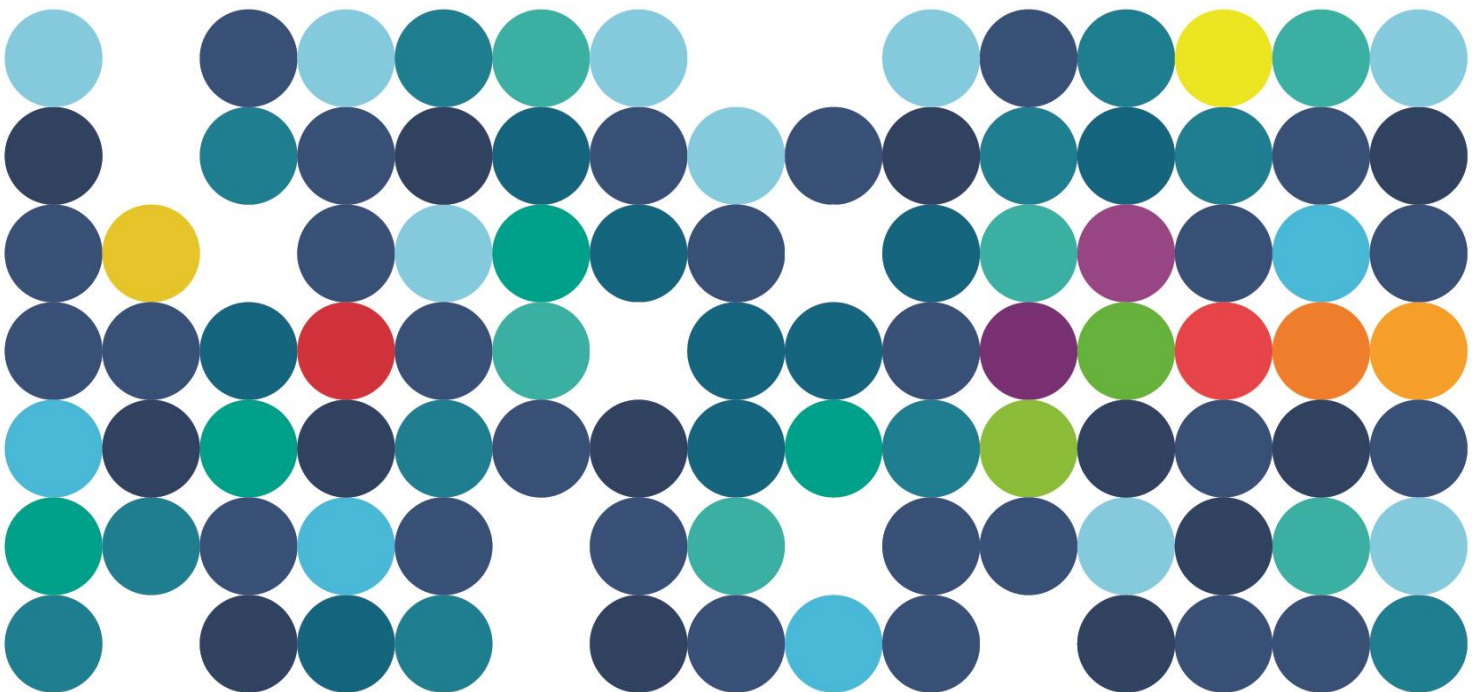


Performance Compliance Report 2017-2018

Ministerial Statement 665

Use of the Cape Peron Outlet Pipeline to Dispose of
Industrial Wastewater to the Sepia Depression, Kwinana





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1. Introduction

The use of the Sepia Depression Ocean Outlet Landline (SDOOL) to dispose of up to 30 ML/d of industrial wastewater, in addition to treated wastewater from Woodman Point and Point Peron wastewater treatment plants and water from the Jervoise Bay Groundwater Recovery Scheme, was approved by the Minister for the Environment on 28 October 2004 (Assessment 1471, Ministerial Statement 665).

Ministerial Statement (MS) 665 Schedule 1 includes the following specified sources and further unspecified sources of industrial wastewater disposed to the SDOOL:

- the Kwinana Wastewater Reclamation Plant (KWRP);
- BP Refinery (Kwinana);
- CSBP Limited; and
- Edison Mission Energy (Western Energy).

This report covers the reporting period from 1 July 2017 to 30 June 2018 (2017-18). It outlines the compliance status with the conditions of MS 665 and the Water Corporation's Environmental Management Commitments as reported in the Statement and incorporated into the monitoring framework detailed in the SDOOL Monitoring and Management Plan (M&MP).

Condition 5-1 of MS 665 describes the requirements for compliance reporting:

5-1 the proponent shall prepare an audit program and submit compliance reports to the Department of Environment which address:

- 1. the status of implementation of the proposal as defined in schedule 1 of this statement;*
- 2. evidence of compliance with the conditions and commitments; and*
- 3. the performance of the environmental management plans and programs.*

This Performance and Compliance Report (PCR) fulfils the requirements of MS 665 condition 5-1.



2. Current Status

All participants with the exception of the Jervoise Bay Groundwater Recovery Scheme continued to discharge into the SDOOL. The Jervoise Bay Groundwater Recovery Scheme bores ceased discharging to the SDOOL in October 2010.

Table 1 summarises the volumes discharged into the SDOOL during the 2017-18 reporting period. The Kwinana Water Reclamation Plant (KWRP) processed 10.25 ML/day from SDOOL for use by industry. Of this, 6.73 ML/day was used by industries in the Kwinana area and the remaining 3.52 ML/day redirected back into the SDOOL. Industry participants discharged approximately 4.13 ML/day into the SDOOL. Table 1 shows the breakdown of the volumes discharged to the SDOOL.

The KWRP did not operate between February and June 2018 due to reduced quality feed water from Woodman Point, in addition to intermittent shut down periods in other months. This has impacted the 2017-18 volumes of waste water processed for re-use.

Table 1 – Volume of treated wastewater discharged via SDOOL

Site	Volume Discharged via SDOOL (ML/day)
Woodman Point WWTP	145.59
Point Peron WWTP	17.69
KWRP	3.52
Kwinana Industries	4.13
Kwinana WWTP	2.15
East Rockingham WWTP	2.81

There were no changes to MS 665 or the Monitoring and Management Plans (M&MP) during the reporting period.



3. Implementation

3.1 MS 665 Proposal - Schedule 1

During 2017-18 the Proposal was implemented in accordance with Schedule 1 with exceptions as described in Table 2 below.

Table 2 – Compliance with Schedule 1 Key Characteristics Table

Parameter	Current plus initial KWRP (2013)	Possible expansion (2030)	2017-18 Compliance***
Industry reclaimed water reuse	17 ML/day	Up to 27 ML/d	Compliant 7 ML/day
Industry wastewater discharge to SDOOL Typical Maximum	6 ML/day 13 ML/day	Up to 30 ML/d	Compliant KWRP discharge: 3 ML/d Industry discharge: 4.13 ML/d Total industry wastewater discharge to SDOOL: 7.13 ML/d
Combined Treated wastewater quantity and quality Average volume Typical* Maximum**	145 ML/day 160 ML/day	Up to 200 ML/d Up to 208 ML/d	Compliant 175.89 ML/day
Suspended Solids	39-90 mg/L	35** mg/L	Compliant Refer Table 3
Biochemical Oxygen Demand (BOD ₅)	24-40 mg/L	16** mg/L	Non-compliant Refer Table 3
Total Phosphorus (TP)	11-22 mg/L	11*-12** mg/L	Compliant Refer Table 3
Total Nitrogen (TN)	1,778 tonnes per annum	1,778 tonnes per annum	Non-compliant 2,185 tonnes. Refer Table 3
Dilution	Average dilution of the SDOOL wastewater stream will be at least 1:300 with the dilution being above 1:200 99% of the time within 100 metres of the Sepia Depression Ocean Outlet (SDOO) diffuser.		Compliant Modelling predicted centreline dilution at 60m of 1:493 indicating dilution at 100m greater than 1:300.
Annual Toxicant Loads from Industrial Participants	In order to manage the capped toxicant load, at a maximum permissible level of 208 ML/day, the Water Corporation is responsible to carefully consider any proposed increase in toxicant loads to ensure ecological and social values of the marine environment are protected.	New proposals for discharges to the SDOOL will be referred to the EPA	Compliant No new proposals for discharge to the SDOOL in 2017-18.



Toxicant Concentrations	As per PLOOM reporting, 1992 to 2002	Projected loads and flows will result in toxicant concentrations meeting the ANZECC & ARMICANZ 80% species protection guideline values for bio-accumulating toxicants at the diffuser.	Compliant Refer Table 7
Toxicant Concentrations	As per PLOOM reporting, 1992 to 2002	Projected loads and flows will result in toxicant concentrations meeting the ANZECC & ARMICANZ 99% species protection guideline values (with the exception of cobalt, where the 95% guideline will apply) beyond 100 metres from the Sepia Depression Ocean Outlet diffuser.	Compliant Refer Table 7
Nutrient Loads	Nutrient loads from the SDOO to the Sepia Depression will be no greater than 1994 loads, and should subsequent monitoring show an adverse environmental impact at that level, it will be reduced to 75% of 1994 loads.		Non-compliant TN load was 2,185 tonnes/year. Subsequent monitoring confirmed no adverse environmental impact Refer Table 3
Sediment	ANZECC & ARMICANZ Interim Sediment Quality Guideline-low levels to be used as trigger for management action and investigation for bio-accumulating substances within the Zone of Low Ecological Protection, and generally outside the Zone of Low Ecological Protection.		Compliant Refer Table 7
Protection of Social Values – Contact Recreation	The area not meeting the guidelines for contact recreation due to domestic wastewater discharge will not increase because of the addition of industrial effluent.		Compliant Refer Table 4
Protection of Social Values – Aesthetic Value	Visual amenity will not deteriorate because of the addition of industrial effluent.		Compliant Refer Table 7
Protection of Social Values – Seafood for Human Consumption	The industrial wastewater discharge will not increase the area not meeting the guidelines for seafood harvesting due to domestic wastewater discharge.		Compliant Refer Table 7

*Typical means the expected average daily operational target

**Maximum means the expected infrequent (<10% of the time) operational targets based on the monthly average contributions from each industry participant.

***Comparison with figures from s45C approved change (20 Feb 2015) – central column of this table - 'Possible Expansion (2030)'



3.2 Schedule 1 Discussion on compliance status

During 2017-18, works commenced on the upgrade of the Woodman Point Wastewater Treatment Plant in order to increase capacity. As per Table 1, Woodman Point WWTP is the source of the majority of treated wastewater into the SDOOL (approximately 83% of flow in 2017-18). Whilst the upgrade will ultimately improve the quality of the discharge to the ocean, the plant has been operating in an interim mode to facilitate the capital works.

In April 2018, Water Corporation experienced a safety incident which forced the shutdown of the interim secondary treatment at Woodman Point WWTP. This compounded the issues relating to effluent quality generated by the plant.

These factors combined led to the non-compliances with Schedule 1 criteria reported for 2017-18.

3.2.1 Total Nitrogen, Nutrient Load and BOD

Combined treated wastewater quality limits were assessed on a rolling 12 month average basis as per the SDOOL M&MP (with the exception of TN, which is a total loading criterion). As Table 3 demonstrates, non-compliances were reported for BOD in April, May and June 2018; and overall TN (therefore nutrient load).

Table 3– TSS, BOD, TP and TN Results 2017-18

Toxicant	TSS	BOD	TP	TN (Loading)*	
Unit	mg/L	mg/L	mg/L	tonnes/month	tonnes/yr
Criteria	39-90	24-40	11-22	-	1,778
Jul-17	26.9	22.4	4.5	177.6	
Aug-17	32.2	23.4	4.5	130.1	
Sep-17	34.8	23.6	4.5	113.6	
Oct-17	34.8	24.1	4.3	91.7	
Nov-17	40.4	25.3	4.4	131.9	
Dec-17	41.8	25.0	4.2	108.2	
Jan-18	42.5	26.4	4.1	102.2	
Feb-18	58.3	29.7	4.7	221.9	
Mar-18	71.9	35.9	5.2	327.6	
Apr-18	76.4	40.8	5.5	312.1	
May-18	81.7	55.2	6.0	331.3	
Jun-18	81.1	55.4	6.4	136.7	
Total					2,185

*Annual TN loading is a sum of monthly TN loadings for the reporting year.

Additional sampling was undertaken at the Sepia Depression ocean outlet between April and June 2018 (refer to Appendix A for summary of report).

Sampling found that the discharge of nitrogen above the allowed 1778 tonne limit was not likely to result in TN concentrations at the LEPA boundary outside the range of natural variability, and therefore was not expected to have a substantial long term environmental effect.



Biochemical oxygen demand was elevated above acceptance criteria in samples between April and June 2018, however sampling found that oxygen saturation was maintained throughout the region over the period and marine communities around the outlet were at a very low risk of being affected by low oxygen levels (hypoxia).

Refer to Appendix B for Water Corporation’s notification to DWER dated 8 November 2018 in regard to the identified exceedances, the resultant sampling programme and the expected short term and low risk impact on the environment.

3.2.2 Contact Recreation

Both the Environmental Quality Guideline and the Environmental Quality Standard in relation to the ‘Maintenance of Primary Contact Recreation’ Environmental Quality Objective 3 were found to be exceeded in 2017-18 (Table 4).

Table 4 – Comparison of faecal pathogen measurement at post upgrade boundary to EQG and EQS

Quality Indicator	Environmental Quality Criteria		Result
Faecal pathogens	Environmental Quality Guideline	95th percentile value of Enterococci spp. taken over bathing season not to exceed 200 MPN/100mL outside post-upgrade boundary.	1100 MPN/100 mL
	Environmental Quality Standard	95th percentile value of Enterococci spp. taken over bathing season not to exceed 500 MPN/100mL outside post-upgrade boundary.	

Ocean sampling undertaken between 4 December and 27 April 2018 showed that the discharge plume during this period moved predominantly in a northerly to north-westerly direction (away from shoreline). In addition, shoreline sampling undertaken between April and June showed pathogen levels were acceptable and demonstrated no impact to the local bathing beaches.

In September 2017 Water Corporation approached the Department of Health (DoH) for comment on the use of primary contact recreational water criteria at the SDOOL zone boundary. Water Corporation proposed that utilising primary contact criteria was inappropriate as it was unreasonable to expect primary contact water activities (such as swimming) to occur in the proximity of the SDOOL outlet. DoH agreed with this assessment in writing on 20 September 2017 and recommended use of secondary contact recreation criteria instead.

Refer to Appendix C for Water Corporations’ notification of EQO exceedance to DWER, including a summary of DoH’s comments and recommendations. Water Corporation shall submit an amended M&MP to DWER based on these recommendations and, assuming this is approved, the risk of not complying with this Schedule 1 item will be significantly reduced.

3.3 Internal/External Audits

No external audits of MS 665 were undertaken during the reporting period. The development of this report and scrutiny through internal review encompasses the requirements of an internal audit.



3.4 Complaints

Six complaints were received following the precautionary advice put in place by Water Corporation on 23 March 2018 for the 1km area surrounding the ocean outfall. Each of these complaints were responded to in a timely manner and are considered closed. Refer Table 5.

Table 5 – Summary of complaints related to SDOOL in 2017-18

Complaint	Response	Status
Mon 9th April 2018 Member of public via email Concern re quality of treated wastewater	Mon 9th April 2018 Senior Advisor – Community Engagement	Closed
Fri 13th April 2018 Member of public via email Request for information regarding community engagement	Fri 13th April 2018 Senior Advisor – Community Engagement	Closed
Wed 18th April 2018 Member of public via email Concern re water visibility and smell	Mon 23rd April 2018 Senior Advisor – Community Engagement	Closed
Sat 21st April 2018 Member of public via email Concern re quality of treated wastewater	Tue 24th April 2018 Consultant - Customer Experience	Closed
Tue 24th April 2018 Member of public via email Concern re quality of treated wastewater	Tue 24th April 2018 Senior Advisor – Community Engagement	Closed
Thur 26th April 2018 Member of public via email Concern re quality of treated wastewater	Thur 26th April 2018 Senior Advisor – Community Engagement	Closed

4. Marine Monitoring

Marine water quality monitoring for the reporting period was carried out by a qualified consultant (BMT). In accordance with the M&MP, the following environmental quality objectives (EQOs) were assessed:

- Maintenance of Ecosystem Integrity (EQO 1);
- Maintenance of Aquatic Life for Human Consumption (EQO 2);
- Maintenance of Primary and Secondary Contact Recreation (EQO 3 & 4); and
- Maintenance of Aesthetic Values (EQO 5).

The extent to which the EQOs were met was assessed Environmental Quality Guidelines (EQG) and Environmental Quality Standards (EQS).

The Compliance Report Card for 2017-18 is shown in Table 7 below, and demonstrates that while six EQG were not met in the reporting period, compliance was subsequently attained for all but one EQS. Details for the EQS which was not met are provided in section 3.2.2.

The Compliance Report Card uses colour coding to represent the extent to which the EQC were met (Table 6).

Detailed results of SDOOL ocean outlet monitoring for 2017/18 can be found in Appendix D.



Table 6 - Compliance Report Card Legend


















Management response	Legend
Monitor: EQG met: continue monitoring	
Investigative: EQG not met: assess against EQS. EQS met	
Action: EQS not met: management response required	






Table 7 – 2017-18 Marine Monitoring Compliance Report Card

Indicator	Environmental Quality Criteria (EQC)	Assessment
EQO 1 – MAINTENANCE OF ECOSYSTEM INTEGRITY		
Toxicants in treated wastewater	EQG: Concentration of contaminants will not exceed the ANZECC & ARMCANZ (2000) 80% species protection guideline trigger levels for bio-accumulating toxicants at the diffuser	
	EQG: The ANZECC/ARMCANZ (2000) 99% species protection guideline trigger levels for non bio-accumulating are met at the edge of the low ecological protection area (LEPA).	
	EQG: The total toxicity of the mixture (TTM) for the additive effect of dissolved ammonia, copper and zinc (as per ANZECC/ARMCANZ (2000) guidelines) is less than 1.0.	
Whole of Effluent Toxicity Testing	EQG: The EQG will be exceeded if after the 1 hr sea urchin test: $\frac{TDA}{DRNOEC} \leq 1.0$	
Receiving waters physio/chemical measures	EQG: Median chlorophyll-a concentration during non-river-flow period not to exceed 80 th percentile of reference site data	
	EQG: Median light attenuation (LAC) during non-river-flow period not to exceed 80 th percentile of reference site data	
	EQG: Median dissolved oxygen in bottom waters (0-0.5 m above the sediment surface) greater than 90% saturation at any site for a defined period of not more than six weeks	
	EQG: Median salinity (0.5 m below the water surface) at an individual site over any period not to deviate beyond the 20 th and 80 th percentile of natural salinity range over the same period.	
Receiving water biological measures	EQG: Median phytoplankton biomass measured as chlorophyll-a not to exceed 3-times median chlorophyll-a concentration of reference sites, on any occasion during non river-flow period.	
	EQS: Median chlorophyll-a concentration did not exceed 3 times the median chlorophyll-a concentration of reference sites on more than one occasion in the 2017–2018 non-river flow period, or in the 2016–2017 non-river flow period, and therefore the EQS was met	
	EQG: Phytoplankton biomass measured as chlorophyll-a at any site does not exceed 3 times median chlorophyll-a concentration of reference sites, on 25% or more occasions during the non river-flow period	
EQO 2 – MAINTENANCE OF AQUATIC LIFE FOR HUMAN CONSUMPTION		
Thermotolerant Coliforms	EQG: Median TTC counts at sites at the boundary of the Shellfish Harvesting Exclusion Zone (SHEZ) are not to exceed 14 CFU 100 mL, with no more than 10% of the samples exceeding 21 CFU 100 mL as measured using the membrane filtration method	



Indicator	Environmental Quality Criteria (EQC)	Assessment
Algal biotoxins	EQG: Concentrations of potentially toxic algae at sites at the boundary of the SHEZ are not to exceed the WASQAP trigger concentrations	
EQO 3 – MAINTENANCE OF PRIMARY CONTACT RECREATION		
Faecal pathogens* *Refer section 3.2.2.	EQG: The 95 th percentile value of <i>Enterococci</i> taken over the bathing season not to exceed 200 MPN/100 mL, outside the post upgrade boundary EQS: The 95 th percentile value of <i>Enterococci</i> taken over the bathing season not to exceed 500 MPN/100 mL, outside the post upgrade boundary	 
Algal biotoxins	EQG: Median total phytoplankton cell count for the area of concern should not exceed 15,000 cells/mL	
EQO 4 – MAINTENANCE OF SECONDARY CONTACT RECREATION		
Faecal pathogens	EQG: The 95 th percentile value of <i>Enterococci</i> taken over the bathing season not to exceed 2000 MPN/100 mL, outside the post upgrade boundary	
EQO 5 – MAINTENANCE OF AESTHETIC VALUES		
Nuisance organisms	EQG: Macrophytes, phytoplankton scums, filamentous algal mats, blue-green algae and sewage fungus should not be present in excessive amounts	
Faunal deaths	EQG: There should be no reported incidents of large-scale deaths of marine organisms relating from unnatural causes	
Water Clarity	EQG: The natural visual clarity of the water should not be reduced by more than 20% EQS: There should be no overall decrease in the aesthetic water quality values of Cockburn Sound using direct measures of the community's perception of aesthetic value.	 
Colour	EQG: The natural hue of the water should not be changed by more than ten points on the Munsell scale. EQS: There should be no overall decrease in the aesthetic water quality values of Cockburn Sound using direct measures of the community's perception of aesthetic value.	 
Surface films	EQG: Oil and petrochemicals should not be noticeable as a visible film on the water or detectable by odour	
Surface debris	EQG: Water surfaces should be free of floating debris, dust and other objectionable matter, including substances that cause foaming EQS: There should be no overall decrease in the aesthetic water quality values of Cockburn Sound using direct measures of the community's perception of aesthetic value.	 



Indicator	Environmental Quality Criteria (EQC)	Assessment
Odour	<p>EQG: There should be no objectionable odours.</p> <p>EQS: There should be no overall decrease in the aesthetic water quality values of Cockburn Sound using direct measures of the community's perception of aesthetic value.</p>	 
Fish tainting substances	<p>EQG: Concentrations of contaminants will not exceed the aesthetics guidelines for fish tainting substances at the Shellfish Harvesting Safety Zone boundary.</p>	



5. Stakeholder Consultation

5.1 Stakeholder Liaison Group (SLG)

Performance Summary Reports are submitted annually to the SLG. These reports provide a summary of MS 665 compliance; results of the ocean monitoring program; details of the non-conformances and proposed management responses; any changes to MS 665 or the M&MP; complaints received; and any other emerging issues. A link to the SDOOL Annual Report is also provided.

The 2016-17 SDOOL Annual Performance Summary Report was not submitted to the SLG following the completion of the 2016-17 PCR. The 2016-17 data shall be submitted in conjunction with the 2017-18 Performance Summary Report to the SLG in early 2019.

6. Compliance with MS 665 Conditions and Commitments

As required by MS 665 to form part of this Performance and Compliance Report, each condition and environmental management commitment specified in MS 665 was assessed for compliance in 2017-18. The results of this assessment are presented in the OEPA Audit Table as Table 8 below.

A Statement of Compliance has been prepared and is attached as **Error! Reference source not found.E**.



Table 8 – Audit Table (Provided by OEPA)



Government of **Western Australia**
Office of the **Environmental Protection Authority**

AUDIT TABLE

Statement Compliance Section

PROJECT: Use of Cape Peron Outlet Pipeline to Dispose of Industrial Wastewater to the Sepia Depression, Kwinana

Note:

- Phases that apply in this table = Pre-Construction, Construction, Operation, Decommissioning, Overall (several phases)
- This audit table is a summary and timetable of conditions and commitments applying to this project. Refer to the Minister's Statement for full detail/precise wording of individual elements.
- Code prefixes: M = Minister's condition; P = Proponent's commitment
- Acronym list: CEO = Chief Executive Officer of OEPA; DEC = Department of Environment Regulation; DPAW = Department of Parks and Wildlife; DIA = Department of Indigenous Affairs; DMP = Department of Mining and Petroleum; EPA = Environmental Protection Authority, DoH = Department of Health; DoW = Department of Water, Minister for Env = Minister for the Environment; OEPA = Office of the Environmental Protection Authority.
- Compliance Status: C = Compliant, CLD = Completed, NA = Not Audited, NC = Non – compliant, NR = Not Required at this stage. Please note the terms VR = Verification Required and IP = In Progress are only for OEPA use.

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:M1.1	Implementation	Implement the proposal as documented in Schedule 1 of Statement 665, subject to the conditions of this statement		MS 665 2017-18 Performance Compliance Report (this document)	Overall	Throughout the life of the project	NC	NC inferred here due to other NC shown in this report
665:M2.1	Proponent Commitments	Implement the environmental management commitments documented in Schedule 2 of Statement 665		MS 665 2017-18 Performance Compliance Report (this document)	Overall		C	Refer to individual comments listed below (665:P1-P13.2)
665:M3.1	Nominated Proponent	The proponent nominated by the Minister for the Environment, under S38(6) or (7) of the EP Act is responsible for the implementation of the proposal until the Minister has revoked this nomination and nominated another person in respect of the proposal under S38(7) of the EP Act			Overall		C	Proponent remains the Water Corporation
665:M3.2	Change in Proponent	Any request for a change in proponentship shall be accompanied by a copy of the Minister's statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in Statement 665. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.		1. Letter applying for a transfer of proponent and a copy of the Statement endorsed by the proposed replacement proponent; 2. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal	Overall	Before transfer of ownership of the proposal	C	Proponent remains the Water Corporation
665:M3.3	Proponent	Notify the DoE of any change of proponent contact name and address		Notification of change of proponent contact name and address	Overall	Within 60 days of any change of address	C	No change in proponent name or address
665:M4.1	Commencement	If the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in Statement 665 shall lapse and be void	The Minister will determine any question as to whether the proposal has been substantially commenced	Statement issued October 2004, CSBP discharging to SDOOL October 2005, BP commenced discharging in Sept 2009	Overall	By 28 October 2009	CLD	Proposal was commenced within five years of the date of MS 665.



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:M4.2	Commencement	Make an application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of Statement 665	An approval may be granted for an extension of the approval period if 1. The environmental factors of the proposal have not changed significantly; 2. new, significant environmental issues have not arisen; and 3. all relevant government authorities have been consulted . Note: The Minister for the Environment may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.	Letter regarding extension required, stating that the proposal is to be implemented as approved.	Overall	At least six months prior to the expiration date of the five year period (by 28 April 2009)	CLD	Proposal was commenced within five years of the date of MS 665.
665:M5.1	Compliance Auditing	Prepare an audit programme and submit compliance reports (CR's) to the DoE	Compliance reports to address 1. the status of implementation of the proposal as defined in Schedule 1 of Statement 665; 2. evidence of compliance with the conditions and commitments; and 3. the performance of the environmental management plans and programmes. Note - Under sections 48(1) and 47(2) of the Environmental Protection Act 1986, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.	1. Initial Compliance report to be submitted at Pre-operation addressing all Pre-operation phase and any relevant "Overall" phase requirements. 2. Annual compliance reporting for the first five years commencing one year after the date that the Statement was issued, then reporting as required by the DoE. MS 665 Performance Compliance Reports (PCR)	Overall	1. Initial Compliance report Pre-operation addressing all "Pre-operation" and relevant "Overall" phase elements. 2. Annual compliance reporting for the first five years, then reporting as required by the DoE	C	2016-17 MS 665 PCR submitted to OEPA on 27 December 2017. Submission of 2017-18 PCR - this report
665:M5.2	Performance Review	Submit a Performance Review	Addressing - (1) the major environmental issues associated with the project; the targets for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those targets; (2) the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable; (3) significant improvements gained in environmental management, including the use of external peer reviews; (4) stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and (5) the proposed environmental targets over the next five years, including improvements in technology and management processes	Performance Review MS 665 Performance Review Reports (PRR)	Operation	Each five years after the start of the operations phase	C	2015 MS 665 PRR was submitted to the OEPA on 25 November 2015. Next PRR due for submission in Nov 2020
665:M5.3	Report prepared by an auditor	The proponent may submit a report prepared by an auditor (approved by the DoE under the 'Compliance Auditor Accreditation Scheme') on each condition/commitment of this statement which requires the preparation of a management plan, programme, strategy or system	Stating that the requirements of each condition/commitment have been fulfilled within the timeframe stated within each condition/commitment	Auditor's report if appropriate	Overall	As appropriate	NR	Auditors report not required during 2017-18 reporting period.



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:M6.1	Monitoring and management of the Outlet	Prepare a Preliminary Sepia Depression Ocean Outlet Monitoring and Management Plan. See also P3, P4.	Include: 1. the monitoring and evaluation of the environmental effects of discharging treated wastewater into the Sepia Depression; 2. long-term environmental quality objectives and their spatial application consistent with the Environmental Protection Authority's objectives as described in the publication Perth's Coastal Waters, Environmental Values and Objectives, Environmental Protection Authority, February 2000; 3. a programme to achieve long-term environmental quality objectives through short to medium term targets; 4. agreed trigger levels for further investigations (environmental quality guidelines); 5. agreed trigger levels for remedial and/or preventative actions to protect the water quality and the environment of the Sepia Depression (environmental quality standards); and 6. management actions to be taken in the event that environmental quality guidelines or environmental quality standards are not met	Preliminary Sepia Depression Ocean Outlet Monitoring and Management Plan	Pre-operation	Prior to the acceptance of industrial effluent into the Sepia Depression Ocean Outlet Landline	CLD	
665:M6.2	Monitoring and management of the Outlet	Prepare a Sepia Depression Ocean Outlet Monitoring and Management Plan. See also P3, P4.	Address: items 1 to 6 of condition 6-1 and any matters arising during the twelve months of operation, and shall be subject to amendment from time to time	Sepia Depression Ocean Outlet Monitoring and Management Plan	Operation	Within twelve months following the acceptance of industrial effluent into the Sepia Depression Ocean Outlet Landline	CLD	Latest SDOOL M&MP version approved by OEPA on 9 May 2014.
665:M6.3	Monitoring and management of the Outlet	Implement the Sepia Depression Ocean Outlet Monitoring and Management Plan		CR MS 665 2017-18 Performance Compliance Report (this document)	Operation		C	See Table 7 and Appendix D for detailed 2017-18 SDOOL ocean outlet monitoring.
665:M6.4	Sepia Depression Ocean Outlet Monitoring and Management Plan	Make the Sepia Depression Ocean Outlet Monitoring and Management Plan, publicly available	Carry out the following: 1) Request DoE to advertise the availability in the EPA/DoE weekly advertisement in the Monday edition of "The West Australian" newspaper; 2) Provide free copies of the documentation when approved for release to organisations nominated by EPA, such as the DoE library (2 copies), Battye Library (2 copies) and local Government libraries (2 copies each). 3. Post the document on the proponent's website.	CR Water Corporation website	Operation		C	SDOOL M&MP available on the Water Corporation's website- https://www.watercorporation.com.au/about-us/our-performance/ocean-outfall/point-peron-monitoring-program
665:M7.1	Ecological Protection Zones and Toxicant Criteria	Determine and report to the Department of Environment whether the concentrations of bio-accumulating toxicants in the effluent at the diffuser exceed the ANZECC & ARMCANZ 80% species protection guideline trigger levels (as published from time to time) for bio-accumulating toxicants in accordance with the Sepia Depression Ocean Outlet Monitoring and Management Plans required by conditions 6-1 and 6-2	Implement the SDOOL Monitoring and Management Plan. Report through the SDOOL Annual Reports and this PCR.	CR MS 665 2017-18 Performance Compliance Report (this document) MS 665 M&MP Annual Report	Operation		C	Concentrations of bio-accumulating toxicants (cadmium and mercury) were below ANZECC/ ARMCANZ (2000) 80% species protection guideline "trigger" levels for the reporting period. See Table 7, or Appendix D for detailed 2017-18 SDOOL ocean outlet monitoring.



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:M7.2	Ecological Protection Zones and Toxicant Criteria	In the event that a guideline trigger level for a bio-accumulating toxicant, referred to in condition 7-1, is exceeded, the proponent shall report the matter to the Department of Environment within one working day of determining that this has occurred, and shall initiate an investigation against the environmental quality standards and into the cause of the exceedance in accordance with the framework developed in Revised Environmental Quality Criteria Reference Document (Cockburn Sound)		1. Report to DoE within one working day when the guideline trigger level for a bio-accumulating toxicant referred to in condition 7-1 is exceeded. 2. Initiate an investigation against the environmental quality standards and into the cause of the exceedance in accordance with the framework developed in Revised Environmental Quality Criteria Reference Document (Cockburn Sound)	Operation		C	No "trigger" levels for bio-accumulating toxicants were exceeded during this period.
665:M7.3	Ecological Protection Zones and Toxicant Criteria	If an environmental quality standard for a bio-accumulating toxicant, referred to in condition 7-2, is exceeded, the proponent shall initiate a management response to determine the cause and remedy the exceedance in accordance with the implementation framework for the National Water Quality Management Strategy		CR	Operation		C	No management response required (Refer to M7.2 above).
665:M7.4	Ecological Protection Zones and Toxicant Criteria	Determine and report to the Department of Environment whether the ANZECC & ARMCANZ 99% species protection guideline trigger levels (as published from time to time) for toxicants (with the exception of cobalt, where the 95% guideline shall apply), identified in accordance with the Sepia Depression Ocean Outlet Monitoring and Management Plans required by conditions 6-1 and 6-2, are being exceeded within the Zone of High Ecological Protection (i.e. beyond a 100 metre radius of the diffuser)	Implement the SDOOL Monitoring and Management Plan. Report through the SDOOL Annual Reports and this PCR.	CR MS 665 2017-18 Performance Compliance Report (this document) MS 665 M&MP Annual Report	Operation		C	Concentrations of toxicants were below ANZECC/ ARMCANZ (2000) 99% species protection guideline "trigger" levels (95% for cobalt) for the reporting period. See Table 7, or Appendix D for detailed 2017-18 SDOOL ocean outlet monitoring.
665:M7.5	Ecological Protection Zones and Toxicant Criteria	In the event that a guideline trigger level for a toxicant, referred to in condition 7-4 is exceeded, the proponent shall report the matter to the Department of Environment within one working day of determining that this has occurred, and shall initiate an investigation against the environmental quality standards and into the cause of the exceedance in accordance with the framework developed in Revised Environmental Quality Criteria Reference Document (Cockburn Sound)		1. Report to DoE within one working day when guideline trigger level for a toxicant referred to in condition 7-4 is exceeded. 2. initiate an investigation against the environmental quality standards and into the cause of the exceedance in accordance with the framework developed in Revised Environmental Quality Criteria Reference Document (Cockburn Sound)	Operation		C	No "trigger" levels for toxicants were exceeded during this period.
665:M7.6	Ecological Protection Zones and Toxicant Criteria	If an environmental quality standard for a toxicant, referred to in condition 7-5, is exceeded, the proponent shall initiate a management response to determine the source and remedy the exceedance in accordance with the implementation framework for the National Water Quality Management Strategy		CR as appropriate	Operation		C	No management response required (Refer to M7.4 above).
665:M8.1	New Discharges and Changes to Industrial Wastewater Discharge	The proponent shall not accept industrial effluent from industries not specified in schedule 1 unless a proposal has been referred to the Environmental Protection Authority		CR	Operation		C	No industrial waste has been accepted from industries other than those specified in Schedule 1 or approved via a Section 45C application to the OEPA



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:M9.1	Toxicant Loads	The proponent shall only accept and convey effluent from the industry participants to the Sepia Depression where industrial toxicant loads to be discharged do not exceed those authorised for discharge into Cockburn Sound by the relevant individual industry Environmental Protection Act Part V licences	SDOOL M&MP Participant effluent monitoring data	CR Participant effluent monitoring data Communication protocols.	Operation		C	Effluent monitoring results are analysed individually and as a composite in accordance with the M&MP. Industry has been instructed to only discharge toxicant loads if they fall within Part V Licence criteria. Communication protocols have been developed to keep all parties aware of changes in discharge quality.
665:M9.2	Toxicant Loads	The proponent shall not accept discharges which are not licensed under Part V of the Environmental Protection Act 1986 into the Sepia Depression Ocean Outlet Landline for disposal to the Sepia Depression		CR <ul style="list-style-type: none">Woodman Point WWTP Licence L4201Point Peron WWTP Licence L4202Kwinana WWTP Licence L6543East Rockingham WWTP Licence L8960CSBP Licence L6107BP Licence L5938Western Energy Licence L8471Kwinana Cogeneration Plant (Edison Mission Energy) Licence L8247	Operation		C	All participants discharging to SDOOL are licensed under Part V of the EP Act. Note KWRP is not a prescribed premise so does not operate under a Part V Licence. KWRP only discharges Woodman Point WWTP treated wastewater back into SDOOL.
665:M10.1	Nitrogen Loads	Operate the Sepia Depression Ocean Outlet Landline so that the annual nitrogen load to the Sepia Depression does not exceed the nitrogen load discharged from the outlet in 1994		CR	Operation		NC	TN load discharged to the Sepia Depression during the reporting period was 2,185 tonnes/year. This figure exceeds the 1994 level of 1,778 tonnes/year. See Section 3 of this PCR.
665:M10.2	Nitrogen Loads	In the event that subsequent monitoring shows an adverse environmental impact at the 1994 nitrogen load, the proponent shall reduce the annual nitrogen load to 75% of the load discharged from the outlet in 1994.		CR	Overall		C	Subsequent monitoring did not indicate adverse environmental impacts due to nitrogen load above 1994 level. Reduction of annual nitrogen load to 75% of 1994 level not required. See Section 3 of this PCR.
665:M11.1	Sediment Quality	Monitor sediment quality within and at the boundary of the Zone of Low Ecological Protection, and report to the Department of Environment on whether sediments exceed the ANZECC & ARMCANZ Interim Sediment Quality Guidelines-low trigger levels	Implement the SDOOL Monitoring and Management Plan. Report through the SDOOL Annual Reports and this PCR.	CR Completed 2014/15 Sediment Survey and Report	Operation		C	Sediments are collected every five years as per the M&MP. The last sediment survey was undertaken in 2015. No sample from any site exceeded the ISQG trigger levels.
665:M11.2	Sediment Quality	In the event that a guideline trigger level for sediment quality, referred to in condition 11-1, is exceeded, the proponent shall report the matter to the Department of Environment within one working day of determining that this has occurred, and shall initiate an investigation against the environmental quality standards and into the cause of the exceedance in accordance with the framework developed in Revised Environmental Quality Criteria Reference Document (Cockburn Sound).		1. Report to DoE within one working day when guideline trigger level for sediment quality referred to in condition 11-1 has been exceeded. 2. initiate an investigation against the environmental quality standards and into the cause of the exceedance in accordance with the framework developed in Revised Environmental Quality Criteria Reference Document (Cockburn Sound)	Operation		C	No "trigger" levels for sediment quality were exceeded during this period.
665:M11.3	Sediment quality	If an environmental quality standard for sediment quality referred to in condition 11-2 is not met, the proponent shall initiate a management response to determine the cause and act to prevent further sediment quality degradation		CR as appropriate	Operation		C	No management response required (Refer to M11.1 above).



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:M12.1	Preliminary Decommissioning Plan	Prepare a Preliminary Decommissioning Plan, which provides the framework to ensure that the site is left in an environmentally acceptable condition	Addressing: conceptual plans for the removal or, if appropriate, retention of infrastructure; long-term management of systems affected by the discharge of waste.	Preliminary Decommissioning Plan	Overall	Before 1 May 2005	CLD	
665:M12.2	Final Decommissioning Plan	Prepare a Final Decommissioning Plan designed to ensure that the site is left in an environmentally acceptable condition	Addressing: conceptual plans for the removal or, if appropriate, retention of infrastructure; long-term management of systems affected by the discharge of waste.	Final Decommissioning Plan	Operation	At least twelve months prior to the anticipated date of decommissioning	NR	
665:M12.3	Final Decommissioning Plan	Implement the Final Decommissioning Plan		CR-closure	Post-operation	Until such time as the Minister for the Environment determines, on advice of the Environmental Protection Authority, that the proponents decommissioning responsibilities have been fulfilled	NR	
665:P1	Marine Environmental Values	Attain an average dilution of the Sepia Depression Ocean Outlet Landline (SDOOL) wastewater stream of at least 1:300 with the dilution being above 1:200 at least 99% of the time within 100 metres of the Sepia Depression Ocean Outlet (SDOO) diffuser	Dilution will be demonstrated by modelling and monitoring	CR MS 665 2017-18 Performance Compliance Report (this document) MS 665 M&MP Annual Report	Operation		C	Based on modelling results, the average initial dilution for the reporting period at Sepia Depression was greater than 1:300 (1:492 at 60m) See Table 7, or Appendix D for detailed 2017-18 SDOOL ocean outlet monitoring.
665:P2	Marine Environmental Values	Accept only wastewater from industrial participants whose discharge is authorised by the relevant licence and/or Ministerial conditions issued to them, or as otherwise authorised in writing by the DoE from time to time	Keep a Register of relevant industries licences or Ministerial Statement numbers	CR <ul style="list-style-type: none">• CSBP Licence L6107• BP Licence L5938• Western Energy Licence L8471• Kwinana Cogeneration Plant (Edison Mission Energy) Licence L8247	Operation		C	Industry participants CSBP, BP, Kwinana Cogen Plant (formerly Edison Mission Energy) and Perth Energy (formerly Western Energy) are currently discharging to SDOOL and have relevant approvals through a DER Part V Licence.
665:P3	Marine Environmental Values	Manage the discharge of treated wastewater to the Sepia Depression, including that accepted from industrial participants and future expansion of the wastewater treatment system to ensure that the concentration of toxicants meets agreed EQC 100 metres from the diffuser	Compliance will be demonstrated by modelling and monitoring	CR-Modelling and monitoring results MS 665 2017-18 Performance Compliance Report (this document) MS 665 M&MP Annual Report	Operation		C	All toxicants met the EQC at 100m from the diffuser (edge of the LEPA). See Table 7, or Appendix D for detailed 2017-18 SDOOL ocean outlet monitoring.
665:P4	Protection of Marine Flora and Fauna	Conduct specific investigations and annually report the effects of wastewater discharge to the Sepia Depression through the Perth Long-term Ocean Outlet Monitoring programme or other agreements	Implement the SDOOL Monitoring and Management Plan. Report through the SDOOL Annual Reports and this PCR.	CR MS 665 2017-18 Performance Compliance Report (this document) MS 665 M&MP Annual Report	Operation		C	Relevant aspects of the SDOOL M&MP are included in the 2017-18 PLOOM report (Appendix D)
665:P5	Protection of Marine Flora and Fauna	Conduct specific investigations in the event that toxicants in the treated wastewater exceed concentrations which will result in the EPAs relevant high protection EQG being exceeded following 1:200 initial dilution, with the relevant industrial participant/s and in consultation with the DoE to identify the source and cause of the identified condition	Report any exceedances in the Compliance Report	CR MS 665 2016-17 Performance Compliance Report (this document) MS 665 M&MP Annual Report	Operation		C	No exceedances of toxicant EQG during this reporting period



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:P6	Protection of Marine Flora and Fauna	Undertake assessment of the risk presented to the ecological processes in the Sepia Depression by the exceedance in commitment 5, and undertake measures necessary to mitigate those risks		CR-report mitigation measures	Operation		C	No exceedances of the EQG as specified above in P5
665:P7	Protection of Marine Flora and Fauna	Undertake Whole Effluent Toxicity (WET) testing using a method agreed with the DoE following the principles contained in the USEPA, APHA and ASTM protocols at a NATA accredited laboratory in accordance with the protocols set out in ANZECC/ARMCANZ 2000 and in accordance with the Monitoring Program specified in Plan for Monitoring and Management of SDOO	Implement the SDOOL Monitoring and Management Plan.	CR MS 665 2017-18 Performance Compliance Report (this document) MS 665 M&MP Annual Report	Operation		C	Quarterly WET testing undertaken with EQG met during the reporting period. See Table 7, or Appendix D for detailed 2017-18 SDOOL ocean outlet monitoring.
665:P8	Public Health Values	Participate in close consultation with the Department of Health, the Department of Conservation and Land Management and DoE to further refine the notional social environmental quality objectives for the maintenance of seafood for human consumption and recreation and aesthetic EQC values and boundaries for treated wastewater discharge to the marine environment. Deploy sentinel mussels to monitor tissue coliform levels in accordance with the Monitoring Program specified in Plan for Monitoring and Management of SDOO.	Implement the SDOOL Monitoring and Management Plan.	Report results in CR. MS 665 2017-18 Performance Compliance Report (this document) MS 665 M&MP Sediments and Sentinel Mussel Report (2015)	Overall		C	In accordance with the SDOOL M&MP, sentinel mussels monitoring is undertaken every five years. Monitoring results demonstrated concentrations were all lower than their relevant reporting limits with the majority below detection limits. The last sentinel mussel survey was undertaken in 2015, with results demonstrating compliance with EQC (see Table 3)
665:P9	Public Health Values	Notify the Department for Planning and Infrastructure of the spatial extent of the area in proximity to the Sepia Depression Ocean Outlet where primary contact recreation and taking of seafood is not recommended, with a request for inclusion on relevant Maritime Charts. DOC74273	Provide evidence of the notification	CR	Pre-operation	Prior to industrial wastewater discharge and following any change to spatial extent of area	C	Copy of correspondence was provided in the 2005-06 PCR submitted to the OEPA.



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:P10	Environmental Management	Prepare a Wastewater Monitoring and Management Plan to address the receipt and discharge of wastewater from the SDOOL	Including: 1. The monitoring and evaluation of combined treated wastewater and industrial effluent into the Sepia Depression. The monitoring will include as far as practicable: a) Real-time monitoring of all streams of wastewater returned to the SDOOL and combined streams prior to discharge. Routine monitoring is to include flow-rate, pH, conductivity, turbidity and temperature; and b) Routine monitoring of prescribed contaminant levels in all streams of wastewater returned to the SDOOL and combined streams prior to discharge. Prescribed contaminants are those agreed from time to time under this Plan. 2. Procedures required to be implemented by the proponent and Kwinana Water Reclamation Plant participants if the wastewater contamination has the potential to cause the toxicant concentrations and loads specified in Table 1 of schedule 1 to be exceeded; and; 3. Mode of operation of the SDOOL to attain an average dilution of the combined wastewater stream of at least 1:300 with the dilution being above 1:200 at least 99% of the time within 100 metres of the diffuser	Wastewater Monitoring and Management Plan framework SDOOL Monitoring and Management Plan.	Pre-operation	Framework of the management plan agreed prior to industrial wastewater acceptance	C	The M&MP specifies requirements for real-time monitoring of all streams of wastewater returned to the SDOOL and combined streams prior to discharge; as well as monitoring of prescribed contaminant levels. See sections 5.2 and 5.3 of the SDOOL M&MP.
665:P11	Environmental Management	Finalise the Wastewater Monitoring and Management Plan referred to in commitment 10		Wastewater Monitoring and Management Plan	Operation	Plan finalised within 6 months of commencement of acceptance of Wastewater to SDOOL	C	Latest SDOOL M&MP version approved by OEPA on 9 May 2014.
665:P12	Environmental management	Implement the Plan referred to in commitments 10 and 11	SDOOL M&MP	CR MS 665 2017-18 Performance Compliance Report (this document) MS 665 M&MP Annual Report	Operation		C	M&MP was fully implemented during the reporting period.



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
665:P13.1	Stakeholder Consultation Strategy	Develop a Stakeholder Consultation Strategy	The Strategy will: Identify relevant stakeholders including community groups, environmental groups, local governments (including the City of Rockingham) and government agencies; Describe stakeholder consultation measures, having regard for the Governments consultation strategy; Require stakeholder input into the Plans and Strategies required to be prepared by these commitments; Describe opportunities to publicly review annual reports and data on the Sepia Depression Ocean Outlet environmental performance and monitoring programs; Make reports on Kwinana Water Reclamation Plant environmental performance readily available to the public and advertise their availability; Make the results of the Perth Long-term Ocean Outlet Monitoring programme readily available to the public and advertise their availability; Maintain a complaints/response record of actions taken to address matters arising from the project; and Present up to date information and data, consult on and receive input on current and possible future industry participation prior to any referral under section 38 of the Environmental Protection Act 1986	Stakeholder Consultation Strategy	Pre-operation	At least six months prior to industrial wastewater discharge	CLD	
665:P13.2	Stakeholder Consultation Strategy	Implement the Stakeholder Consultation Strategy		CR -report monitoring results, complaints and responses in the CR	Operation		C	The Stakeholder Consultation Strategy has been implemented in accordance with the Terms of Reference.



Appendix A: BMT Incident Report June 2018 - Summary

Additional sampling was completed near the Sepia Depression ocean outlet from April - June 2018 during the Woodman Point plant upgrade and following an incident on site causing shut down of the plant.

Concentrations of nitrogen were elevated in the discharge leading to an exceedance of Condition 10-1 of MS 665. Around 2185 tonnes of nitrogen was discharged during the reporting period, exceeding the allowed 1778 tonne 1994 load. Despite this exceedance, the TN concentrations at the LEPA boundary (calculated at 0.18 mg/L, which is below the ANZECC/ARMCANZ (2000) guideline for TN as a stressor in South Western Australian inshore marine waters of 0.23 mg/L), can be expected to be within the range of natural variability and therefore not have a substantial long term environmental effect.

During the period of increased nitrogen load there was a large algal bloom (chlorophyll a concentration as high as 4.2 µg/L) on 10 April 2018. Chlorophyll a concentrations were also elevated at the reference site on that day (up to 1.5 µg/L) suggesting that the bloom was not focused around the outlet but was regional in extent. The bloom was short lived and not evident on any other sampling occasion.

Ammonia concentrations extrapolated from treated wastewater measurements and determined from samples collected at the LEPA boundary were all well below the EPA (2017) high protection guideline for ammonia (0.5 mg/L).

Biochemical oxygen demand was elevated in some treated wastewater samples, but oxygen saturation was maintained throughout the region over the period. Marine communities around the outlet are at a very low risk of hypoxia.

Microbial concentrations (thermotolerant coliforms and *Enterococci* sp.) at compliance sites were elevated above normal concentrations during sampling. The risks to seafood/recreation contact were short lived.

During the reporting period, the aesthetic value around the outlet was also reduced. This occurred over a short timeframe and was directly related to improving quality of the Woodman Point discharge which in turn should serve to reduce the instance of similar issues over the longer term.

The full report is available upon request (PM#20544077).



Appendix B: Notification to DWER of Exceedances of Schedule 1 Criteria

629 Newcastle Street
Leederville WA 6007

PO Box 100
Leederville WA 6902

T (08) 9420 2420
F (08) 9420 3626



Your Ref: MS665
Our Ref: JT1 2005 03131 V02
Enquiries: Craig Byers
Telephone: (08) 9371 4104

8 November 2018

Ian Munro - Manager: Ministerial Statement Section
Department of Water and Environmental Regulation
Locked Bag 33
CLOISTERS SQUARE
WA 6850

Attention: Kevin da Silva

Ministerial Statement 665: Use of the Cape Peron Outlet pipeline to dispose of industrial wastewater to the Sepia Depression, Kwinana – NOTIFICATION OF EXCEEDANCE

The use of the Sepia Depression Ocean Outlet Landline (SDOOL) at Cape Peron is subject to conditions in Ministerial Statement 665 (MS665) dated 28 October 2004, issued under the *Environmental Protection Act 1986*.

Monitoring specified by MS665 (through the Monitoring and Management Plan required by condition 6-3) shows that there have been exceedances of parameters during the reporting year 1 July 2017 to 30 June 2018 as noted below:

- Condition 1-1 states '*The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions of this statement*'. Monitoring of SDOOL has indicated an exceedance of the Biochemical Oxygen Demand (BOD) stipulated in Schedule 1, with the annual rolling average reaching 55.4mg/L in June 2018, as compared to the Schedule 1 maximum value of 40mg/L.
- Condition 10-1 states '*The proponent shall operate the [SDOOL] so that the annual nitrogen load to the Sepia Depression does not exceed the nitrogen load discharged from the outlet in 1994*'. The annual total nitrogen (TN) load discharged to the ocean through SDOOL for the reporting period was 2,165 tonnes. This exceeds the annual 1994 TN load of 1,778 tonnes (refer MS668 Schedule1 as amended 15 July 2014).



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Ongoing monitoring is being conducted to assist in determining whether the exceedances resulted in any adverse environmental impact. It should be noted however that, due to dilution with background seawater (having approximately 0.1 mg/L TN, and expected dilution of 1:310), the median TN at the Low Environmental Protection Area (LEPA) boundary is expected to be 0.18 mg/L and below the ANZECC/ARMCANZ (2000) guideline for TN as a stressor in South Western Australian inshore marine waters of 0.23 mg/L. Thus, despite exceeding the 1994 loading, the TN concentrations at the LEPA boundary are expected to be within the range of natural variability.

The exceedance of these parameters is attributed mainly to significant capital works underway at Woodman Point Wastewater Treatment Plant which are upgrading treatment capacity to meet the demand of catchment growth. The upgrade has the plant currently in an interim mode of operation, with completion expected during 2019. Monitoring results of the performance of this interim plant have indicated that wastewater quality has improved significantly. It is expected that the quality of wastewater leaving the plant will continue improving as the upgrade progresses.

Further information regarding the circumstances of the exceedances and results of the subsequent ocean monitoring will be reported in the annual compliance report, due for submission to DWER in December 2018.

If you require any further information in this regard please contact Craig Byers at craig.byers@watercorporation.com.au or 9371 4104.

Yours sincerely

Dr Digby Short
Manager Governance, Assurance and Approvals



Appendix C: Notification to DWER of EQO Exceedances

629 Newcastle Street PO Box 100 T (08) 9420 2420
 Leederville WA 6007 Leederville WA 6902 F (08) 9420 3626



Your Ref:
 Our Ref: JT1 2005 06220 V02
 Enquiries: Craig Byers
 Telephone: 9371 4104

14 September 2018

Manager - Ministerial Statement Section
 Department of Water and Environmental Regulation
 Locked Bag 33
 Cloisters Square
 Perth WA 6850

Attention: Cameron Hanush

**NOTIFICATION OF EXCEEDENCE RELATED TO USE OF CAPE PERON
 OUTLET PIPELINE TO DISPOSE OF INDUSTRIAL WASTEWATER TO THE
 SEPIA DEPRESSION, KWINANA (MINISTERIAL STATEMENT 665)**

Water Corporation wishes to report an exceedance of the quality criteria for faecal pathogens within the marine waters around the discharge of the Sepia Depression Ocean Outfall Landline (SDOOL) during the 2017/18 reporting period.

In accordance with the SDOOL Monitoring and Management Plan (2014) (MMP), faecal pathogens (*Enterococci* spp.) are measured over the summer period at the post-upgrade boundary. The results are compared against the Environmental Quality Guideline (EQG) and Environmental Quality Standard (EQS) that relate to the 'Maintenance of Primary Contact Recreation' Environmental Quality Objective (EQO). In this instance, both the EQG and EQS were exceeded, as detailed in Table 1 below.

Quality Indicator	Environmental Quality Criteria		Result
Faecal pathogens	Environmental Quality Guideline	95 th percentile value of <i>Enterococci</i> spp. taken over bathing season not to exceed 200 MPN/100mL outside post-upgrade boundary.	1100 MPN/100 mL
	Environmental Quality Standard	95 th percentile value of <i>Enterococci</i> spp. taken over bathing season not to exceed 500 MPN/100mL outside post-upgrade boundary.	

During the monitoring period there was a reduction in the quality of wastewater leaving Woodman Point Wastewater Treatment Plant (the major feed into SDOOL) due to major upgrade work at the plant. Ocean sampling undertaken between 4 December and 27 April 2018 showed that the discharge plume during this period moved predominantly in a northerly to north-westerly direction. In addition, shoreline sampling undertaken between April to June showed pathogen levels were acceptable and demonstrated no impact to the local bathing beaches (results were below the limit of <150 faecal coliform organisms/100mL *Australian and New*



Zealand Environment and Conservation Council 2000 guideline for primary recreational contact). Final wastewater quality has improved notably since June due to optimization of the treatment capacity.

Water Corporation liaised with Department of Health (DoH), Department of Water and Environmental Regulation (Pollution Response Unit), City of Cockburn and City of Rockingham during the period of reduced water quality.

Water Corporation also previously sought advice from DoH with regard to the ongoing management response (in accordance with the MMP), and their reply included the following comments:

- The DoH strongly supports the protection of Primary Contact Recreation values for the marine waters around the SDOOL outfall. DoH considered it inappropriate however to apply the primary contact recreation water quality standards, as recommended in the NHMRC 2008 Guideline, to the SDOOL boundary zone as it is unreasonable to expect members of the public to readily access and use the zone for primary contact purposes;
- Given the distance of the SDOOL outfall from the coastline and the unlikely occurrence of primary contact recreation activities in the proximity of the boundary zone, the DoH recommended the use of secondary contact recreation quality criteria to ensure adequate public health protection; and
- The DoH also recommended that the SDOOL zone boundary be reviewed as it is inappropriate to apply a square or rectangular profile when treated wastewater dispersion through the water column is more in keeping with known plume modelling.

Considering the recent and historic exceedences, Water Corporation will consult with DWER to update the SDOOL MMP to include the DoH recommendations and thereby ensure the marine waters around the SDOOL outfall are effectively monitored to manage the public health aspects into the future. A revised MMP is intended for submission to DWER before end of year.

Please contact Craig Byers, Manager Environment and Resources on 9371 4104 or craig.byers@watercorporation.com.au if you wish to discuss further.

Yours sincerely

Dr Digby Short
Manager Governance, Assurance and Approvals



Appendix D: Perth Long Term Ocean Outlet Monitoring (PLOOM) Program – 2018 Summer Water Quality Surveys Report

The PLOOM Summer Water Quality Surveys are carried out annually at the three metropolitan Water Corporation wastewater ocean outlets (Ocean Reef, Swanbourne and Sepia Depression (SDOOL)). The purpose of the surveys is to:

- provide data on water quality in the vicinity of the outlets;
- assess the performance of each outlet by determining the dilution and dispersion characteristics of the treated wastewater;
- examine the extent of influence of the plumes;
- allow for the ongoing assessment of the environmental impact of the wastewater discharge in relation to the marine water quality and beneficial uses of the area;
- allow for the ongoing assessment of the level of public health risk associated with ocean disposal of treated wastewater.

The SDOOL 2018 summer water quality survey was conducted on 20 February 2018. Results may be found at the below link, commencing on page 51.

[Perth Long Term Ocean Outlet \(PLOOM\) Program 2018 Summer Water Quality Surveys](https://www.watercorporation.com.au/-/media/files/residential/about-us/our-commitments/environment-and-sustainability/ocean-outfall-of-wastewater/ploom_summer_water_quality_report_2018.pdf)

https://www.watercorporation.com.au/-/media/files/residential/about-us/our-commitments/environment-and-sustainability/ocean-outfall-of-wastewater/ploom_summer_water_quality_report_2018.pdf



Appendix E: Statement of Compliance

Statement of Compliance

1. Proposal and Proponent Details

Proposal Title	<i>Use of the Cape Peron Outlet Pipeline to Dispose of Industrial Wastewater to the Sepia Depression, Kwinana</i>
Statement Number	MS665
Proponent Name	<i>Water Corporation</i>
Proponent's Australian Company Number <i>(where relevant)</i>	28 003 434 917

2. Statement of Compliance Details

Reporting Period	1/07/17 to 30/06/18
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Implementation phase(s) during reporting period (please tick ✓ relevant phase(s))							
Pre-construction	<input type="checkbox"/>	Construction	<input type="checkbox"/>	Operation	<input checked="" type="checkbox"/>	Decommissioning	<input type="checkbox"/>

Audit Table for Statement addressed in this Statement of Compliance is provided at Attachment:	2
<p>An audit table for the Statement addressed in this Statement of Compliance must be provided as Attachment 2 to this Statement of Compliance. The audit table must be prepared and maintained in accordance with the Department of Water and Environmental Regulation (DWER) <i>Post Assessment Guideline for Preparing an Audit Table</i>, as amended from time to time. The 'Status Column' of the audit table must accurately describe the compliance status of each implementation condition and/or procedure for the reporting period of this Statement of Compliance. The terms that may be used by the proponent in the 'Status Column' of the audit table are limited to the Compliance Status Terms listed and defined in Table 1 of Attachment 1.</p>	

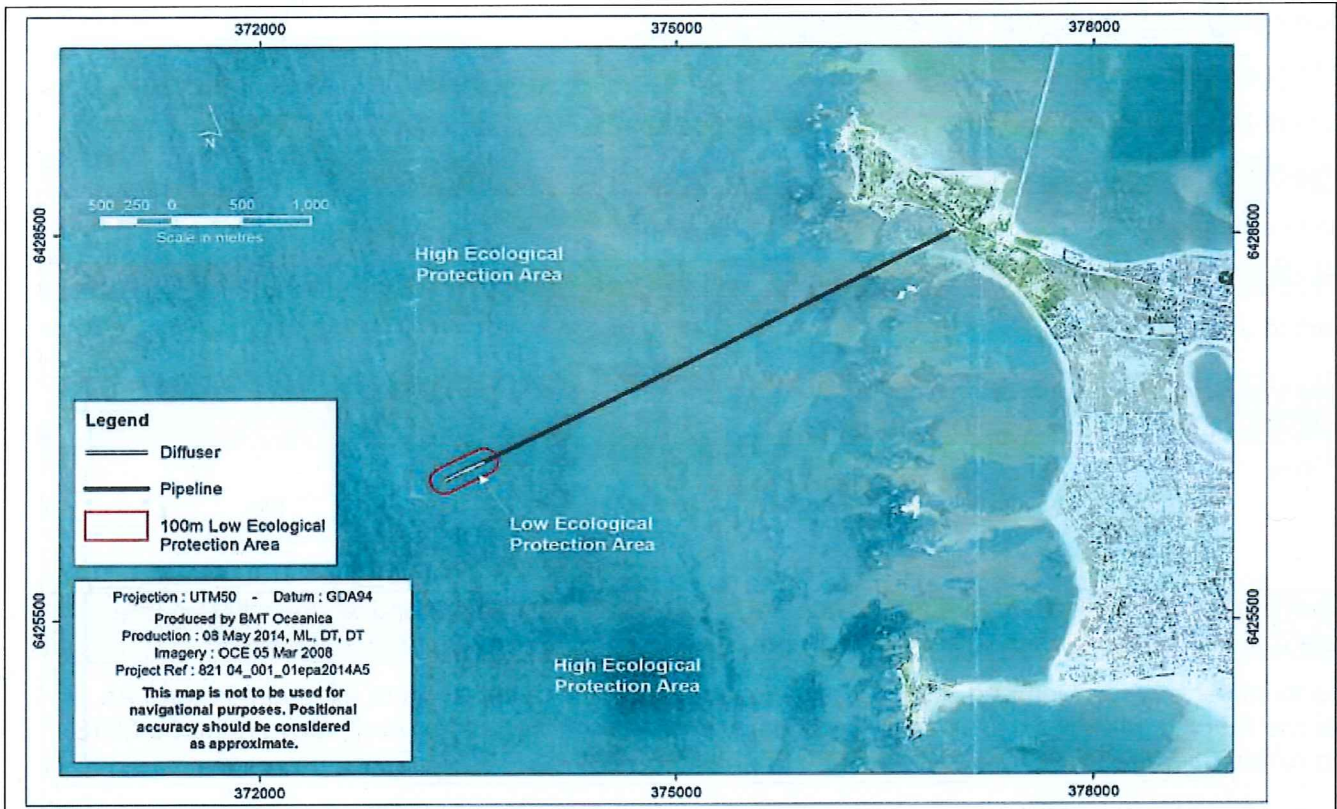
Were all implementation conditions and/or procedures of the Statement complied with within the reporting period? (please tick ✓ the appropriate box)			
No (please proceed to Section 3)	<input checked="" type="checkbox"/>	Yes (please proceed to Section 4)	<input type="checkbox"/>

3. Details of Non-compliance(s) and/or Potential Non-compliance(s)

The information required Section 3 must be provided for each non-compliance or potential non-compliance identified during the reporting period covered by this Statement of Compliance.

Non-compliance/potential non-compliance 3-1

Which implementation condition or procedure was non-compliant or potentially non-compliant?	
M10:1 Nitrogen Loads and Schedule 1 Key Characteristics Table – Nutrient Loads	
Was the implementation condition or procedure non-compliant or potentially non-compliant?	
Non-compliant	
On what date(s) did the non-compliance or potential non-compliance occur (if applicable)?	
N/A – Annual assessment of total nitrogen load (and thereby nutrient load)	
Was this non-compliance or potential non-compliance reported to the Chief Executive Officer, DWER?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Reported to DWER verbally Date _____ <input checked="" type="checkbox"/> Reported to DWER in writing Date 8 Nov 2018	<input type="checkbox"/> No
What are the details of the non-compliance or potential non-compliance and where relevant, the extent of and impacts associated with the non-compliance or potential non-compliance?	
<p>Total nitrogen load and nutrient load to Sepia Depression is not to exceed the load discharged from the outlet in 1994 (1778 tonnes). Nitrogen load discharged for the 2017-18 period was 2,185 tonnes.</p> <p>Additional sampling at the Sepia Depression ocean outlet was carried out between April and June 2018 and it was determined that TN concentrations at the LEPA boundary (calculated at 0.18 mg/L, which is below the ANZECC/ARMCANZ (2000) guideline for TN as a stressor in South Western Australian inshore marine waters of 0.23 mg/L), were expected to be within the range of natural variability and therefore not have a substantial long term environmental effect. Ammonia concentrations extrapolated from treated wastewater measurements and determined from samples collected at the LEPA boundary were all well below the EPA (2017) high protection guideline for ammonia.</p>	
What is the precise location where the non-compliance or potential non-compliance occurred (if applicable)? (please provide this information as a map or GIS co-ordinates)	
Sepia Depression Ocean Outlet – Low Ecological Protection Area (refer map below).	



What was the cause(s) of the non-compliance or potential non-compliance?

Upgrade works to the Woodman Point Wastewater Treatment Plant (WWTP) are temporarily reducing the quality of effluent discharged in to the SDOOL. Additionally, a significant safety incident occurred on the project site in April 2018 which forced the shutdown of the secondary treatment works. These factors combined are the cause of the increase in nitrogen / nutrient load to the Sepia Depression.

What remedial and/or corrective action(s), if any, were taken or are proposed to be taken in response to the non-compliance or potential non-compliance?

Additional sampling was carried out at the ocean outlet between April and June 2018.
The current upgrade works to the Woodman Point WWTP are designed to increase capacity and improve the performance of the plant and thereby the quality of discharge to the ocean outlet. This will mitigate the risk of unacceptable levels of nitrogen / nutrients in the effluent as works progress.

What measures, if any, were in place to prevent the non-compliance or potential non-compliance before it occurred? What, if any, amendments have been made to those measures to prevent re-occurrence?

Interim secondary treatment works were in place to facilitate effective treatment of effluent during plant upgrades. Due to an unforeseen significant safety incident on site, a forced shutdown of these works was unavoidable. It is not anticipated that a similar incident will occur during the remainder of the plant upgrade works.

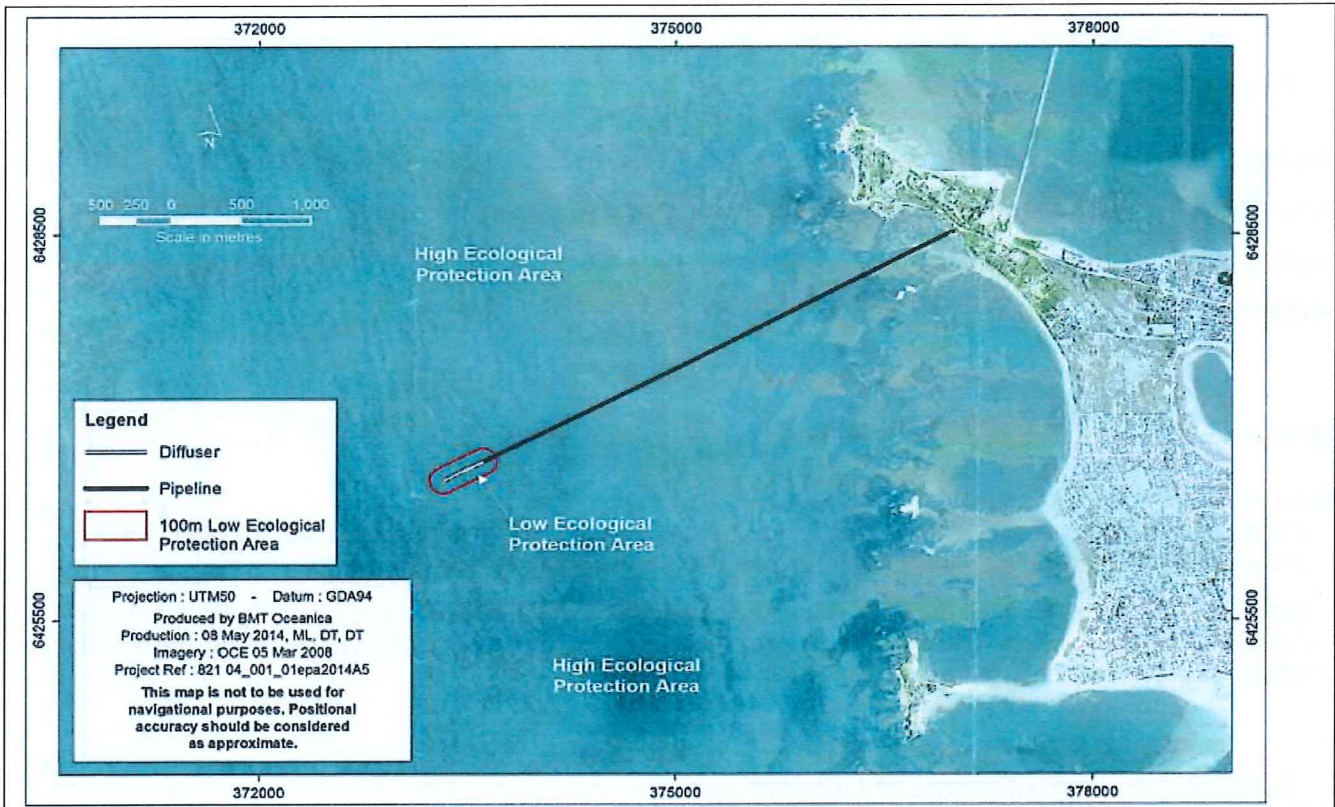
Please provide information/documentation collected and recorded in relation to this implementation condition or procedure:

- in the reporting period addressed in this Statement of Compliance; and
- as outlined in the approved Compliance Assessment Plan for the Statement addressed in this Statement of Compliance.

(the above information may be provided as an attachment to this Statement of Compliance)

Non-compliance/potential non-compliance 3-2

Which implementation condition or procedure was non-compliant or potentially non-compliant?	
Schedule 1 Key Characteristics Table – Biochemical Oxygen Demand (BOD)	
Was the implementation condition or procedure non-compliant or potentially non-compliant?	
Non-compliant	
On what date(s) did the non-compliance or potential non-compliance occur (if applicable)?	
April to June 2018	
Was this non-compliance or potential non-compliance reported to the Chief Executive Officer, DWER?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Reported to DWER verbally Date _____ <input checked="" type="checkbox"/> Reported to DWER in writing Date 8 Nov 2018	<input type="checkbox"/> No
What are the details of the non-compliance or potential non-compliance and where relevant, the extent of and impacts associated with the non-compliance or potential non-compliance?	
<p>Biochemical Oxygen Demand at the Sepia Depression ocean outlet is not to exceed 40 mg/L. As per the SDOOL M&MP, BOD is assessed on a rolling 12 month basis. In April, May and June 2018, the rolling average for BOD exceeded 40 mg/L as follows:</p> <ul style="list-style-type: none"> • Apr 18: 40.8 mg/L • May 18: 55.2 mg/L • Jun 18: 55.4 mg/L <p>Additional sampling was undertaken at the Sepia Depression ocean outlet between April and June 2018. This sampling found that oxygen saturation was maintained throughout the region over the period and marine communities around the outlet were at a very low risk of being effected by low oxygen levels (hypoxia).</p>	
What is the precise location where the non-compliance or potential non-compliance occurred (if applicable)? (please provide this information as a map or GIS co-ordinates)	
Sepia Depression Ocean Outlet (refer map below).	



What was the cause(s) of the non-compliance or potential non-compliance?

Upgrade works to the Woodman Point Wastewater Treatment Plant (WWTP) are temporarily reducing the quality of effluent discharged in to the SDOOL. Additionally, a significant safety incident occurred on the project site in April 2018 which forced the shutdown of the secondary treatment works. These factors combined are the cause of the increase in BOD in effluent discharged to the Sepia Depression.

What remedial and/or corrective action(s), if any, were taken or are proposed to be taken in response to the non-compliance or potential non-compliance?

Additional sampling was carried out at the ocean outlet between April and June 2018. The current upgrade works to the Woodman Point WWTP are designed to increase capacity and improve the performance of the plant and thereby the quality of discharge to the ocean outlet. This will mitigate the risk of unacceptable levels of BOD in the effluent as works progress.

What measures, if any, were in place to prevent the non-compliance or potential non-compliance before it occurred? What, if any, amendments have been made to those measures to prevent re-occurrence?

Interim secondary treatment works were in place to facilitate effective treatment of effluent during plant upgrades. Due to an unforeseen significant safety incident on site, a forced shutdown of these works was unavoidable. It is not anticipated that a similar incident will occur during the remainder of the plant upgrade works.

Please provide information/documentation collected and recorded in relation to this implementation condition or procedure:

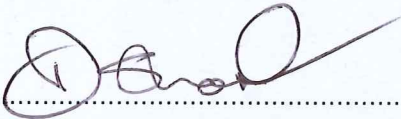
- in the reporting period addressed in this Statement of Compliance; and
- as outlined in the approved Compliance Assessment Plan for the Statement addressed in this Statement of Compliance.

(the above information may be provided as an attachment to this Statement of Compliance)

4. Proponent Declaration

I, Digby Short - Manager Governance Assurance & Approvals...., (full name and position title) declare that I am authorised on behalf of Water Corporation (being the person responsible for the proposal) to submit this form and that the information contained in this form is true and not misleading.

Signature:.....



Date:.....

19/02/2019

Please note that:

- it is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give or cause to be given information that to his knowledge is false or misleading in a material particular; and
- the Chief Executive Officer of the DWER has powers under section 47(2) of the *Environmental Protection Act 1986* to require reports and information about implementation of the proposal to which the statement relates and compliance with the implementation conditions.

5. Submission of Statement of Compliance

One hard copy and one electronic copy (preferably PDF on CD or thumb drive) of the Statement of Compliance are required to be submitted to the Chief Executive Officer, DWER, marked to the attention of Manager, Compliance (Ministerial Statements).

Please note, the DWER has adopted a procedure of providing written acknowledgment of receipt of all Statements of Compliance submitted by the proponent, however, the DWER does not approve Statements of Compliance.

6. Contact Information

Queries regarding Statements of Compliance, or other issues of compliance relevant to a Statement may be directed to Compliance (Ministerial Statements), DWER:

Manager, Compliance (Ministerial Statements)

Department of Water and Environmental Regulation

Postal Address: Locked Bag 33
Cloisters Square
PERTH WA 6850


Phone: (08) 6364 7000

Email: compliance@dwer.wa.gov.au

7. Post Assessment Guidelines and Forms

Post assessment documents can be found at www.epa.wa.gov.au

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance.

INITIALS: 

ATTACHMENT 1

Table 1 Compliance Status Terms

Compliance Status Terms	Abbrev	Definition	Notes
Compliant	C	Implementation of the proposal has been carried out in accordance with the requirements of the audit element.	This term applies to audit elements with: <ul style="list-style-type: none"> ongoing requirements that have been met during the reporting period; and requirements with a finite period of application that have been met during the reporting period, but whose status has not yet been classified as 'completed'.
Completed	CLD	A requirement with a finite period of application has been satisfactorily completed.	This term may only be used where: <ul style="list-style-type: none"> audit elements have a finite period of application (e.g. construction activities, development of a document); the action has been satisfactorily completed; and the DWER has provided written acceptance of 'completed' status for the audit element.
Not required at this stage	NR	The requirements of the audit element were not triggered during the reporting period.	This should be consistent with the 'Phase' column of the audit table.
Potentially Non-compliant	PNC	Possible or likely failure to meet the requirements of the audit element.	This term may apply where during the reporting period the proponent has identified a potential non-compliance and has not yet finalized its investigations to determine whether non-compliance has occurred.
Non-compliant	NC	Implementation of the proposal has not been carried out in accordance with the requirements of the audit element.	This term applies where the requirements of the audit element are not "complete" have not been met during the reporting period.
In Process	IP	Where an audit element requires a management or monitoring plan be submitted to the DWER or another government agency for approval, that submission has been made and no further information or changes have been requested by the DWER or the other government agency and assessment by the DWER or other government agency for approval is still pending.	The term 'In Process' may not be used for any purpose other than that stated in the Definition Column. The term 'In Process' may not be used to describe the compliance status of an implementation condition and/or procedure that requires implementation throughout the life of the project (e.g. implementation of a management plan).

Each page (including Attachment 2) must be initialed by the person who signs Section 4 of this Statement of Compliance.

INITIALS: