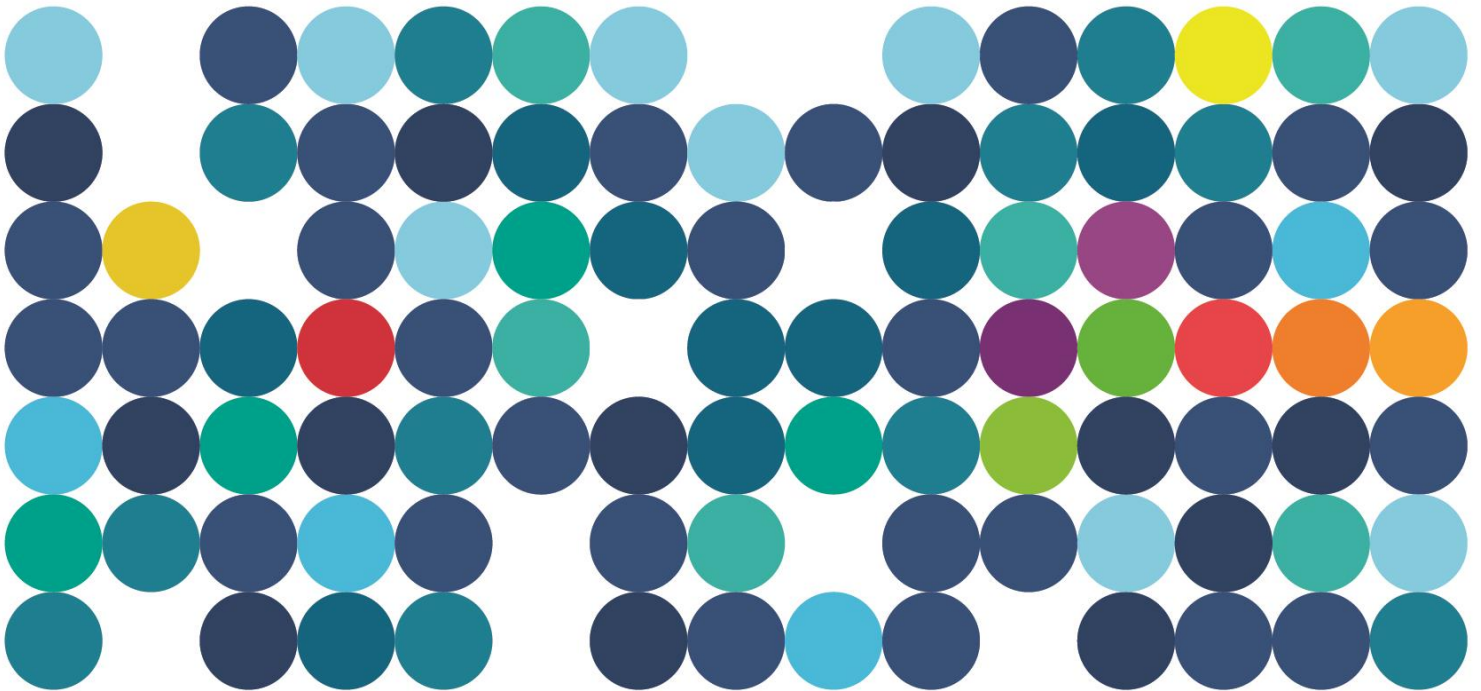


Compliance Assessment Report 2020-2021

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).

Approved sources of wastewater currently disposed to the SDOOL are as follows:

- the Kwinana Wastewater Reclamation Plant (KWRP)
- BP Refinery (Kwinana)
- CSBP Limited (Kwinana)
- Perth Energy
- Perth Power Company

This report covers the reporting period from 1 July 2020 to 30 June 2021 (2020-21). 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 Compliance Assessment Report (CAR) fulfils the requirements of MS 665 condition 5-1.



2. Current Status against Schedule 1 Proposal Description

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 2020-21 reporting period. The Kwinana Water Reclamation Plant (KWRP) removed and processed 17.34 ML/day from SDOOL for use by industry. Of this, 11.92 ML/day was used by industries in the Kwinana area and the remaining 5.33 ML/day redirected back into the SDOOL as reject flow. Industry participants discharged approximately 3.45 ML/day into the SDOOL. Table 1 shows the breakdown of the volumes discharged to the SDOOL.

Table 1 – Volume of treated wastewater discharged via SDOOL

Site	Volume Discharged via SDOOL (ML/day)
Woodman Point WWTP	146.32
Point Peron WWTP	17.82
KWRP Feedwater	-17.34
KWRP Reject Water	5.33
Kwinana Industries Discharge	3.45
Kwinana WWTP	3.10
East Rockingham WWTP	3.97
TOTAL	162.65

There were no changes to MS 665 or the SDOOL M&MP during the reporting period. A new industrial participant was approved by the EPA in this reporting period; refer to Section 2.2.3.



2.1 Compliance with Schedule 1

Table 2 provides an overview of compliance with the proposal’s key characteristic over 2020-21 as described in Schedule 1 of MS 665.

Table 2 – Compliance with Schedule 1 Key Characteristics Table

Parameter	Current plus initial KWRP (2013)	Possible expansion (2030)	2020-21 Compliance***
Industry reclaimed water reuse	17 ML/day	Up to 27 ML/d	Compliant 17.82 ML/day
Industry wastewater discharge to SDOOL Typical Maximum	6 ML/day 13 ML/day	Up to 30 ML/d	Compliant KWRP discharge: 5.33 ML/d Industry discharge: 3.45 ML/d Total wastewater discharge to SDOOL: 8.78 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 162.65 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	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	Compliant 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 dilution at 22m of 1:397 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 Covalent Lithium referred a proposal to the EPA on 25 November 2020. Refer Section 2.2.2



Parameter	Current plus initial KWRP (2013)	Possible expansion (2030)	2020-21 Compliance***
Toxicant Concentrations	As per PLOOM reporting, 1992 to 2002	Projected loads and flows will result in toxicant concentrations meeting the ANZECC & ARMCANZ 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 & ARMCANZ 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.		Compliant Refer Table 3
Sediment	ANZECC & ARMCANZ 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 Section 3.1
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)'



2.2 Schedule 1 Discussion on compliance status

2.2.1 Treated Wastewater Quality

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, all 'current' treated wastewater criteria were met in 2020-21.

Table 3 – TSS, BOD, TP and TN Results 2020-21

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-20	18.2	25.5	5.3	113.0	
Aug-20	18.8	25.7	5.3	110.0	
Sep-20	18.2	25.1	5.0	112.0	
Oct-20	17.5	24.2	4.6	107.7	
Nov-20	17.7	24.2	4.6	98.2	
Dec-20	17.9	24.5	4.4	105.1	
Jan-21	17.7	24.6	4.4	101.2	
Feb-21	18.5	24.1	4.0	83.3	
Mar-21	18.7	23.8	4.0	109.5	
Apr-21	18.7	23.6	3.8	108.3	
May-21	18.2	23.5	3.7	97.9	
Jun-21	17.4	22.8	3.7	102.9	
Total					1,249

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

2.2.2 Industrial Participants

Covalent Lithium referred a proposal to the EPA on 25 November 2020 to discharge wastewater in to the SDOOL. Ministerial Statement 1170 in relation to this activity was granted on 15 July 2021.

In accordance with Schedule 1 of MS 665, Water Corporation reviewed the proposal and provided advice. It was determined that the proposed discharge was not of a quality or quantity that would materially alter the volume or characteristics of SDOOL wastewater, and therefore did not constitute a change to the proposal or require revision of the SDOOL M&MP.

2.3 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. Performance of Environmental Management Plans and Programs

Marine water quality monitoring for the reporting period was carried out by a qualified consultant. In accordance with the SDOOL 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 against Environmental Quality Criteria (EQC), specifically Environmental Quality Guidelines (EQG) and Environmental Quality Standards (EQS).

The Compliance Report Card for 2020-21 is shown in Table 7 below and demonstrates the level of compliance against the SDOOL M&MP.

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

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 – 2020-21 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 ANZG (2018) 80% species protection guideline trigger levels for bio-accumulating toxicants at the diffuser	
	EQG: The ANZG (2018) 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 ANZG (2018) 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.	
	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%	
Colour	EQG: The natural hue of the water should not be changed by more than ten points on the Munsell scale.	
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	
Odour	EQG: There should be no objectionable odours. 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
Fish tainting substances	EQG: Concentrations of contaminants will not exceed the aesthetics guidelines for fish tainting substances at the Shellfish Harvesting Safety Zone boundary.	



3.1 EQO Discussion on Compliance Status

The Environmental Quality Guideline (EQG) and the Environmental Quality Standard (EQS) criteria in relation to the ‘Maintenance of Primary Contact Recreation’ (EQO3) were exceeded in 2020-21 (Table 4). However, this exceedance relates to faecal pathogens (Enterococci spp.) and is not due to the addition of industrial effluent. EQO4 – ‘Maintenance of Secondary Contact Recreation’ was met (Table 7).

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.	2000 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.	

Water Corporation are continuing to progress capital projects that will allow the diversion of flows away from the Point Peron Wastewater Treatment Plant (WWTP) by December 2024.

The diversion of flows away from Point Peron WWTP will enable the Water Corporation to meet the “primary recreational contact criteria”. Water Corporation are working with Department of Health on the interim management of risks to primary contact recreation users until the works have been completed.

Water Corporation notified DWER via email on 16th September 2021 of the exceedance of the faecal pathogens EQG and EQS exceedance in 2020-21.

4. Stakeholder Consultation & Complaints (Commitment 13)

4.1 Stakeholder Liaison Group (SLG)

SDOOL Annual 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 SDOOL M&MP; complaints received; and any other emerging issues. A link to the SDOOL Annual Report, documenting the findings of the ocean monitoring program, is also provided.

The 2019-20 SDOOL Annual Performance Summary Report was submitted to the SLG via email on the 29th December 2020.



4.2 Complaints

There were no complaints related to the SDOOL received in the reporting period.

5. Compliance with Conditions and Commitments

Each condition and environmental management commitment specified in MS 665 was assessed for compliance in 2020-21. The results of this assessment are presented in the Audit Table (Table 8) below.

5.1 Sediment and Mussel Survey

The SDOOL M&MP includes a commitment to complete a metals and pesticides survey on sediments and biota in the vicinity of the outlet every 5 years. This was carried out in the 2020/21 reporting period and the report is available at Appendix A. Results are similar to the 2015 survey results.

6. Reporting

A copy of the SDOOL Annual Report may be found at:

<https://www.watercorporation.com.au/Our-water/Wastewater/Ocean-outfall/Perth-monitoring-program>

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 2020-21 Compliance Assessment Report (this document)	Overall	Throughout the life of the project	C	
665:M2.1	Proponent Commitments	Implement the environmental management commitments documented in Schedule 2 of Statement 665		MS 665 2020-21 Compliance Assessment 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 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 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.
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	Performance Review MS 665 Performance Review Reports (PRR)	Operation	Each five years after the start of the operations phase	C	2020 MS 665 PRR was submitted to the OEPA on 1st April 2021 (WC Ref. 114056172). Next PRR due for submission in Dec 2025



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
			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					
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	NR	NR	Overall	NR	NR	Auditor report not required during 2020-21 reporting period.
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 2020-21 Compliance Assessment Report (this document)	Operation		C	See Table 7 for detailed 2020-21 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), Batty Library (2 copies) and local Government libraries	CR Water Corporation website	Operation		C	SDOOL M&MP available on the Water Corporation's website- https://www.watercorporation.com.au/Our-water/Wastewater/Ocean-outfall/Point-Peron-monitoring-program



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
			(2 copies each). 3. Post the document on the proponent's website.					
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 & ARM CANZ 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 CAR.	CR MS 665 2020-21 Compliance Assessment Report (this document) MS 665 M&MP Annual Report	Operation		C	Concentrations of bio-accumulating toxicants (cadmium and mercury) were below ANZECC/ ARM CANZ (2000) 80% species protection guideline "trigger" levels for the reporting period. See Table 7 for detailed 2020-21 SDOOL ocean outlet monitoring.
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 & ARM CANZ 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 CAR.	CR MS 665 2020-21 Compliance Assessment Report (this document) MS 665 M&MP Annual Report	Operation		C	Concentrations of toxicants were below ANZECC/ ARM CANZ (2000) 99% species protection guideline "trigger" levels (95% for cobalt) for the reporting period. See Table 7 for detailed 2020-21 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.



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
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 for which a proposal has been submitted to the EPA.
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 SDOOL 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">Kwinana Wastewater Reclamation Plant (KWRP)BP Refinery (Kwinana) - L5938/1967/12CSBP Limited (Kwinana) - L6107/1967/17Perth Energy - L8471/2010/2Perth Power Company - L8247/2008/2	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		C	TN load discharged to the Sepia Depression during the reporting period was 1,249 tonnes/year. This figure is within the 1994 level of 1,778 tonnes/year. See Table 3 of this CAR.
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 environmental monitoring not required.
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 CAR.	CR Completed 2020/21 Sediment Survey and Report	Operation		C	Sediments are collected every five years as per the SDOOL M&MP. A sediment survey was undertaken in 2020/21. 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.



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
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).
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 2020-21 Compliance Assessment 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 (1:397 at 22m). See Table 7 for detailed 2020-21 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"> Kwinana Wastewater Reclamation Plant (KWRP) BP Refinery (Kwinana) - L5938/1967/12 CSBP Limited (Kwinana) - L6107/1967/17 Perth Energy - L8471/2010/2 Perth Power Company - L8247/2008/2 	Operation		C	Industry participants are currently discharging to SDOOL and have relevant approvals through a DWER Part V Licence. 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: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 2020-21 Compliance Assessment 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 for detailed 2020-21 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 CAR.	CR MS 665 2020-21 Compliance Assessment Report (this document) MS 665 M&MP Annual Report	Operation		C	Relevant aspects of the SDOOL M&MP are included in the 2020-21 PLOOM report: https://www.watercorporation.com.au/Our-water/Wastewater/Ocean-outfall/Perth-monitoring-program



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
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 2020-21 Compliance Assessment Report (this document) MS 665 M&MP Annual Report	Operation		C	No exceedances of toxicant EQG during this reporting period
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 2020-21 Compliance Assessment 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 for detailed 2020-21 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 2020-21 Compliance Assessment Report (this document) MS 665 M&MP Sediments and Sentinel Mussel Report (2020-21)	Overall		C	In accordance with the SDOOL M&MP, sentinel mussel monitoring is undertaken every five years, with the most recent one conducted in 2020-21. The next sentinel mussel monitoring survey is scheduled to be undertaken in 2024-25.
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 CAR submitted to the OEPA.
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	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 SDOOL 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.



Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further Information
			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					
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 2020-21 Compliance Assessment Report (this document) MS 665 M&MP Annual Report	Operation		C	SDOOL M&MP was fully implemented during the reporting period.
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.



7. Appendix A: SDOOL Metals and Pesticides Survey



8. Appendix B: Statement of Compliance