

# CLEANAWAY REFINERS RUTHERFORD ANNUAL ENVIRONMENTAL MANAGEMENT REPORT 2023

**Date:** December 2023  
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# 1 Annual Environmental Management Review

TABLE 1: ANNUAL REVIEW TITLE BLOCK

<b>Name of operation</b>	Resource Recovery and Recycling Facility, 41 Kyle Street, Rutherford 2320 NSW
<b>Name of operator</b>	Cleanaway Refiners
<b>Project Approval</b>	05_0037
<b>Name of project</b>	Construction and operation of a Resource Recovery and Recycling Facility
<b>Name of holder of development consent</b>	Cleanaway Pty Ltd
<b>Annual Review start date</b>	29 September 2022
<b>Annual review end date</b>	28 September 2023
I Scott McLeod, certify that this audit report is a true and accurate record of the compliance status of Resource Recovery and Recycling Facility for the 2023 reporting period and that I am authorised to make this statement on behalf of Cleanaway.	
<b>Name of authorised reporting officer</b>	Scott McLeod
<b>Title of authorised reporting officer</b>	Regional Manager - Refineries
<b>Signature of authorised reporting officer</b>	
<b>Date</b>	21 December 2023

## 2 Introduction

Cleanaway Refiners (Cleanaway) operates an oil refinery at 41 Kyle Street, Rutherford, New South Wales. The refinery processes up to 40,000 tonnes per annum (tpa) of re-refined used lubricating oil. This oil is further refined via hydrogenation into base oil for use in lube oil blending and industrial processes (Refer Figure 1 and Figure 2).

The refinery has been operating since May 2007. During this time Cleanaway has been progressively improving operations.

Operation of the refinery is subject to the conditions of the Project Approval (05\_0037), as modified, and Environment Protection Licence (EPL) 12555.

Schedule 2, Condition 5.2 of Project Approval 05\_0037 requires that an Annual Environmental Management Report (AEMR) is submitted to the Office of Environment and Heritage<sup>1</sup> (OEH), Maitland City Council and the Department of Planning and Environment (DPE) annually on the 22 December. The requirements of Condition 5.2 and where they have been addressed are detailed in Table 2.

<sup>1</sup> To be submitted to the NSW Environment Protection Authority (NSW EPA)

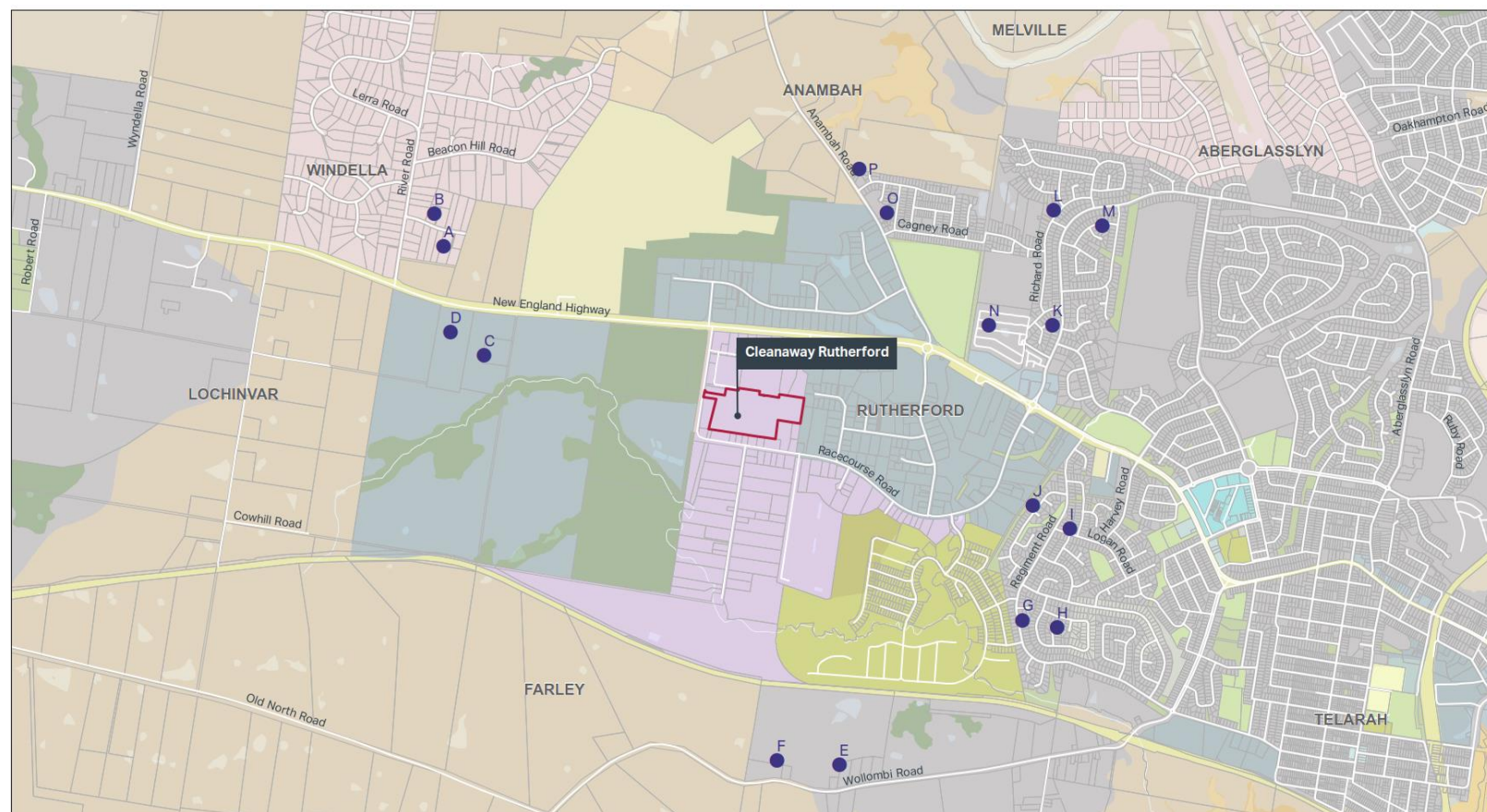
This AEMR has been prepared for the 12-month reporting period of 29 September 2022 to 28 September 2023 (herein referred to as the reporting period).

**TABLE 2: AEMR REQUIREMENTS**

Condition	Requirement	Where addressed
5.2 a)	Details of compliance with the conditions of this approval, and any other licences and approvals for the project	Section 5 and Appendix A
b)	A list of variations obtained to approvals applicable to the development and to the site during the preceding twelve-month period	Section 3
c)	A copy of the Complaints Register for the preceding twelve-month period (exclusive of personal details); and a description of how these complaints were addressed and resolved	Section 8.2 and Appendix G
d)	Results of all environmental monitoring required under this approval and other approvals including interpretations and discussion by a suitably qualified person	Section 7
e)	A list of all occasions in the preceding twelve-month period when environmental performance goals have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident	Section 7
f)	A comparison of the environmental impacts and performance of the development against the environmental impacts and performance predicted in the EA and the additional information listed under Condition 1.1	Section 7
g)	Identification of trends in monitoring data over the life of the development to date	Section 7
h)	Environmental management targets and strategies for the following twelve-month period taking into account identified trends in monitoring results	Section 7 and Section 9

Copies of this AEMR will be provided to the NSW EPA, Maitland City Council and the DPE. A copy of the AEMR will also be placed on the Cleanaway Public Website: <http://www.cleanaway.com.au>

FIGURE 1 REGIONAL CONTEXT



## Legend

● Sampling locations	Land usage	E2 Environmental Conservation	R1 General Residential	RU1 Primary Production
□ Cleanaway Rutherford	B1 Neighbourhood Centre	E3 Environmental Management	R5 Large Lot Residential	RU2 Rural Landscape
	B2 Local Centre	E4 Environmental Living	RE1 Public Recreation	SP1 Special Activities
	B5 Business Development	IN1 General Industrial	RE2 Private Recreation	SP2 Infrastructure
	B6 Enterprise Corridor			

AECOM



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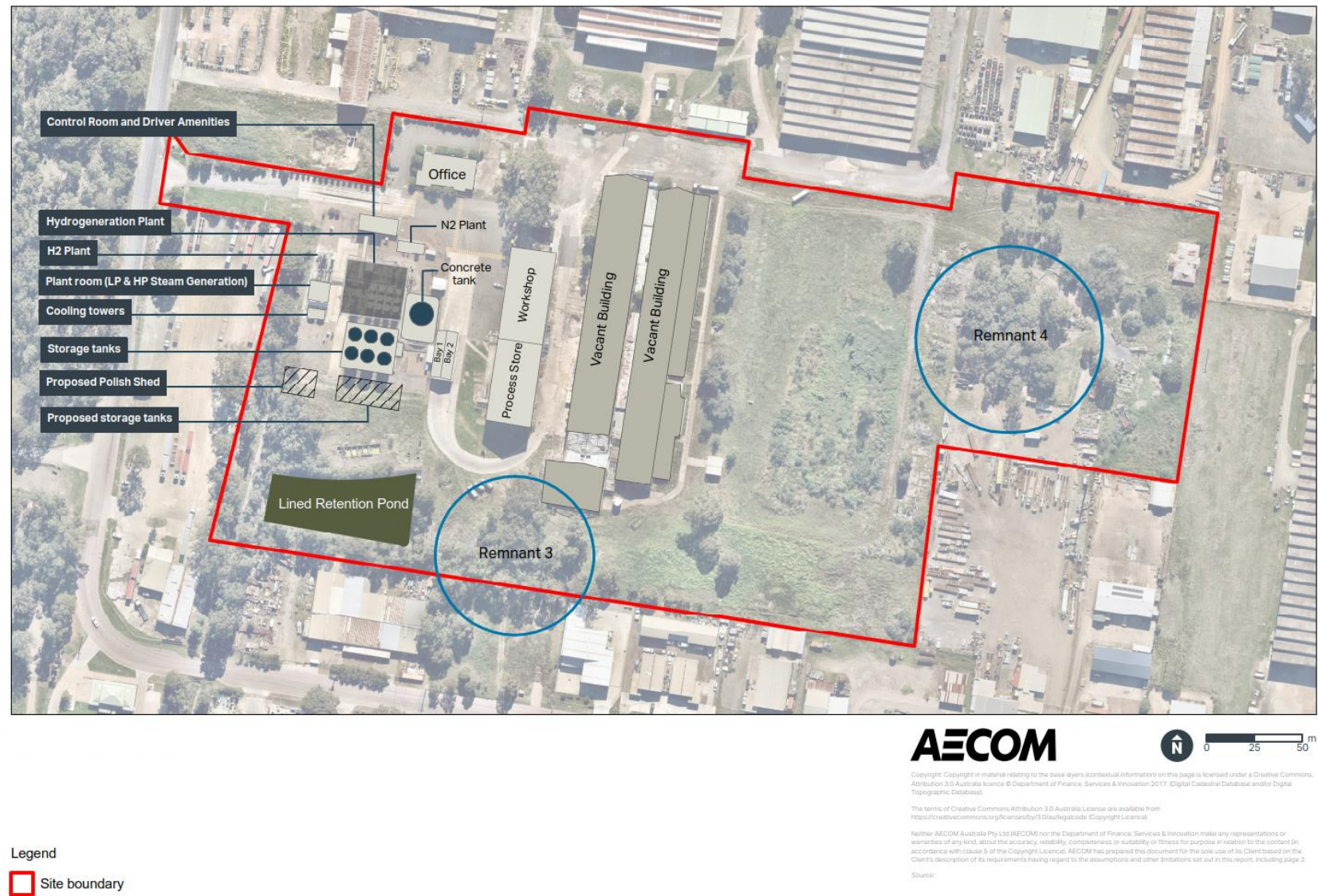
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FIGURE 2 RUTHERFORD REFINERY SITE LAYOUT



### 3 Approvals

Operations at Rutherford are regulated by Project Approval 05\_0037 and EPL 12555, which are summarised below.

#### Project Approval 05\_0037

The Site was initially granted project approval (MP05\_0037) on 4 July 2006 for the construction and operation of a resource recovery and recycling facility. This was transitioned to State Significant Development (SSD) with the same reference number (05\_0037) on 16 April 2021.

Project Approval 05\_0037 was modified on five occasions between 2006 and September 2023. This included the following modifications:

- Modification 1 (MOD 1): Construction of additional plant to improve the quality of the final waste oil product, determined 16 May 2007.
- Modification 2 (MOD 2): Modification of monitoring requirements to ensure consistency with the EPL, determined 18 October 2011.
- Modification 4 (MOD 4): replacement of the stack at monitoring point 19, determined 10 December 2014.
- Modification 5 (MOD 5): Construction and operation of new equipment (oil polishing system, multi-fuel burner, six additional oil storage tanks with total combined storage of 2.4 ML and safety and fire-fighting systems) and increase the height of the Multi-Fuel Burner Stack, to enable the facility to produce both Class I and Class II product oils, determined 9 September 2016.
- Modification 6 (MOD 6): Construction and operation of a Mobile Oil Polishing Plant (MOPP) for a trial period of 30 months, determined 20 August 2021.

Modification 2<sup>2</sup> for the relocation of oil storage tanks was withdrawn.

Works associated with MOD 5 have not physically commenced and consequently the approval lapsed on the 9 September 2023 (noting that a two-year extension was granted due to Covid-19). Cleanaway will contact DPE once they progress the design of the diversification project.

MOD 6 is still within the 30-month trial period. Cleanaway was granted an extension to the MOPP trial period for a further 24 months by DPE in November 2023 (outside the reporting period).

Cleanaway submitted a Modification application for the construction of an additional stack to separate the emission flow from the existing stack into two distinct emission points (MOD 7). This was subsequently obtained outside the reporting period (11 October 2023).

#### Environment Protection Licence (EPL) 12555

Cleanaway operates Rutherford hydrogenation plant under EPL 12555, with an anniversary date of 29 September. Monitoring results are reported to the EPA as part of the Rutherford EPL Annual Return and this monitoring data is available on the Cleanaway website.

Activities to which the EPL applies are: "Petroleum products and fuel production" and "Chemical storage."

<sup>2</sup> It is noted that there are two separate modifications called Modification 2, as result there is no Modification 3.



There were no variations to the EPL during the reporting period. Cleanaway is in the process of obtaining a variation relating to the new stack approved by MOD 7. This is likely to be finalised in late 2023.

During the previous reporting period (15 September 2022) the EPL was varied to use the MOPP on a permanent basis at the premises. This included the addition of air emission Discharge Point (DP) 24 (Stack discharge point serving MOPP) and associated concentration limits and monitoring requirements. Two rounds of monitoring at DP24 were undertaken during the reporting and results are presented in Section 7.2.

#### Trade Wastewater Deed

The site discharges trade waste to sewer under a Trade Wastewater Deed dated 16 December 2019 (expiring on 16 December 2024).

## 4 Operations summary

A summary of production from the hydrogenation plant and a comparison against the Project Approval limit is provided in Table 3 below.

**TABLE 3: PRODUCTION SUMMARY**

Material	Approved limit (tpa)	Previous reporting period (tpa)	This reporting period (tpa)	Next reporting period (forecast) (tpa)
Product: waste lubricant oils	40,000	27,026	28,515	29,000

Cleanaway continued to operate the MOPP during the reporting period and test various end products. Some take up in the market of the end product was realised in the last six months. Further testing and development are proposed prior to the construction of a larger scale oil polishing system.

The works associated with decommissioning the legacy, lined retention dam located in the south western corner of site were completed during the reporting period. This included grading and grassing the area.

The 2021 Independent Environmental Audit (IEA) was undertaken by AECOM in February 2022. The IEA covered an audit period from 11 September 2018 to 2 February 2022 and assessed compliance with the Project Approval and EPL as well as a review of the Operational Environmental Management Plan (OEMP) and sub plans. The IEA identified a number of non-compliances across the audit period and made a number of recommendations. The IEA and Cleanaway's response to the recommendations were submitted to DPE on the 2 April 2022 and are available on the Cleanaway website. An update on the status of implementation of the actions is provided in Appendix G.

#### Next reporting period

Installation of the new stack approved by MOD 7 will occur during the next reporting period. The new stack will vent emissions from the fired heater, whilst the existing stack will vent emissions from the thermal oil heater.

The operation of the MOPP will continue throughout the next reporting period as Cleanaway continues to test and develop customer acceptance and offtake markets for the end product.

Cleanaway will continue to progress the design of the diversification project and contact DPE regarding the lapsed MOD 5 approval.

## 5 Statement of compliance

This section details compliance with the conditions of approval and any other licence and approvals for the project. The compliance status with the Project Approval and EPL is provided in Table 4.

**TABLE 4: STATEMENT OF COMPLIANCE**

Approval	No. of Conditions Compliant	No. of Conditions Non-compliant	No. of Conditions Not triggered	No. of Conditions Noted / Closed Out
Project Approval 05_0037	35	0	20	19
EPL 12555	52	0	12	10

There were no non-compliances recorded during the reporting period. The complete Compliance Tables are provided in Appendix A.

## 6 Actions required from previous Annual Review

DPE reviewed the 2022 AEMR and provided Cleanaway with a Request for Additional Information dated 19 December 2022. In response, the 2022 AEMR was revised to include as Appendix H, a status update of all actions provided in the Response to Auditor Recommendations following the 2022 IEA. A letter from DPE accepting the revised 2022 AEMR was received on the 10 February 2023.

## 7 Results of environmental monitoring

### 7.1 Meteorology

In accordance with Schedule 3, Condition 2.6 of SSD 05\_0037, and Condition P1.1 of EPL 12555, Cleanaway continued to operate the meteorological station throughout the reporting period. The meteorological station is located on the rooftop close to the southwest corner of the control room.

### 7.2 Air quality

The Rutherford refinery operates in accordance with EPL 12555 and an approved Air Quality Management Plan (AQMP). The AQMP was revised in April 2023 and is available on the Cleanaway website. The AQMP describes air quality management and monitoring requirements associated with the hydrogenation plant.

## 7.2.1 Emissions criteria

Air quality monitoring locations, pollutant criteria and concentration limits are presented in Table 5.

**TABLE 5: EPL 12555 AIR QUALITY MONITORING LOCATIONS AND CRITERIA**

EPA Reference	Location	Pollutant	Concentration limit (mg/m <sup>3</sup> )
2	3.0MW boiler stack	Volatile organic compounds (VOCs)	10
		Nitrogen oxides	350
		Solid particles	10
3	0.2MW boiler stack	VOCs	10
		Nitrogen oxides	350
		Solid particles	10
5	Light ends scrubber	VOCs	20
19	Fired heaters stack	Solid particles	50
		Hydrogen sulphide	5
		VOCs	10
		Nitrogen oxides	350
		Sulfuric acid mist and sulphur trioxide (as SO <sub>3</sub> )	100
		Sulphur dioxide	1,360
20	Hydrogen reformer	VOCs	10
		Nitrogen oxides	350
		Solid particles	10
24	MOPP Stack	VOCs	20
		Nitrogen oxides	350
		Sulphur dioxide	100
		Carbon monoxide	125
		Solid particles	10

Annual load limits prescribed in EPL 12555 are presented in Table 6.

**TABLE 6: ANNUAL LOAD LIMITS**

Assessable pollutant	Load limit (kg)
Arsenic (air)	N/A
Benzene (air)	26
Benzo(a)pyrene (air)	4.6
Fine particulates	1,360
Hydrogen sulphide (air)	64
Lead (air)	N/A
Mercury (air)	N/A
Nitrogen Oxides (air)	10,000
Sulphur Oxides (air)	46,000
Volatile organic compounds (air)	850

## 7.2.2 Monitoring results during the reporting period

Air quality data collected from each monitoring location during the reporting period is summarised below. Monitoring is required to be undertaken annually for all monitoring locations with the exception of EPL Point 24 (MOPP stack) which requires six monthly monitoring. Monitoring for the 2023 AEMR period was undertaken from 21 -24 November 2022 inclusive. Additional monitoring was undertaken at EPL Point 24 on 8 May 2023. Figure 3 presents an aerial view of the discharge points (monitoring locations).

**FIGURE 3 LOCATION OF DISCHARGE POINTS (MONITORING LOCATIONS)**

Results for all pollutants were significantly below prescribed concentration limits for all EPL discharge points.

**TABLE 7: DISCHARGE POINT 2: 3MW BOILER**

Pollutant	Unit of measure	Result	Limit Conditions
Temperature	°C	205	N/A
Nitrogen oxides at 8%O <sub>2</sub>	mg/m <sup>3</sup>	104	350
Volatile organic compounds (n-propane) at 8%O <sub>2</sub>	mg/m <sup>3</sup>	<2.57	10
Oxygen	%	5.42	N/A
Velocity	m/s	4.48	N/A
Dry gas density	kg/m <sup>3</sup>	1.32	N/A
Molecular weight of stack gases	g/g-mol	29.6	N/A
Volumetric flowrate	m <sup>3</sup> /s	0.761	N/A
Moisture	%	9.78	N/A
Solid particles	mg/m <sup>3</sup>	2.71	10

**TABLE 8: DISCHARGE POINT 3: 0.2MW BOILER**

Pollutant	Unit of measure	Result	Limit Conditions
Temperature	°C	255	N/A
Nitrogen oxides at 8%O <sub>2</sub>	mg/m <sup>3</sup>	126	350
Volatile organic compounds (n-propane) at 8%O <sub>2</sub>	mg/m <sup>3</sup>	<2.22	10
Oxygen	%	7.69	N/A
Velocity	m/s	6.36	N/A
Dry gas density	kg/m <sup>3</sup>	1.31	N/A
Molecular weight of stack gases	g/g-mol	29.5	N/A
Volumetric flowrate	m <sup>3</sup> /s	0.0954	N/A
Moisture	%	7.28	N/A
Solid particles at 8% O <sub>2</sub>	mg/m <sup>3</sup>	3.43	10



**TABLE 9: DISCHARGE POINT 5: LIGHT END SCRUBBER**

Pollutant	Unit of measure	Result	Limit Conditions
Temperature	°C	27.7	N/A
Volatile organic compounds as propane at 8% O <sub>2</sub>	mg/m <sup>3</sup>	<2.75	20
Benzo(a)pyrene (equivalent - total)	mg/m <sup>3</sup>	0.000000492	N/A
Volumetric flowrate	m <sup>3</sup> /s	0.051	N/A
Moisture	%	2.47	N/A
Odour	OU	1,215	N/A

**TABLE 10: DISCHARGE POINT 19: FIRED HEATER**

Pollutant	Unit of measure	Result	Limit Conditions
Temperature	°C	92.4	N/A
Nitrogen Oxides at 8% O <sub>2</sub>	mg/m <sup>3</sup>	159	350
Volatile organic compounds as propane at 8% O <sub>2</sub>	mg/m <sup>3</sup>	<1.43	10
Hydrogen sulphide at 8% O <sub>2</sub>	mg/m <sup>3</sup>	<0.16	5
Oxygen	%	6.94	N/A
Velocity	m/s	1.76	N/A
Dry gas density	kg/m <sup>3</sup>	1.32	N/A
H <sub>2</sub> SO <sub>4</sub> and SO <sub>3</sub> (as SO <sub>3</sub> equivalent) at 8% O <sub>2</sub>	mg/m <sup>3</sup>	22.6	100
Odour	OU	3,036	N/A
Molecular weight of stack gases	g/g-mol	29.5	N/A
Volumetric flowrate	m <sup>3</sup> /s	0.303	N/A
Moisture	%	19.3	N/A
Solid particles at 8%O <sub>2</sub>	mg/m <sup>3</sup>	5.94	50
Sulphur dioxide at 8%O <sub>2</sub>	mg/m <sup>3</sup>	<0.877	1360
Formaldehyde at 8%O <sub>2</sub>	mg/m <sup>3</sup>	0.816	N/A

**TABLE 11: DISCHARGE POINT 20: REFORMER**

Pollutant	Unit of measure	Result	Limit Conditions
Temperature	°C	784	N/A
Nitrogen Oxides at 4% O <sub>2</sub>	mg/m <sup>3</sup>	118	350
Volatile organic compounds as propane at 4% O <sub>2</sub>	mg/m <sup>3</sup>	<2.25	10
Hydrogen sulphide at 4% O <sub>2</sub>	mg/m <sup>3</sup>	<2.38	N/A
Oxygen	%	8.92	N/A
Velocity	m/s	10.1	N/A
Dry gas density	kg/m <sup>3</sup>	1.33	N/A
Odour	OU	2,472	N/A
Molecular weight of stack gases	g/g-mol	29.8	N/A
Volumetric flowrate	m <sup>3</sup> /s	0.225	N/A
Moisture	%	14.0	N/A
Solid particles at 4% O <sub>2</sub>	mg/m <sup>3</sup>	<2.97	10

**TABLE 12: DISCHARGE POINT 24: MOPP**

Pollutant	Unit of measure	Result	Limit Conditions
Temperature	°C	391	N/A
Nitrogen Oxides	mg/m <sup>3</sup>	51.7	350
Volatile organic compounds as propane	mg/m <sup>3</sup>	3.28	20
Oxygen	%	12.5	N/A
Velocity	m/s	41.2	N/A
Dry gas density	kg/m <sup>3</sup>	1.33	N/A
Molecular weight of stack gases	g/g-mol	29.5	N/A
Volumetric flowrate	m <sup>3</sup> /s	0.0315	N/A
Moisture	%	5.0	N/A
Solid particles	mg/m <sup>3</sup>	<3.95	10

Pollutant	Unit of measure	Result	Limit Conditions
Sulphur dioxide	mg/m <sup>3</sup>	51.7	100
Carbon monoxide	mg/m <sup>3</sup>	32.2	125

Annual assessable loads during the reporting period are provided in Table 13. Results for all assessable pollutants were below load limits.

**TABLE 13: ANNUAL ASSESSABLE LOADS DURING THE REPORTING PERIOD (29-9-2022 TO 28-09-2023)**

Assessable pollutant	Assessable load (kg)	Load limit (kg)
Arsenic (air)	0.072	N/A
Benzene (air)	4.724	26
Benzo(a)pyrene (air)	0.0	4.6
Fine particulates	136.934	1,360
Hydrogen sulphide (air)	22.052	64
Lead (air)	0.017	N/A
Mercury (air)	0.003	N/A
Nitrogen Oxides (air)	4,509.644	10,000
Sulphur Oxides (air)	100.623	46,000
Volatile organic compounds (air)	89.635	850

### 7.2.3 Trends

Graphical presentations of historical data from 2018 are provided in Appendix B. The results show the following trends for the 2023 AEMR reporting period compared to previous years:

- Nitrogen dioxide emissions were fairly consistent with previous years and were well below the EPL limit.
- Carbon monoxide emissions at EPL Point 24 were consistent across the two monitoring rounds and were well below the EPL limit.
- Solid particle emissions at EPL Points 2, 3 and 20 were fairly consistent with previous years and were below the EPL limit. Solid particle emissions at EPL Point 19 were generally consistent with the exception of the 2021 result. Monitoring in 2022 and 2023 showed decreasing solid particle emissions well below the EPL limit. Solid particle emissions at EPL Point 24 were fairly consistent across the two monitoring rounds and were well below the EPL limit.
- Volatile Organic Compound emissions were consistent for all monitoring points and well below the EPL limit.
- Odour levels were consistent with previous years.
- Hydrogen Sulphide emissions increased slightly at EPL Point 5 and 20 and decreased slightly at all other monitoring points.
- Sulphuric acid mist at EPL Point 19 continued to remain significantly below the EPL limit.
- Sulphur Dioxide emissions at EPL Point 19 continued to decrease and remained significantly below the EPL limit. Sulphur dioxide emissions at EPL Point 24 were well below the EPL limit.
- Benzo(a)pyrene emissions at EPL Point 5 continued to remain very low.

- Formaldehyde emissions were fairly consistent across all monitoring points with a slight decrease at EPL Point 2.

## 7.2.4 Comparison to Environmental Assessment predictions

A comparison of the 2023 AEMR reporting period measured air emissions against the predictions made in the 2006 revised Air Quality Impact Assessment (AQIA) prepared by PAE Holmes as part of the Preferred Project and the 2010 AQIA prepared by PAE Holmes as part of an EPL variation are provided in Table 14.

**TABLE 14: PREDICTED VERSUS ACTUAL EMISSIONS**

Emission Point	Parameter	Unit	2006 AQIA	2010 AQIA	2023 Reporting period Emissions
EPL Point 2	Nitrogen Dioxide	mg/m <sup>3</sup>	350	N/A	104
	Solid Particles	mg/m <sup>3</sup>	50	N/A	2.71
	Volatile Organic Compounds	mg/m <sup>3</sup>	6	4.3	<2.57
EPL Point 3	Nitrogen Dioxide	mg/m <sup>3</sup>	350	N/A	126
	Solid Particles	mg/m <sup>3</sup>	50	N/A	3.43
	Volatile Organic Compounds	mg/m <sup>3</sup>	7	8	<2.22
EPL Point 5	Volatile Organic Compounds	mg/m <sup>3</sup>	N/A	7.7	<2.75
EPL Point 19	Nitrogen Dioxide	mg/m <sup>3</sup>	350	N/A	159
	Solid Particles	mg/m <sup>3</sup>	50	N/A	5.94
	Volatile Organic Compounds	mg/m <sup>3</sup>	5	N/A	<1.43
	Hydrogen Sulphide	mg/m <sup>3</sup>	N/A	6.6	<0.16
	Sulphuric Acid Mist	mg/m <sup>3</sup>	N/A	110	22.6
	Sulphur Dioxide	mg/m <sup>3</sup>	3709	N/A	<0.877
EPL Point 20	Nitrogen Dioxide	mg/m <sup>3</sup>	350	N/A	118
	Solid Particles	mg/m <sup>3</sup>	50	N/A	<2.97
	Volatile Organic Compounds	mg/m <sup>3</sup>	7	7.6	<2.25

All measured air emission results for the 2023 reporting period were below the levels predicted and assessed in the 2006 and 2010 Air Quality Assessment reports.

The 2021 AQIA prepared by AECOM as part of the MOD 6 modification report for the MOPP trial, presented predicted pollutant concentrations for a number of scenarios including Scenario 3, which represented the existing operation with the addition of the MOPP. The results for scenario 3 showed that there were predicted to be no exceedances of the EPA criterion for the cumulative concentrations of each pollutant examined as assessed at or beyond the boundary. Whilst these predictions cannot be verified by monitoring, which is undertaken at each stack rather than at the

boundary, the monitoring undertaken since the installation of the MOPP has reported pollutant concentrations below the EPL limits.

## 7.2.5 Management implications

Cleanaway will continue to implement the approved AQMP and continue monitoring the licenced discharge points in alignment with EPL 12555.

## 7.3 Groundwater quality

The Rutherford Refinery operates in accordance with the EPL 12555 and an approved Groundwater Management Plan (GWMP). The GWMP was revised in April 2023 and is available on the Cleanaway website. The GWMP describes groundwater quality management and monitoring requirements associated with the hydrogenation plant.

### 7.3.1 Groundwater criteria

The GWMP includes groundwater assessment criteria for a range of parameters as required by Condition 3.6 of SSD 05\_0037. Groundwater monitoring locations, monitoring frequency and pollutants as specified by EPL 12555 and the GWMP are presented in Table 15. The EPL does not specify concentration limits for groundwater pollutants.

**TABLE 15: EPL 12555 GROUNDWATER QUALITY MONITORING LOCATIONS AND POLLUTANTS**

EPA Monitoring Point	Location	Pollutants	Units	Frequency
6	Bore MW21	Tetrachloroethene (tetrachloroethylene) Total petroleum hydrocarbons (TPH) C10-C36 Fraction TPH C6-C9 Fraction	µg/l	Yearly
10	Bore MW12			
22	Bore MW15			
23	Bore MW19			

Notes:

Previously reported Bores MW18, 17 and 20 have been removed from EPL 12555.

In addition to the above pollutants, the GWMP also requires that the following field groundwater quality parameters are measured during each sampling event:

- Temperature
- Dissolved oxygen
- pH
- Oxidation-reduction potential
- Electrical conductivity
- Groundwater level



## 7.3.2 Monitoring results during the reporting period

Annual groundwater monitoring in accordance with the GWMP was undertaken on 22 November 2022. The results of the monitoring at each location are summarised in Table 16. Table 16 also includes the groundwater assessment criteria adopted by the GWMP for the parameters / pollutants monitored. A plan showing the groundwater monitoring locations is presented in Figure 4.

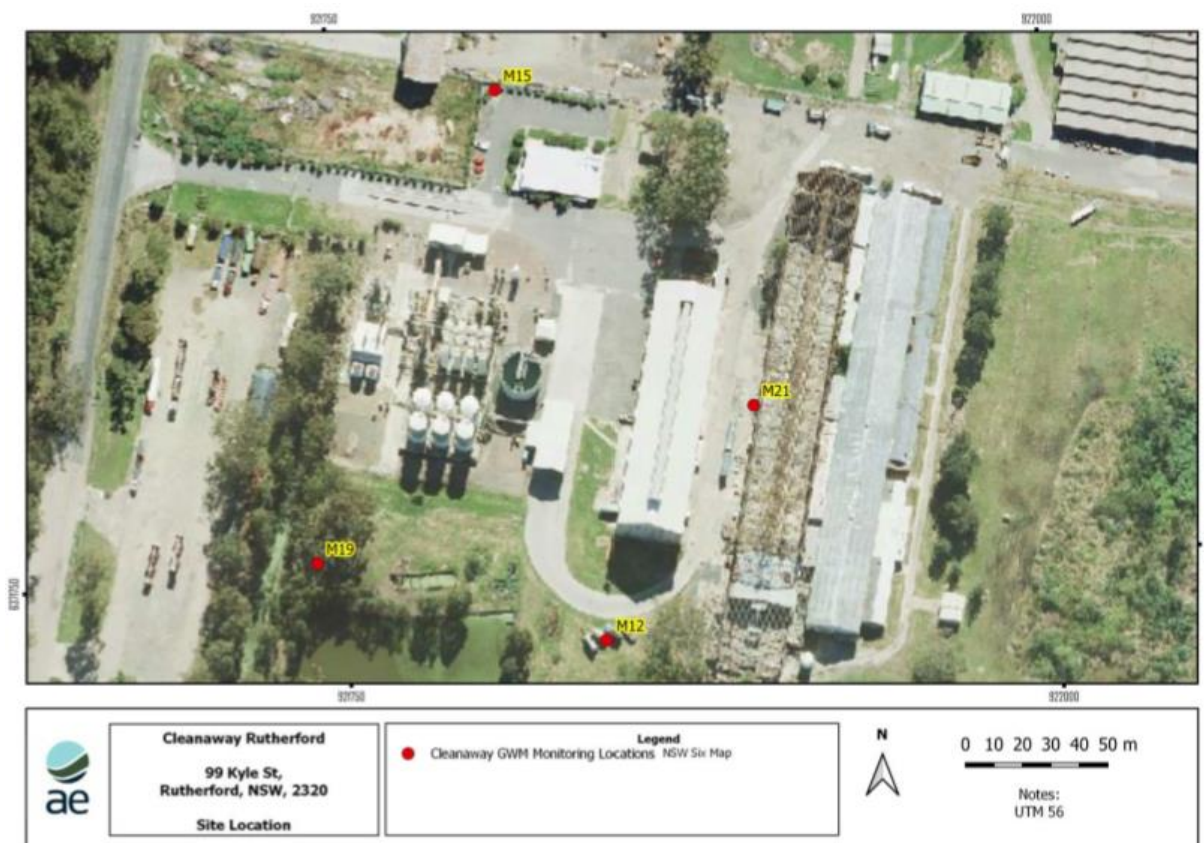


FIGURE 4 GROUNDWATER MONITORING WELL LOCATIONS

TABLE 16: GROUNDWATER QUALITY RESULTS

Sample ID			MW12	MW15	MW19	MW21
Date			22/11/2022	22/11/2022	22/11/2022	22/11/2022
Sampled by			Assured Environmental			
Parameter / pollutant	Units	Assessment criteria				
Temperature	°C	-	23.8	22.88	18.99	Dry
Dissolved oxygen	mg/l		7.25	7.41	9.16	
pH	pH		5.04	5.65	4.05	
Oxidation-reduction potential	mV		135.9	88	257.9	
Electrical conductivity	ms/cm		53,420	61,400	6,670	
Groundwater level	m		12.89	13.2	12.8	
Tetrachloroethene	µg/l	10 <sup>1</sup>	<1	<1	<1	
Total Recoverable Hydrocarbons (TRH) C6-C9	µg/l	-	<10	<10	<10	
TRH C10-C36	µg/l	-	<50	<50	<50	
TRH C10-C40	µg/l	600 <sup>2</sup>	<50	<50	<50	

Notes:

1. Guidelines for Managing Risks in Recreational Waters (NHMRC 2013), Agriculture, primary contact recreation and aesthetics
2. Aquatic systems criteria in Dutch 2000 Groundwater Intervention Value.

### Total Recoverable Hydrocarbons

Concentrations of Total Recoverable Hydrocarbons (TRH) C6-C9 fraction and TRH C10-C36 fraction were reported below the laboratory limit of reporting (LOR) in groundwater extracted from all sampled monitoring wells. Concentrations of the TRH C10-C40 fraction were below the adopted assessment criteria.

### Tetrachloroethene

Concentrations of Tetrachloroethene were reported below the LOR of <1 µg/l in groundwater extracted from all sampled monitoring wells and below the adopted assessment criteria.

## 7.3.3 Trends

Historical groundwater quality monitoring results are provided in Appendix D.

Concentrations of semi-volatile TRH fractions have remained below the laboratory LOR in each of the groundwater monitoring wells sampled.

TRH C6-C9 concentrations in monitoring wells MW17, MW18 and MW21 have historically reported concentrations above the LOR and below the assessment criterion, with a preliminary trend of decreasing concentrations in MW17 and MW18. MW17 and MW18 have not been sampled since

2017 when the EPL was varied to remove three groundwater monitoring points MW17, MW18 and MW20 from the licence and replace them with two alternative groundwater monitoring points MW15 and MW19. MW21 has not been sampled since 2016 due to it being dry at each monitoring event.

Tetrachloroethene concentrations have historically reported concentrations above the LOR in monitoring wells MW12, MW17, MW18, MW20 and MW21, exceeding the assessment criteria in MW17 and MW21 in the 2016 monitoring event. MW21 has not been sampled since 2016 when it reported concentrations a magnitude over the assessment criteria (150 µg/L) as the bore was found to be dry during recent monitoring events. Tetrachloroethene concentrations recorded at MW12, MW15 and MW19 have been below the LOR since 2017.

Groundwater monitoring undertaken to date indicates that:

1. Groundwater impacts appear localised around the original point of contamination, namely the former dye and finishing warehouse located in the centre of the property, and not Cleanaway activities.
2. Concentrations from the monitoring event undertaken for the current reporting period are below the laboratory LOR and assessment criteria for TRH and tetrachloroethene.

### 7.3.4 Comparison to Environmental Assessment Predictions

The groundwater investigation undertaken as part of the Environmental Assessment indicated the presence of TRH, copper and nickel, tetrachloroethene and chloroform above investigation levels as a result of previous site activities. The risk of groundwater contamination from Rutherford refinery activities was assessed as minimal as the groundwater in the alluvial sand is protected from surface contamination by overlying sandy clay alluvium and as activities on site will be conducted on imperviously bunded areas.

Groundwater monitoring since 2017 has reported TRH and tetrachloroethene levels below the laboratory LOR.

### 7.3.5 Management implications

Cleanaway will continue to implement the approved GWMP to minimise and manage groundwater impacts associated with site operations and ensure compliance with licence and approval requirements.

## 7.4 Surface water quality

The Rutherford refinery can be divided into the following three surface water catchment areas:

1. Bunded areas which drain to trade waste.
2. Refinery hardstand and driveways which flow to the Vortex separator and then the stormwater shut-off valve. The shut-off valve remains closed unless the protocol for opening

the valve described in the Stormwater Management Plan (SWMP) has been followed at which point it discharges to the offsite stormwater system.

3. Site hardstand and driveways (outside the Refinery operational area) which flow directly to the offsite stormwater system.

Surface water is managed in accordance with the OEMP, SWMP and the site's Trade Wastewater Deed.

### 7.4.1 Surface water criteria

EPL 12555 does not include any surface water discharge points or concentration limits and requires that Cleanaway comply with Section 120 of the Protection of the Environment Operations Act 1997 which prohibits the pollution of waters. The OEMP includes the following water quality guideline values based on the Australian and New Zealand Guidelines (ANZG) 95% Protection Limit and the ANZECC Guideline for Lowland Rivers in SE Australia.

**TABLE 17: OEMP SURFACE WATER QUALITY CRITERIA**

Parameter	OEMP Water Quality Guideline Values
Total phosphorus	500 µg/L
Total nitrogen	-
Total ammonia	900 µg/L*
Chlorophyll a	-
Nitrogen oxides as nitrogen	-
Salinity	125 – 2200 µS/cm**
Dissolved Oxygen	-
pH	6.5-8**
Total Oil and Grease	5 mg/L
Suspended Solids	50 mg/L**
TRH/TPH	No limit set

\*Based on ANZG 95% Protection Limit

\*\*Based on ANZECC Guideline for Lowland Rivers in SE Australia

### 7.4.2 Monitoring results during reporting period

The OEMP requires that stormwater sampling and testing is conducted on a quarterly basis for a number of parameters (subject to rainfall onsite). The Stormwater Management Plan includes additional details on the stormwater sampling and discharge process. It requires visual inspection as well as pH and electrical conductivity testing prior to every discharge.

Discharges from the stormwater system occurred on 16 occasions during the reporting period. All discharges were related to rainfall events. Prior to each discharge, the stormwater pit was visually inspected and the pH measured. The pH results ranged between 6.5 to 8.1 with an average pH of 7.4.

Samples were taken from the Refinery outlet at the South Western point of the site and sent to a NATA accredited laboratory for analysis on four occasions. Table 18 summarises the results of the

monitoring undertaken during the reporting period. A plan showing the stormwater sampling location is provided in Appendix D.

**TABLE 18: SURFACE WATER QUALITY MONITORING RESULTS**

Parameter	OEMP Guideline Values	Monitoring Results			
		14/11/22	15/03/23	23/06/23	13/09/23
Total phosphorus (mg/L)	0.5	0.22	0.16	0.25	0.3
Total nitrogen (mg/L)	-	1.2	1	1.5	1.4
Total ammonia (mg/L)	0.9	0.14	0.12	0.42	0.36
Nitrite & nitrate (NOx) (mg/L)	-	0.49	0.35	0.6	0.26
Electrical Conductivity (µS/cm)	125-2200	170	188	168	285
pH	6.5-8.0	7.03	7.62	7.24	7.35
Oil and Grease (mg/L)	5	<5	<5	<5	<5
Total Suspended Solids (mg/L)	50	14	11	24	6
Total Dissolved Solids (mg/L)	-	103	119	95	196
TRH C6-C10 Fraction (µg/L)	-	<20	<20	<20	<20

Total phosphorus and total ammonia levels were below the OEMP guideline values. Oil and grease and total suspended solids were below the OEMP guideline values. Electrical conductivity and pH were within the range specified in the OEMP.

### 7.4.3 Trends

Graphical presentations of historical surface water monitoring results are provided in Appendix E.

The results show the following trends for the 2023 AEMR reporting period compared to previous years:

- Total phosphorus concentrations remained fairly consistent and below the OEMP guideline value of 0.5 mg/L since mid-2022.
- Total nitrogen concentrations were fairly consistent with previous years.
- Total ammonia concentrations continued to be well below the OEMP guideline value of 0.9 mg/L.
- Electrical conductivity values were fairly consistent with previous years.
- Oil and grease concentrations were below the limits of reporting (and the OEMP guideline value) during the reporting period. This is an improvement on previous years.
- Total suspended solids concentrations consistently remain below the OEMP guideline value.

### 7.4.4 Comparison to Environmental Assessment predictions

The 2006 Environmental Assessment included water quality testing from the drain above the point of site discharge and comparison with the water quality objectives for the Hunter River. The monitoring results were higher than the water quality objectives for most parameters and the Environmental Assessment concluded that the quality of the water in the drain is likely to be generally poor.



The Environmental Assessment predicted surface water quality impacts to be minimal provided the mitigation measures outlined where implemented. These included separation of clean stormwater from potentially contaminated stormwater, first flush system, impervious surfaces for trafficable areas, stormwater interceptors, bunded tank farms and an inspection and maintenance regime. The above mitigation measures were implemented and continue to be maintained.

## 7.4.5 Management implications

Cleanaway will continue to implement the OEMP and Stormwater Management Plan to minimise and manage stormwater quality impacts associated with site operations and ensure compliance with licence and approval requirements.

## 7.5 Noise

The Rutherford Refinery operates in accordance with EPL 12555 and an approved OEMP. The OEMP describes management and monitoring requirements to reduce potential noise impacts.

### 7.5.1 Noise criteria

Condition 2.20, Schedule 2 of SSD 05\_0037 and EPL Condition L5.1 require that noise from the premises must not exceed the noise criteria presented in Table 19.

**TABLE 19: PROJECT APPROVAL AND EPL NOISE CRITERIA**

Location	Day 7am – 6pm Mon to Sat 8am – 6pm Sun & Public Holidays	Evening 6pm – 10pm Mon to Sat	Night 10pm – 7am Mon to Sat 10pm – 8am Sun	
	L <sub>Aeq</sub> (15 minute) (dB(A))	L <sub>Aeq</sub> (15 minute) (dB(A))	L <sub>Aeq</sub> (15 minute) (dB(A))	L <sub>A1</sub> (1 minute) (dB(A))
Receptor B	37	37	37	49
Receptor A – P (excluding B)	35	35	35	49

### 7.5.2 Monitoring results during reporting period

Noise monitoring was not undertaken during the reporting period. Attended noise monitoring was undertaken in March 2020 by acoustic consultants, Global Acoustics at 5 locations considered representative of Receptors A – P, as shown in Figure 5.



**FIGURE 5 NOISE MONITORING LOCATIONS**

The results indicated that noise levels from the Rutherford operations complied with the relevant noise criteria at all monitored locations. At location C, an  $L_{Aeq}$  of 32 dB and an  $LA_{1,1 \text{ minute}}$  of 33 dB was measured. At all other locations the Rutherford operations were inaudible.

### 7.5.3 Trends

The noise monitoring undertaken in March 2020 was the first noise monitoring to be undertaken in recent times. No noise complaints have been received by Cleanaway in recent history.

### 7.5.4 Comparison to Environmental Assessment predictions

The 2006 Noise Impact Assessment prepared by Parsons Brinckerhoff made the following conclusions relating to operational noise:

- The operational noise criteria adopted for the assessment (Day time 46 dB(A), Evening 45 dB(A), Night time 38 dB(A)) were achieved at each location under each scenario.
- Operational noise from the site was predicted to be inaudible to barely audible at each nearest potentially affected receiver during all periods of operations.

The noise criteria specified by SSD 05\_0037 and EPL 12555 were more stringent than the operational noise criteria adopted for the Environmental Assessment. Noise monitoring undertaken in March 2020 indicated that compliance with the more stringent SSD and EPL noise criteria was achieved and that noise from the Rutherford operations was inaudible at most receivers during the night.

## 7.5.5 Management implications

Cleanaway will continue to implement the noise management controls outlined in the OEMP.

## 8 Community

### 8.1 Website

Cleanaway operates a website ([www.cleanaway.com.au](http://www.cleanaway.com.au)) where members of the community can access information about the Rutherford site, including the latest reports, management plans and environmental monitoring data, including previous Annual Reviews.

### 8.2 Environmental complaints

Cleanaway maintains the following methods for receiving community complaints:

- (i) a 24-hour telephone number (1800 158 447)
- (ii) a postal address – ‘PO Box 246, Rutherford NSW 2320’
- (iii) Cleanaway Facebook page: [www.facebook.com/CleanawayAU](https://www.facebook.com/CleanawayAU)
- (iv) General Enquiry Form – via Cleanaway Corporate website

Complaints are recorded in a Cleanaway ‘*Incident Non-Conformance Report*’ and transferred to an incident recording system (known as Myosh).

No complaints were received by Cleanaway for the site during the reporting period. A copy of the Complaints Register is included as Appendix G.

#### 8.2.1 Trends

Table 20 shows the number of complaints received in previous years.

**TABLE 20 NUMBER OF COMPLAINTS RECEIVED 2017-2023**

2023	2022	2021	2020	2019	2018	2017
0	0	1	1	0	0	0

## 9 Proposed environmental management activities during the next reporting period

Cleanaway propose to undertake the following environmental management activities during the next reporting period:

- Construct an additional waste gas stack to separate the emission flow from the existing stack (EPL Point 19) into two distinct emission points. The stack modification project was approved as MOD 7 in October 2023 (outside the reporting period). Cleanaway will update the management plans to reflect the Modification. Cleanaway will also seek to vary the EPL to include the new stack as a licensed emission point.
- Continue the roll out and optimisation of the Computerised Maintenance Management System (CMMS) for managing scheduled maintenance of plant and equipment. The next stage of the CMMS will be implemented which involves a software based application.
- Continue to investigate technology for onsite water treatment to remove requirement for off-site transport and disposal.

## Appendix A: Compliance Tables



Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
1	ADMINISTRATIVE CONDITIONS			
	TERMS OF APPROVAL			
1.1	<p>The Proponent shall carry out the project generally in accordance with the:</p> <p>a) EAR as amended by the preferred project report (Resource Recovery and Recycling Facility, Rutherford – Preferred Project Report) prepared by Parsons Brinckerhoff Australia Pty Ltd, and dated May 2006</p> <p>b) statement of commitments, prepared by Parsons Brinckerhoff Australia Pty Ltd, and dated 19 May 2006;</p> <p>c) Modification assessments</p> <p>d) conditions of this approval</p>	Throughout	<p>The Rutherford Refinery is generally operated in accordance with the EAR as amended by the Preferred Project report with the exception of the truck wash bay and transport vehicle depot and industrial cleaning depot which are no longer required.</p> <p>The Rutherford Refinery is generally operated in accordance with the SoC. It is noted a number of SoC are no longer relevant under the Preferred Project.</p> <p>MOD 1 approved the continued use of infrastructure not previously approved in the original project approval.</p> <p>MOD 2 approved the streamlining of monitoring requirements within the Project Approval with the EPL. The Rutherford Refinery has generally complied with the requirements to undertake environmental monitoring in accordance with this Modification. Refer to specific monitoring requirements of CoA and EPL.</p> <p>MOD 4 approved the replacement of a stack at the Site. This was completed in 2014. The stack was 25 m in height as per the Modification Application.</p> <p>MOD 5 approved the construction and operation of new equipment (oil polishing system, multi-fuel burner, six additional oil storage tanks with total combined storage of 2.4 ML and safety and fire-fighting systems) and increase the height of the Multi-Fuel Burner Stack, to enable the facility to produce both Class I and Class II product oils. Physical works are yet to commence under MOD 5.</p> <p>MOD 6 approved installation and operation of a MOPP, a scaled-down version of the oil polishing plant approved under MOD 5, to trial the effectiveness of the oil polishing process. The Site is generally operating the MOPP in accordance with the Modification Assessment</p> <p>The Rutherford Refinery has generally operated in accordance with the CoA. Refer to assessment against specific CoA.</p>	Compliant
1.2	If there is any inconsistency between the above, the conditions of this approval shall prevail to the extent of the inconsistency.	Throughout	Noted	Not-triggered
1.3	<p>The Proponent shall comply with any reasonable requirement/s of the Planning Secretary arising from the Department’s assessment of:</p> <p>a) any reports, plans or correspondence that are submitted by the Proponent in accordance with this approval; and</p> <p>b) the implementation of any actions or measures contained in those reports, plans or correspondence submitted by the Proponent.</p> <p><i>Note: Note: nothing in this consent approves the following components of the original project:</i></p> <ul style="list-style-type: none"><li>• the oily water treatment and waste oil transfer facility;</li><li>• the Chemical Fixation, Stabilisation and Solidification (CFS) process facilities;</li><li>• the waste water treatment plant;</li><li>• the dangerous goods store; and</li><li>• the soil conditioning and composting facility.</li></ul>	Throughout	<p>Cleanaway updated the 2022 AEMR following DPE review. This is discussed further in Section 6 of the AEMR. No comments were received from DPE following submission of the OEMP (Rev 6) and sub plans in May 2023.</p> <p>No requests from the Planning Secretary were received relating to the implementation of actions or measures contained in reports, plans or correspondence during the reporting period.</p> <p>The listed components of the original project have not been constructed.</p>	Compliant
1.3A	<p>The Applicant shall:</p> <p>a) design and construct tanks in MOD 5 in accordance with API 650: Welded Steel Tanks for Oil Storage</p> <p>b) comply with the requirements of the current edition of AS1940: The storage and handling of flammable and combustible liquids</p>	Design & Construct MOD 5	<p>Detailed design of MOD 5 commenced in September 2021 and continued during the reporting period. The Project Approval requirements formed part of the consultants scope.</p> <p>Evidence of compliance will be provided in future reporting periods.</p>	Not-triggered
1.4	<p><i>Limits of Approval</i></p> <p>The Proponent shall not process more than 40,000 tonnes of waste lubricant oils a year at the hydrogenation plant.</p>	Operation	The Rutherford Refinery processed27,623 tonnes of waste lubricant oil during the reporting period.	Compliant
1.5	This approval shall lapse five years after the date on which it is granted, unless the works the subject of this approval are physically commenced on or before that time.	Throughout	<p>Commencement of physical works associated with the original approval, MOD 2, MOD 4 and MOD 6 commenced within five years of the date granted.</p> <p>Works associated with MOD 5 have not physically commenced and consequently this approval lapsed on the 9/09/2023. Cleanaway will contact DPE when a decision is made on how they will proceed with the diversification project.</p>	Compliant
1.6	<p>The Applicant must ensure the Mobile Oil Polishing Plant (MOPP) trial as described under MOD 6:</p> <p>a) operates in accordance with the requirements of EPL 21402;</p> <p>b) is commissioned, operated and decommissioned for a total combined period of 30 months, unless otherwise agreed by the Secretary; and</p> <p>c) is decommissioned prior to the construction and operation of MOD 5.</p>	MOPP Trial	<p>Operation of the MOPP was transferred from the REOIL EPL 21402 to the Cleanaway EPL 12555 on 15 September 2022. The MOPP has been operating in accordance with EPL 12555 since September 2022. Two rounds of monitoring, as required by the EPL, have been undertaken to date and results have been well below the EPL concentration limits. Refer to Section 7.2 for further discussion of air quality monitoring.</p> <p>Commissioning of the MOPP commenced in August 2021 and continued through this reporting period.</p> <p>Not triggered</p>	Compliant

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
1.7	For the purposes of the MOPP under MOD 6, the Applicant must notify the Secretary in writing 7 days prior to the following: a) the commencement of commissioning; and	MOPP Trial	The Secretary was notified of the commencement of commissioning in July 2022 which was not within required timeframe. This condition was reported as non-compliant in the previous reporting period. This requirement has been closed out.	Closed out
	b) decommissioning		Not triggered	Not-triggered
2	SPECIFIC ENVIRONMENTAL CONDITIONS			
	WASTE			
2.1	Except as provided in condition 2.2 of this consent and/or expressly permitted by an EPL, the Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal. <i>Note: The above condition only applies to the storage, treatment processing, reprocessing or disposal of waste at the site if it requires an EPL under the Protection of the Environment Operations Act 1997.</i>	Operation	No other waste types except those permitted by EPL Condition L4.1 are received on site.	Compliant
2.2	The Proponent shall only receive, store, treat, process or reprocess the following wastes at the site: - waste lubricant oils	Operation	No other waste types except those permitted by EPL Condition L4.1 are received on site.	Compliant
2.3	The Proponent is prohibited from storing green waste and septic waste on site.	Operation	No green waste or septic waste is stored on site.	Compliant
	AIR QUALITY			
2.4	<i>Dust</i> The Proponent shall design, construct, operate and maintain the project in a manner that prevents and/or minimises air pollution.	Throughout	The majority of the Rutherford facility is covered in hard stand and dust generation from onsite activities is minimal. Cleanaway implements the AQMP including undertaking visual monitoring for dust during routine inspections and implementing dust controls (e.g. street sweeper) as required. It is noted the requirement to monitor depositional dust was removed from the Project Approval by MOD 3.	Compliant
2.5	<i>Odour</i> The Proponent shall not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the Protection of the Environment Operations Act 1997. Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the Proponent must not cause or permit the emission of any offensive odour from the site, but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.	Operation	Cleanaway implements the AQMP to minimise and manage odour. This includes ensuring plant is maintained and operated efficiently, conducting odour assessments as part of routine workplace inspections, recording and managing odour complaints and undertaking odour monitoring as required by the EPL. No complaints relating to odour were received during the reporting period.	Compliant
2.6	<i>Air Quality Criteria</i> The Proponent shall design, operate and maintain the project in a manner that would achieve emissions compliance with the EPL. The Proponent must advise the Department of any variations to the EPL as approved by EPA	Throughout	Air quality monitoring undertaken during the reporting period indicated compliance with EPL limits at all discharge points for all pollutants. Refer Section 7 of AEMR.	Compliant
2.7	<i>Design Requirements</i> The Proponent shall design, operate and maintain the project in a manner that would achieve Best Available Control Technology for toxic air pollutants specified in Approved Methods for the Modelling and Assessment of Air pollutants in New South Wales (August 2005)	Design	The Rutherford Refinery implements burners, flares and activated carbon mitigation systems along with nitrogen blanketing which are considered best practice for the control of emissions	Compliant
2.8	The Proponent shall ensure that all stack air emission points at the site are designed to: a) broadly conform to the general requirements of Guidelines for Determination of Good Engineering Practice Stack Height (Technical Support Document for the Stack Height Regulations) (US EPA); and  b) to accommodate and be built with sampling ports that conform with TM-1 as specified in Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (August 2005)	Design	Stack air emission points were designed to broadly conform to stack height guidelines.  Stack air emission points were designed to accommodate sampling ports conforming to sample port standards.	Compliant
2.9	The Proponent shall ensure that the flare is designed, constructed and operated in accordance with the requirements of Clauses 38 – 41 of the Protection of the Environment (Clean Air) Amendment (Industrial and Commercial Activities and Plant) Regulation 2005. The manufacture’s design specification for the flare must include the design destruction efficiency and must be submitted to the OEH for approval. The OEH’s approval in writing must be obtained by the Proponent prior to the installation of the flare.	Design	The flare was designed and constructed in accordance with requirements and EPA approval obtained.	Compliant
2.10	The Proponent shall design, operate and maintain the project in a manner that complies with all requirements of the OEH as specified in the EPL for the project with respect to volatile organic liquid control equipment prescribed in Part 5 of the Protection of the Environment Operations (Clean Air) Amendment (Industrial and Commercial Activities and Plant) Regulation 2005.	Design	The regulation referred to is no longer in force and was repealed when the Clean Air Regulation was promulgated in 2010. Notwithstanding, the storage tanks at the Cleanaway facility are controlled with vapour reduction unit to capture and control emissions from the tanks and the loading / unloading area. The light end capture system (nitrogen blanketing and vapour capture) are scrubbed by the activated charcoal system prior to the VOC wet scrubber. The flare is only used when the system experiences interruptions or shutdowns known as an ‘upset’ as shown on the Flare Log.	Compliant

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
2.11	<i>Operation of Flare</i> The Proponent shall not vent the flare except during start-up, shutdown and process upsets. For the purposes of this condition, process upsets shall not exceed 2% of the process operating time per annum. This excludes the initial commissioning period of the project, which is defined as being three months from the start-up date of the project.	Operation	Flaring is tracked using the SCADA system and then transferred onto a manual flare log by the control room. A Flaring Time Rolling Total spreadsheet is maintained which records the total cumulative flare time and records process operating times. All flare events during the reporting period were during start-up, shut down and process upsets. In 2022-23 process upsets totalled approximately 1.3% of process operating time which is below 2% as required by EPL Condition O6.2.	Compliant
2.12	Throughout the life of the project, the Proponent shall keep and maintain detailed records of each use of the flare on site, and the details of all process upsets, start-ups and shutdowns. The records shall be made available to the OEH upon request, and shall include: a) the flare start and stop time, and the reasons for its use; b) the process start and stop time, and the reason for each process upset.	Operation	Flare logs are completed and maintained by the control room which include the date, time flaring started, time flaring finished, duration of flaring, stack appearance (visible plume or no visible plume) and reason for flaring.  Process start and stop times and details of process upsets are recorded in the monthly Plant KPI Reports.	Compliant
2.13	<i>Boilers</i> The Proponent shall not burn or use waste oil and other non-standard fuels as fuel at the site.	Operation	The Rutherford Refinery uses natural gas to fuel operations. No waste oil or non-standard fuels are used as fuel.	Compliant
2.14	Air supply to the boilers at the site may include vent air emissions from the hydrogenated oil storage, feed stock storage, light ends storage and sour water storage.	Operation	Air supply to the boilers does not include vent air from air emissions from the hydrogenated oil storage, feed stock storage, light ends storage and sour water storage.	Not-triggered
2.14A	The sulphur composition of all fuel utilised for the project must not exceed 0.5 per cent	Operation	This condition is a MOD 5 requirement which has not been triggered. Notwithstanding, the refinery uses natural gas as fuel which has trace amounts of sulphur well below 0.5%.	Not-triggered
SOIL AND WATER				
2.15	Except as may be expressly provided in an EPL for the project, the Proponent shall comply with section 120 of the Protection of the Environment Operations Act 1997.	Throughout	Management measures to prevent pollution of waters are outlined in the OEMP, GWMP and Stormwater Management Plan. The following measures were implemented during the reporting period: - Surface water captured in the storage tank area, hydrogenation plant and truck unloading bay was directed to the Puraceptor and Granular Activated Carbon (GAC) unit prior to discharge to sewer under a Trade Wastewater Agreement. - Surface water from other hardstand areas including Cooling Towers, HP Boiler, LP Boiler, N2 Plant and H2 Plant, flows to the back (southwestern) corner of the Site for pollution collection and retention. The surface water flows into two grated drains that collect at a stormwater pit (Hydrodynamic Vortex Separator) designed to remove solid sediment, pollutants, oil and other floatables in the water. - The stormwater pit is isolated from the surface water drainage system by maintaining the stormwater shut-off valve in a closed position unless release is allowed under controlled conditions. - Inspection and maintenance of the stormwater management is undertaken on a daily, weekly, monthly, 3-monthly, 6-monthly and annual basis. - Quarterly stormwater monitoring was undertaken in accordance with the OEMP and Stormwater Management Plan. Refer to Section 7.4. - Groundwater monitoring is undertaken annually. Refer to Section 7.3. There were no incidents recorded during the reporting period which resulted in the pollution of waters.	Compliant
2.16	Prior to the commencement of operations, the Proponent shall ensure that stormwater management measures are implemented to mitigate the impacts of stormwater run-off from and within the site in a manner that is consistent with the Stormwater Management Plan for the catchment. Where a Stormwater Management Plan has not yet been prepared, the measures shall be consistent with the guidance contained in Managing Urban Stormwater: Council Handbook (DEC).	Pre-operation	Completed outside of reporting period.	Closed out
2.17	Soil Contamination Prior to the commencement of construction, the Proponent shall submit to the Planning Secretary for approval, a soil contamination validation report to confirm the presence, or otherwise, of any contamination within the construction footprint of the development, and to demonstrate that any contamination on the site is not inconsistent with the development. The validation report shall be prepared by a suitably qualified and independent person(s), and shall detail any additional measures that shall be implemented to address contamination, if identified, and if required.	Pre-construction	Completed outside of reporting period.	Closed out

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
2.18	<p>Within six months of the granting of modified consent, the Proponent must complete the following groundwater contamination investigations and works which includes, but need not be limited to, the following:</p> <p>(a) An assessment of the potential for off-site migration of chemicals of potential concern (including <del>Transport Assessment</del>);</p> <p>(b) Identification, based on the activities carried out on the site, of suspected source locations. If suspected source locations are identified, an evaluation of the presence of DNPLs trapped in or above lower permeability zones above the regional groundwater aquifer must be undertaken (note that care must be taken to ensure that the regional aquifer is not penetrated at suspected source locations);</p> <p>(c) Works to assess regional groundwater and determination of hydrogeological characteristics (such as flow and direction). Such works must include the installation of additional wells across the site to:</p> <ul style="list-style-type: none"><li>- enable the groundwater flow direction to be determined;</li><li>- further investigate the lateral and vertical extent of groundwater contamination;</li><li>- enable more accurate falling head tests and/or a pump test to be undertaken; and</li><li>- allow collection of soil samples within the water bearing zone.</li></ul> <p>d) Soil samples collected must be analysed for organic carbon content and cation exchange capacity to allow fate and transport modelling to assess the potential for adsorption and retardation of dissolved organic compounds;</p> <p>e) An assessment of risk posed by the contamination and recommendations for appropriate management requirements.</p> <p>The Planning Secretary and the EPA must be provided with a copy of the report detailing the results of the investigations within seven months of the modified development consent being granted.</p> <p>The Proponent shall comply with all reasonable requirements of the Planning Secretary and the EPA in respect of the implementation of any measures presented in the Report. Any such works shall be completed within such time as the Planning Secretary or the EPA may require.</p> <p><i>Note: should it be established that there are no ongoing contamination sources at the site, that the regional groundwater has no beneficial uses, and that groundwater is not used in the area, then more detailed investigations into contaminant concentrations in the regional aquifer, groundwater flow direction and flow velocity may not be necessary. If applicable, the reasons for not undertaking this further investigation must be detailed in the report.</i></p>	By November 2007 (within 6 months of granting MOD 1)	Completed outside of reporting period.	Closed out
2.18A	Prior to commencement of operations of MOD 5, the Applicant shall submit to the EPA details of an inventory system to accurately measure and report product losses from the tank farm.	Pre-operation MOD 5	MOD 5 operations had not commenced during the reporting period.	Not-triggered
2.18B	<p>The Applicant shall ensure the bund for the tank farm in MOD 5:</p> <p>a) includes a bund lining system to achieve an impermeable barrier;</p> <p>b) is designed, constructed and maintained in accordance with AS 1940:2004 and the DECC Technical Guideline Bunding and Spill Management;</p> <p>c) includes the installation of an early warning leak detection and prevention systems, prior to commencement of operations, that are certified by a site auditor accredited under the Contaminated Land Management Act, 1997;</p> <p>d) includes measures to manage liquids within the bund to ensure no migration of contaminants occurs that could cause pollution of land and/or groundwater;</p> <p>e) demonstrates that materials contained within the bund are compatible with bund construction such that its long-term function is not impaired; and</p> <p>f) is included in monitoring programs to ensure the bund achieves its performance objectives and continues to provide an effective barrier for the prevention of pollution of land and waters</p>	Design, Construction & Operation of MOD 5	<p>Detailed design of MOD 5 commenced in September 2021 and continued during the reporting period. The Project Approval requirements formed part of the consultants scope.</p> <p>Construction and operation had not commenced during the reporting period.</p> <p>Evidence of compliance will be provided in future reporting periods.</p>	Not-triggered
2.18C	<p>Prior to commencement of operations of MOD 5, the Applicant shall submit to the satisfaction of the Planning Secretary, a report confirming the bunds have been installed in accordance with condition 2.18B. The report shall include:</p> <p>a) as-constructed drawings from field surveys depicting the base elevation of the bund, upper surface of the liner(s), geotextiles, engineered liners and sealed layers of the bund;</p> <p>b) construction quality control results; and</p> <p>c) written advice from the person(s) overseeing the works that the bunds were installed in accordance with the approved design and construction specifications.</p>	Pre-operation MOD 5	MOD 5 operations had not commenced during the reporting period.	Not-triggered
2.18D	Prior to commencement of operations of MOD 5, the Applicant shall implement a Containment Bund, Tank and Pipeline Integrity Assessment Program. The program must detail measures to assess and maintain the integrity of the tank farm containment bund, other containment structures, tanks and pipelines during the life of the facility	Pre-operation MOD 5	MOD 5 operations had not commenced during the reporting period.	Not-triggered

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
NOISE				
2.19	<p><i>Construction Hours</i></p> <p>The Proponent shall only undertake construction activities associated with the project, that are audible at any residential receptor, between the following hours:</p> <p>a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive;</p> <p>b) 8:00 am to 1:00 pm on Saturdays; and</p> <p>c) at no time on Sundays or public holidays.</p>	Throughout	<p>Earthworks associated with the legacy dam decomissoning works were completed during the reporting period. These activities were undertaken during approved construction hours.</p> <p>No noise complaints have been received.</p>	Compliant
2.20	<p><i>Noise Limits</i></p> <p>The Proponent shall ensure that noise from the project at the nearest sensitive receiver does not exceed the criteria specified in Table 1 at those locations and during those periods indicated.</p> <p><i>Note: for the purposes of this condition:</i></p> <p><i>a) noise emission limits apply under meteorological conditions of wind speeds up to 3m/s at 10 metres above ground level and temperature inversions conditions of 3 degrees Celsius per 100m. To determine compliance with this condition, noise from the development must be measured at any point within the residential boundary of a noise sensitive receiver location, or at any point within 30 metres of the dwelling at a noise sensitive receiver location where the dwelling is more than 30 metres from the boundary. However, where it can be demonstrated that direct measurement of noise from the development is impractical, the EPA may accept alternative means of determining compliance (see Chapter 11) of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.</i></p> <p><i>b) Locations specified in Table 2 as per Noise Impact Assessment, Figure ES-1 as presented in the EAR.</i></p>	Throughout	<p>Monitoring undertaken in 2020 indicated compliance with the specified noise criteria. Refer to Section 7.</p>	Compliant
HAZARDS AND RISKS				
2.21	<p>Prior to the commencement of construction of the project, the Proponent shall prepare and submit for the approval of the Planning Secretary, the following studies:</p> <p>a) a Fire Safety Study covering the relevant aspects of the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 2 - Fire Safety Study Guidelines and the NSW Government’s Best Practice Guidelines for Contaminated Water Retention and Treatment Systems. In addition to approval from the Planning Secretary, approval for this study shall also be obtained from the Commissioner of the NSW Fire Brigades/Rural Fire Service.</p> <p>b) a Hazard and Operability Study, undertaken by an independent qualified person approved by the Planning Secretary. The study shall be carried out in accordance with Department of Planning’s Hazardous Industry Planning Advisory Paper No. 8 - HAZOP Guidelines. The study report shall be accompanied by a program for the implementation of all recommendations made in the report. If the Proponent proposes to defer the implementation of a recommendation, full justification must be included. In particular, the HAZOP must address:</p> <p>i) the adequacy of the vent and pressure relief systems, such as relief valves and busting discs, in the hydrogen system and the process systems;</p> <p>ii) the adequacy of measures to ensure that oil/sludge is not built up on the upstream side of relief devices;</p> <p>iii) that adequate provision has been made for isolating the hydrogen line and the process area with ‘blowing through’ with inert gas prior to maintenance work such as welding in the vicinity;</p> <p>iv) the details of the hazardous classification area and the adequacy of safety measures for the hydrogen manufacturing area, process area and the area surrounding the hydrogen supply pipes; and</p> <p>v) the separation distances between the hydrogen system, and the natural gas and the boiler house system.</p> <p>c) a Final Hazard Analysis prepared in accordance with the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis.</p> <p>d) a Construction Safety Study prepared in accordance with the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 7 - Construction Safety Guidelines. The “commissioning” portion of the study may be completed prior to the commencement of operations rather than prior to the commencement of construction. In particular, risks during the construction period from and to the existing plant shall be considered in the study.</p> <p>Construction, other than of preliminary works, shall not commence until approval is given to the studies listed in a)- d). The Proponent shall consider and implement, as appropriate, all recommendations arising out of the studies and/or shall comply with all reasonable requirements of the Planning Secretary in respect of the implementation of any measures presented in the Report. Any such works shall be completed within such time as the Planning Secretary may require.</p>	Pre-construction	<p>Completed outside of reporting period.</p>	Closed out



Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
2.21A	Prior to the commencement of stack demolition associated with MOD 4, the Proponent shall submit a Construction Safety Study prepared in accordance with the Department of Planning’s Hazard Industry Planning Advisory Paper No. 7, ‘Construction safety’ to the satisfaction of the Planning Secretary.	Pre-construction MOD 4	Completed outside of reporting period.	Closed out
2.21B	At least one month prior to the commencement of construction of MOD 5, or within such further period as the Planning Secretary may agree, the Applicant shall prepare and submit for the approval of the Planning Secretary an update of the following studies to include MOD 5. Construction of MOD 5, other than preliminary works, shall not commence until approval has been given by the Planning Secretary and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW. a) Fire Safety Study : An updated Fire Safety Study in accordance with Condition 2.21 a).  b) Final Hazard Analysis: A Final Hazard Analysis in accordance with Condition 2.21 c) and include the implementation of recommendations of the Preliminary Hazard Analysis in MOD 5.  c) Construction Safety Study: An updated Construction Safety Study in accordance with Condition 2.21 d).	Pre-construction MOD 5	MOD 5 construction had not commenced during the reporting period.	Not-triggered
2.22	<i>Pre-commissioning</i> Prior to the commencement of operation of the project, the Proponent shall prepare and submit for the approval of the Planning Secretary, the following studies: a) an Emergency Plan and detailed emergency procedures shall for the site. An update of the existing site Emergency Plan will be acceptable for the purpose of this condition. The plan shall include detailed procedures for the safety of all people outside of the development who may be at risk from the development. The plan shall be prepared in accordance with the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 1 - Industry Emergency Planning Guidelines.  b) a Safety Management System covering all on-site operations and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Planning Secretary or nominee. The Safety Management System shall be developed in accordance with the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 9 - Safety Management.  Operations shall not commence until approval is given to the studies outlined in a) - b). The Proponent shall consider and implement, as appropriate, all recommendations arising out of the studies and/or shall comply with all reasonable requirements of the Planning Secretary in respect of the implementation of any measures presented in the Report. Any such works shall be completed within such time as the Planning Secretary may require.	Pre-operation	Completed outside of reporting period.	Closed out
2.22A	At least two months prior to the commencement of commissioning of MOD 5, or within such further period as the Planning Secretary may agree, The Applicant shall submit for the approval of the Planning Secretary, an updated Emergency Plan including updated emergency procedures to incorporate changes due to MOD 5. The Emergency Plan shall be prepared in accordance with Condition 2.22 a).	Pre-commissioning MOD 5	MOD 5 commissioning had not commenced during the reporting period.	Not-triggered
2.22B	At least two months prior to the commencement of commissioning of MOD 5, or within such further period as the Planning Secretary may agree, The Applicant shall submit for the approval of the Planning Secretary, an updated Safety Management System to incorporate changes due to MOD 5. The Safety Management System shall be prepared in accordance with Condition 2.22 b).	Pre-commissioning MOD 5	MOD 5 commissioning had not commenced during the reporting period.	Not-triggered
2.23	<i>Post commissioning</i> Prior to commencement of operations, the Proponent shall submit to the Planning Secretary, a Pre-Start up Compliance Report, detailing compliance with conditions 2.21 and 2.22, including: a) dates of commissioning of plant; b) an action plan to implement the recommendations made in the studies listed in conditions 2.21 and 2.22; and c) responses to each requirement imposed by the Planning Secretary in respect of the implementation of any measures arising from recommendations of the studies or reports referred to in conditions 2.21 and 2.22 above and the hazards-related conditions of this approval, within such time as the Planning Secretary may	Pre-operation	Completed outside of reporting period.	Closed out



Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
2.24	<i>Dangerous Goods</i> All chemicals, fuels and oils shall be stored in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund. The bund(s) shall be designed and installed in accordance with: a) the requirements of all relevant Australian Standards; and b) the DEC’s Environmental Protection Manual Technical Bulletin Bunding and Spill Management. In the event of an inconsistency between the requirements listed from a) to b) above, the most stringent requirement shall prevail to the extent of the inconsistency.	Throughout	An internal bund review of the Process Tank, Storage Tank, FPCC, Hydrogenation Plant (HGP) & Fire Heater, Loading Bay and Dangerous Goods (DG) Storage undertaken in October 2020 confirmed the volume of each bunded area had sufficient capacity to contain 110% of the largest container stored within the bund. The review also included a visual inspection of: - bunding integrity, including surface condition, coatings, penetration, sealing and sealing joints - construction material within the bund floor and wall for compatibility with the materials stored within the bund - tank material compatibility with materials stored within the bund - conformance to the crest locus limit or compliance of installation of shielding - location of couplings and suitability of means for collecting and retaining any leaks or spills - management of drain valves (where fitted) including marking of “open” or “closed” positions - bund cleanliness, placarding and labelling. The MOPP is self-bunded (the HAZOP completed for the MOPP takes into account bund capacity impacts). Cleanaway undertakes Monthly Tank Inspections which include a visual inspection of the bund to check if bunds are free from a build up of rubbish, vegetation and other combustibles. Monthly Workplace Inspections also include a visual inspection of bunded areas. An Annual bund wall inspection is also undertaken and was last completed on the 24 March 2023.	Compliant
TRANSPORT				
2.25	<i>Road Improvements</i> Prior to the commencement of operations or as otherwise agreed to by the Planning Secretary, the Proponent shall provide a monetary contribution of \$60,000 to the RTA towards the upgrade of the New England Highway and Kyle Street intersection to accommodate B-Double movements.	Pre-operation	Completed outside of reporting period.	Closed out
2.26	The Proponent shall ensure that B-Doubles associated with the site do not use the New England Highway and Kyle Street intersection at any time until the intersection has been upgraded to cater for B-Double movements. In the interim, B-Doubles associated with the site shall only use the Racecourse Road/New England Highway intersection to access the site via Racecourse Road and Kyle Street.	Prior to intersection upgrade	Completed outside of reporting period.	Closed out
2.27	To enforce the nominated B-Double route, as conditioned in condition 2.26, the Proponent shall implement a Transport Code of Conduct for the project. The Code of Conduct shall include, but not necessarily be limited to, the following: a) details of the measures that would be implemented to enforce this route. This shall include, but not be restricted to, contractual arrangements and disciplinary action;  b) a program of driver training to ensure that drivers are aware of route restrictions applicable to the development; c) communication and management strategies for both the Proponent’s own fleet and contracted fleet to ensure the requirements of the Code are met; d) the incorporation of a regular audit and monitoring program for the Code to determine compliance with the Strategy by heavy vehicles associated with the development and to evaluate the effectiveness of Code in enforcing this route.  The Applicant shall not commence operations until the Director General has approved the Transport Code of Conduct. The Code shall be incorporated into the Operational Environmental Management Plan for the development (refer to condition 3.5 and condition 3.6 of this consent).	Pre-operation	Completed outside of reporting period.	Closed out
2.28	<i>Internal Road Works and Parking</i> The Proponent shall ensure that: (a) All car parking on the site is constructed in accordance with the relevant requirements in AS 2890.1-2004;  b) the internal road network can accommodate the largest vehicles that would be used on site in accordance with the relevant requirements of AS 2890.2-2002;  c) no vehicles from the project park, queue or stand in any of the road reserves outside the site.	Pre-construction  Pre-construction  Throughout	Cark park design and construction was completed outside of reporting period.  The internal road network was designed to accommodate the largest vehicle used on site.  There have not been any issues with queuing off-site during the reporting period.	Compliant

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
2.29	Prior to the commencement of construction work, the Proponent shall submit to the Planning Secretary documentation detailing the internal traffic management plan, particularly the internal road works and car parking arrangement for the project. This shall include: (a) Measures to ensure the conflict between passenger vehicles and heavy vehicles are minimised. This includes reversing passenger vehicles into road carriage ways utilised by heavy vehicles;  b) Measures to ensure the conflict between pedestrians and vehicles on-site are minimised;  c) The arrangement for the unloading and loading of heavy vehicles; and  d) Demonstration of adequate turning-paths for all heavy vehicles accessing various components of the project This internal traffic management plan shall be prepared in consultation with Council. Documentary evidence of this consultation shall be provided to the Planning Secretary.	Pre-construction	Completed outside of reporting period.	Closed out
2.30	Prior to the commencement of construction work, the Proponent shall demonstrate to the Planning Secretary that any applicable consent for the site access road works have been granted under section 138 of the Roads Act 1993. The site access point shall be completed prior to the commencement of operations.	Pre-construction	Completed outside of reporting period.	Closed out
FLORA AND FAUNA				
2.31	The Proponent shall minimise any clearing of vegetation during construction work, and shall retain the vegetation community, referred to as ‘Remnant 4’ on Map Reference 2118506A_2001 (Figure No.11 of the EAR), and partially retain the vegetation community, referred to as ‘Remnant 3’, throughout the life of the development in a healthy and tidy state.	Throughout	A number of trees were removed that had grown in close proximity to the operating plant and were identified as a hazard. A review of Maitland City Council’s website by the arborist confirmed that a permit was not required for the removal of the trees as they did not meet the criteria specified.  Remnant 3 and 4 have been fenced and are in a tidy state. Cleanaway continues to monitor the Remnant 3 and 4 areas and undertake weed management as required.	Compliant
VISUAL				
2.32	The Proponent shall ensure that all external lighting associated with the project: a) does not create a nuisance to surrounding properties or roadways; and b) complies with AS 4282(INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting	Throughout	There were no changes to lighting during the reporting period.  No complaints have been received in relation to lighting.	Compliant
ASBESTOS				
2.33	The Proponent shall handle and dispose of asbestos containing materials in accordance with the Protection of the Environment Operations (Waste) Regulation 1996.	Throughout	The management of Asbestos Containing Materials (ACM) is outlined in the Asbestos Containing Building Materials Management Plan.  During the reporting period, asbestos removal was undertaken at the Old Centre Shed. The Old Centre Shed is a legacy building and is not within any operational areas of the refinery. A visual clearance inspection was undertaken by SLR consulting Australia on completion of all asbestos removal activities and a Clearance Certificate, dated 11 August 2023, was provided to Cleanaway. Airborne fibre monitoring was conducted by SLR during the removal of ACM on 1 and 2 August 2023. Results showed less than the minimum detection limit of 0.01 fibres/mL. The Asbestos Register and Asbestos Containing Building Materials Management Plan	Compliant
2.34	Prior to the commencement of construction work at the site, the Proponent shall ensure that all asbestos-containing materials, including friable asbestos particles within soil, are identified, treated and/or removed to ensure no long-term impact on human health and safety for personal located at the site and neighbouring properties.  <i>Note: The Proponent is required to comply with the statutory requirements of the Occupational Health and Safety Regulation 2001 to manage risks to human health as a result of handling, treatment and removal of asbestos at the site.</i>	Construction	The majority of ACM identified on site was removed prior to construction. The remaining ACM has been documented in the Asbestos Containing Materials Management Plan, with the recommendation to “remove in accordance with current regulation and guidance prior to any works in the area that may disturb the material”.	Compliant
2.35	The Proponent shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.	During demolition	No demolition work was carried out during the reporting period.	Not-triggered
2.36	The Proponent shall ensure that any demolition waste generated as a result of MOD 4 should be classified in accordance with the EPA’s waste classification guidelines and disposed of to (or recycled at) an appropriately licenced facility.	During MOD 4 demolition	Completed outside of reporting period.	Closed out

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
3	ENVIRONMENTAL MANAGEMENT AND MONITORING			
	ENVIRONMENTAL REPRESENTATIVE			
3.1	<p>Prior to the commencement of construction, the Proponent shall employ a suitably qualified and experienced environmental representative/s, whose appointment has been endorsed by the Planning Secretary. The Proponent shall employ this representative/s throughout the life of the project, and notify the Director General of any changes to the appointment that may occur from time to time. This environmental representative must be:</p> <p>a) the primary contact point in relation to the environmental performance of the project;</p> <p>b) responsible for all the environmental requirements under this approval;</p> <p>c) responsible for considering and advising on matters specified in the conditions of this approval, and all other licences and approvals related to the environmental performance and impacts of the project;</p> <p>d) responsible for receiving and responding to complaints about the project; and</p> <p>e) given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.</p>	Throughout	<p>Cleanaway nominated the Regional Manager Refineries as the Environmental Representative on the 18 October 2022 and received formal endorsement for the appointment from the DPE by letter dated 19 October 2022. This condition was reported as non-compliant in the 2022 AEMR as the previously nominated Environmental Representative had not been approved by DPE. Cleanaway received a Warning Letter from the DPE dated 20 October 2022 relating to this breach. On the basis, that the new Environmental Representative was endorsed by the DPE for the majority of the reporting period and that the previous breach was reported in the 2022 AEMR, this condition has been reported as compliant.</p> <p>The responsibilities of the Environmental Representative are included in the OEMP (Revision 6) and have been assigned to the Regional Manager. The Regional Manager was endorsed by the DPE as the Environmental Representative.</p>	Compliant
	OPERATIONAL MONITORING - AIR			
3.2	Air quality monitoring will be undertaken in strict accordance with the requirements set out in the EPL covering the operation of the facility and the Rutherford Resource Recovery and Recycling Facility Air Quality Management Plan (AQMP) prepared by Pacific Air and Environment (PAE) dated 20 March 2007.	Operation	Air quality monitoring has been undertaken during the reporting period in accordance with the EPL and AQMP. Refer Section 7.2 of AEMR.	Compliant
	CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)			
3.3	<p>Prior to the commencement of construction, the Proponent shall prepare (and following approval implement) a Construction Environmental Management Plan (CEMP) for the project to the satisfaction of the Planning Secretary. This plan must outline the environmental management practices and procedures that would be implemented during each stage of construction, and include:</p> <p>a) a description of all activities to be undertaken on the site during construction of the project, including an indication of stages of construction, where relevant;</p> <p>b) statutory and other obligations that the Proponent is required to fulfil during construction, including all approvals, consultations and agreements required from authorities and other stakeholders;</p> <p>c) details of how the environmental performance of the construction works would be monitored, and what actions would be taken to address identified adverse environmental impacts;</p> <p>d) a description of the roles and responsibilities for all relevant employees involved in the construction of the project; and</p> <p>e) complaints handling procedures during construction and site preparation.</p> <p>Site preparation and construction works associated with any stage of the project shall not commence until the Planning Secretary has approved the CEMP for that stage. Upon receipt of the Planning Secretary's approval, the Proponent shall supply a copy of the CEMP to the OEH, DNR and Council as soon as practicable.</p>	Construction	Completed outside of reporting period.	Closed out

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
3.4	<p>The CEMP for the project shall include the following Management Plans:</p> <p>a) an Soil, Water and Dust Management Plan to detail measures to minimise the disturbance of soil, erosion and the generation of dust during construction of the project.</p> <p>This plan shall include:</p> <p>i) the results of investigations into soils associated with the site, in particular the presence of friable asbestos and/or contaminants within the construction work footprint;</p> <p>ii) a description of the proposed erosion and sediment control measures, which must be consistent with best practice, including the Landcom’s publications Soil and Water Management for Urban Development and the Managing Urban Stormwater – Soils and Construction;</p> <p>iii) a description of the measures that would be employed to prevent the generation of dust during construction work;</p> <p>iv) a description of the proposed monitoring that would be carried out during construction, clearly indicating who would conduct the monitoring, how the results would be recorded; and, if any non-compliance is detected, what corrective action would be taken; and</p> <p>v) a description of procedures that would be implemented to ensure that the control measures are maintained at all times, and to address any non-compliance, should it occur.</p> <p>b) a Soil Contamination Protocol to manage soil contamination during site preparation and construction works. The Protocol shall detail procedures for the identification, isolation and removal of any contaminated soil, asbestos (including friable asbestos fibres) and munitions disturbed during site preparation and construction works, and detail measures for addressing any detected contamination.</p> <p>c) a Vegetation Management Plan to detail measures to minimise the impact of vegetation clearing associated with the project and manage the rehabilitation of remaining remnants throughout the life of the development. This plan shall include:</p> <p>i) a detailed plan showing the area and type of vegetation that is to be removed;</p> <p>ii) a description of the measures that would be implemented to protect the vegetation that would not be cleared (such as fencing);</p> <p>iii) identification of plant material to be used for rehabilitation, and the densities and species mix for areas to be rehabilitated; and</p> <p>iv) a description of establishment methods, sequencing of tasks, maintenance and performance monitoring.</p>	Construction	Completed outside of reporting period.	Closed out
3.4A	Prior to the commencement of construction of MOD 5, The Applicant shall prepare (and following approval implement) an updated CEMP for MOD 5 to the Satisfaction of the Certifying Authority. The CEMP shall be prepared in accordance with the requirements of Condition 3.3 and Condition 3.4.	Pre-construction MOD 5	Construction of MOD 5 is yet to commence	Not-triggered
OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN				
3.5	<p>Prior to the commencement of operations, the Proponent shall prepare (and following approval implement) an Operation Environmental Management Plan (OEMP) for the project, in consultation with the OEH, DNR, and Council), and to the satisfaction of the Planning Secretary. This plan must describe the environmental management framework, practices and procedures that would be followed during operations, and include:</p> <p>a) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to operation of the development, including all approvals, licences, approvals and consultations;</p> <p>b) a description of the roles and responsibilities for all relevant employees involved in the operation of the development;</p> <p>c) overall environmental policies and principles that will be/ are applied to the operation of the development;</p> <p>d) standards and performance measures that will be applied/ are to the development, and a means by which environmental performance can be periodically reviewed and improved;</p> <p>e) management policies to ensure that environmental performance goals are met and to comply with the conditions of this approval;</p> <p>f) details of all landscaping to be undertaken on the site;</p> <p>g) the various management plans required under this approval; and</p> <p>h) contingency measures should monitoring of environmental issues under this approval indicate that the development has had, or is having an adverse environmental impact.</p> <p>Operations shall not commence until the Planning Secretary has approved the OEMP. Upon receipt of the Planning Secretary's approval, the Proponent shall supply a copy of the OEMP to the OEH and Council as soon as practicable.</p>	Operation	<p>The OEMP was updated in April 2023 (Rev 6) following the 2022 AEMR. It was provided to Maitland Council and the EPA on the 5 May 2023 for consultation. The EPA responded on the 15 June 2023 that it does not review management plans. Maitland Council responded on the 25 May 2023 requesting final versions of the plans for their records. The OEMP was provided to DPE on the 4 May 2023. No comments or response was received from DPE. Formal approval of the revised OEMP was not received. The OEMP was re-submitted to DPE on the 19 December 2023 (outside the reporting period) requesting formal approval of the OEMP and management plans.</p> <p>Included in Section 2 of the OEMP.</p> <p>Included in Section 5 of the OEMP.</p> <p>Included in Section 4 and Attachment A of the OEMP.</p> <p>Included in Section 6, 7 and 8 of the OEMP.</p> <p>Included in Section 6 of the OEMP.</p> <p>Included in Section 6.3 of the OEMP. Included as Attachment C, D and E of the OEMP. Included in Section 8 of the OEMP.</p> <p>At the time of writing, formal approval of the April 2023 OEMP was yet to be received. The OEMP and sub plans are due for review in December 2023, following the AEMR.</p>	Compliant

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
3.6	<p>The OEMP for the project shall include the following Management Plans:</p> <p>a) an Air Quality Management Plan outlining the measures that would be implemented to minimise and manage air quality impacts of the proposal, particularly odour. The Plan shall include, but not necessarily be limited to:</p> <p>i) identification of all point and diffuse sources of air quality emissions associated with the project;</p> <p>ii) a detailed description of the mitigation methods and management practices that would be used throughout the project, particularly methods to ensure offensive odour impacts do not occur off site, and a demonstration that these measures are consistent with industry best practice;</p> <p>iii) a detailed monitoring program for the project;</p> <p>iv) details of the contingency measures that would be implemented if non-compliance with air quality emission criteria is detected or if offensive odour impacts occur; and</p> <p>v) a procedure for handling complaints.</p> <p>b) a Transport Code of Conduct to outline measures to manage all heavy vehicle traffic movements associated with the project to minimise impacts on the local and regional road network, including traffic noise. The Code shall address the requirements of Council and the RTA and shall include, but not necessarily be limited to:</p> <p>i) restrictions to routes, where relevant;</p> <p>ii) management measures to reduce volumes of heavy vehicles travelling to and from the site during peak hours, particularly B-Double movements at the Kyle Street/New England Highway intersection during peak hours; and</p> <p>iii) details of what disciplinary actions would be taken should any non-compliance with the Transport Code of</p> <p>c) a Groundwater Management Plan to detail measures to monitor, and where applicable, manage the impact on groundwater. The Plan shall be prepared in consultation with DNR and OEH, and shall include, but not necessarily be limited to:</p> <p>i) details of baseline groundwater quality, as present prior to the commencement of construction of the development;</p> <p>ii) groundwater assessment criteria for a broad range of parameters, including, heavy metals, total nitrogen and total phosphorous;</p> <p>iii) monitoring program of groundwater quality, including frequency of monitoring and monitoring locations;</p> <p>iv) details of contingency measures and management options should monitoring of groundwater quality indicate that the development has had, or is having, an adverse effect on groundwater quality;</p> <p>v) details of the nominated contingency measures and management options, should monitoring of groundwater quality indicate that the development has exceeded this criteria. These levels and contingency and management options must be developed to the satisfaction of the OEH and DNR.</p>	Operation	<p>The AQMP was updated in April 2023 (Rev 3).</p> <p>i) Included in Section 4 of AQMP</p> <p>ii) Included in Section 5 and 6 of AQMP</p> <p>iii) Included in Section 7 of AQMP</p> <p>iv) Included in Section 10 of AQMP</p> <p>v) Included in OEMP</p> <p>The Transport Code of Conduct was updated in April 2023 (Rev 7).</p> <p>i) Included in Section 1 and 4.16</p> <p>ii) The site operates 24 hours per day, seven days per week, thus reducing peak hour volumes</p> <p>iii) Included in Section 4.19</p> <p>The GWMP was updated in April 2023 (Rev 3). It was provided to the EPA and Maitland Council for consultation on 5 May 2023. No comments were received from either agency.</p> <p>i) Included in Section 4</p> <p>ii) Included in Section 5</p> <p>iii) Included in Section 6</p> <p>iv) Included in Section 7</p> <p>v) Included in Section 7</p>	Compliant
3.7	Within 3 months of the completion of each Independent Environmental Audit (see condition 4.4), the Proponent shall review and update the Operation Environmental Management Plan (OEMP) for the project, in consultation with the OEH and Council, and to the satisfaction of the Planning Secretary.	Operation	There was no IEA during the reporting period to trigger this review, however the OEMP was updated in April 2023 in consultation with EPA and Maitland Council.	Not-triggered
4	COMPLIANCE, AUDITING AND INDEPENDENT AUDITING			
	COMPLIANCE			
4.1	Prior to the commencement of construction and operations, the Proponent shall certify in writing to the satisfaction of the Planning Secretary, that it has complied with all the applicable conditions of this approval.	Pre-construction and Pre-operation	Completed outside of reporting period.	Closed out

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
	AIR QUALITY AND NOISE VALIDATION REPORT			
4.2	Within three months of commissioning operations at the site, the Proponent shall submit an Operational Air and Noise Validation Report for the project. This Report shall: a) be undertaken by a suitability qualified and experienced person(s); b) assess whether the project is complying with the noise criteria specified in condition 2.20 of this approval, and identify what additional measures could be implemented to ensure compliance should any non-compliance be detected; c) validate that the performance of the project reflects the assumptions and conclusions made in the Preferred Project Report and the Environmental Assessment for Transpacific Refiners, Modifications to Existing Development, dated 12 April 2007; d) undertake air quality validation and performance verification reporting as detailed in the AQMP prepared by PAE, dated 20 March 2007 to validate compliance with the Protection of the Environment Operations (Clean Air) Amendment (Industrial and Commercial Activities and Plant) Regulation 2005 and the emissions inventory of the project as detailed in the Environmental Assessment for Transpacific Refiners, Modifications to Existing Development, dated 12 April 2007; e) provide details of each round of Performance Verification Monitoring such that the monitoring frequency for all pollutants can be reviewed, as specified in the AQMP; f) identify what additional measures could be implemented to ensure compliance should any non-compliance be detected; and g) provide details of any complaints received relating to air quality generated by the project, and action taken to respond to those complaints.	Within 3 months of commissioning of operations	Completed outside of reporting period.	Closed out
4.3	If the Report identifies any non-compliance with the air quality limits imposed under this approval, an EPL for the development and/or does not reflect the conclusions made within the Environmental Assessment for Transpacific Refiners, Modifications to Existing Development, dated 12 April 2007, the Proponent shall detail what additional measures would be implemented to ensure compliance, clearly indicating who would implement these measures, when these measures would be implemented, and how the effectiveness of these measures would be measured and reported to the Planning Secretary and the OEH. The Proponent shall comply with all reasonable requirements of the Planning Secretary or the OEH in respect to the findings presented in the Report. Any such works shall be completed within such time as the Planning Secretary or the OEH may require.	Following completion of Operational Air and Noise Validation Report	Completed outside of reporting period.	Closed out
4.3A	Within six (6) months of the date of commencement of the modified operation, the Applicant must submit for the approval of the Planning Secretary, an Operational Air and Odour Validation Report. The Report must:  a) be prepared by a suitably qualified and experienced person(s)in consultation with the EPA;  b) include a revised Air Quality Impact Assessment of air quality impacts from the project ‘as constructed’ and include actual measured emissions; c) assess conclusions made in the documents: - “Air Quality Impact Assessment – Transpacific Diversification Project 05_0037 Mod 5” prepared by AECOM and dated 15 March 2016; and - any subsequent air quality impact assessment prepared for the facility ‘as constructed’.  d) include a complete source emissions monitoring program for the facility to validate compliance with the Protection of the Environment Operations (Clean Air) Regulation 2010 (“the Regulation”) and to validate the emissions inventory contained within the document “Air Quality Impact Assessment – Transpacific Diversification Project 05_0037 Mod 5” prepared by AECOM and dated 14 January 2016 or any subsequent emissions inventory prepared for the facility ‘as constructed’. A copy of the results and recommendations of the source emissions monitoring program must be included in the Report.          e) identify what additional measures could be implemented to ensure compliance with the Regulation and approval conditions should any non-compliance be detected; and    f) provide details of any complaints received relating to air quality generated by the project and action taken to respond to those complaints	Within 6 months of commencement of operation of MOD 5	Works approved under MOD 5 had not commenced during the reporting period.	Not-triggered



Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
INDEPENDENT ENVIRONMENTAL AUDIT				
4.4	Within one year of the commencement of operations, and then as directed by the Planning Secretary, the Proponent shall commission an Independent Environmental Audit of the development. This audit must:  a) be carried out by a suitably qualified, experienced and independent audit team, that contains an odour specialist and hazard specialist, whose appointment has been endorsed by the Planning Secretary;  b) be carried out in accordance with ISO 14010 – Guidelines and General Principles for Environmental Auditing and ISO 14011 – Procedures for Environmental Auditing, the Department’s guideline Hazardous Industry Planning Advisory Paper No. 5 – Hazard Audit Guidelines;  c) assess whether the project is complying with the conditions of both this approval and the EPL for the project;  d) assess whether the project is being carried out with industry best practice;  e) review the adequacy of the Operation Environmental Management Plan for the project; compliance with the requirements of this approval, and other licences and approvals; and  f) recommend measures or actions to improve the environmental performance of the project, and/or the Operation Environmental Management Plan for the project.	As directed by DPE	There was no IEA undertaken during the audit period. The previous IEA was undertaken in 2021.	Not-triggered
4.5	Within 2 months of commissioning this audit, or as otherwise agreed by the Planning Secretary, the Proponent shall submit a copy of the audit report to the Planning Secretary, with a response to any recommendations contained in the audit report.	Within 2 months of commissioning IEA	There was no IEA undertaken during the audit period. The previous IEA was undertaken in 2021.	Not-triggered
4.6	Twelve months after the commencement of operations of the MOD 5 project and every three years thereafter, or at such intervals as the Planning Secretary may agree, the Applicant shall carry out a comprehensive Hazard Audit of the proposed project and within one month of each audit submit a report to the Planning Secretary for an approval. The audits shall be carried out at the Applicant’s expense by a qualified person or team, independent of the project, approved by the Planning Secretary prior to commencement of each audit. Hazard Audits shall be consistent with the Department of Planning’s Hazardous Industry Planning Advisory Paper No. 5, ‘Hazard Audit Guidelines’. The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented.	12 months after commencement of MOD 5 operations	Works approved under MOD 5 had not commenced during the reporting period.	Not-triggered
5	ENVIRONMENTAL REPORTING			
INCIDENT REPORTING				
5.1	The Proponent shall notify the OEH and the Planning Secretary of any incident with actual or potential significant off-site impacts on people or the biophysical environment as soon as practicable after the occurrence of the incident. The Proponent shall provide written details of the incident to the OEH and the Planning Secretary within seven days of the date on which the incident occurred.	Throughout	No reportable incidents were recorded during the reporting period.	Not-triggered

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
ANNUAL PERFORMANCE REPORTING				
5.2	<p>The Proponent shall submit an Annual Environmental Management Report (AEMR) for the project to the OEH, Council, and the Department. The AEMR shall be submitted annually on the 22 December, unless otherwise approved by the Department, and include:</p> <p>a) details of compliance with the conditions of this approval, and any other licences and approvals for the project;</p> <p>b) a list of variations obtained to approvals applicable to the development and to the site during the preceding twelve-month period;</p> <p>c) a copy of the Complaints Register for the preceding twelve month period (exclusive of personal details), and a description of how these complaints were addressed and resolved;</p> <p>d) results of all environmental monitoring required under this approval and other approvals, including interpretations and discussion by a suitably qualified person;</p> <p>e) a list of all occasions in the preceding twelve-month period when environmental performance goals for the development have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident;</p> <p>f) a comparison of the environmental impacts and performance of the development against the environmental impacts and performance predicted in the EA and the additional information listed under condition 4.4;</p> <p>g) identification of trends in monitoring data over the life of the development to date; and</p> <p>h) environmental management targets and strategies for the following twelve-month period, taking into account identified trends in monitoring results.</p>	Throughout	<p>This AEMR has been prepared for the period 29 September 2022 to 28 September 2023.</p> <p>Table 2 of the AEMR details where each of these requirements have been addressed.</p>	Compliant
6	COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT			
ACCESS TO INFORMATION				
6.1	Subject to confidentiality, the Proponent shall make all documents required under this approval publicly available.	Throughout	<p>Cleanaway reported this condition as non-compliant in the 2022 AEMR as not all the documents required under this approval were made publicly available (as identified in the 2021 IEA). Cleanaway received a Warning Letter from the DPE dated 20 October 2022 relating to this breach.</p> <p>The Cleanaway website was updated in June 2022 to include the missing documents (specifically the Soil Contamination Validation Report, Groundwater Contamination Assessment, Construction Safety Study, Operational Air and Noise Validation Report, IEA's 2008 and 2018, 2021 AEMR). The website now includes all documents required under this approval including the updated (April 2023) management plans and the 2022 AEMR.</p>	Compliant
COMPLAINTS PROCEDURE				
6.2	<p>Prior to the commencement of construction, the Proponent shall establish community complaints system to the satisfaction of the Planning Secretary. This system must include:</p> <p>a) a 24-hour telephone number on which complaints about operations on the site may be registered;</p> <p>b) a postal address to which written complaints may be sent; and</p> <p>c) an email address to which electronic complaints may be transmitted, should the Proponent have email capabilities.</p> <p>The telephone number, the postal address and the email address shall be advertised in a newspaper circulating within the locality on at least one occasion prior to the commencement of construction of each stage of the development. These details must also be displayed on a sign near the entrance to the site, in a position that is clearly visible to the public and on the Proponent's internet site, should one exist. The telephone number, postal address and email address must be maintained throughout the life of the development.</p>	Throughout	<p>Cleanaway maintains a 24 hour community hotline number (1800 158 447 ), postal address and email address where complaints may be registered.</p> <p>These details are displayed on a sign at the entrance to the Rutherford facility and on the Cleanaway website.</p>	Compliant
6.3	<p>The Proponent must record details of all complaints received about the project in an up-to-date Complaints Register. This register must record, but not necessarily be limited to:</p> <p>a) the date and time, where relevant, of the complaint;</p> <p>b) the means by which the complaint was made (telephone, mail or email);</p> <p>c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;</p> <p>d) the nature of the complaint;</p> <p>e) any action(s) taken by the Proponent in relation to the complaint, including any follow-up contact with the complainant; and</p> <p>f) if no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken.</p> <p>The Complaints Register must be made available for inspection by the Planning Secretary upon request.</p>	Throughout	<p>Complaints are logged in the MYOSH system. The MYOSH system allows for the required information to be captured.</p> <p>No complaints were recorded during the reporting period. The Complaint Register is included as Appendix E of the AEMR.</p>	Compliant

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
1	ADMINISTRATIVE			
A1	WHAT THE LICENCE AUTHORISES AND REGULATES			
A1.1	This licence authorises the carrying out of the scheduled development work listed below at the premises listed in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition. Chemical Storage: >100 T annual volume of waste generated or stored Petroleum products and fuel production: >10000-20000 T	Throughout	The scheduled activities of chemical storage and petroleum products and fuel production took place during the reporting period. The Rutherford Refinery processed 28,515 tonnes of waste lubricant oil during the reporting period. This is well below the 200,000 tonne annual production capacity maximum scale specified.	Compliant
A2	PREMISES OR PLANT TO WHICH LICENCE APPLIES			
A2.1	The licence applies to the following premises: Cleanaway Refiners Pty Ltd 41 Kyle Street Rutherford NSW 2320 Lot 223 DP 1037300	Throughout	Noted.	Noted
A3	OTHER ACTIVITIES			
A3.1	This licence applies to all other activities carried on at the premises, including: - Chemical storage	Throughout	Noted.	Noted
A4	INFORMATION SUPPLIED TO THE EPA			
A4.1	Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to: (a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and (b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.	Throughout	No works and activities outside those specified in the EPL application have been undertaken during the audit period.	Compliant
2	DISCHARGES TO AIR AND WATER AND APPLICATIONS TO LAND			
P1	LOCATION OF MONITORING / DISCHARGE POINTS AND AREAS			
P1.1	The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point. <i>Air</i> EPA Identification No's 2, 3, 4, 5, 19, 20, 21, 24	Operation	The air monitoring points outlined in this condition have been established and monitoring has been undertaken as required. Refer to EPL Condition L3.2 for a discussion of Discharge Points (DP) DP2, DP3, DP5, DP19, DP20 and DP24. Refer to EPL Condition M5.1 for a discussion of the weather station (DP21). Refer to EPL Condition O6 for a discussion of monitoring at DP4.	Compliant
P1.2	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.	Operation	No utilisation areas noted.	Noted
P1.3	The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point. <i>Water and land</i> EPA Identification No's 6, 10, 22, 23	Operation	The groundwater monitoring wells outlined in this condition have been established and monitoring has been undertaken as required. Refer to EPL Condition M2.3 for discussion of groundwater monitoring.	Compliant

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
3	LIMIT CONDITIONS			
L1	POLLUTION OF WATERS			
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Throughout	Management measures to prevent pollution of waters are outlined in the OEMP, GWMP and Stormwater Management Plan. The following measures were implemented during the reporting period: - Surface water captured in the storage tank area, hydrogenation plant and truck unloading bay was directed to the Puraceptor and Granular Activated Carbon (GAC) unit prior to discharge to sewer under a Trade Wastewater Agreement. - Surface water from other hardstand areas including Cooling Towers, HP Boiler, LP Boiler, N2 Plant and H2 Plant, flows to the back (southwestern) corner of the Site for pollution collection and retention. The surface water flows into two grated drains that collect at a stormwater pit (Hydrodynamic Vortex Separator) designed to remove solid sediment, pollutants, oil and other floatables in the water. - The stormwater pit is isolated from the surface water drainage system by maintaining the stormwater shut-off valve in a closed position unless release is allowed under controlled conditions. - Inspection and maintenance of the stormwater management is undertaken on a daily, weekly, monthly, 3-monthly, 6-monthly and annual basis. - Stormwater monitoring is undertaken on a quarterly. Refer to Section 7.4. - Groundwater monitoring is undertaken annually. Refer to Section 7.3. There were no incidents recorded during the reporting period which resulted in the pollution of waters.	Compliant
L2	LOAD LIMITS			
L2.1	The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.	Operation	All assessable pollutants were within the load limits specified. Refer to Section 7.2.	Compliant
L2.2	The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.	Operation	The 2023 Annual Return listed the Source Monitoring Method TM-34, as the calculation method for each of the assessable pollutants. This is listed in the EPA's Load Calculation Protocol as an acceptable method for assessable air pollutants. Source monitoring was undertaken by external consultants, Assured Environmental for the reporting period.	Compliant
L3	CONCENTRATION LIMITS			
L3.1	For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	Operation	Noted. Refer to L3.2.	Noted
L3.2	Air Concentration Limits <u>Points 2,3,20</u> VOC: 10 mg/m3 NOx: 350 mg/m3 Solid particles: 10 mg/m3 <u>Point 5</u> VOC: 20 mg/m3 <u>Point 19</u> Solid particles: 50 mg/m3 H2S: 5 mg/m3 VOC: 10 mg/m3 NOx: 350 mg/m3 Sulfuric acid mist: 100 mg/m3 S2O: 1360 mg/m3 <u>Point 24</u> Solid particles: 10 mg/m3 Sulphur dioxide: 100 mg/m3 Nitrogen oxides: 350 mg/m3 VOC: 20mg/m3 Carbon monoxide: 125mg/m3	Operation	There were no exceedances of air concentration limits. Refer Section 7.2.	Compliant

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
L4	WASTE			
L4.1	<p>The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below.</p> <p>Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below. Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below.</p> <p>This condition does not limit any other conditions in this licence.</p> <p>J100 - Waste mineral oils - waste processing - must not exceed 40,000 tonnes per year</p> <p>J120 - Waste oily/hydrocarbons mixtures in water - waste storage - must not exceed 120 tonnes at any one time</p> <p>D120 - Spent catalyst - waste storage - must not exceed 120 tonnes at any one time</p> <p>General or specific exempted waste - As specified in each particular resource recover exemption - limit N/A</p> <p>Waste - Any waste received on site that is below the licensing thresholds in Schedule 1 of the POEO Act - limit N/A</p>	Operation	<p><u>J100 - Waste Oil</u></p> <p>28,515 tonnes of waste lubricant oil was processed during the reporting period. This is below the 40,000 tonne limit.</p> <p><u>J120 - Oily water</u></p> <p>The following oily water is stored on site:</p> <ul style="list-style-type: none"><li>- Two 1,000 L Intermediate bulk containers (IBC) for the storage of oily water (J120) from the puraceptor (predominately)</li><li>- One 1,000 L IBC of waste oil generated during the refinery process (e.g. from product testing) which gets emptied back into the feed tank for re-processing.</li></ul> <p>These waste storage activities are well below the storage limits specified.</p> <p><u>D210 - Spent Catalyst</u></p> <p>Spent catalyst is stored in drums housed in a dedicated covered and bunded storage area. A monthly stocktake is undertaken and the number of tonnes of spent catalyst recorded in a stocktake spreadsheet. The limit of 120 tonnes was not exceeded during the reporting period.</p> <p><u>Waste</u></p> <p>No waste was received on site during the reporting period. Importing of VENM for the legacy dam decommissioning works was completed in the previous AEMR reporting period. No VENM was brought onto site during this reporting period.</p>	Compliant
L5	NOISE LIMITS			
L5.1	<p>Noise generated at the premises must not exceed:</p> <ul style="list-style-type: none"><li>a) 37dB(A) LAeq(15 minute) at (Receptor B);</li><li>b) 35 dB(A) LAeq(15 minute) at (Receptors A to P excluding B); and</li><li>c) 49 dB(A) LA1(1 minute) at Receptors A to P during the hours 10pm to 7am Monday to Saturday and 10pm to 8am Sunday at all times, except as expressly provided by this licence.</li></ul> <p>Where LAeq means the equivalent continuous noise level – the level of noise equivalent to the energy-average of noise levels occurring over a measurement period.</p> <p>Where Receptors A to P are identified in the document “Rutherford Resource Recovery and Recycling Facility, Environmental Assessment, Volume 3 Appendix K” prepared by Parsons Brinkerhoff and dated January 2006.</p>	Operation	<p>Monitoring undertaken in 2020 indicated compliance with the specified noise criteria. Refer to Section 7.5.</p>	Compliant
L5.2	<p>To determine compliance with condition(s) of this licence noise must be measured at, or computed for, at the identified noise sensitive receptor. A modifying factor correction must be applied for tonal, impulsive or intermittent noise in accordance with the "Environmental Noise Management - NSW Industrial Noise Policy (January 2000)"</p>	Operation	<p>Monitoring undertaken in 2020 indicated compliance with the specified noise criteria. Refer to Section 7.5.</p>	Compliant
L6	POTENTIALLY OFFENSIVE ODOUR			
L6.1	<p>No condition in this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.</p> <p><i>Note: Section 129 of the Protection of the Environment Operations Act 1997 provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.</i></p>	Operation	<p>Cleanaway implements the AQMP to minimise and manage odour. This includes ensuring plant is maintained and operated efficiently, conducting odour assessments as part of routine workplace inspections, recording and managing odour complaints and undertaking odour monitoring as required by the EPL.</p> <p>No complaints relating to odour were received during the reporting period.</p>	Compliant
L7	OTHER LIMIT CONDITIONS			
L7	<p><i>Note: The licensee must comply with the conditions as specified in this licence or where no specific conditions are outlined in this licence, the licensee must comply with the "Chemical Control Order in Relation to Materials and Wastes Containing Polychlorinated Biphenyl, 1997".</i></p>	Operation	<p>No materials or waste containing PCBs are stored on site.</p>	Not-triggered

## Cleanaway Rutherford Refinery

Reference	Requirement	Phase	Evidence & Comments	Compliance Status
<b>4</b>	<b>OPERATING CONDITIONS</b>			
O1	ACTIVITIES MUST BE CARRIED OUT IN A COMPETENT MANNER			
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Operation	Cleanaway maintains a training register in MYOSH which identifies training competencies assigned and completed by each employee. Different training modules have been developed for different access to the Site e.g., visitor, contractor, truck driver to loading bay. Operator and maintenance staff training is undertaken regularly. Waste is transported by appropriately licensed transporters to appropriately licensed facilities.	Compliant
O1.2	All operations and activities used in connection with the licensed activity must be carried out in a manner that prevents or minimises the emission of air pollutants from where the licensed activity takes place.	Operation	Air emissions are managed in accordance with the AQMP. The following measures are in place to minimise air emissions: - Storage tanks at the Cleanaway facility are controlled with vapour reduction unit to capture and control emissions from the tanks and the loading / unloading area. - The light end capture system (nitrogen blanketing and vapour capture) are scrubbed by the activated charcoal system prior to the VOC wet scrubber. - The flare is only used when the system experiences interruptions or shutdowns known as an 'upset' as shown on the Flare Log.	Compliant
O2	MAINTENANCE OF PLANT AND EQUIPMENT			
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	Operation	The site operates 24 hours per day, seven days per week and is controlled via the Main Control Room. The Main Control Room includes monitoring of site conditions and weather forecasts and operating controls as required. CMMS was introduced company wide for safety critical elements and compliance monitoring in October 2022. The CWY Rutherford Equipment List Maintenance spreadsheet continues to be used for aspects not covered by the CMMS. Equipment with environmental duties such as the SOX scrubber, flare, weather station, VOC scrubber, stormwater pit silt trap and oily water separator are included in the CMMS.	Compliant
O2.2	Waste oil and other non-standard fuels must not be burnt or used as fuel on the site.	Operation	The Rutherford Refinery uses natural gas to fuel operations. No waste oil or non-standard fuels are used as fuel.	Compliant
O2.3	All boilers must be fuelled only by natural gas.	Operation	The Rutherford Refinery uses natural gas to fuel operations.	Compliant
O3	EMERGENCY RESPONSE			
O3.1	The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) in relation to the activity to which this licence relates. The licensee must at all times keep the PIRMP at the location where the licensed activity takes place. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur where the licensed activity takes place or that may be associated with activities that occur where the licensed activity takes place and which are likely to cause harm to the environment. The licensee must, in relation to the PIRMP, comply with the requirements in Part 5.7A of the Act and Regulations made under the Act	Operation	The Pollution Incident Response Management Plan (PIRMP) documents the procedures to deal with incidents which are likely to cause harm to the environment. The PIRMP is supported by the site-specific emergency management plan. The PIRMP is reviewed annually and tested at a minimum every 12 months. The PIRMP was tested on the 16 March 2023 and reviewed on the 6 April 2023. A hard copy of the PIRMP is located at the Rutherford office. An electronic version is available on the Cleanaway intranet portal and on the Cleanaway website.	Compliant
O4	PROCESSING AND MANAGEMENT			
O4.1	The licensee must ensure that any liquid and/or non-liquid waste for treatment, processing, reprocessing or disposal at the premises is assessed and classified in accordance with the Waste Classification Guidelines produced by the Environment Protection Authority (EPA) as in force from time to time.	Operation	The only waste processed at the premises during the reporting period was refined used fuel oil. No waste is disposed of at the premises. All waste generated at the site is taken off-site for disposal. Waste tracking certificates are kept on file for waste removed from site.	Compliant
O4.2	The licensee must ensure that waste identified for recycling is stored separately from other waste.	Operation	Separate bins are provided in the office area for paper, comingled recycling and landfill. Waste metal is separated for collection by local scrap steel recycler.	Compliant
O4.3	No more than 30,000 litres of feed oil can be processed prior to the sorbent reactivation cycle being conducted. For the purposes of this condition the quantity of feed oil is taken from the time after the previous reactivation cycle occurred.	Operation	Cleanaway monitors this through its SCADA control system. The MOPP's internal control system will automatically commence the reactivation cycle prior to reaching the 30,000L feed oil limit.	Compliant
O4.4	Only base oil processed through the Cleanaway Refiners Pty Ltd facility at 41 Kyle Street, Rutherford, NSW, 2320, (Environment protection licence no. 12555) may be processed through the Mobile Oil Regeneration System	Operation	The MOPP is supplied from Finished Product Storage Tank 6 and therefore can only process base oil that has been processed by the refinery.	Compliant
O4.5	Base oil processed through the Mobile Oil Regeneration System must not contain polychlorinated biphenyls (PCBs) or other contaminant which the plant is not designed to treat.		The MOPP is supplied from Finished Product Storage Tank 6 and therefore can only process base oil that has been processed by the refinery. Other Cleanaway facilities are responsible for the pre-treatment of waste oil (including screening for PCB's) prior to it being received at the Rutherford facility for refining.	Compliant



Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
O5	WASTE MANAGEMENT			
O5.1	All above ground tanks containing material that is likely to cause environmental harm must be bunded or have an alternative spill containment system in place.	Operation	The following areas with above ground tanks are bunded: Process Tank, Storage Tank, FPCC, Hydrogenation Plant (HGP) & Fire Heater, Loading Bay and Dangerous Goods (DG) Storage area. An internal bund review of the undertaken in October 2020 confirmed the volume of each bunded area had sufficient capacity to contain 110% of the largest container stored within the bund. The MOPP is self-bunded (the HAZOP completed for the MOPP takes into account bund capacity impacts). IBC's used for storage of oily water from the puraceptor and waste oil generated from product testing are stored on pallet bunds.	Compliant
O5.2	The licensee must ensure that suitable measures (e.g. high/low alarms, control valves with interlock control, one way valves) are installed on all tanks, ponds or clarifiers and associated pipes and hoses to prevent the spillage of waste.	Operation	Bunds drain to interceptor pits which are pumped through the puraceptor to a balance tank. The balance tank employs high level and low level switches. The effluent pumps were interlocked into the high level switch. In the event that the puraceptor overflows, the overflow drains back to the interceptor pit for reprocessing. Waste oil is stored in IBCs within the bunded area and attached to the puraceptor via flexi hoses.	Compliant
O6	OTHER OPERATING CONDITIONS			
O6.1	The flare must not operate except during start up, shutdown and permissible process upsets.	Operation	Flaring is tracked using the SCADA system and then transferred onto a manual flare log by the control room. A Flaring Time Rolling Total spreadsheet is maintained which records the total cumulative flare time and records process operating times. All flare events during the reporting period were during start-up, shut down and process upsets.	Compliant
O6.2	Process upsets must not exceed 2% of the total process operating time during any 12 month period.	Operation	In 2022/23 process upsets were less than 2% of process operating time (approximately 1.3%).	Compliant
O6.3	There must be no visible emission from Point 4 other than for a total period of no more than 5 minutes in any 2 hour period.	Operation	The Flare Log requires a check for visible plumes. No visible plumes were observed during the reporting period.	Compliant
5	MONITORING AND RECORDING CONDITIONS			
M1	MONITORING RECORDS			
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	Operation	Results of monitoring required by the EPL (groundwater, air quality and weather) are recorded and retained as required. Refer M1.2 and M1.3.	Compliant
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Operation	Records are maintained in a legible form on the internal Cleanaway network drive in electronic format. They are maintained for at least four years. The EPA has not requested any data during the reporting period.	Compliant
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	Operation	<u>Air Quality Monitoring</u> Air Quality monitoring was undertaken by Assured Environmental during the reporting period. The report provided detailed the date on which samples were taken, the run start and run stop times, the sample locations and the name of the person who collected the sample. <u>Groundwater Monitoring</u> Groundwater monitoring was undertaken by Assured Environmental during the reporting period. The report provided detailed the date and time at which samples were taken, the sample locations and the name of the person who collected the samples.	Compliant
M2	REQUIREMENT TO MONITOR CONCENTRATION OF POLLUTANTS DISCHARGED			
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Operation	Noted. Refer to M2.2.	Noted
M2.2	<i>Air Monitoring Requirements</i> Points 2,3 (table not reproduced - refer EPL) Point 5 (table not reproduced - refer EPL) Point 19 (table not reproduced - refer EPL) Point 20 (table not reproduced - refer EPL) Point 24 (table not reproduced - refer EPL)	Operation	Annual Monitoring was conducted from 21 - 24 November 2022 at Points 2, 3, 5, 19, 20 and 24. Monitoring was also undertaken at Point 24 on the 8 May 2023 (six monthly). The monitoring reports prepared by Assured Environmental include a table of test methods for each analyte. These correlate with the test methods specified by M2.2.	Compliant



Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
M2.3	Water and /or Land Monitoring Requirements Point 6, 10, 22, 23 (table not reproduced - refer EPL)		Annual Monitoring was undertaken on the 22/11/2022 at Points 10 (MW12), 22 (MW15) and 23 (MW19). Point 6 (MW21) was dry so no sampling could be undertaken. Sampling for tetrachloroethylene, TPH C10-C35 and TPH C6-C9 was undertaken for Points 10, 22 and 23.	Compliant
M2.4	For each monitoring/discharge point specified below (by a point number), the licensee must adjust the monitoring results for the pollutants listed in Column 2 to the units of measure and reference conditions specified opposite in the other columns. (table not reproduced - refer EPL)	Operation	The monitoring reports prepared by Assured Environmental state in the Abbreviations Table that the gas volume in dry cubic meters is at standard temperature and pressure (0 degrees celcius and 101.3kPa). The monitoring results include 'Reference Corrections' relating to the %O2 for specific pollutants. These are as per the reference conditions specified by M2.4.	Compliant
M2.5	Special Method 1 – means the method described in US-EPA 323	Operation	Noted.	Noted
M3	TESTING METHODS - CONCENTRATION LIMITS			
M3.1	Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with: a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place. <i>Note: The Protection of the Environment Operations (Clean Air) Regulation 2002 requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".</i>	Operation	Monitoring for air pollutants has been conducted in accordance with the methods specified by the EPL.	Compliant
M3.2	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.	Operation	There are no licensed discharge points for discharges to water or to a utilisation area. Stormwater monitoring is undertaken in accordance with the OEMP and Stormwater Management Plan.	Noted
M4	TESSTING METHODS - LOAD LIMITS			
M4	Note: Division 3 of the Protection of the Environment Operations (General) Regulation 2009 requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.	Operation	Noted.	Noted
M5	WEATHER MONITORING			
M5.1	For each monitoring point specified in the table below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period, and sample at the frequency specified in the other columns. Point 21 (table not reproduced - refer EPL)	Operation	The weather station is located on top of the Control Room and operates continuously. Weather station data is downloaded to the Control Room where it is viewed on screen. Parameters are measured continuously and averaged at 15 minute periods. Envirodata, the vendor who supplies the unit, also conducts maintenance and calibration of the weather station. The Annual Field Calibration Reports state that sampling is as per the specified sampling methods.	Compliant
M6	RECORDING OF POLLUTION COMPLAINTS			
M6.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Throughout	Complaints are logged in the MYOSH system. No complaints were recorded during the reporting period.	Compliant
M6.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	Throughout	The MYOSH system allows for the required information to be captured.	Compliant
M6.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Throughout	Complaints are retained for at least 4 years.	Compliant
M6.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Throughout	The EPA have not requested any record be produced during the reporting period.	Not-triggered
M7	TELEPHONE COMPLAINTS LINE			
M7.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	Throughout	Cleanaway maintains a 24 hour community hotline number (1800 158 447 ) which can be used for receiving complaints.	Compliant
M7.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	Throughout	The complaints line is displayed at the entrance of the Rutherford facility. The community hotline number is also available on the Cleanaway website.	Compliant
M7.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.	Throughout	Completed outside of reporting period.	Closed out

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
M8	OTHER MONITRING AND RECORDING CONDITIONS			
M8.1	Detailed records of each use of the flare must be kept on site and made available to the EPA on request. Each record must include the flare start and stop time and the reason for its use.	Operation	Flare logs are completed and maintained by the control room which include the date, time flaring started, time flaring finished, duration of flaring, stack appearance (visible plume or no visible plume) and reason for flaring.	Compliant
M8.2	Detailed records of all process upsets and process start-ups and shutdowns must be kept. Each record must include the process start and stop time and the reason for each process upset.	Operation	Process start and stop times and details of process upsets are recorded in the monthly Plant KPI Reports.	Compliant
6	REPORTING CONDITIONS			
R1	ANNUAL RETURN DOCUMENTS			
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: 1. a Statement of Compliance; and 2. a Monitoring and Complaints Summary. 3. a statement of Compliance – Licence Conditions, 4. a Statement of Compliance - Load based Fee, 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan, 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and 7. a Statement of Compliance - Environmental Management Systems and Practices. At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.	Operation	The Annual Return for the period 29 September 2022 to 28 September 2023 was submitted to the EPA on the 27 November 2023. It was completed using the provided form and included the required statements of compliance.	Compliant
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	Operation	The Annual Return for 2022 was submitted in November 2022. The Annual Return for 2023 was submitted in November 2023 (outside this reporting period).	Compliant
R1.3	Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.	Operation	The licence was not transferred to a new licensee during the reporting period.	Not-triggered
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.	Operation	The licence was not been surrendered or revoked during the reporting period.	Not-triggered
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	Operation	The Annual Return for the period 29 September 2022 to 28 September 2023 was submitted to the EPA on the 27 November 2023.	Compliant
R1.6	Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify: a) the assessable pollutants for which the actual load could not be calculated; and b) the relevant circumstances that were beyond the control of the licensee.	Operation	Not triggered.	Not-triggered
R1.7	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Operation	Annual Returns are retained for at least four years.	Compliant
R1.8	Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	Operation	The Annual Return was signed by the Director and Company Secretary.	Compliant
R1.9	The licensee must submit the following information with the Annual Return: a) A comparison of data obtained from emissions monitoring to the emission limits in this licence and other relevant air quality criteria; b) Recommendations for the continuation or discontinuation of monitoring for pollutants which have not been detected or detected consistently at levels significantly below the licence and/or regulatory limits	Operation	a) Monitoring data is compared to emission limits and exceedances are reported in Section C2 of the Annual Return as non compliances. The Annual Return also includes a link to the Cleanaway website where monitoring data is published. The monitoring report published on the website includes a comparison of the data with the assessment criteria. b) There was no plan to change the monitoring requirements during the reporting period.	Compliant
	<i>Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.</i> <i>Note: An application to transfer a licence must be made in the approved form for this purpose.</i>	Throughout	Noted	Noted

Cleanaway Rutherford Refinery				
Reference	Requirement	Phase	Evidence & Comments	Compliance Status
R2	NOTIFICATION OF ENVIRONMENTAL HARM			
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	Throughout	No incidents of environmental harm have occurred during the reporting period.	Not-triggered
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. <i>Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.</i>	Throughout	No incidents of environmental harm have occurred during the reporting period.	Not-triggered
R3	WRITTEN REPORT			
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Throughout	Not triggered.	Not-triggered
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Throughout	Not triggered.	Not-triggered
R3.3	The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event; b) the type, volume and concentration of every pollutant discharged as a result of the event; c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event; d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and g) any other relevant matters.	Throughout	Not triggered.	Not-triggered
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request	Throughout	Not triggered.	Not-triggered
R4	OTHER REPORTING CONDITIONS			
R4.1	The licensee must notify the EPA of any process start-up, process shut-down and/or process upset which results in the concentration of hydrogen sulphide, as measured by the continuous hydrogen sulphide monitoring system exceeding 15 parts per million for a period of 30 seconds or more. The notification must be made within 24 hours of any of these events. Notification may be made by facsimile to (02) 49086810 or by email to newcastlerequest@environment.nsw.gov.au.	Operation	No process start-up, process shut-down and/or process upset resulted in concentration of hydrogen sulphide, as measured by the continuous hydrogen sulphide monitoring system exceeding 15 parts per million for a period of 30 seconds or more during the reporting period.	Compliant
7	GENERAL CONDITIONS			
G1	COPY OF LICENCE KEPT AT THE PREMISES			
G1.1	A copy of this licence must be kept at the premises to which the licence applies.		An electronic copy of the EPL is maintained on site. A copy (electronic or printed) is available to anyone on request.	Compliant
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.		Not triggered.	Not-triggered
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.		An electronic copy of the EPL is maintained on site. A copy (electronic or printed) is available to anyone on request.	Compliant

## Appendix B: Air Quality Trend Analysis

FIGURE B1: HISTORICAL NITROGEN DIOXIDE (EPL POINTS 2, 3, 19, 20 AND 24) TREND GRAPH

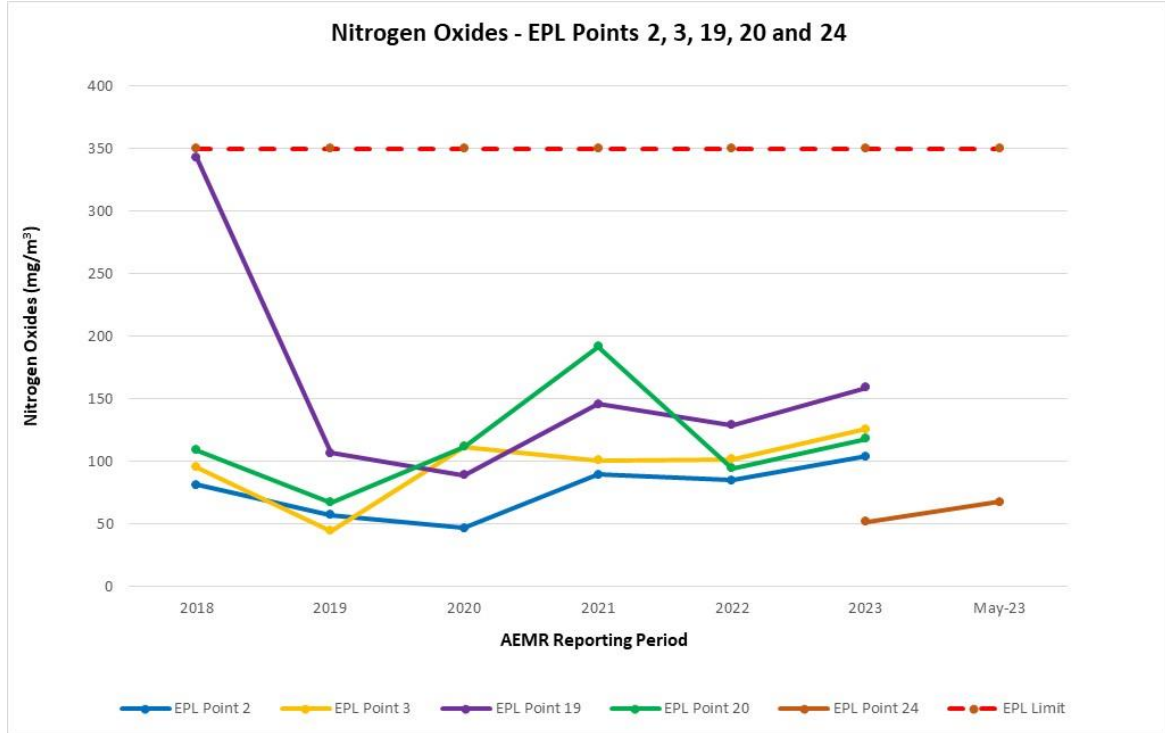
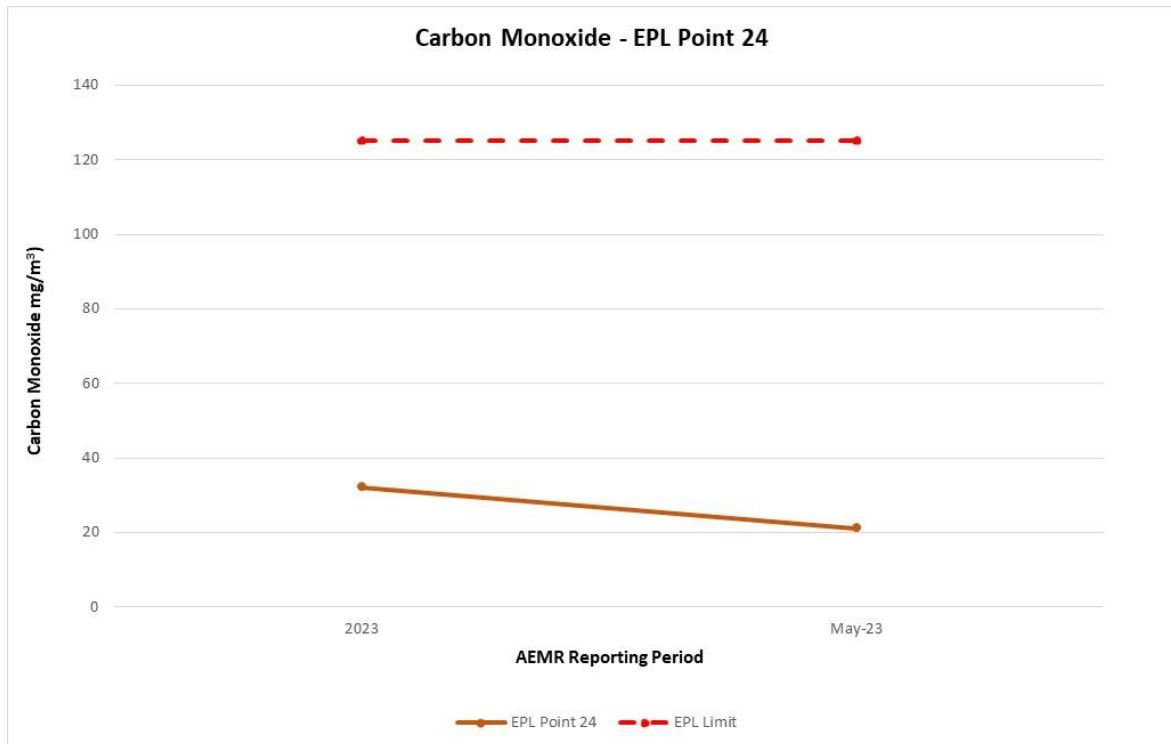
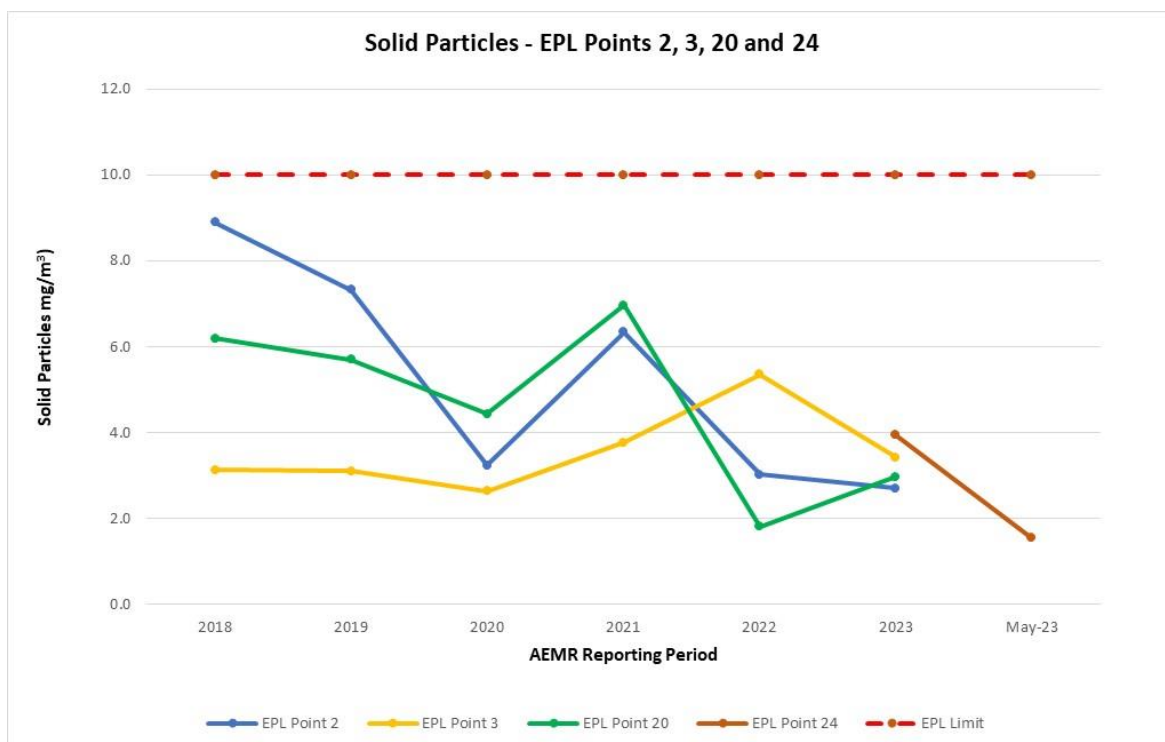
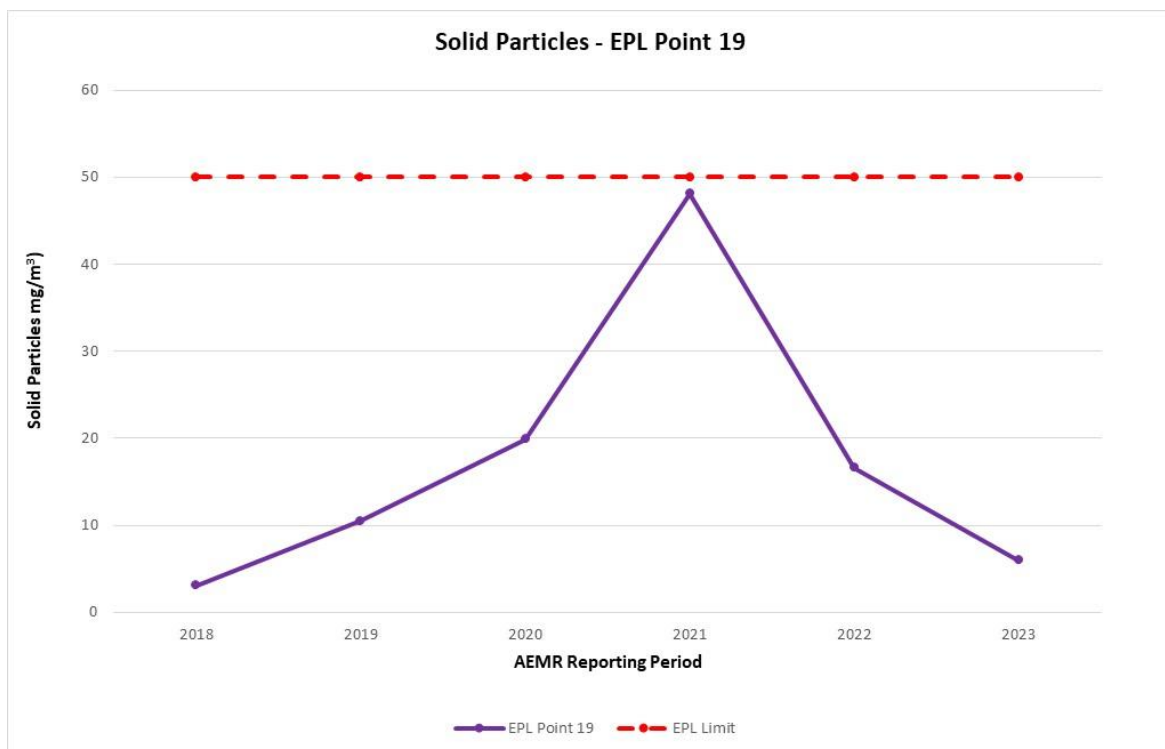
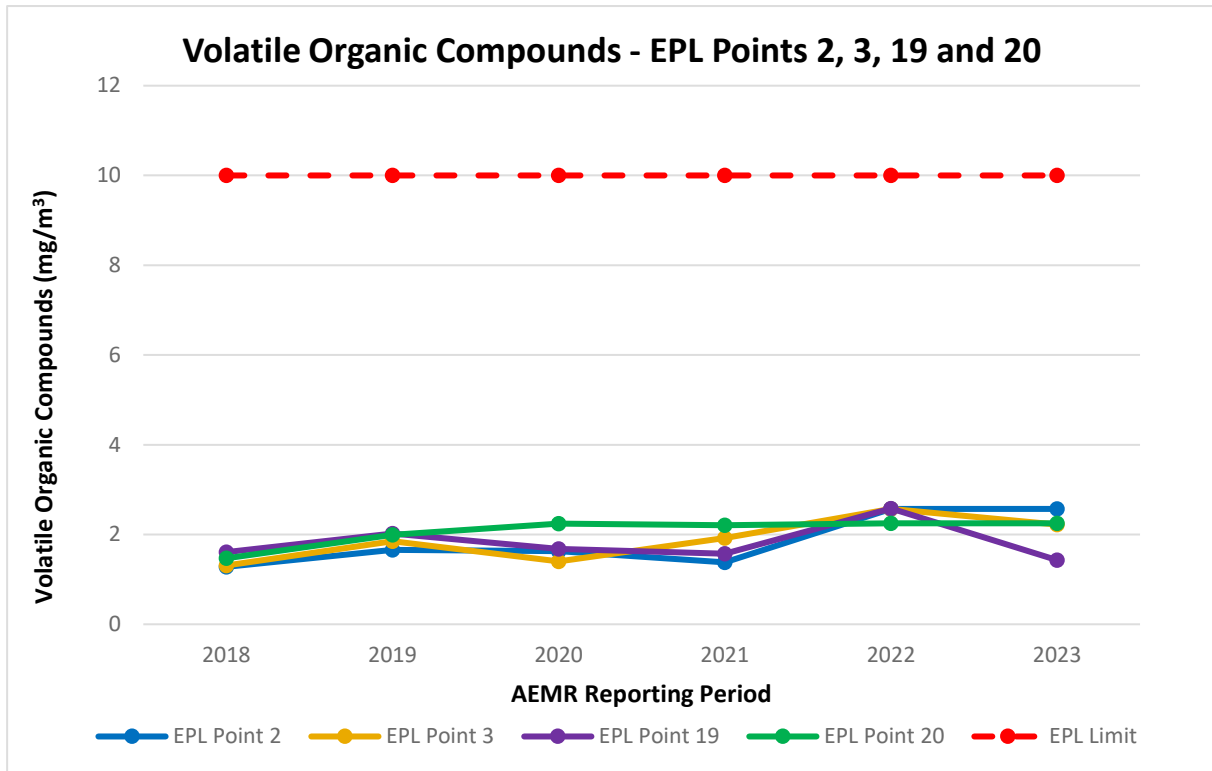
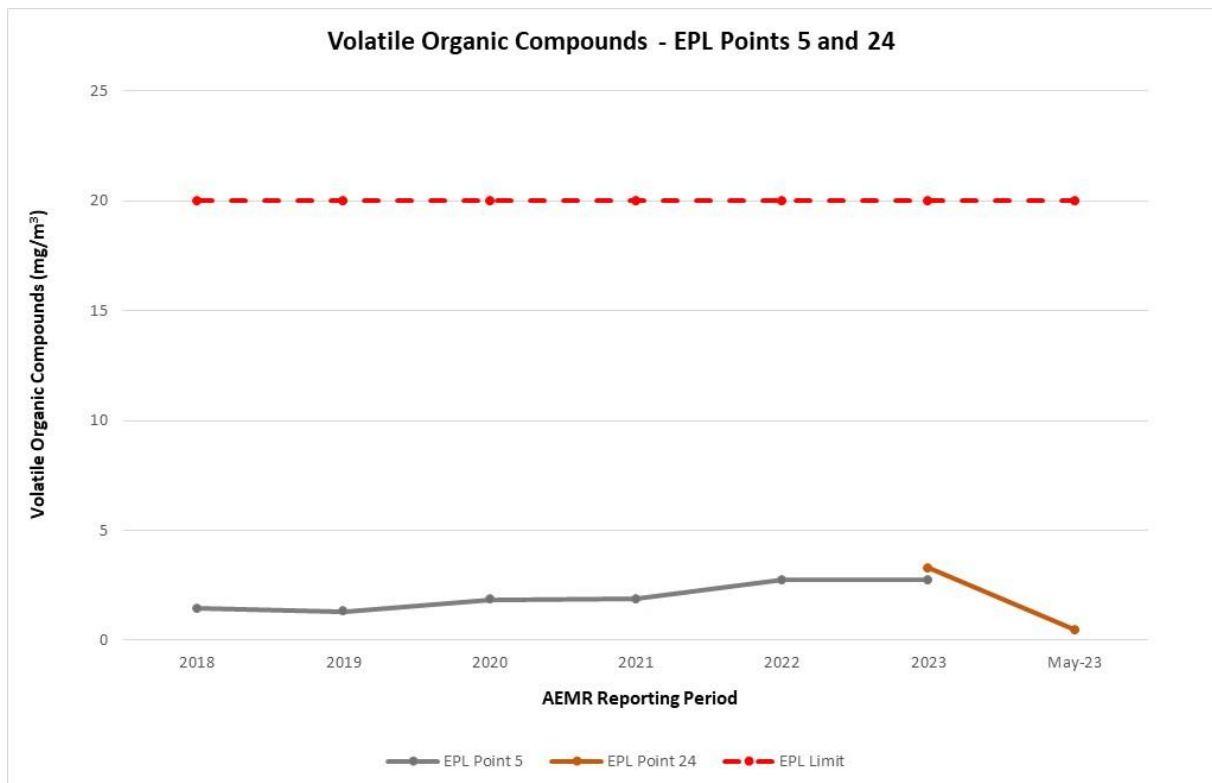
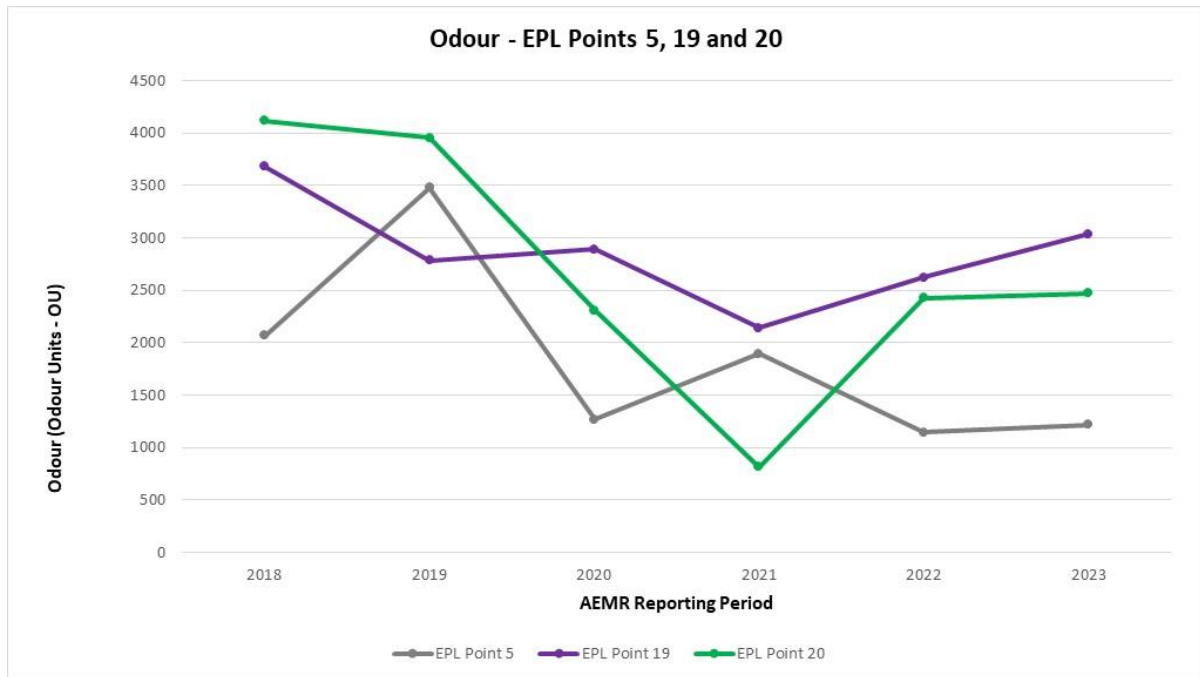
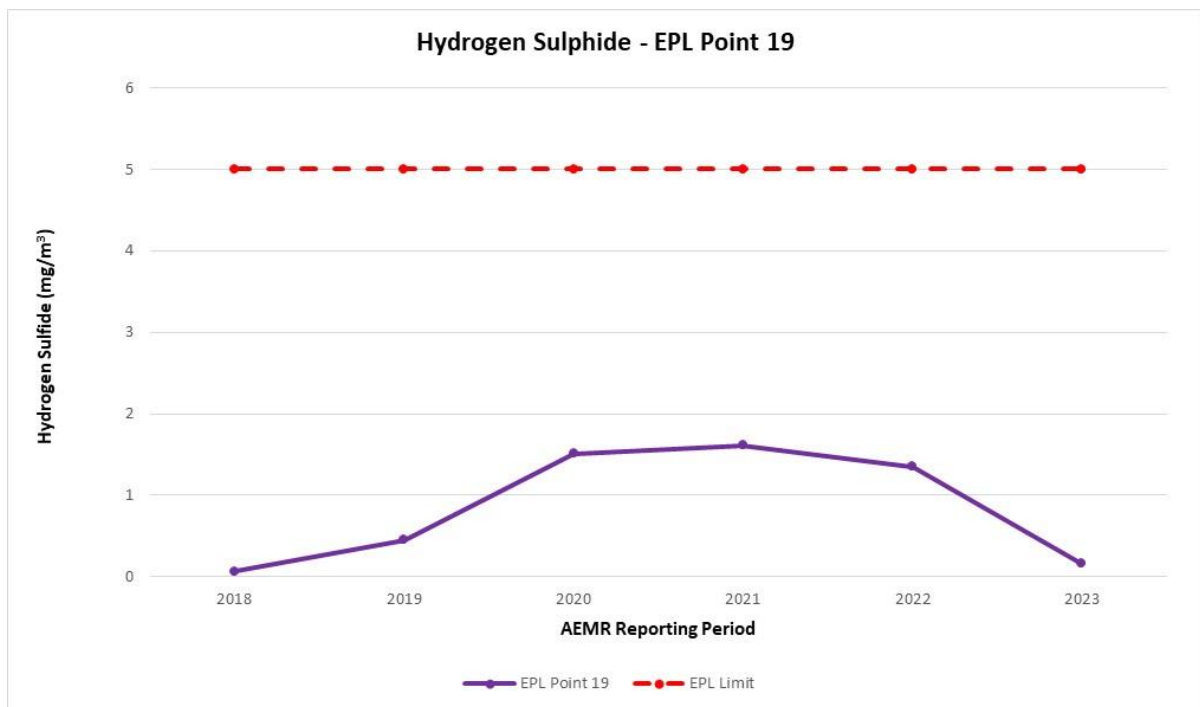


FIGURE B2: HISTORICAL CARBON MONOXIDE (EPL POINT 24) TREND GRAPH

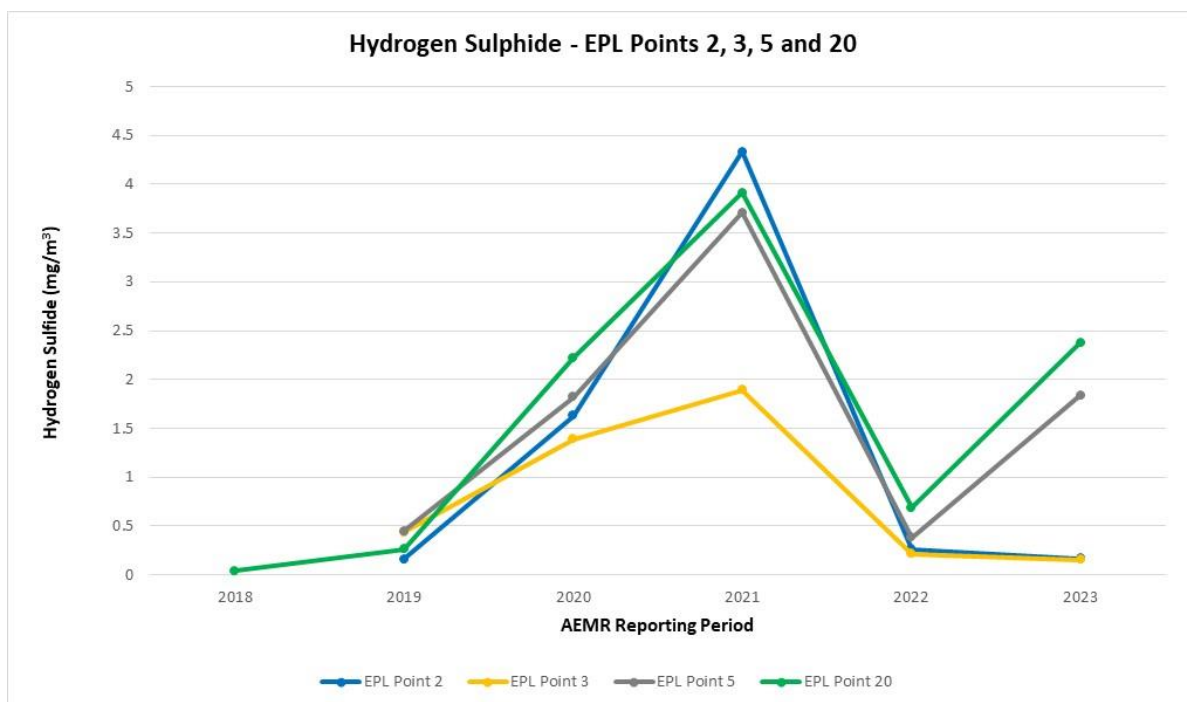
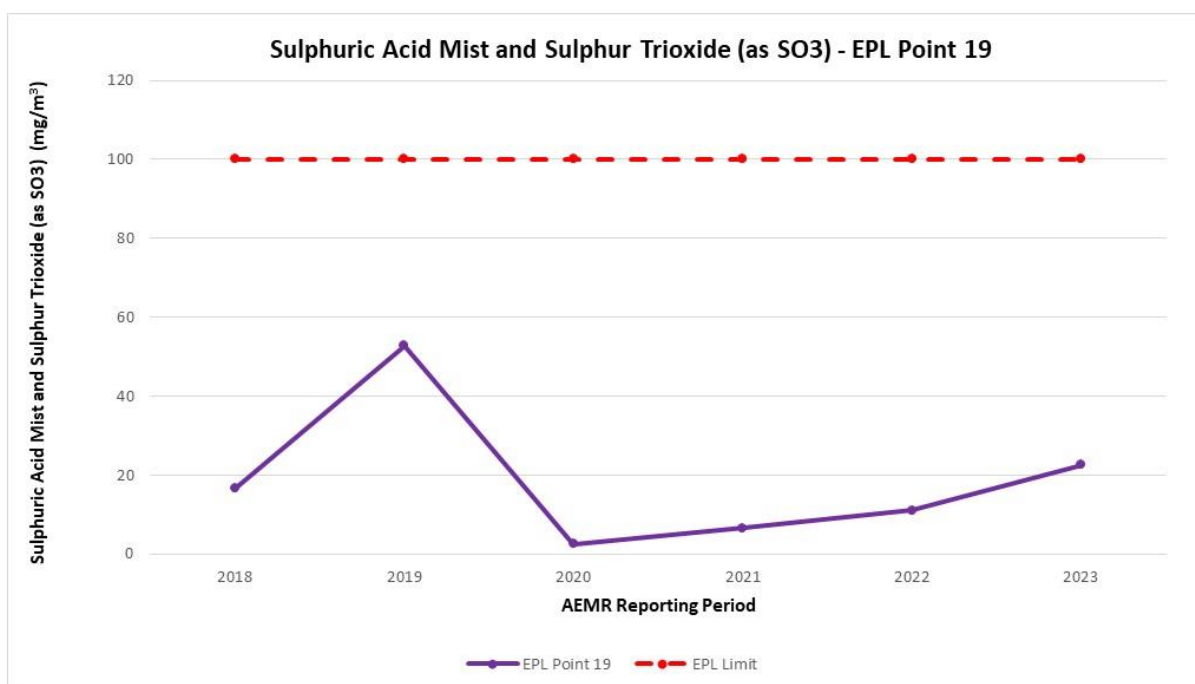


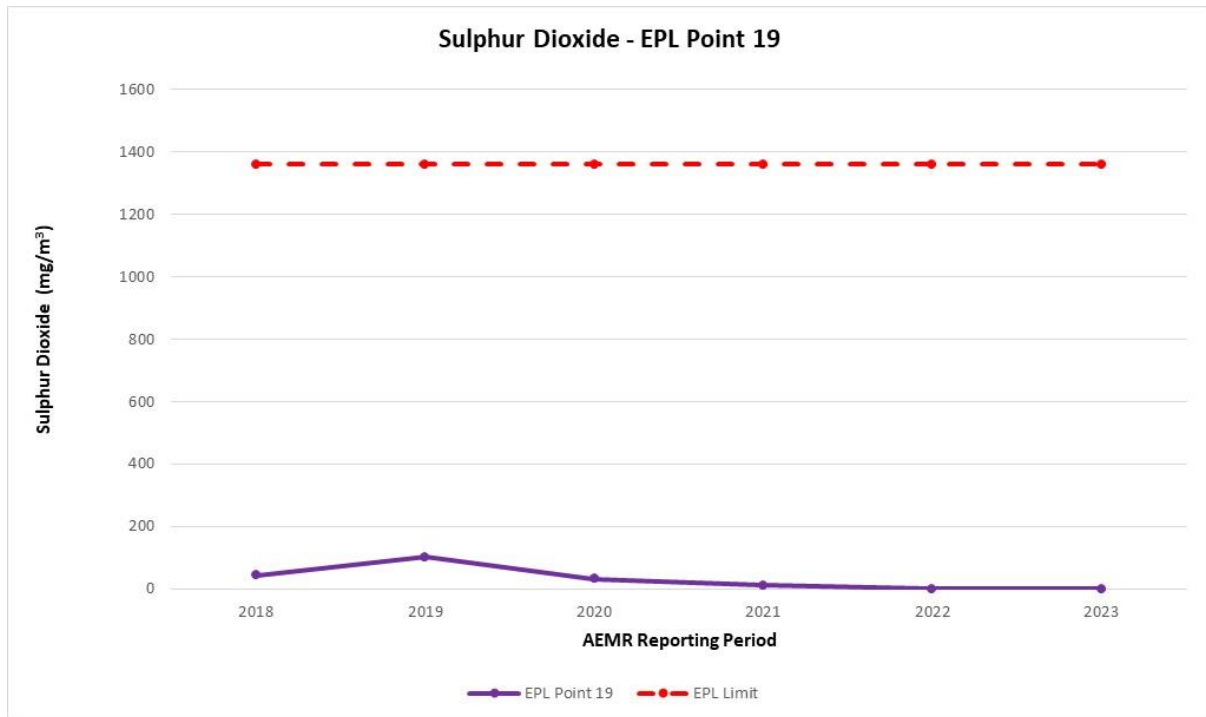
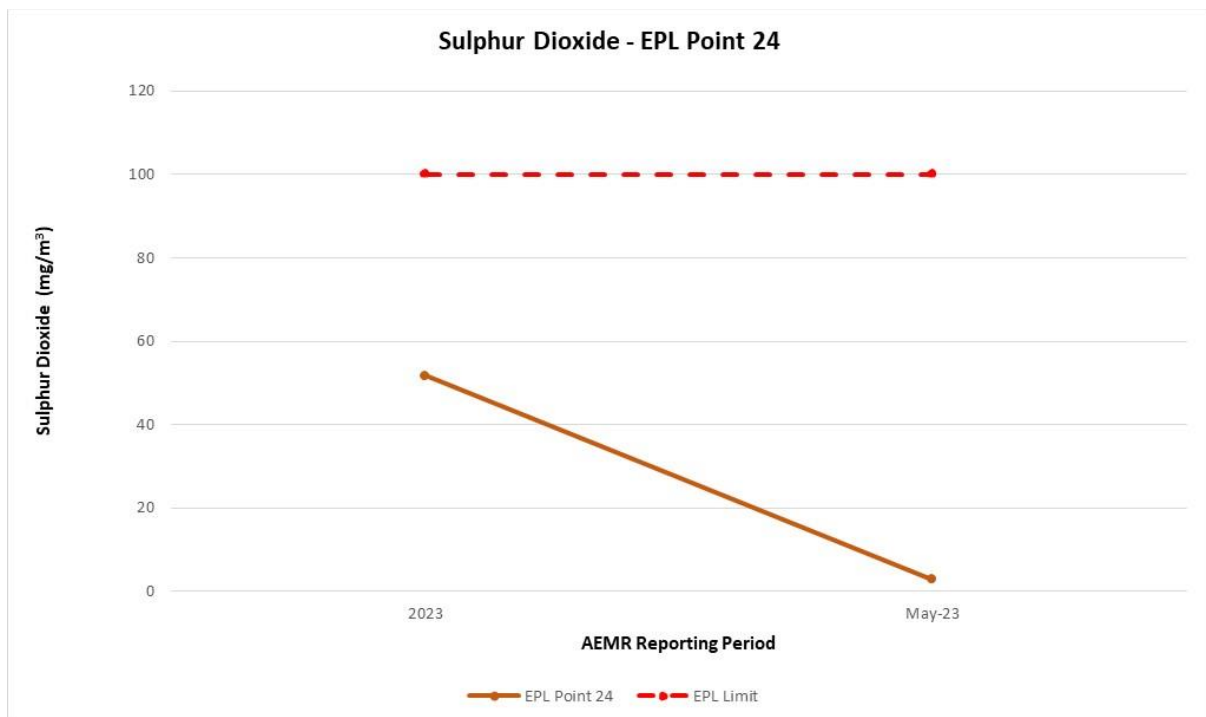
**FIGURE B3: HISTORICAL TOTAL PARTICULATE (EPL POINTS 2, 3, 20 AND 24) TREND GRAPH****FIGURE B4: HISTORICAL TOTAL PARTICULATE (EPL POINT 19) TREND GRAPH**

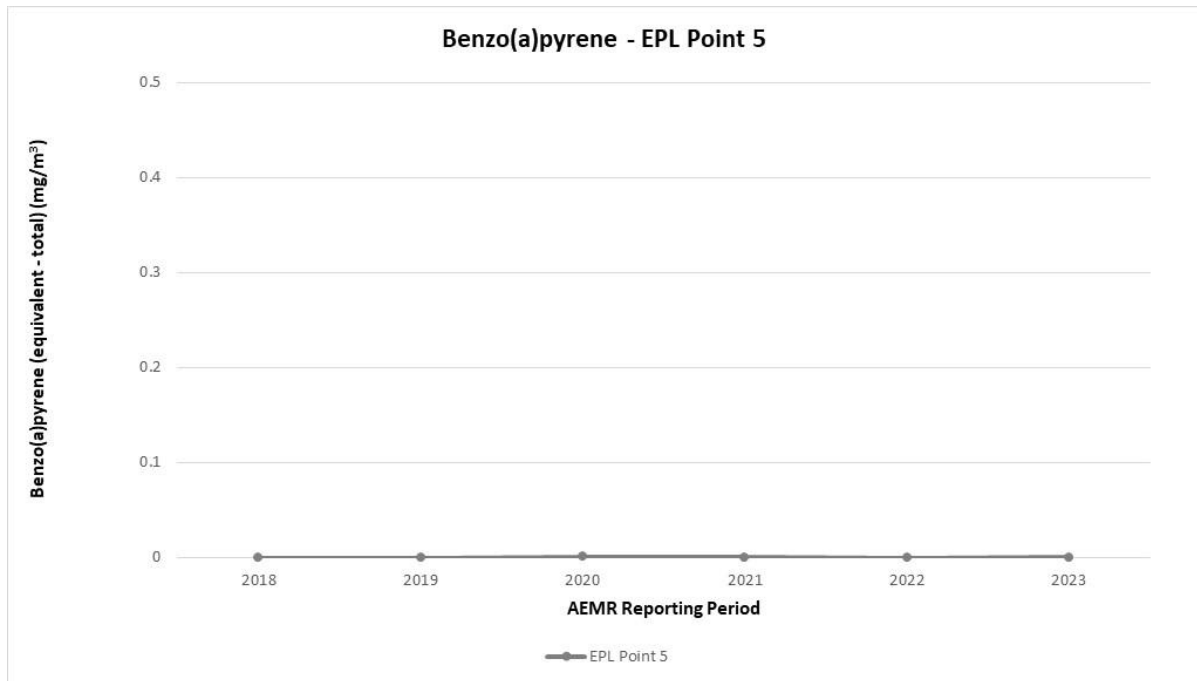
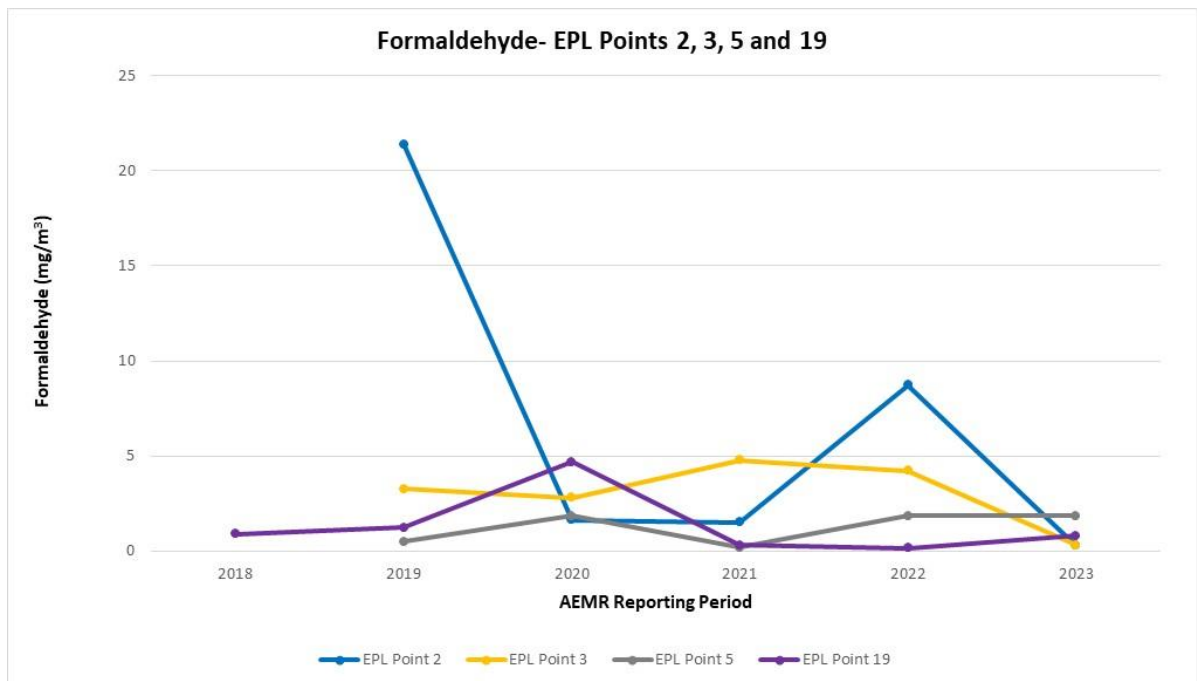
**FIGURE B5: HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPL POINTS 2, 3, 19 AND 20) TREND GRAPH****FIGURE B6: HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPL POINTS 5 AND 24) TREND GRAPH**

**FIGURE B7: HISTORICAL ODOUR (EPL POINTS 5, 19 AND 20) TREND GRAPH****FIGURE B8: HISTORICAL HYDROGEN SULPHIDE (EPL POINT 19) TREND GRAPH**



**FIGURE B9: HISTORICAL HYDROGEN SULPHIDE (EPL POINTS 2, 3, 5 AND 20) TREND GRAPH****FIGURE B10: HISTORICAL SULPHURIC ACID MIST AND SULPHUR TRIOXIDE (EPL POINT 19) TREND GRAPH**

**FIGURE B11: HISTORICAL SULPHUR DIOXIDE (EPL POINT 19) TREND GRAPH****FIGURE B12: HISTORICAL SULPHUR DIOXIDE (EPL POINT 24) TREND GRAPH**

**FIGURE B13: HISTORICAL PAH [BENZO(A)PYRENE EQUIVALENT] (EPL POINT 5) TREND GRAPH****FIGURE B14: HISTORICAL FORMALDEHYDE (EPL POINTS 2, 3, 5 AND 19) TREND GRAPH**

## Appendix C: Groundwater Quality Trend Analysis

Sample ID	Date Sampled	Groundwater level (m)	Temp (°C)	DO (mg/L)	pH	EC (mS/cm)	Redox (mV)	C6-C9 (µg/L)	C10-C16 (µg/L)	C16-C34 (µg/L)	C34-C40 (µg/L)	C10-C36 (µg/L)	Tetrachloroethene
MW12	8/12/2016	13.1	20.5	1.4	5.32	12980	119	11	<50	<100	<100	-	3
	30/11/2017	11.75	26.2	2.72	6.35	12.6	NP	<10	<50	<100	<100	-	<1
	29/11/2018	13.5	20.3	4.84	5.9	12600	NP	<10	<50	<100	<100	-	<1
	6/11/2019	13.9	24.5	2.96	5.35	10119	138	<20	-	-	-	<100	<5
	1/12/2020	Dry	-	-	-	-	-	-	-	-	-	-	-
	17/12/2021	Dry	-	-	-	-	-	-	-	-	-	-	-
	22/11/2022	12.89	23.8	7.25	5.04	53420	135.9	<10	<50	<100	<100	<50	<1
MW15	30/11/2017	14.25	22.9	7.33	6.74	7.905	NP	<10	<50	<100	<100	-	<1
	29/11/2018	16	22.3	4.93	7.76	44010	NP	<10	<50	<100	<100	-	<1
	5/11/2019	14.5	20.6	4.47	6.02	8185	140	<20	-	-	-	<100	<5
	1/12/2020	13.3	20.7	6.9	6.28	6768	12	<20	<100	<100	<100	<50	<5
	17/12/2021	13.2	21.2	1.4	5.0	3100	147	<10	<50	<100	<100	<50	<1
	22/11/2022	13.2	22.88	7.41	5.65	61400	88	<10	<50	<100	<100	<50	<1
MW19	30/11/2017	14.5	21.7	1.88	6.51	5950	NP	<10	<50	<100	<100	-	<1
	29/11/2018	17	20.4	8.65	6.47	48000	NP	<10	<50	<100	<100	-	<1
	6/11/2019	16	22.1	0.65	6.06	6292	-199	<20	-	-	-	<100	<5
	1/12/2020	13.3	21	0.78	5.73	6766	-14	<20	<100	<100	<100	<50	<5
	17/12/2021	13.3	20.3	2.4	5.5	2200	88.6	<10	<50	<100	<100	<50	<1
	22/11/2022	12.8	18.99	9.16	4.05	6670	257.9	<10	<50	<100	<100	<50	<1
MW21	8/12/2016	12.78	33.3	3.23	6.61	5681	-15.7	400		<100	<100	-	150
	30/11/2017	Dry	-	-	-	-	-	-	-	-	-	-	-
	29/11/2018	Dry	-	-	-	-	-	-	-	-	-	-	-
	5/11/2019	Dry	-	-	-	-	-	-	-	-	-	-	-
	1/12/2020	Dry	-	-	-	-	-	-	-	-	-	-	-
	17/12/2021	Dry	-	-	-	-	-	-	-	-	-	-	-
	22/11/2022	Dry	-	-	-	-	-	-	-	-	-	-	-

Sample ID	Date Sampled	Groundwater level (m)	Temp (°C)	DO (mg/L)	pH	EC (mS/cm)	Redox (mV)	C6-C9 (µg/L)	C10-C16 (µg/L)	C16-C34 (µg/L)	C34-C40 (µg/L)	C10-C36 (µg/L)	Tetrachloroethene
MW17*	8/12/2016	12.9	19.8	2.34	6.37	8120	-18.8	250	<50	<100	<100	-	54
	13/12/2017	12.87	21	NP	7	7960	-50.1	140	<100	<200	<200	-	39
MW18*	8/12/2016	12.77	20.5	1.45	6.4	7840	-99.5	75	<50	<100	<100	-	26
	13/12/2017	12.96	30.2	NP	7.02	8030	18.2	25	<100	<200	<200	-	12
MW20*	8/12/2016	13.96	20.7	2.1	6.31	7650	62.2	<10	<50	<100	<100	-	2
	13/12/2017	17	22.4	NP	7.18	7610	91.4	<10	<100	<200	<200	-	<1

**Notes:** \*Location removed from EPL12555 NP= Not provided

## Appendix D: Surface Monitoring Locations

Figure D1: Site Plan and Stormwater Drainage (from Stormwater Management Plan)

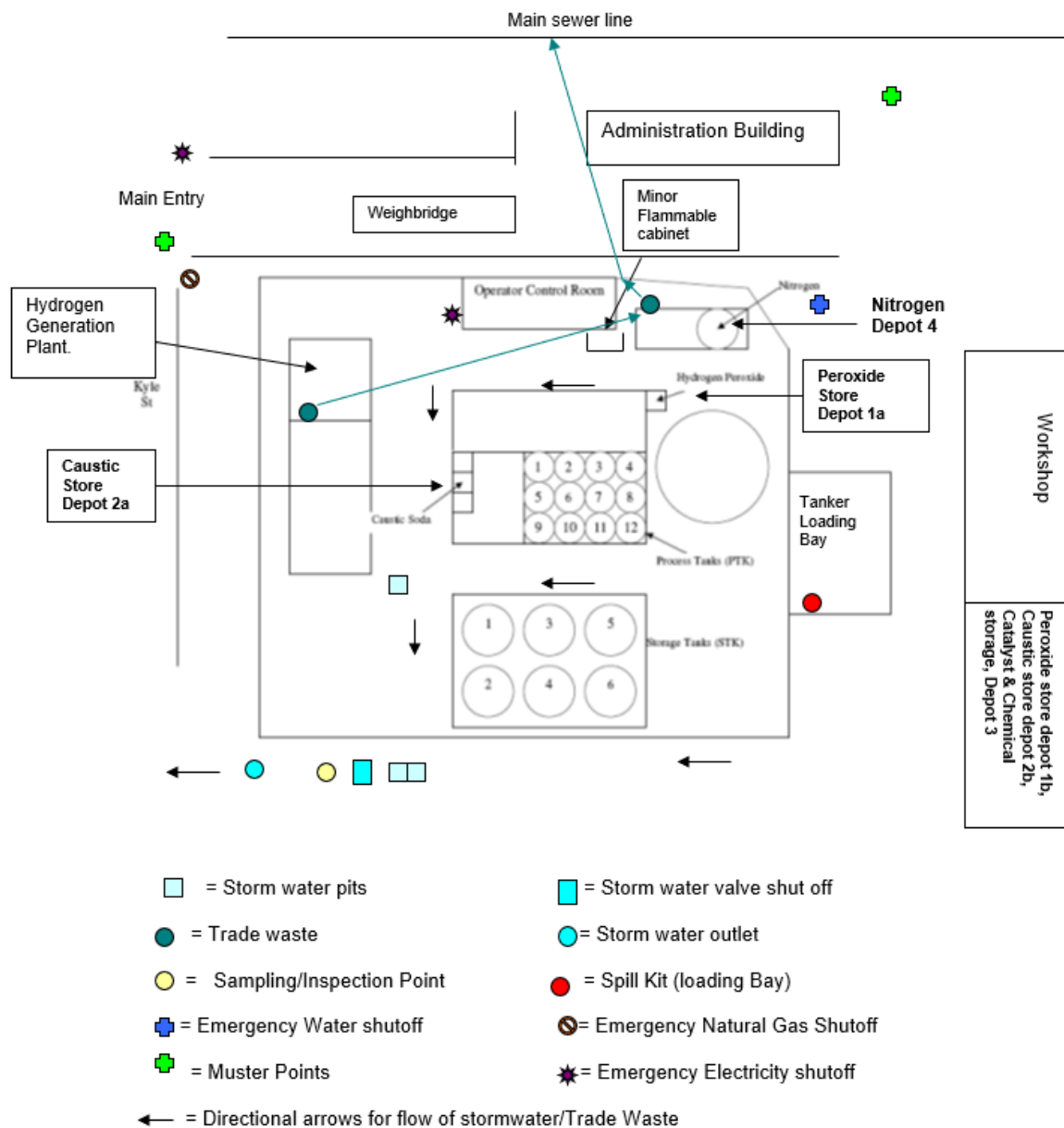


Figure D2: Stormwater Shut off valve (from Stormwater Management Plan)





## Appendix E: Surface Water Quality Trend Analysis

FIGURE E1: STORMWATER MONITORING – TOTAL PHOSPHORUS TREND GRAPH

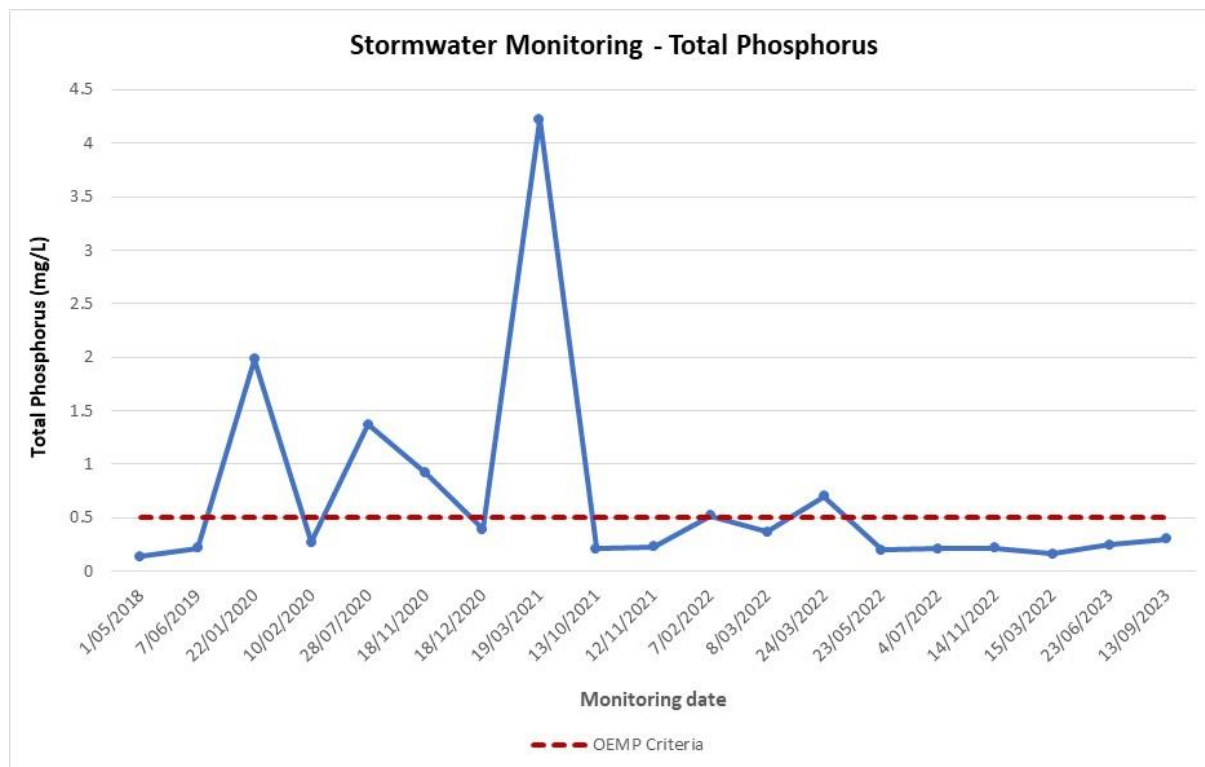
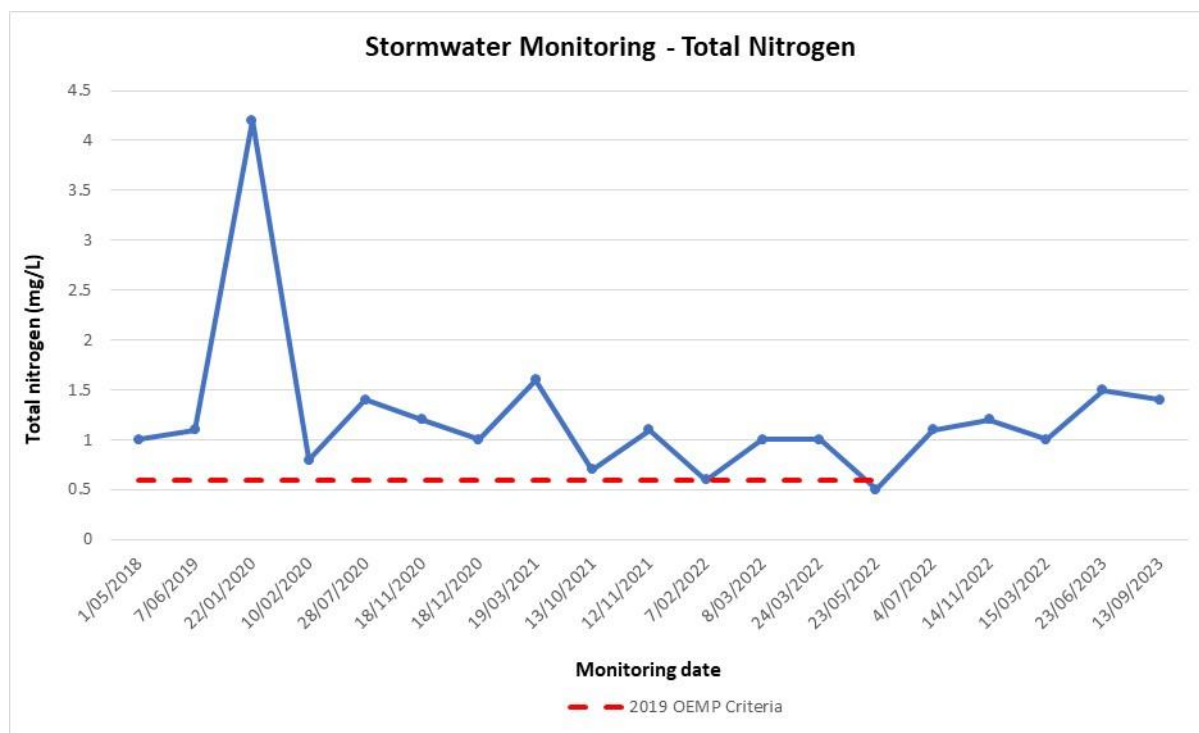
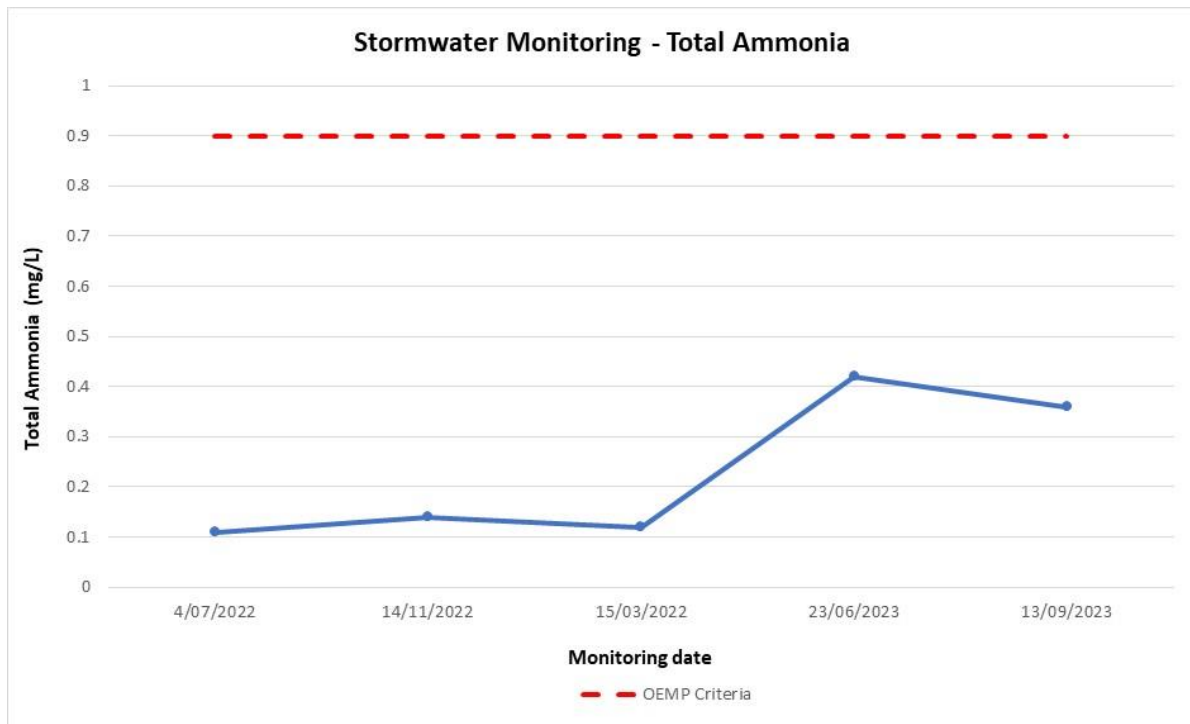
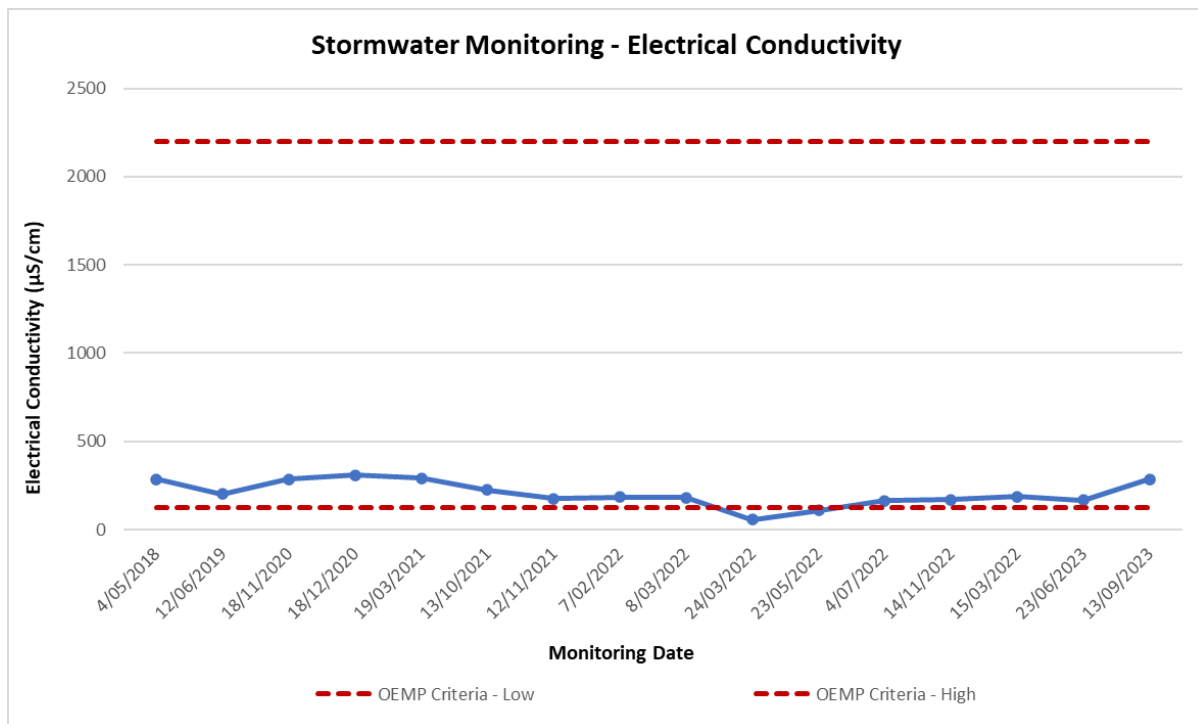
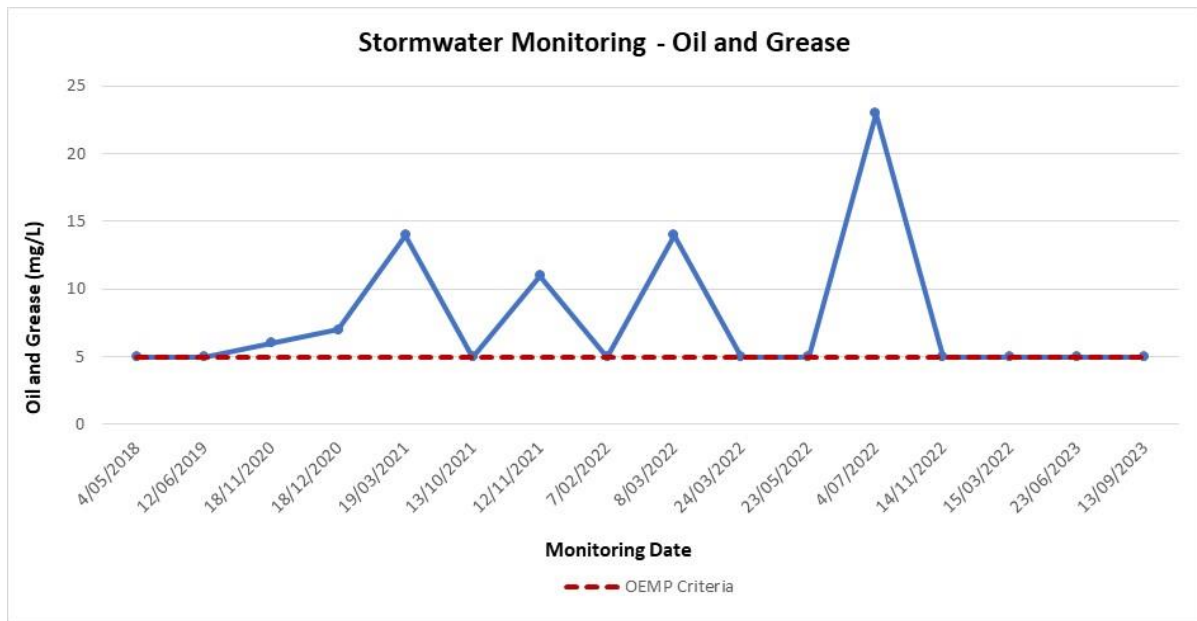
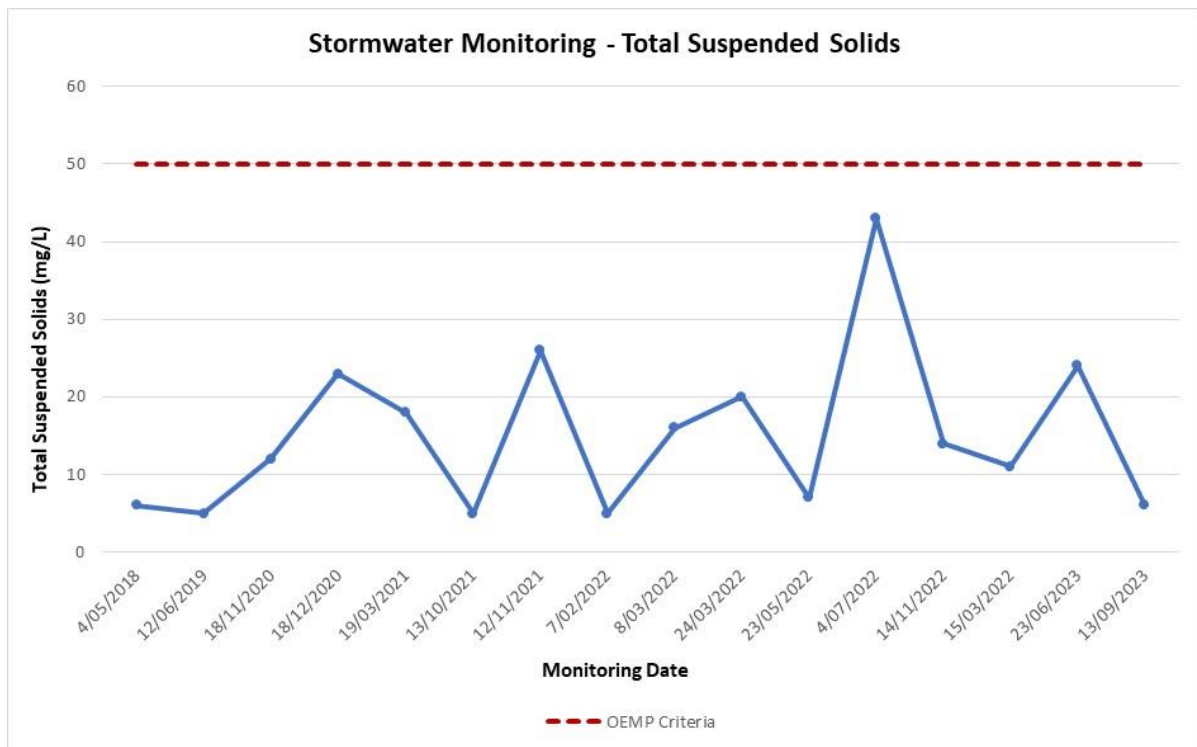


FIGURE E2: STORMWATER MONITORING – TOTAL NITROGEN TREND GRAPH



**FIGURE E3: STORMWATER MONITORING –TOTAL AMMONIA****FIGURE E4: STORMWATER MONITORING – ELECTRICAL CONDUCTIVITY TREND GRAPH**

**FIGURE E5: STORMWATER MONITORING – OIL AND GREASE TREND GRAPH****FIGURE E6: STORMWATER MONITORING –TOTAL SUSPENDED SOLIDS TREND GRAPH**

## Appendix F: Complaints Register

**TABLE E1: COMPLAINTS REGISTER 29 SEPTEMBER 2022 TO 28 SEPTEMBER 2023**

Date	Time	How complaint made (telephone / email / mail)	Nature of complaint	Action taken (including follow up with complainant)
No complaints received				

## Appendix G: Action Status of 2021 Independent Environmental Audit Recommendations and Opportunities for Improvement

**TABLE G1: 2021 INDEPENDENT ENVIRONMENTAL AUDIT RESPONSE TO RECOMMENDATIONS - ACTION STATUS**

Reference	2021 IEA Recommendation	2021 Cleanaway Response to Recommendation	Due Date for Completion	2022 & 2023 AEMR Status Update <sup>1</sup>
2021-REC-01	Cleanaway to provide training to Site personnel on environmental controls required to minimise potential environmental risks (inclusive of air quality, noise, vegetation and stormwater) the need to comply with these conditions.	Cleanaway has companywide environmental training.	COMPLETE	N/A
2021-REC-02	The next IEA should confirm that the design and construction of the tanks approved by MOD 5 was in accordance with API 650 and AS 1940.	Noted	Next IEA	N/A
2021-REC-03	Cleanaway to communicate with the Department with regards to Condition 1.5 of PA 05_0037 and the validity of the MOD 5 approval.	As per 3.4A of consolidated consent no construction works are to commence before approval of CEMP. Department to be notified to inform of intent to proceed with MOD5 approval and anticipated timeframe.	30/06/2022	COMPLETE: Cleanaway was advised by DPE that due to COVID-19, the validity of the MOD 5 approval was extended by 2 years and now expires on 9 September 2023.
2021-REC-04	The next IEA should confirm that the MOPP operates in accordance with the requirements of EPL 21402.	Noted	Next IEA	N/A
2021-REC-05	Cleanaway to notify the Department of the date of commissioning of the MOPP under MOD 6.	Noted	30/04/2022	COMPLETE: The Secretary was notified of the commencement of commissioning in July 2022.

<sup>1</sup> Actions reported as COMPLETE in the 2022 AEMR have been shaded grey and include the 2022 AEMR status update. Actions reported as COMPLETE in this reporting period have been shaded green and include the 2023 status update

Reference	2021 IEA Recommendation	2021 Cleanaway Response to Recommendation	Due Date for Completion	2022 & 2023 AEMR Status Update <sup>1</sup>
2021-REC-06	Cleanaway to assess construction and maintenance activities for potential environmental risks (inclusive of air quality, noise, vegetation and storm water) to ensure compliance with this condition. Contractors should be informed of this assessment and the controls to be implemented. Alternatively, Cleanaway should require contractors to provide their own risk assessments which include assessment and controls for environmental risks associated with the work being undertaken.	Noted	Ongoing	COMPLETE: For construction activities, contractors must submit a Construction Environmental Management Plan (CEMP) which is reviewed and approved by an Environmental Business Partner (or equivalent role).  The site induction was revised to emphasise the environmental compliance aspects of the consent as they relate to maintenance works.
2021-REC-07	Cleanaway to include air quality checks, such as a review for dust and air emissions, in the workplace inspection checklists.	Cleanaway to update workplace inspection checklist to incorporate checks for air emissions including odour and dust.	30/04/2022	COMPLETE: The Workplace Inspection Form was updated (Version 0.2) to include a check (in Section 5 of the Workplace Inspection Form) of potential Environmental Compliance issues related to odour and dust emissions.
2021-REC-08	Cleanaway to ensure they keep a record of complaints in accordance with EPL requirements.	This is already being conducted as per EPL requirements.	COMPLETE	N/A
2021-REC-09	Cleanaway to identify an alternative firefighting product and remove AFFF from site before 26 September 2022 to ensure they are complying with the requirements of the Protection of the Environment Operations (General) Amendment (PFAS Firefighting Foam) Regulation 2021.	This is in progress, have obtained information from Fire Engineer relating to requirements. Current firefighting equipment/infrastructure to be updated to support viscosity changes from current FFF.	26/09/2022	COMPLETE: Ansulite AFFF was replaced with Respondal which is fluorine free in September 2022.
2021-REC-10	Update SWMP to align with the OEMP – which requires testing of full range of parameters prior to release of stormwater. Alternatively, OEMP may be updated to remove this requirement, in consultation with the EPA and the Department.	OEMP and SWMP to be updated within 3 months of completion of IEA as per consolidated consent condition 3.7	02/07/2022	COMPLETE: The OEMP and SWMP were revised on 30/06/2022 to include a revised frequency and suite of parameters to be monitored. The two plans are aligned.
2021-REC-11	SWMP be updated to include parameters for field testing of conductivity and pH; and actions to be implemented in the event that levels are outside acceptable range.	SWMP to be updated as per Rec 2021-REC-10	02/07/2022	COMPLETE: The SWMP was revised on 30/06/2022 to include additional details on the stormwater sampling and discharge process.



Reference	2021 IEA Recommendation	2021 Cleanaway Response to Recommendation	Due Date for Completion	2022 & 2023 AEMR Status Update <sup>1</sup>
2021-REC-12	SWMP to include specific pre- and post-rainfall inspection requirements, including cleaning prior to rainfall events.	SWMP to be updated as per Rec 2021-REC-10. NB, it is not possible to know rainfall events in order to schedule cleaning in advance.	02/07/2022	COMPLETE: The SWMP was revised to refer to the OEMP for more information on the inspections, cleaning and maintenance protocols on site. The OEMP states that stormwater pit levels are to be checked after heavy rainfall as per the Stormwater Pit Inspection Log. Cleanaway believe that this, and the other inspection/s undertaken by the site addresses 2021-REC-12.
2021-REC-13	SWMP to be updated to include recording and monitoring of surface water laboratory testing parameters against SOC 27A, or for gradual deterioration over time.	SWMP to be updated as per Rec 2021-REC-10.	02/07/2022	COMPLETE: The OEMP and SWMP were revised on 30/06/2022 to include a revised frequency and suite of surface water parameters to be monitored. Results are recorded and trend analysis included in the AEMR.
2021-REC-14	Update incident management training to include examples of the types of environmental incidents and near misses that require reporting	Training has been facilitated Cleanaway Wide as per 2021-REC-01.	COMPLETE	N/A
2021-REC-15	The next IEA should confirm that the design of the tanks approved by MOD 5 was in accordance with Schedule 2, Condition 2.18B of PA05_0037.	Noted	Next IEA	N/A
2021-REC-16	Cleanaway to verify that Goldsprings are aware of the requirement to retain the vegetation community, Remnant 4 in a healthy and tidy state. This requirement should be incorporated into the lease agreement.	Property to communicate requirements regarding Remnant 4. NB Lease agreement is for the land south of Remnant 4.	31/5/2022	COMPLETE: As per the 2021 response, the "Lease agreement is for the land south of Remnant 4", however on 29/06/2022, the Cleanaway Regional Manager Refineries and the Rutherford Plant Operations Supervisor visited Goldsprings to advise in person of their requirement.
2021-REC-17	The Site's Environmental Representative must comply with the requirements of Condition 3.1 of PA 05_0037.	Noted	Ongoing	COMPLETE: Cleanaway nominated the Regional Manager as the Environmental Representative in October 2022. The responsibilities of the Environmental Representative are included in the OEMP (Revision 6) and have been assigned to the Regional Manager. The Regional Manager was endorsed by the DPE as the Environmental Representative.

Reference	2021 IEA Recommendation	2021 Cleanaway Response to Recommendation	Due Date for Completion	2022 & 2023 AEMR Status Update <sup>1</sup>
2021-REC-18	Responsibilities in the OEMP should be reviewed and updated to ensure effective delegation of environmental requirements under the Project Approval to personnel qualified and experienced in managing environmental compliance requirements.	Noted	30/06/2022	COMPLETE: The OEMP was updated on the 30/06/2022 including Section 5 Roles and Responsibilities.
2021-REC-19	Cleanaway should ensure it has evidence to show that the Environmental Representative has been endorsed by the Department Planning Secretary.	Cleanaway to consult with DPIE to confirm endorsement.	15/04/2022	COMPLETE: Cleanaway nominated the Regional Manager Refineries, as the Environmental Representative on the 18 October 2022 and received formal endorsement for the appointment from the DPE by letter dated 19 October 2022.
2021-REC-20	Cleanaway to ensure the required regulatory agencies were consulted as per Condition 3.5 of PA 05_0037.	Cleanaway to consult with DPIE to confirm which Regulatory Agencies require consultation.	15/04/2022	COMPLETE: The revised OEMP and subplans (June 2022) were consulted with the EPA, Council and DPE as outlined in Section 2.2 of the OEMP.
2021-REC-21	Cleanaway to ensure the Operational Air and Noise Validation Report was submitted to the Department. Evidence of submission is to be retained by Cleanaway	Cleanaway to consult with DPIE to confirm submission and retain verification document.	15/4/2022	COMPLETE: The Operational Air and Noise Validation Report was submitted to DPE and confirmation of receipt received via email dated 18 July 2022. This has been retained on file.
2021-REC-22	It is recommended the Environmental Representative is involved in the review of all environmental incidents.	The Environmental Representative should be involved in the review of all major environmental incidents. MyOSH system with environmental incident field ensures this is in place	Ongoing	COMPLETE: The Environmental Incident Field within the Myosh system includes a requirement for the Environmental Representative to review all major environmental incidents.
2021-REC-23	Prepare and submit to the Department the 2021 AEMR.	In progress	15/05/2022	COMPLETE: The 2021 AEMR was submitted to DPE on the 27/07/2022.
2021-REC-24	Implement a reporting / review trigger process to ensure timely delivery of compliance reports required under PA 05_0037.	Noted.	30/06/2022	COMPLETE: Cleanaway tracks the timely delivery of compliance reports in alignment with PA 05_0037 via two key mechanisms: <ul style="list-style-type: none"> <li>• Myosh actions</li> <li>• Excel Spreadsheet tracker of submission due dates.</li> </ul> In addition, the triggers for the review of other environmental documentation are clearly documented within the site management plans (i.e. OEMP, AQMP etc).

Reference	2021 IEA Recommendation	2021 Cleanaway Response to Recommendation	Due Date for Completion	2022 & 2023 AEMR Status Update <sup>1</sup>
2021-REC-25	Cleanaway to maintain a record of AEMR submission to the Department and Approval of the AEMRs by the Department.	Noted	Ongoing	COMPLETE: Records of AEMR submissions and approvals are retained in the Rutherford Refinery site folders and in the Environment team folders.
2021-REC-26	Documents to be made publicly available on the Cleanaway website as per the OEMP Section 10.3 and PA Condition 6.1.	Noted	Ongoing	COMPLETE: The Cleanaway website was updated in June 2022 and now includes all documents required under this approval.
2021-REC-27	Review testing results and source gas sulfur concentration, as per commitment made by Cleanaway in the 2020 / 2021 Annual Return compliance statement.	Finalise findings and statements from consultant, enter details into MyOSH.	30/06/2022	COMPLETE: Review of results indicated that the higher hydrogen sulphide load was either an anomaly or due to an increased sulphur concentration in the natural gas. The 2022 annual load of hydrogen sulphide was well below the load limit.
2021-REC-28	Maintenance of plant and equipment should be in accordance with maintenance intervals set in the planned maintenance spreadsheet	Maintenance spreadsheet to be updated with a scheduled review process incorporated.	30/06/2022	COMPLETE: CMMS was implemented in October 2022 for Safety Critical Elements and compliance monitoring (which includes environmental control equipment. A Corporate Manager role and team was created to oversee the implementation of the CMMS and ensure maintenance activities are being undertaken to the CMMS schedule.
2021-REC-29	Review and update Site Emergency Management Plan.	COMPLETED	01/04/2022	N/A
2021-REC-30	It is recommended Cleanaway consult with the EPA to confirm compliance with the monitoring frequency specified in Condition M2.2 of EPL 12555, with regards to Cleanaway conducting monitoring within the Annual Return term and not strictly within a 12-month period.	This recommendation is noted however Cleanaway believes it has submitted Annual Returns in accordance with Condition R1.5. Clarification of the frequency “yearly” to be obtained.	30/06/2022	COMPLETE: Air quality monitoring is generally undertaken in November / December each year. The non-compliance this recommendation related to, was an exception where one point could not be accessed due to corrosion and a non-routine monitoring event was scheduled for May 2021. Since then, monitoring has resumed to the normal yearly frequency. Email correspondence from the EPA dated 24/08/2022 clarified that “Yearly” as a frequency for monitoring on the licence, means once per reporting period but as close to 12 months between monitoring as possible. The EPA had no issues and did not deem this to be a potential non-compliance.

Reference	2021 IEA Recommendation	2021 Cleanaway Response to Recommendation	Due Date for Completion	2022 & 2023 AEMR Status Update <sup>1</sup>
2021-REC-31	Ensure the information required under EPL Condition R1.10 is submitted with the Annual Return each year	Noted	Ongoing	<p>COMPLETE: Monitoring data is compared to emission limits and exceedances are reported in Section C2 of the Annual Return as non-compliances. The Annual Return also includes a link to the Cleanaway website where monitoring data is published. The monitoring report published on the website includes a comparison of the data with the assessment criteria.</p> <p>Any recommendations for changes to monitoring requirements are made via the licence variation process.</p> <p>Further to the above, NSW EPA have reviewed the Annual Return submissions completed by Cleanaway over a number of years and they have not raised any issues with the information submitted to the regulator. In consultation with the regulator, no non-compliances with respect to 2021-REC-31 have been raised and Cleanaway believe that this is being addressed by the business during its submissions to the NSW EPA.</p>
2021-REC-32	Cleanaway must review stormwater management on site to ensure the Site's management of stormwater collected in bunds does not present a risk of harm/or potential harm to the environment. Where required, amend site mitigation measures and update the OEMP to reflect the actions being undertaken in the event of heavy rainfall.	As per SWMP and OEMP revisions above	02/07/2022	<p>COMPLETE: The OEMP and SWMP were revised on the 30/06/2022 to remove inconsistencies relating to stormwater management during periods of heavy rain. A new Stormwater Release Procedure was included in the SWMP for extreme rainfall events.</p>

**TABLE G2: 2021 INDEPENDENT ENVIRONMENTAL AUDIT RESPONSE TO OPPORTUNITIES FOR IMPROVEMENTS - ACTION STATUS**

Reference	2021 IEA Opportunity for Improvement (OFI)	2021 Cleanaway Response to OFI	Due Date for Completion	2022 AEMR Status Update <sup>1</sup>
2021-OFI-01	Cleanaway should seek Department approval to remove the conditions relating to the two activities approved in the original application which are no longer required, these include: <ul style="list-style-type: none"> <li>A truck wash bay and transport vehicle depot with ancillary wastewater recycling plant</li> <li>An industrial cleaning depot and environmental recovery services depot.</li> </ul>	Noted	2024	COMPLETE: Cleanaway has reviewed this OFI and has decided to leave the approval as it stands at this stage.
2021-OFI-02	Cleanaway should set up environmental compliance register to track all compliance requirements.	As per 2021-REC-24	30/06/2022	COMPLETE: Cleanaway has developed Compliance Tables which it uses to track the requirements of its Project Approval and EPL. The Compliance Tables are updated and included as an Appendix to the AEMR. This has been completed for the 2021 and 2022 AEMRs.
2021-OFI-03	Cleanaway should ensure they have documented evidence to show a review of the stack sampling point locations was conducted.	Currently in place	COMPLETE	N/A
2021-OFI-04	Cleanaway should consider automating the collection of data with regards to flare operation to avoid the risk of human error associated with manual entry.	Will investigate if can be incorporated in site SCADA system.	2024	In-progress: The software engineer has been investigating whether flare operation data can be incorporated into the SCADA system. Trials to date have been unsuccessful. Cleanaway is continuing to investigate whether this is possible.

<sup>1</sup> Actions reported as COMPLETE in the 2022 AEMR have been shaded grey and include the 2022 AEMR status update. Actions reported as COMPLETE in this reporting period have been shaded green and include the 2023 status update

Reference	2021 IEA Opportunity for Improvement (OFI)	2021 Cleanaway Response to OFI	Due Date for Completion	2022 AEMR Status Update <sup>1</sup>
2021-OFI-05	The auditors suggest, in line with the 28 IEA OFIs, that a standard operating procedure be developed to document the process for flare operation and recording of flare data. It is also suggested to include reporting against this requirement in the AEMR.	Flare operation currently covered in main plant operation SOP. Will review SOP and refer to SOP number in Updated OEMP	02/07/2022	COMPLETE: Reporting against the requirement of CoA 2.11 is included in the Compliance Tables which form Appendix A to the AEMR. The OEMP (Revision 6) includes in Table 8 <i>Environmental Inspections and records for reporting</i> , the requirement to maintain a flare log and record the date and duration of flaring, the reason for flaring and the appearance of the plume from the flare stack. Table 10 <i>Environmental Reporting</i> , also includes the EPL requirements around maintaining detailed records of flare use.
2021-OFI-06	Update incident management process to include recording details of incident including type and volume of spills and whether contained before reaching the drainage system; root analysis, corrective actions and allocation of responsibility for close out.	This is current practice in MyOsh system	COMPLETE	N/A
2021-OFI-07	Cleanaway should ensure that the requirements of this condition are referenced in all construction work plans/contracts.	Noted. Construction Noise is included in environmental hazards for such activities	Ongoing	COMPLETE: For construction activities, environmental requirements including construction hours are included in contract scope documents. Contractors are required to submit a CEMP prior to work commencing on site. The CEMP is reviewed by the Environmental Business Partner to ensure environmental requirements have been adequately addressed.
2021-OFI-08	Faded placards should be replaced	Noted, ongoing activity.	Ongoing	COMPLETE: Faded Dangerous Goods placards were replaced on the 7/04/2022.
2021-OFI-09	Cleanaway should put controls in place to ensure any clearing of vegetation during construction work will be minimised. This could be in the form of a vegetation removal process to be approved by the Environmental Business Partner identifying vegetation to be removed and measures to be put in place to protect vegetation to be retained.	Noted	Ongoing	COMPLETE: Clearing of vegetation during construction work shall be addressed within the contractor's CEMP prior to works commencing onsite. The CEMP is reviewed by the Environmental Business Partner to ensure environmental requirements have been adequately addressed.



Reference	2021 IEA Opportunity for Improvement (OFI)	2021 Cleanaway Response to OFI	Due Date for Completion	2022 AEMR Status Update <sup>1</sup>
2021-OFI-10	It is recommended Cleanaway conduct an assessment of the condition of Remnant 4 to identify if any remediation actions are required to ensure the area remains in a healthy and tidy state.	Cleanaway will conduct an Assessment of both Remnant 3 and 4 areas to determine remediation actions, if any.	29/4/2022	COMPLETE: Cleanaway conducted an assessment of the Remnant 3 and 4 areas and engaged a landscape contractor to undertake ground maintenance activities. Cleanaway is continuing to monitor weeds.
2021-OFI-11	Postal address and link to Facebook page should be provided on Site website	Links to Facebook, LinkedIn, Instagram, Twitter and Youtube are provided on the corporate website.	COMPLETE	N/A
2021-OFI-12	Review and update CWY Rutherford Equipment List Maintenance spreadsheet so that it can be utilised effectively for planning maintenance of plant and equipment.	This is a living document and is constantly under review for improvement.		COMPLETE: As per REC-28, CMMS was implemented in October 2022 for safety critical elements and compliance monitoring. Cleanaway continues to use the CWY Rutherford Equipment Maintenance spreadsheet for managing the maintenance schedule of non-critical equipment on site.
2021-OFI-13	Consideration should be given to the implementation of a computer-based maintenance system that provides for a more automated process and less potential for failure to complete the testing requirements.	Cleanaway corporate project underway.		COMPLETE: As per REC-28, CMMS was implemented in October 2022.
2021-OFI-14	Within the next EPL variation, update this condition to refer to the current Regulations.	Noted. To be competed in conjunction with 2021-OFI-16	29/4/2022	COMPLETE: Condition O4.3 was removed by the Licence Variation issued on 15/09/2022.
2021-OFI-15	Update the Cleanaway website so it is clear that the complaints line telephone number is a complaints line, so the impacted community knows how to make a complaint.	The corporate website denotes the number with the following heading 'Community Hotline – Feedback and Complaints.' No action required	COMPLETE	N/A
2021-OFI-16	Submit a variation to the EPL to remove this condition (2018 OFI)	Cleanaway to engage with NSW EPA to vary the licence removing condition R1.9.	29/4/2022	COMPLETE: Condition R1.9 was removed by the Licence Variation issued on 15/09/2022.
2021-OFI-17	Update reference to the WHS Regulation from 2011 to 2017.	Noted. To be competed in conjunction with 2021-OFI-16	29/4/2022	COMPLETE: The OEMP (Revision 6) correctly references the 2017 Regulation.
2021-OFI-18	DPI to be updated to DPE or 'the Department' throughout the OEMP	To be included in OEMP update	02/07/2022	COMPLETE: Updated in June 2022 OEMP.
2021-OFI-19	Update the name and contact details of the environmental business partner in Section 5 of the OEMP.	To be included in OEMP update	02/07/2022	COMPLETE: Updated in June 2022 OEMP

Reference	2021 IEA Opportunity for Improvement (OFI)	2021 Cleanaway Response to OFI	Due Date for Completion	2022 AEMR Status Update <sup>1</sup>
2021-OFI-20	Suggest changing the title of Section 4.1 to 'Site Environmental Risk Register' as the section is not referring to a risk assessment.	Noted	02/07/2022	COMPLETE: Updated in June 2022 OEMP.
2021-OFI-21	Review the site Environmental Risk Register and ensure annual reviews are undertaken.	Noted	Annually	COMPLETE: The Environmental Risk Register for the site was last update on 1 July 2022 and shall be reviewed annually.
2021-OFI-22	During the next review of the Environmental Risk Register waste should be included as an inherent risk and relevant controls listed on the Critical Control Management Program tab.	Noted. As per 2021-OFI-21	30/11/2022	COMPLETE: Within the July 2022 version of the Environmental Risk Register, Cleanaway has expanded its consideration of "Waste" and added the additional controls related to this. As part of the continual improvement process for Rutherford Refinery, Cleanaway shall continue to update and expand the environmental risk register for the site (not only for waste, but for all facets), where necessary.
2021-OFI-23	Cleanaway should ensure stormwater pits are cleaned out every six months.	Practice already in place	COMPLETE	N/A
2021-OFI-24	Ensure fencing is in place around Remnant 4 which restricts access, so as to prevent weed ingress, rubbish dumping and vegetation damage.	Noted	30/09/2022	COMPLETE: Fencing (star picket and wire) is in place around Remnant 4 restricting access. This recommendation relates to an observation by the auditor of a damaged gate that provides access to the area adjacent to Remnant 4. A separate picket fence separates this area to Remnant 4.
2021-OFI-25	The workplace inspection checklist should capture the requirement to monitor the health of the trees within Remnant 3 and Remnant 4.	Noted	30/06/2022	COMPLETE: The Workplace Inspection Form (Version 0.2) includes a check of the Remnant 3 and 4 areas.
2021-OFI-26	Update the OEMP to detail weed management measures required on site, particularly in the Remnant 3 and Remnant 4 areas.	Noted. To be included in OEMP update.	02/07/2022	COMPLETE: The June 2022 OEMP includes weed management measures.
2021-OFI-27	The site could benefit from consolidating their waste records into one register. Cleanaway should consider utilising the waste register referenced in the OEMP. Alternatively, provided adequate records are kept, the OEMP should be updated to reflect how waste data is captured by the Site.	Note. Current waste data is collected through JDE, will investigate reporting process.	30/06/2022	COMPLETE: Cleanaway has consolidated its waste records into a Waste Register. The 'Refinery Waste Tracking' spreadsheet is a live document that is updated as required.

Reference	2021 IEA Opportunity for Improvement (OFI)	2021 Cleanaway Response to OFI	Due Date for Completion	2022 AEMR Status Update <sup>1</sup>
2021-OFI-28	Update table 7 of the OEMP to reflect the off-site disposal of Spent Catalyst.	Noted. To be included in OEMP update.	02/07/2022	COMPLETE: Table 7 updated in June 2022 OEMP to include spent catalyst disposal.
2021-OFI-29	Update table 7 of the OEMP to reflect all waste types generated on site	Noted. To be included in OEMP update.	02/07/2022	COMPLETE: Table 7 updated in June 2022 OEMP.
2021-OFI-30	The OEMP should be reviewed along with the Stormwater Management Plan to ensure they are consistent.	Noted. To be included in OEMP update.	02/07/2022	COMPLETE: OEMP and SWMP were updated and are now consistent.
2021-OFI-31	Stormwater discharge should be tested in accordance with the OEMP.	Noted. To be included in OEMP update.	02/07/2022	COMPLETE: Stormwater discharge testing is being undertaken in accordance with the updated OEMP and SWMP.
2021-OFI-32	Conduct annual internal audits against the Cleanaway EMS and Site OEMP.	Internal review process to be included in OEMP update	02/07/2022	COMPLETE: Cleanaway undertakes a range of environmental audits and review processes across the broader business (and at Rutherford Refinery) including, but not limited to: <ul style="list-style-type: none"> <li>• Annual internal audit against the Cleanaway EMS and OEMP</li> <li>• Second Line of defence environmental audits – each site audited every 3 years</li> <li>• Corporate Internal Risk Audit</li> <li>• Environmental Site Inspection</li> <li>• Annual review of environmental processes and procedures to ensure alignment with site practices.</li> <li>• Annual review of compliance tables as part of AEMR process</li> </ul>
2021-OFI-33	Environmental personnel and environmental records should be made available during any future IEA.	Noted	Next IEA	N/A

Reference	2021 IEA Opportunity for Improvement (OFI)	2021 Cleanaway Response to OFI	Due Date for Completion	2022 AEMR Status Update <sup>1</sup>
2021-OFI-34	It is recommended the General Site Induction be reviewed and updated to: <ul style="list-style-type: none"> <li>• Include the key requirements from the OEMP, AQMP and GWMP</li> <li>• Identify the project approval, EPL and the key regulatory authorities (the Department and EPA)</li> <li>• Outline the incident management process including examples of environmental incidents, how/when to report an incident and penalties relating to negligence and failure to report incidents.</li> </ul>	Noted. Site induction to be updated to reference environmental management	30/06/2022	COMPLETE: The General Site Induction was updated in January 2023 to include further details of environmental management on site and the incident management process.
2021-OFI-35	Review and update the OEMP as per the review schedule in the OEMP. In addition, update the OEMP and associated sub-plans to address MOD 6 and the commencement of design of MOD 5. The update should also address the construction and operational phases of MOD 5 as well.	Noted, MOD 5 OEMP requirements will be addressed once project commences.	02/07/2022	N/A -The OEMP incorporates MOD 6. MOD 5 requirements will be included in the OEMP once the project commences. This requirement is N/A at this stage.
2021-OFI-36	Update the AQMP so that references to storage tank emission reduction controls is more specific and reflective of the controls on each tank on site.	Noted. Included in management plan updates post IEA	02/07/2022	COMPLETE: Addressed in Section 4 of the AQMP. For example, "the Light end scrubber / Vapour Recovery Unit (VRU) Discharge Stack (EPA Point 5) treats emissions from the light end fume collection system (flashpoint correction burner and the product storage tanks)". Cleanaway is of the opinion that references to specific tank numbers or further information regarding the specific tanks would not be beneficial within the AQMP. This information does not increase the businesses control of air emissions at the site, nor reduce the risk of potential emissions. Cleanaway manage this via the monitoring and management of these specific controls.
2021-OFI-37	Update Table 4 and Figure 4 of the GMP to reference the EPL monitoring point number against each monitoring well reference.	Not required. Table 2 notes EPA identification and MW correlation	COMPLETE	N/A

Reference	2021 IEA Opportunity for Improvement (OFI)	2021 Cleanaway Response to OFI	Due Date for Completion	2022 AEMR Status Update <sup>1</sup>
2021-OFI-38	Update the GMP so that the adopted groundwater assessment criteria is reflective of the contaminants being monitored or include justification as to why additional contaminants are included in the groundwater assessment criteria table.	Will refer to GWM consultant	Next AR submission	COMPLETE: Cleanaway has reviewed the GMP in consultation with Cleanaway's third party consultant AE. The groundwater assessment criteria included in the GMP remain unchanged.
2021-OFI-39	Update the GMP to state that a summary of monitoring data and the results of the analysis of groundwater quality results will be reported in the sites AEMR	Noted. Included in management plan revision post IEA	02/07/2022	In-progress: To be completed in the early 2024 update to the GWMP. This however is being completed within the site AEMR's.
2021-OFI-40	It is suggested the GMP include reference to the use of AFFF at the site and the mitigations in place to prevent contamination to groundwater.	N/A as onsite AFFF to be removed no later 26/09/2022.		COMPLETE: AFFF was removed from site in September 2022.
2021-OFI-41	Cleanaway should consider storing the IBC located next to the MOPP in an undercover area.	IBC bund cover has been procured and implemented since audit.	COMPLETE	N/A