



Clyde Terminal

Annual Environmental Performance Review

Reporting Period: 01 January to 31 December 2022

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1 Introduction

Viva Energy Australia Pty Ltd (Viva Energy) operate the Clyde Terminal, which receives, stores, doses and distributes finished petroleum products.

Following the closure of the Clyde Refinery in late 2012 and the cessation of refining activities, Viva Energy proposed to undertake the following works at the terminal:

- **Demolition works** – The removal of redundant refinery processing units, tanks and other infrastructure;
- **Construction works** – The carrying out of works including excavation, upgrades to tanks, bunds, drainage and instrumentation, replacement of electrical substations, upgrades to the fire water system and revised pumping and piping works; and,
- **Operation** – The operation of the site as a bulk fuel storage facility.

The main objectives of the conversion project were:

- To improve the efficiency of the Clyde Terminal by upgrading existing facilities and structures; and,
- To improve environmental and safety performance of the Clyde Terminal while continuing to operate as a viable and efficient finished petroleum product receipt, storage and distribution terminal.

On 14 January 2015, the Planning Assessment Commission of NSW (as delegate of the Minister for Planning) granted Development Consent (SSD 5147) for the project subject to a number of conditions. The Clyde Terminal currently receives finished petroleum products from Viva Energy's Gore Bay Port Facility. These products are distributed by pipeline from the Clyde Terminal to the adjacent Parramatta Terminal road gantry and to Sydney Airport.

A large part of the former Refinery land in the south-western part of the Clyde Terminal is considered surplus to the Terminal's operational requirements and is currently subject to remediation activities. This area is known as the Western Area (Figure 1) and will be remediated to a standard suitable for future commercial/industrial land uses. The Western Area Remediation Project (WARP) was designated state significant development due to the scale of the proposed works and an Environmental Impact Statement (EIS) was prepared. On 7 May 2020, The Minister for Planning and Places approved the development application (SSD 9302) for the Clyde WARP.

The Clyde Terminal site and the Western Area are shown in Figure 1 below.

The content of this Annual Review meets the requirements of SSD 5147 condition D4. Table 1 below lists the requirements and the corresponding sections where each specific requirement is addressed.

Table 1: Annual review reporting requirements

Condition D4 requirement	AEPR Section
By the end of July each year, or other timing as may be agreed by the Secretary, the Applicant shall review the environmental performance of the Development to the satisfaction of the Secretary. This review must:	
(a) describe the construction and demolition activities that were carried out in the previous calendar year, and the construction and demolition activities proposed to be carried out in the coming calendar year;	Section 3
(b) include a comprehensive review of the monitoring results and complaints records of the Development over the previous calendar year, which includes a comparison of these results against: <ul style="list-style-type: none"> • the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; and • the relevant predictions in the EIS; 	Section 4
(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	Sections 5
(d) identify any trends in the monitoring data over the life of the Development;	Section 4
(e) identify any discrepancies between the predicted and actual impacts of the Development, and analyse the potential cause of any significant discrepancies; and	Section 4
(f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the Development.	Section 10

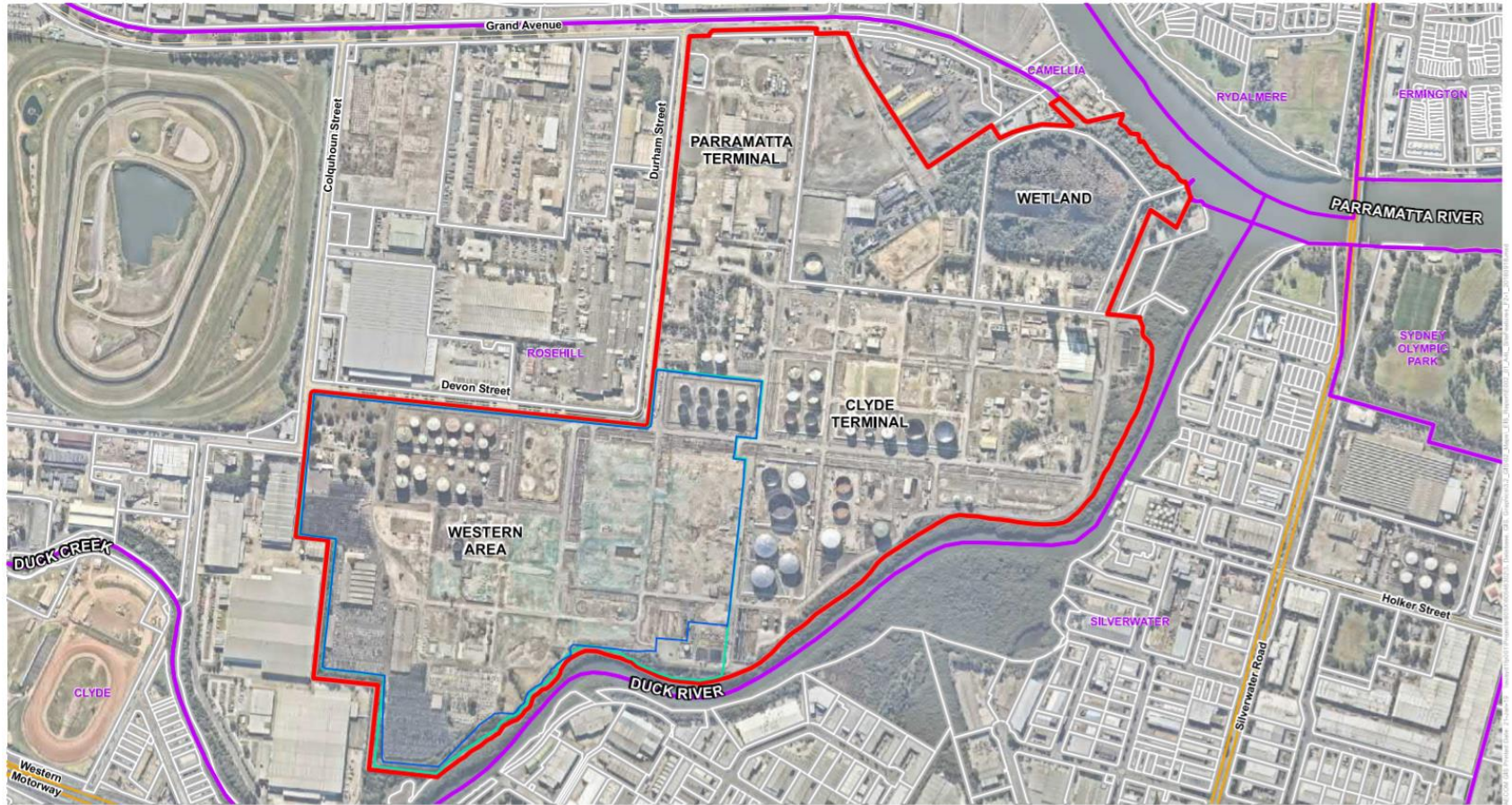


FIGURE 2-1 SITE FEATURES

KEY

- Site boundary
- Project Area boundary
- Western Area boundary
- Suburb boundaries
- Lot boundaries
- State road
- Local road

Note: Project Area boundary along the southern border is indicative only and will be refined during detailed design to exclude the tree management zone.



AECOM

0 100 200 300 m

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Figure 1 – Clyde Terminal and Western Area

2 Approvals

Viva Energy (formerly The Shell Company of Australia Limited) holds two statutory approvals for Clyde Terminal, namely:

- SSD 5147, issued on 14 January 2015 by the Planning Assessment Commission of NSW (as delegate of the Minister for Planning) for the “Conversion of the existing Shell Clyde Refinery to a finished petroleum products import, storage and distribution terminal including demolition of the redundant infrastructure”.
 - On 29 July 2019, the Industry Assessments Director (as delegate of the Minister for Planning and Public Spaces) approved a Modification of Development Consent (SSD 5147 MOD 1) to allow for one year extension on construction period; six additional assets to be demolished; the retention of two storage tanks initially nominated for demolition; and, general updates of the development consent.
- EPBC 2013/6878, issued on 17 April 2014 by the Department of Environment for the Shell Clyde Terminal Expansion “to undertake physical modifications at the existing Shell Clyde Terminal, Rosehill, NSW in accordance with the EPBC Act referral 2013/6878”. This approval has effect until 31 December 2064.

In addition, continued terminal operations are also subject to the conditions and requirements under:

- Environment Protection Licence (EPL) No. 570 under the Protection of Environment Operations Act 1997 (POEO Act).
- Major Hazards Facility (MHF) Licence (licence no. 20-35-81, expiry 15 Jan 2028) under the Work Health and Safety Act 2011 (WH&S Act)

3 Development activities

This Section describes the works undertaken in accordance with Development Consent SSD 5147 during the reporting period (1 January to 31 December 2022).

3.1 Works undertaken during this reporting period

3.1.1 Demolition works

All demolition works approved by SSD-5147 and SSD-5147 MOD 1 had been completed at the time of writing this report.

3.1.2 Construction works

No construction works were executed during the reporting period. Construction consent expired on 14 January 2020 in accordance with Condition B6 of the SSD 5147 MOD 1.

3.1.3 Operations

Operations at Clyde Terminal continued 24 hours, Monday to Sunday, during this reporting period in accordance with condition C22 of the SSD 5147.

The Clyde Terminal continued receiving finished petroleum products from the Gore Bay pipeline. Products were stored in compliance with the limits prescribed in condition B5 of the SSD 5147 (refer to Table 2 below).

Products were distributed by pipeline from the Clyde Terminal to the adjacent Parramatta Terminal road gantry and to Sydney Airport.

Table 2: Operations summary

Product	Approved limit	Previous reporting period (actual)	This reporting period (actual)	Next reporting period (forecast)
Finished petroleum products (ML)	264	213	186	200
Petroleum gases (m ³)	1,550	0	0	0

3.2 Proposed works for the next reporting period

3.2.1 Demolition works

All demolition works approved by SSD-5147 and SSD-5147 MOD 1 had been completed at the time of writing this report. There are no additional demolition works proposed for next year.

3.2.2 Construction works

All construction works approved by SSD-5147 and SSD-5147 MOD 1 had been completed at the time of writing this report and the construction consent has lapsed in accordance with Condition B6 of the SSD 5147 MOD 1.

There are no additional works proposed for next year.

3.2.3 Operations

Operational activities during the next reporting period will be consistent with those described on section 3.1.3 above.

4 Environmental performance

4.1 Noise

During the reporting period, noise at Clyde was managed in accordance with the Environmental Management Manual (EMM) and the operating conditions listed in C24 of the SSD 5147.

No noise complaints were received during this reporting period. Therefore, noise monitoring at the sensitive receivers was not triggered or required.

The above-described performance is consistent with results from previous years.

4.2 Air

During the reporting period, air emissions were managed in accordance with the EMM and monitored following the approved Operational Air Quality Monitoring Program (OAQMP) under condition C30 of the SSD 5147. During the reporting period, visual monitoring for dust was undertaken during routine site activities. Low and controlled levels of dust were observed. No air quality complaints were received during this or previous reporting periods.

The OAQMP was updated in 2022 (updated version dated 31/10/2022). The updated version of the OAQMP is present on the Viva Energy website in accordance with condition D9.

Low levels of odour were observed and recorded during regular site surveillance. Potential for odour generation during regular activities was also assessed during Job Start meetings and Barrier Thinking meetings. Potential for odour generation during non-routine activities were assessed and managed by Viva Energy's Permit to Work system. No offensive odours were identified in these assessments, consistent with results from the previous reporting period.

Emissions from the storage tanks are estimated using the techniques in line with the National Pollutant Inventory (NPI) reporting process and reported as part of the annual NPI submission and NSW EPA Annual Return required under EPL 570 for the period 02 July to 01 July. The assessment of annual air emissions for 2021/2022 was calculated to be 269kg of Benzene and 50,756kg of Volatile Organic Compounds (VOC's) discharged to air, well below the EPL load limits of 26,000kg and 1,250,000kg, respectively. The 2022/2023 annual emissions will be calculated and reported to the NSW EPA by 30 August 2023.

4.3 Soil and water

The soil and water management measures for Operations are detailed in the EMM. During this reporting period, monitoring and maintenance of drains was undertaken on a routine basis.

Monitoring of surface water discharge was conducted in accordance with the EPL requirements (refer to Appendix A.2). The main discharge point for site stormwater to Duck River is identified as EPA ID No.1 (Refer to Figure 3). This point was monitored monthly during the reporting period with pollutant concentrations well below the EPL limits as detailed in summary Table 3 below. Results are comparable to those presented in the previous reporting period.

The average daily discharge flow at this point was 1,053 kL/day, with a maximum daily discharge volume recorded of 2,145 kL. The EPL volume limit at this discharge point is 4,000 kL/day. Water was not discharged from the other approved discharge points (EPA ID No. 2, 4 or 30).

Table 3: Summary of monitoring results for the main discharge point at Clyde Terminal (EPA ID No.1)

Pollutant	Concentration limits			Monitoring results		
	50 percentile	90 percentile	100 percentile	min	ave	max
BOD (mg/L)	45	95	n/a	<5	<5	6
Fluoride (mg/L)	25	40	n/a	0.38	0.77	2.0
Nitrogen (Ammonia)	6	30	n/a	<0.01	0.12	0.59
Oil and Grease (mg/L)	8	10	n/a	<5	<5	6
ph			6.0-9.0	6.8	7.2	7.6
Phenols (mg/L)			0.5	<0.05	<0.05	<0.05
Total Nitrogen (mg/L)	35	100	n/a	0.35	1.4	2.9
Total Phosphorus (mg/L)	1.5	6	n/a	0.08	0.30	0.68
TSS (mg/L)	30	60	n/a	<5	5.7	14

Water discharge through approved flexible discharge points did not occur during the reporting period. Accordingly, no sampling was undertaken at these discharge points.

Overflow events were recorded for the East Interceptors Bays during the months January to April and during July and October 2022 due to heavy rainfall.

Samples were taken daily during overflow conditions for the East Interceptors. Summary results for the overflow discharge at the East Interceptors are presented in Table 4 below.

Table 4: Summary of monitoring results for overflow discharge to water (EPA ID No.28 and 29)

Pollutant	Concentration limits	Monitoring results					
	No concentration limits	EPA ID No.28			EPA ID No.29		
		min	ave	max	min	ave	max
pH	n/a	6.7	7.3	7.9	6.7	7.3	7.9
Total Organic Carbon (mg/L)	n/a	1.3	2.6	6.6	1.3	4.5	10.4
Total Suspended Solids (mg/L)	n/a	<5	<5	31	<5	8.2	24

EPA ID No.	NAME	TYPE
1	Biotreater Effluent	Discharge to water, Water monitoring, Volume monitoring
2	Main Interceptor Pumpout	Discharge to water, Water monitoring
4	B2 System Pumpout	Discharge to water
25	Mobile Discharge to Water	Discharge to water, Water monitoring, Volume monitoring
26	B2 System Pumpout Monitoring Point	Water Monitoring
28	East Interceptor Bay 1/2 O/F	Discharge to water
29	East Interceptor Bay 3/4 O/F	Discharge to water
30	East Interceptor Pumpout	Discharge to water

Environmental Protection Licence No.570 Licenced Discharge Points

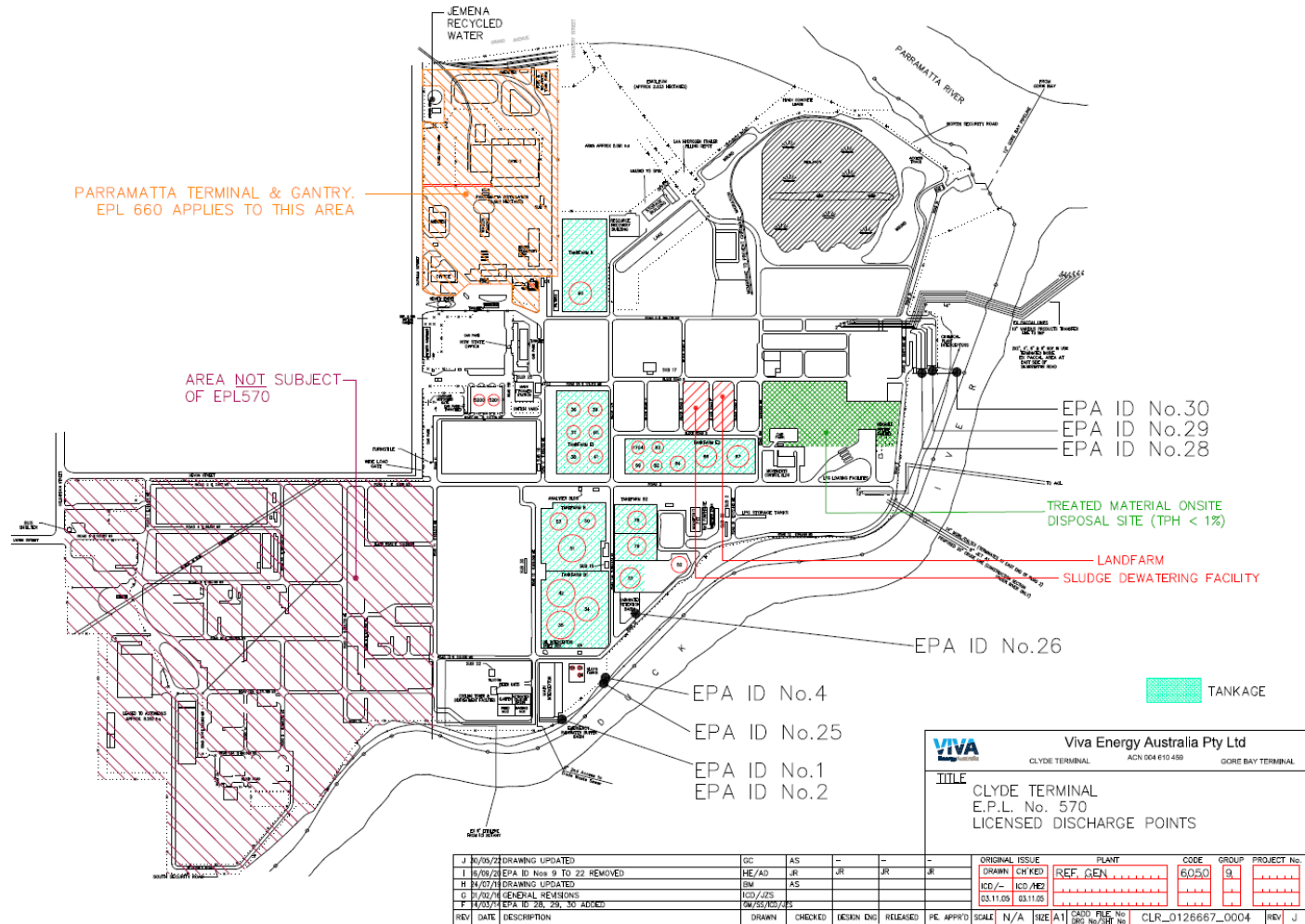


Figure 3 – Clyde Terminal licensed discharge points

4.4 Groundwater

Groundwater monitoring was undertaken by Environmental Resources Management Pty Ltd (ERM) on the Clyde Terminal and the Clyde Western Area in October and November 2022. This monitoring was undertaken in accordance with the requirements of the EMM and the Site's Environment Protection Licence (EPL570).

These results were documented in the following reports and submitted to NSW EPA:

- "Clyde Terminal – Quarter 4 (2022) Groundwater Monitoring Report", prepared by ERM and dated 29 March 2023; and,
- "Clyde Terminal – Annual Progress Report (2022)", prepared by ERM and dated 30 March 2023

Groundwater results are considered to be generally consistent with previous years and the following was noted by ERM regarding groundwater conditions;

- The direction of groundwater flow is generally consistent with previous GMEs undertaken and flows to the southeast and east towards the bounding Duck River north-east towards the Parramatta River within northern sections of Clyde and Parramatta Terminal. Some localised variations in groundwater flows are noted due to localised mounding and the presence of subsurface infrastructure;
- The nature and extent of LNAPL and dissolved phase hydrocarbon impacts are currently considered to be stable, well characterised in the context of the current land use and the monitoring well network is considered suitable to assess potential changes in environmental conditions from Terminal Operations, as well as known residual impacts;
- Dissolved-phase groundwater concentrations of petroleum hydrocarbon Contaminants of Potential Concern (COPC), including BTEXN and TRH C₆-C₄₀ Fractions do not indicate the occurrence of previously undetected release events from Terminal Site Operations.
- Stability of groundwater conditions is evident based on no statistically significant increasing concentrations trends of petroleum hydrocarbon COPCs and the detection of petroleum hydrocarbon concentrations being limited to known localised on-site areas of LNAPL in the sub-surface.

The Conceptual Site Model, including Potential Source-Pathway Receptor Linkages in relation to groundwater remains consistent with previous assessments:

- On-site concentrations of petroleum hydrocarbon COPCs exceeding offsite ecological or recreational criteria were delineated to on-site areas;
- Exceedances of ecological criteria for chromium were noted in monitoring wells within the former Suez Leased Area (trivalent chromium) and the Northern Wetlands (trivalent and hexavalent) chromium, however exceedances have been delineated to on-site areas.
- Potential for risks to on-Site workers conducting excavation within the above areas are currently mitigated via Viva Energy's Permit to Work system, which manages exposure risk via mandatory review of environmental data and implementation of controls prior to excavation at the Site;

Appendix A3 presents a summary of the groundwater results for BTEXN and TRH C10-C36 at the Clyde Terminal.

Groundwater monitoring will continue in 2023 in accordance with the developed groundwater sampling and analysis plan that is presented in the Annual Progress Report detailed above.

4.5 Biodiversity

On 02 April 2019, DoEE granted approval to the Revised Plan of Management: Restoration of Green and Golden Bell Frog Habitat, Clyde Terminal, January 2019. The alternate design included a wetland mosaic adjacent to the main wetlands to provide in particular for the breeding habitat that was qualified as lost in the approved Conservation of Green and Golden Bell Frogs, Shell Site, Clyde, 2013. The approved alternate design also aimed to preserve more of the existing wetland for the benefit of the balance of flora and fauna species in the area whilst meeting the breeding and sustainable habitat aims of the original PoM.

In 2019, the proposed wetland mosaic and dispersal corridor were constructed. These works included the installation of a frog-proof fence along the wetland mosaic and main wetland to help contain the Green and Golden Bell Frog within their improved habitat and exclude them from operational areas.

Wetland maintenance activities have continued throughout the reporting period.

4.6 Waste

Wastes were managed in accordance with the EMM.

During the reporting period, operation activities at Clyde Terminal generated approximately 1,498.2 tonnes of solid and liquid wastes, which was a slight increase from the previous year's result of 1,453.5 tonnes. Most of this waste was subject to chemical or physical treatment prior to disposal (91%), 2.3% was recycled and 6.6% was sent directly to landfill. The proportion of waste sent to landfill decreased from 11.5% during the previous reporting period.

No asbestos were generated during the reporting period.

5 Incidents and non-compliances during the reporting period

No reportable incidents occurred during the reporting period.

No non-compliance with EPL570 conditions occurred during the reporting period.

6 Actions required from previous Annual Review

The Clyde Terminal environmental performance for the reporting period has been in line with the statutory requirements and limits, as described in Section 4 above.

No actions were identified in the previous Annual Review.

7 Measures to improve the environmental performance

Table 5 includes a list of measures to improve the environmental performance as well as an action plan for completion. Listed actions were identified during the Independent Environmental Audit undertaken in March 2022 and were reported in the 2021 AEPR. The table has been updated to provide an update on progress of the action plan.

In August 2022, Viva Energy provided the NSW EPA with a "PFAS Firefighting Foam Transition Plan" for its NSW terminal operations, including the Clyde Terminal. The transition plan provides details of a number of actions till December 2025 that Viva Energy propose to undertake to meet or exceed compliance with the Protection of the Environment Operations (General) Amendment (PFAS Firefighting Foam) Regulation 2021 (the Regulation).

Some of the actions include;

- Decommission non-compliant foams and dispose at a suitable licensed facility.
- Replace identified non-compliant foam stocks with fresh C6 compliant foam for Tankfarm fire protection
- Review the suitability of foams for specific fire scenarios and replace with Fluorine Free Foams.

Table 5: List of measures to improve environmental performance

MYOSH reference number	Recommended Action	Viva Energy proposed action	Responsible party	Initially proposed completion date	Updated status (28/07/2023)
21263	The current EMM includes cross-references to the consent conditions and the conditions from "Licence 570 23 Dec 2021". The EMM should be periodically reviewed and updated to ensure it addresses all relevant conditions from the development consent and the current EPL. For example, the EMM should be amended to fully address CC # C50 as it applies to the operations phase of the EST.	Update EMM to include cross-reference to CC # C50 and to address all of the requirements, including C50(d) Groundwater; and, C50(e) Leachate	Environment Lead	30/09/2022	A Licence variation application for EPL570 was submitted to NSW EPA on 30 June 2023. Once the EPL variation is issued, the EMM will be updated to reflect the updated EPL. The relevant EMM section will also be updated to reflect the requirements of condition C50 (as it applies to the operational phase of the project) during this update. It is proposed that the EMM will be updated and made available on the Viva Energy website no later than 30 Sept 2023 .
N/A	The EPL does not appear to currently permit the generation, storage or disposal of PFAS wastes. Viva Energy should consult with the EPA to determine how the EPL should be amended to address any potential future wastes of this type at the terminal.	Include generation, storage and disposal of PFAS firefighting foams on Application for Exemption for the continued use of long chain PFAS	HSSE Lead	31/08/2022	The waste code M250 is listed in EPL condition L5.3 which is "Surface active agents (surfactants), containing principally organic constituents and which may contain metals and inorganic materials". While it is considered that this code would encompass PFAS, Viva Energy have consulted with the EPA on this matter and are waiting for their response.

MYOSH reference number	Recommended Action	Viva Energy proposed action	Responsible party	Initially proposed completion date	Updated status (28/07/2023)
21264	If the Biotreater is decommissioned, then Viva Energy should consult with the EPA to determine if EPL # L5.9 can be removed from the EPL.	Apply for a license variation for the removal of the biotreater	Environment Lead	15/12/2022	A Licence variation application for EPL570 was submitted to NSW EPA on 30 June 2023. Removal of EPL condition L5.9 has been requested.
N/A	Viva Energy should consult with the EPA to determine if EPL #L5.6 can be removed from the EPL.	To be considered as part of 21264	Environment Lead	15/12/2022	A Licence variation application for EPL570 was submitted to NSW EPA on 30 June 2023. Removal of EPL condition L5.6 has been requested.
N/A	Viva Energy should consult with the EPA to determine if EPL # L5.8 can be removed from the EPL.	To be considered as part of 21264	Environment Lead	15/12/2022	A Licence variation application for EPL570 was submitted to NSW EPA on 30 June 2023. Removal of EPL condition L5.8 has been requested.
N/A	If the Biotreater is decommissioned, then Viva Energy should consult with the EPA to determine if EPL # L8.1 can be removed from the EPL.	To be considered as part of 21264	Environment Lead	15/12/2022	A Licence variation application for EPL570 was submitted to NSW EPA on 30 June 2023. Removal of EPL condition L8.1 has been requested.
21265	It was observed that there are some gaps around the gate to the frog habitat area. These gaps should be closed off to isolate the frog habitat from the terminal area.	Close gaps around the gate to the frog habitat area	Operations and Maintenance Coordinator	30/10/2022	Completed by proposed due date
N/A	The degraded sand / gravel bags observed along some of the surface drains should be replaced (or removed if no longer required).	Sand/gravel bags will be assessed and replaced when necessary	Operations and Maintenance Coordinator	Ongoing	Condition of sand/gravel bags has been assessed as acceptable and no action is currently proposed.

Appendix A

- A.1 2021 Annual Environmental Performance Report – DPE review letter
- A.2 Surface water discharge monitoring results
- A.3 Summary of Clyde Terminal Groundwater Conditions (Q4 2022)

A.1 2021 Annual Environmental Performance Report – DPE review letter

Department of Planning and Environment



Ms Erica Salazar Zarate
Viva Energy Australia Ltd
Gate 3 Durham St
Rosehill New South Wales 2142

07/10/2022

Shell Clyde Refinery Conversion - SSD-5147 Annual Environmental Performance Report 2021

Dear Ms Salazar Zarate,

Reference is made to the Annual Environmental Performance Report (**AEPR**) for the period January to December 2021, submitted to the Department of Planning and Environment (**the department**) on 16 August 2022 as required under Condition D4 of SSD-5147 (**the consent**, as modified).

The department has reviewed the AEPR and considers it to generally satisfy the reporting requirements of the consent. Please make publicly available a copy of the 2021 AEPR on the company website.

The department notes that no non-compliances were identified in the AEPR. The AEPR does however include a recommended improvement measure to update the Environmental Management Manual to reflect the requirements of condition C50 as it applies to the operational phase of the project. Please provide an update on how this recommendation has been actioned in the next AEPR.

The Department also notes that the Operational Air Quality Management Plan (OAQMP) was updated 14 December 2021 and that the Viva Energy website contains a link to a previous (2015) version of this document. Please ensure that the updated OAQMP is made available on the Viva Energy website in accordance with condition D9.

Should you wish to discuss the matter, please contact Michelle Larkin (Compliance Officer), on 02 9995 6799 or compliance@planning.nsw.gov.au

Yours sincerely

A handwritten signature in black ink, appearing to read 'Julia Pope'.

Julia Pope
Team Leader Compliance - Metro
Compliance

As nominee of the Planning Secretary

A.2 Surface water discharge monitoring results

EPA ID No.1 – Main discharge outlet													
Pollutant	Biochemical Oxygen Demand (BOD)	Fluoride	Nitrogen (Ammonia)	Oil and Grease	pH	Phenols	Total Nitrogen	Total Petroleum Hydrocarbons				Total Phosphorus	Total Suspended Solids
Licence Limit	45/95 (50%/90%)	25/40 (50%/90%)	6/30 (50%/90%)	8/10 (50%/90%)	6-9	0.5	35/100 (50%/90%)	C6-C9	C10-C14	C15-C28	C29-C36	1.5/6 (50%/90%)	30/60 (50%/90%)
Units of Measure	mg/L	mg/L	mg/L	mg/L	units	mg/L	mg/L	mg/L				mg/L	mg/L
Freq. as per EPL	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly				Monthly	Monthly
06/01/2022	<5	0.75	0.02	<5	7.4	<0.05	2.3	<0.2	<0.05	<0.2	<0.2	0.68	5
03/02/2022	<5	0.80	0.02	<5	7.3	<0.05	1.9	<0.05	<0.05	<0.2	<0.2	0.42	5
03/03/2022	<5	0.43	0.35	6	6.9	<0.05	1.7	<0.04	<0.05	<0.2	<0.2	0.39	14
07/04/2022	<5	0.68	0.02	<5	7.3	<0.05	0.76	<0.04	<0.05	<0.2	<0.2	0.31	8
05/05/2022	<5	0.84	0.11	<5	7.2	<0.05	1.6	<0.04	<0.05	<0.2	<0.2	0.20	<5
02/06/2022	<5	0.75	0.06	<5	7.4	<0.05	2.9	<0.04	<0.05	<0.2	<0.2	0.23	<5
07/07/2022	<5	0.38	<0.01	<5	6.8	<0.05	0.35	<0.04	<0.05	<0.2	<0.2	0.08	<5
04/08/2022	<5	0.57	0.10	<5	6.9	<0.05	0.53	<0.04	<0.05	<0.2	<0.2	0.18	<5
01/09/2022	<5	0.72	0.02	<5	7.3	<0.05	1.3	<0.04	<0.05	<0.2	<0.2	0.33	12
06/10/2022	<5	0.57	0.06	<5	7.1	<0.05	0.57	<0.04	0.058	0.45	<0.2	0.21	<5
03/11/2022	<5	0.77	0.05	<5	7.2	<0.05	0.57	<0.04	<0.05	0.27	<0.2	0.16	<5
13/12/2022	6	2.0	0.59	<5	7.6	<0.05	2.0	<0.04	0.51	0.34	<0.2	0.42	9

EPA ID No.2 – Main Interceptor Pumpout

Pollutant	pH	Phenols	Total Organic Carbon	Total Suspended Solids
Licence Limit	6.0-9.0	0.5	100	50
Units of Measure	units	mg/L	mg/L	mg/L
Frequency as per EPL	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging
January 2022	No discharge			
February 2022	No discharge			
March 2022	No discharge			
April 2022	No discharge			
May 2022	No discharge			
June 2022	No discharge			
July 2022	No discharge			
August 2022	No discharge			
September 2022	No discharge			
October 2022	No discharge			
November 2022	No discharge			
December 2022	No discharge			

EPA ID No. 4 - B2 System Pump out

Pollutant	pH	Phenols	Total Organic Carbon	Total Suspended Solids	Total Petroleum Hydrocarbons
Licence Limit	6.0-9.0	0.5	100	50	n/a
Units of Measure	units	mg/L	mg/L	mg/L	mg/L
Frequency as per EPL	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging
January 2022	No discharge				
February 2022	No discharge				
March 2022	No discharge				
April 2022	No discharge				
May 2022	No discharge				
June 2022	No discharge				
July 2022	No discharge				
August 2022	No discharge				
September 2022	No discharge				
October 2022	No discharge				
November 2022	No discharge				
December 2022	No discharge				

EPA ID No.25 – Flexible discharge outlet

Pollutant	pH	Total Organic Carbon	Total Suspended Solids
Licence Limit	6.0-9.0	100	50
Units of Measure	units	mg/L	mg/L
Frequency as per EPL	<5 days prior to discharge	<5 days prior to discharge	<5 days prior to discharge
January 2022	No discharge		
February 2022	No discharge		
March 2022	No discharge		
April 2022	No discharge		
May 2022	No discharge		
June 2022	No discharge		
July 2022	No discharge		
August 2022	No discharge		
September 2022	No discharge		
October 2022	No discharge		
November 2022	No discharge		
December 2022	No discharge		

EPA ID No. 26 - B2 System Monitoring Point							
Pollutant	pH	Phenols	Total Organic Carbon	Total Suspended Solids	Total Petroleum Hydrocarbons		
					C6-C9	C10-C14	C15-C28
Units of Measure	pH	mg/L	mg/L	mg/L	mg/L		
Freq. as per EPL	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging		
January 2022				No discharge			
February 2022				No discharge			
March 2022				No discharge			
April 2022				No discharge			
May 2022				No discharge			
June 2022				No discharge			
July 2022				No discharge			
August 2022				No discharge			
September 2022				No discharge			
October 2022				No discharge			
November 2022				No discharge			
December 2022				No discharge			

EPA ID No. 28 – East Interceptor Bay 1&2 overflow			
Pollutant	pH	Total Organic Carbon	Total Suspended Solids
Licence Limit	n/a	n/a	n/a
Units of Measure	units	mg/L	mg/L
Frequency	Each overflow event	Each overflow event	Each overflow event
06/01/2022	7.4	1.3	6
07/01/2022	7.7	1.3	<5
08/01/2022	7.2	1.6	<5
09/01/2022	7.9	1.4	<5
23/02/2022	7.0	2.1	<5
24/02/2022	7.0	1.9	<5
25/02/2022	7.2	2.5	<5
26/02/2022	7.3	6.0	<5
27/02/2022	7.1	5.4	31
28/02/2022	7.1	2.7	<5
01/03/2022	7.1	2.9	<5
02/03/2022	6.7	3.9	<5
03/03/2022	6.7	3.6	5
04/03/2022	7.5	5	<5
05/03/2022	7.5	2.5	<5
06/03/2022	7.3	2.2	<5
07/03/2022	7.4	4.2	12
08/03/2022	7.1	1.5	<5
09/03/2022	7.5	1.9	<5
20/03/2022	7.5	3.1	<5
28/03/2022	7.2	2.4	<5
29/03/2022	6.9	2.1	<5
30/03/2022	7.3	2.2	<5
31/03/2022	7.5	6.6	5
01/04/2022	7.1	2.7	<5
07/04/2022	7.2	2.0	<5

08/04/2022	7.2	1.5	<5
09/04/2022	7.0	1.6	<5
May 2022	No discharge		
Jun 2022	No discharge		
03/07/2022	7.1	1.6	<5
04/07/2022	7.4	1.7	<5
05/07/2022	7.0	2.5	<5
06/07/2022	7.1	1.5	<5
07/07/2022	7.3	1.6	<5
11/07/2022	7.3	1.7	<5
23/07/2022	7.8	2.9	<5
Aug 2022	No discharge		
Sep 2022	No discharge		
09/10/2022	7.5	2.5	<5
Nov 2022	No discharge		
Dec 2022	No discharge		

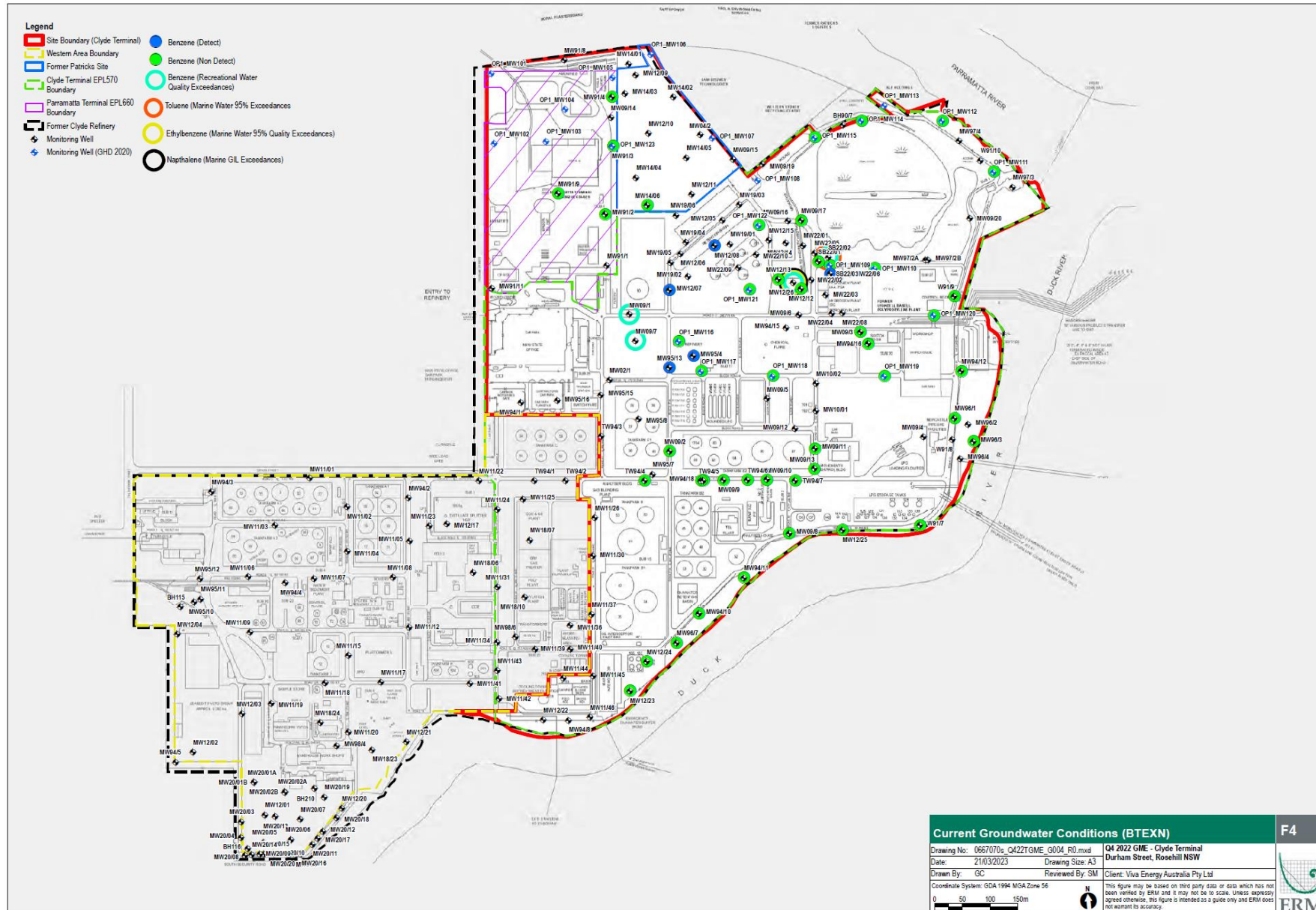
EPA ID No. 29 – East Interceptor Bay 3&4 overflow			
Pollutant	pH	Total Organic Carbon	Total Suspended Solids
Licence Limit	n/a	n/a	n/a
Units of Measure	units	mg/L	mg/L
Frequency as per EPL	Each overflow event	Each overflow event	Each overflow event
08/01/2022	7.4	5.0	17
23/02/2022	7.0	4.7	15
24/02/2022	7.2	6.0	12
25/02/2022	7.4	7.0	7
26/02/2022	7.4	6.1	7
27/02/2022	7.2	4.9	13
01/03/2022	7.2	6.9	<5
02/03/2022	6.7	3.9	15
03/03/2022	6.7	3.5	7
04/03/2022	7.4	2.3	<5
06/03/2022	7.5	4.4	24
07/03/2022	7.9	4.5	5
08/03/2022	7.2	3.1	6
09/03/2022	7.4	3.4	<5
20/03/2022	7.4	5.5	8
28/03/2022	7.1	4.4	10
29/03/2022	7.3	5.5	8
30/03/2022	7.5	6.2	7
31/03/2022	7.5	6.6	<5
01/04/2022	7.3	6.4	<5
07/04/2022	7.3	4.8	9
08/04/2022	7.4	3.4	<5
09/04/2022	7.1	3.9	9
May 2022	No discharge		
Jun 2022	No discharge		
03/07/2022	6.9	3.0	10

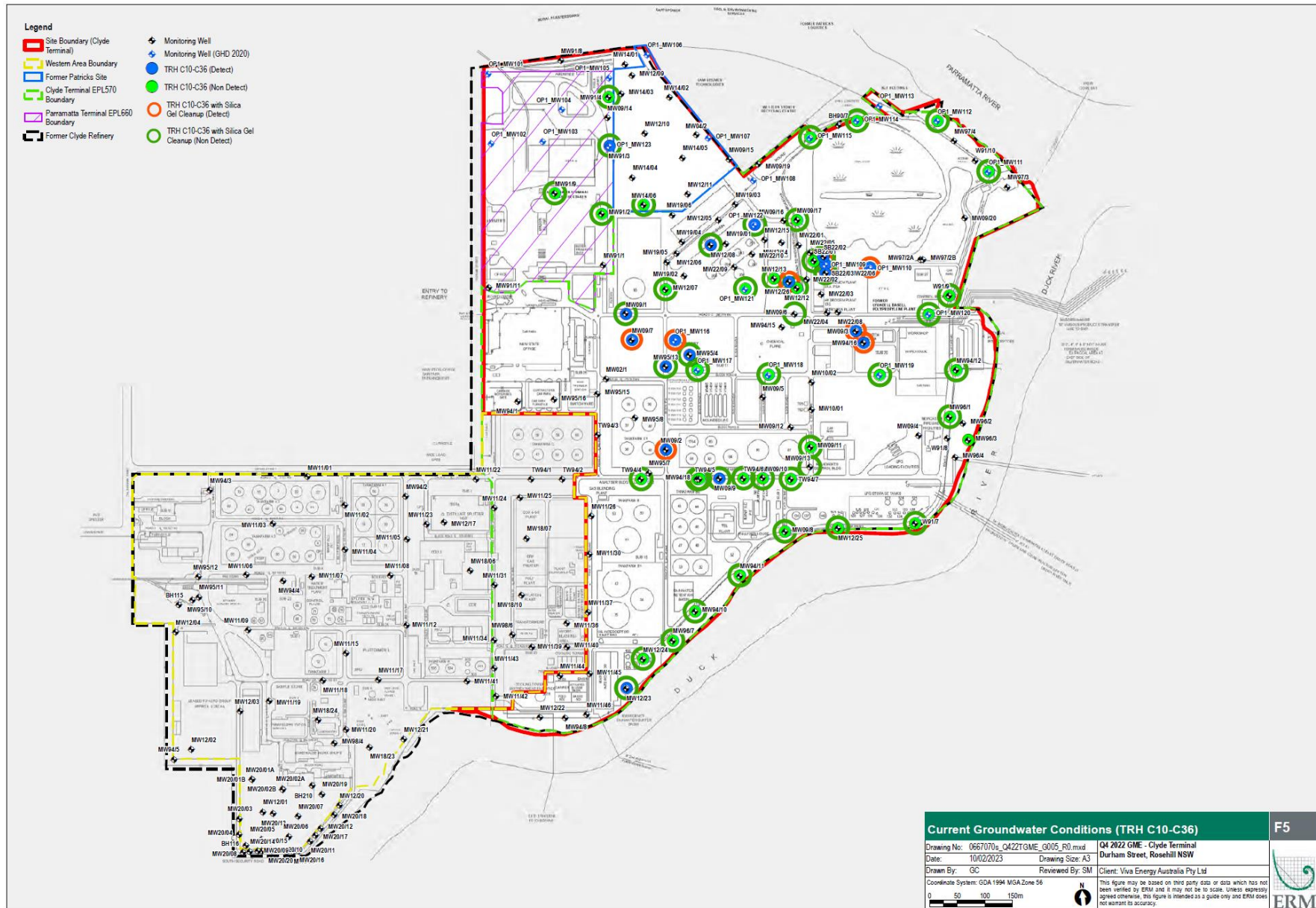
04/07/2022	7.5	3.6	<5
05/07/2022	7.1	1.3	5
06/07/2022	7.3	3.1	<5
07/07/2022	7.5	3.8	<5
11/07/2022	7.5	3.9	9
23/07/2022	7.7	4.3	8
Aug 2022	No discharge		
Sep 2022	No discharge		
09/10/2022	7.5	5.0	16
10/10/2022	7.1	4.4	13
Nov 2022	No discharge		
Dec 2022	No discharge		

EPA ID No.30 – East Interceptor Pump-out

Pollutant	pH	Oil and Grease	Total Organic Carbon	Total Suspended Solids
Licence Limit	6.0-9.0	10	100	50
Units of Measure	units	mg/L	mg/L	mg/L
Frequency as per EPL	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging
January 2022	No discharge			
February 2022	No discharge			
March 2022	No discharge			
April 2022	No discharge			
May 2022	No discharge			
June 2022	No discharge			
July 2022	No discharge			
August 2022	No discharge			
September 2022	No discharge			
October 2022	No discharge			
November 2022	No discharge			
December 2022	No discharge			

A.3 Summary of Clyde Terminal Groundwater Conditions (Q4 2022)







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