



Clyde Terminal

Annual Environmental Performance Review

Reporting Period: 01 January to 31 December 2018

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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 are:

- 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 the Gore Bay Terminal. These products are distributed by pipeline from the Clyde Terminal to the adjacent Parramatta Terminal road gantry and to Sydney Airport. The Clyde Terminal site area, site access and receivers are shown in Figure 1 below.

The content of this Annual Review meets the requirements of SSD 5147 condition D4. Table 4 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 1 – Clyde Terminal site area, site access and receivers

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”.
- 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 the existing Environment Protection Licence (EPL) No. 570 under the Protection of Environment Operations Act 1997 (POEO Act).

No modifications occurred to the above listed approvals during the reporting period.

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 2018).

3.1 Works undertaken during this reporting period

3.1.1 Demolition works

The scope of the Liberty demolition contract was completed during the 2016 reporting period and no demolition works were undertaken in this reporting period.

Demolition works remains within the approved period of ten (10) years from date of the SSD 5147.

3.1.2 Construction works

The following construction works were undertaken during this reporting period:

- Refurbishment of the following storage tanks:
 - Tank farm B: Tank 53 completion
 - Tank farm B2: Tank 33 completion
 - Tank farm E1: Tank 36 completion
 - Tank farm E2: Tank 86 completion
- Construction of the following storage tanks:
 - Tank Farm B2: Tanks 78 & 79 completion
- Various piping installations and modifications, including;
 - Mogas tanks and Quick Flush Tanks (QFT's) in Tank farms E1 and E2 completion
 - Jet tank 53, Joint User Hydrant Installation (JUHI) transfer pit and gantry tie ins
 - Firewater area completion
 - Diesel tanks, manifold, pump pit and QFT's completion
 - General utilities completion
- Various electrical and instrumentation works, including;
 - Electrical substations 2, 15 and 30 Low Voltage (LV) completion
 - Fire water system
 - Lighting
- Instrumentation for tanks in Tank farms E1, E2 and B1, foam skids and jet filters completion
- Various civil works for associated equipment completion

Construction works remained within the approved period of four (4) years from date of the SSD 5147 during the reporting period with consent for construction works lapsing on 14 January 2019.

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 and the Sydney Metropolitan 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, to Sydney Airport, to Silverwater terminal and to Newcastle.

Table 2: Operations summary

Product	Approved limit	Previous reporting period (actual)	This reporting period (actual)	Next reporting period (forecast)
Finished petroleum products (ML)	264	254	252	250
Petroleum gases (m3)	1,550	0	0	0

3.2 Proposed works for the next reporting period

3.2.1 Demolition works

Stage 2 demolition works as approved in the original SSD 5147 and the additional modification works as approved by the Modification 1 of the SSD will be executed during 2019, including:

- Tankfarms A2, A3 and C in the western area of Clyde Terminal;
- Sate business office building;
- Electrical switchyard;
- Two butane spheres and LPG gantry; and,
- Slops tank 106

3.2.2 Construction works

In accordance with condition B6 of the SSD 5147, Construction shall not extend beyond 14 January 2019. A Modification application was lodged to Department of Planning and Environment (DP&E) in January 2019 to extend the demolition scope of works as well as to extend the approved construction period for one (1) year to allow for the execution of the Green and Golden Bell Frog (GGBF) habitat restoration works.

Modification of Development Consent was granted on 29 July 2019. In accordance with this modification, the below works will be executed in 2019:

- Wetland mosaic adjacent to the Clyde main wetland to provide for improved breeding habitat conditions of the GGBF; and,
- Restoration works at the Clyde main wetland to provide for improved breeding and foraging habitat conditions of the GGBF.

Refer to Appendix A.1 for a map depicting areas of GGBF habitat restoration works.

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, construction noise at Clyde was managed in accordance with the Construction and Demolition Noise Management Plan. This plan meets the requirements of condition C25 of the SSD 5147.

Construction works were undertaken within the approved hours under condition C22 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, construction air emissions were managed in accordance with the Construction and Demolition Air Quality Management Plan. This plan meets the requirements of condition C31 of the SSD 5147. During the reporting period, visual observations were conducted weekly throughout various areas of construction works. Low and controlled levels of dust were observed. No air quality complaints were received during this or previous reporting periods.

Operational air emissions were managed in accordance with the Environmental Management Manual (EMM) and monitored following the approved Operational Air Quality Monitoring Program under condition C30 of the SSD 5147. Monitoring results for the reporting period are detailed below:

4.2.1 Dust

Visual monitoring for dust was undertaken during routine site activities. Low and controlled levels of dust were observed.

4.2.2 Odour

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 Permit to Work. No offensive odours were identified in these assessments, consistent with results from the previous reporting period.

An annual emission survey of odours as required in the Operational Air Quality Monitoring Program was undertaken during the reporting period by a suitably qualified and independent consultant on the 8th and 9th May 2018. A perimeter survey of the site was carried out during which the presence and, where possible, the character of odours was noted. Odours were rated, from Not Perceptible to Extremely Strong, based on the German standard Olfactometry Determination of Odour Intensity (VDI 3882 Part 1). Results of the boundary odour survey are depicted on Figure 3 below with odour intensity ranging from not perceptible to weak over a total of 31 discrete locations along the site perimeter.

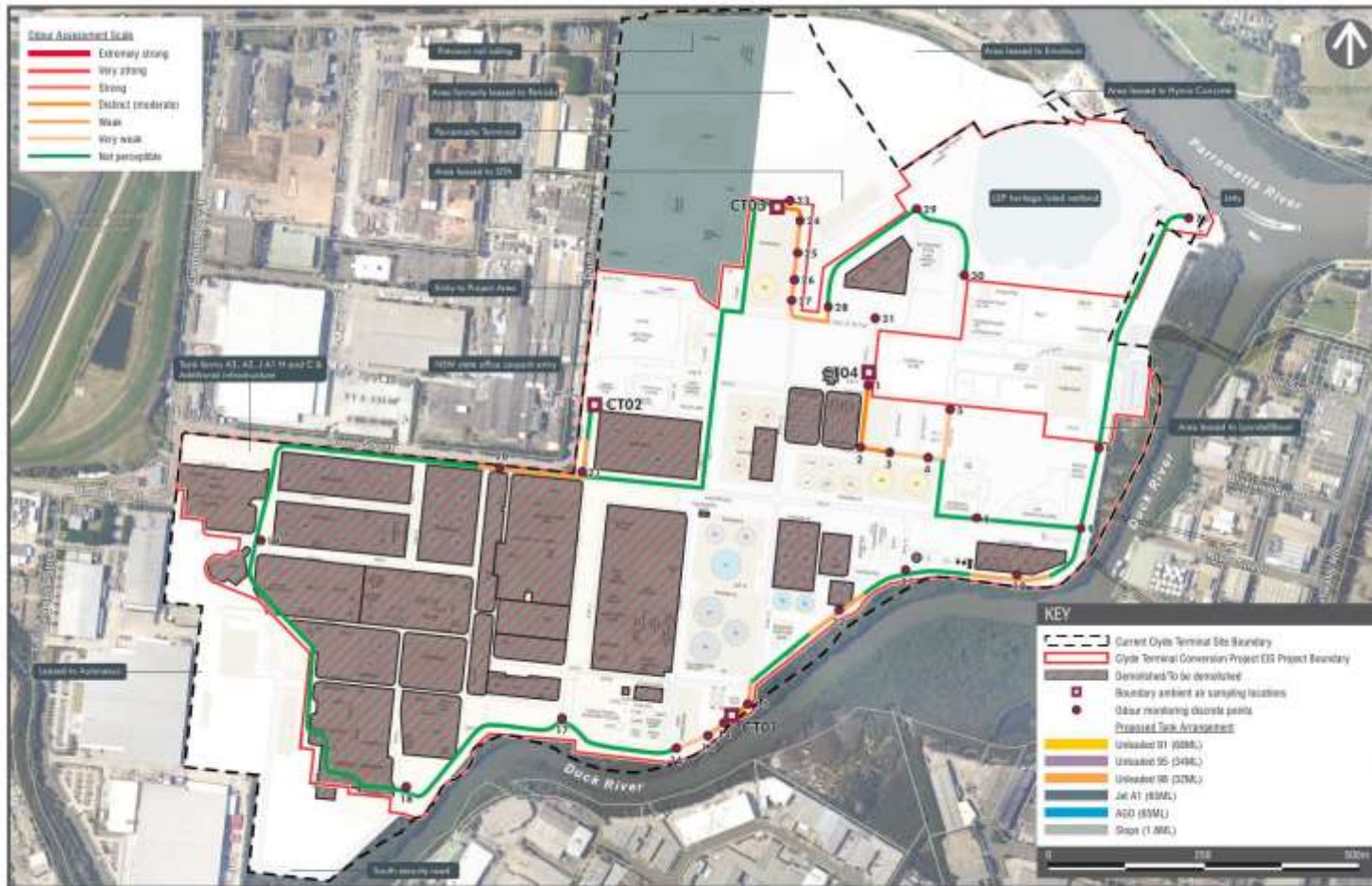


FIGURE 6

Figure 2: Boundary odour survey results

4.2.3 VOCs

The tank maintenance program included maintenance on floating covers and associated vapour sealing systems as part of scheduled off stream inspections to control VOC emissions.

Emissions from the storage tanks were estimated using the techniques in line with the National Pollutant Inventory (NPI) reporting process and submitted to both NPI and Annual Return required under EPL 570 for the period 02 July 2017 to 01 July 2018. Yearly VOC emissions estimates resulted in 0.37 tonne Benzene and 78.80 tonne VOC, well below the EPL load limits (26 tonne and 1250 tonne, respectively) and also below previous reporting period results, which is consistent with lower fuel storage for this reporting period (refer to Table 2 above).

The annual emission survey described in the above section also included VOCs sampling and analysis. Four boundary locations were surveyed based on likely peak impact areas identified in the EIS and variability in wind conditions, as depicted on Figure 4 below. Boundary ambient air sampling was conducted at each location using stainless steel evacuated canisters and flow controllers. Samples were collected over a period of over 20 hours and canisters were subsequently analysed for CoPC following method US EPA TO-15.

Monitoring results are summarised below in Table 3 with details presented on the Annual Air Quality Monitoring Survey report (Aecom, 2018). Minimum monitoring results for benzene and total VOCs are likely representative of background concentrations and correlate well with the EIS predictions. However, when considering the effect of background concentrations, average and maximum monitoring results for total VOCs and benzene appear to be under-estimated by the EIS model. This discrepancy may be explained based on adjacent off-site industrial activities and minor emission sources not included in the EIS model (e.g. waste water interceptors). Measured benzene values are within benzene concentrations likely to be experienced in Sydney's urban ambient air.

When comparing to the assessment criteria adopted in the EIS, all measured VOCs resulted in levels well below the applicable criteria

Table 3: Maximum 1-hour VOC Concentration (99.9th percentile)

Pollutant	Assessment criteria		Monitoring results		
	NSW EPA criteria ¹	EIS prediction ²	min	ave	max
Benzene (µg/m ³)	29	0.35 – 0.60	1.2	2.9	5.4
Cumene (µg/m ³)	21		0.2	0.4	0.6
Cyclohexane (µg/m ³)	260		2.0	3.4	5.5
Ethyl benzene (µg/m ³)	8000		3.6	7.1	14.0
n-Hexane (µg/m ³)	3200		1.1	2.8	5.3
Naphthalene (µg/m ³)	440		1.0	1.2	1.4
Xylenes, total (µg/m ³)	190		15.8	24.4	46.0
Toluene (µg/m ³)	360		17.0	41.6	87.0
VOC, total (µg/m ³)	-	80 - 180	200.0	454.0	980.0

¹ NSW EPA Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (DEC, 2005)

² Excludes background concentration



FIGURE 3

Figure 3: Boundary VOC sampling locations

4.3 Soil and water

Construction soil and water environmental aspects are managed in accordance with the Soil and Water Management Plan. This plan meets the requirements of conditions C17, C20, C24 and C50 of the SSD 5147. During the reporting period, visual observations were conducted to ensure sediment-laden water was properly managed and not discharged off-site.

No groundwater or excavated soil testing was required during the reporting period.

Contaminated soil from the management of a pipeline leak at Sydney Olympic Park in January 2018 was stored at the Clyde Terminal at the Sludge Dewatering Facility during 2018 and 2019. This was noted as part of the Independent Environmental Audit in May 2018. This material (2,820.98 tonnes) was disposed to a NSW licenced landfill between 30 April and 1 May 2019.

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.3). The biotreater effluent is the main discharge point, identified as EPA ID No.1 (Refer to Figure 4). This point was monitored monthly during the reporting period with pollutant concentrations well below the EPL limits as detailed in summary Table 4 below. Results are comparable to those presented in the previous reporting period with slightly decreased levels of TSS. The average daily discharge flow at this point was 864 kL/day, with a maximum daily discharge volume recorded of 2,099 kL. The EPL volume limit at this discharge point is 4,000 kL/day. Water was not discharged from the other approved discharge points (EPL ID No. 2, 4 or 30).

Table 4: Summary of monitoring results for the main discharge point at Clyde Terminal (EP 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	<5
Fluoride (mg/L)	25	40	n/a	0.91	2.22	5.2
Nitrogen (Ammonia)	6	30	n/a	<0.01	0.26	3.0
Oil and Grease (mg/L)	8	10	n/a	<5	<5	7
ph			6.0-9.0	6.8	7.29	8.0
Phenols (mg/L)			0.5	<0.05	<0.05	<0.05
Total Nitrogen (mg/L)	35	100	n/a	0.65	5.89	17
Total Phosphorus (mg/L)	1.5	6	n/a	0.07	0.41	0.92
TSS (mg/L)	30	60	n/a	<5	<5	12

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 ex-Basell interceptors during October and November 2018 due to heavy rainfall. Whilst 2018 was dominated by very dry conditions, October to December saw some relief from the dry, with above average rainfall across parts of NSW (Bureau of Meteorology website).

Samples were taken daily during overflow conditions for the ex-Basell interceptors with pollutant concentrations well below EPL conditions. Results are also below those presented in the previous reporting period. Summary results for the approved overflow discharge at the ex-Basell interceptors are presented in Table 5 below.

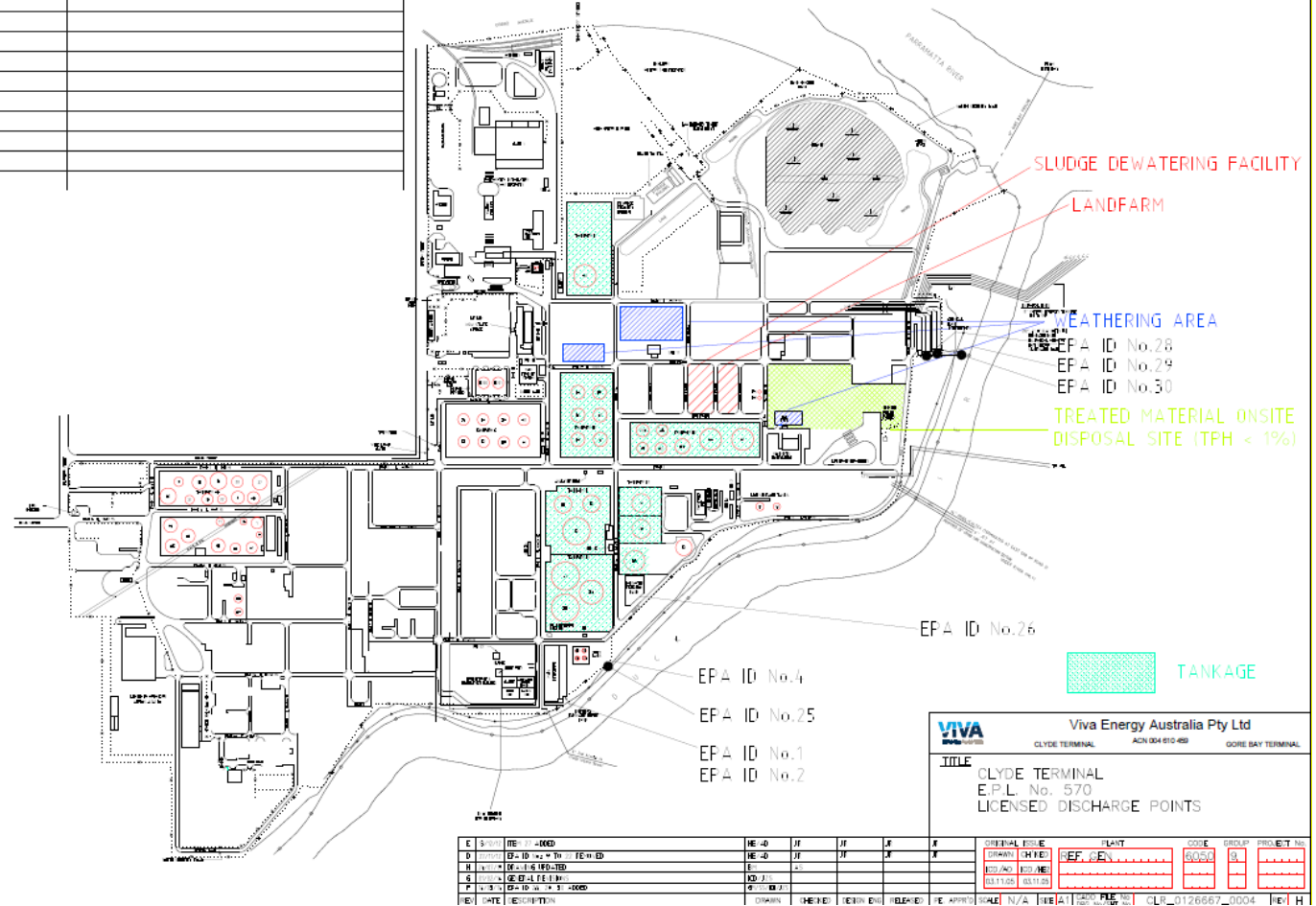
Table 5: Summary of monitoring results for overflow discharge to water (EP ID No.28 and 29)

Pollutant	Concentration limits	Monitoring results					
	100 percentile	EPA ID No.28			EPA ID No.29		
		min	ave	max	min	ave	max
pH		7	7.48	7.9	7.2	7.53	7.8
Total Organic Carbon (mg/L)		2	3.21	7.7	2.7	4.77	6.0
Total Suspended Solids (mg/L)	80 (within 48hrs of a rain event)	<5	5.5	14	15	24	38

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

Environmental Protection Licence No.570

Licenced Discharge Points



REV	DATE	DESCRIPTION	DRAWN	CHECKED	DESIGN ENG	PROJECT	SCALE	N/A	DATE	BY	CHKD	DATE	BY	CHKD	DATE	BY	CHKD	DATE	BY	CHKD	DATE	BY	CHKD	
1	03/11/2016	ISSUE FOR CONSTRUCTION																						
2	03/11/2016	ISSUE FOR CONSTRUCTION																						
3	03/11/2016	ISSUE FOR CONSTRUCTION																						

Figure 4 – Clyde Terminal licensed discharge points

4.4 Biodiversity

Construction biodiversity aspects are managed in accordance with the Biodiversity Management Plan. This plan meets the requirements of condition C58 of the SSD 5147. In addition, the EPBC 2013/6878 approval requires Viva Energy to undertake the modification works in full accordance with, and implement, the Plan of Management: Restoration of Green and Golden Bell Frog (GGBF) Habitat, Clyde, October 2013 and Conservation of Green and Golden Bell Frogs, Shell Site, Clyde, 2013 (the Plans).

In 2018, the originally approved Plan of Management: Restoration of Green and Golden Bell Frog Habitat was critically reviewed by a group of specialists including University of Newcastle (UoN) and Urban Bush Management (UBM) lead by UNSW Water Research Laboratory (WRL). As a result of this work, the Plan of Management was updated and subsequently submitted to DoEE for review and approval.

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 includes 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 will also help 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.

An Annual Compliance Report is required under approval condition 7 of the EPBC 2013/6878. The latest report covered the period 12 February 2018 to 02 April 2019 and is available on the Viva Energy website (<https://www.vivaenergy.com.au/about-us/terminals-shipping/clyde/conversion-project>).

In addition to the compliance status against each of the EPBC 2013/6878 conditions, the Annual Compliance Report also describes the progress on the Plans implementation during the reporting period. The main activities undertaken in 2018 included a number of field inspections undertaken to characterise the current GGBF habitat conditions around the wetlands, including main wetlands, peripheral wetlands, terrestrial habitats, sludge cells at the proposed wetland mosaic and along the mangrove forest between Clyde Terminal and Duck Creek, as well as areas of standing water in the vicinity of this site (refer to Appendix A.1).

Wetland maintenance activities have continued throughout the reporting period and are also detailed in the EPBC Annual Compliance Report.

4.5 Waste

Construction wastes are managed in accordance with the Waste and Resource Recovery Management Plan. This plan meets the requirements of condition C57 of the SSD 5147. The EMM lists the relevant waste management measures for Operations.

Waste generation and disposal continued to be tracked in accordance with NSW EPA requirements during the reporting period. The waste tracking system was audited as part of the Independent Environmental Audit in May 2018 and it was found compliant.

During the reporting period, construction and operation activities at Clyde Terminal generated approximately 1,842.53 tonnes of solid and liquid wastes, which was a significant decrease from the previous years' result of 18,549 tonnes in 2016 and 3,113 tonnes in 2017. Approximately, 42% of this waste is subject to chemical or physical treatment prior disposal, 40% is recycled and 18% is sent off to landfill.

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.

Five non-compliances were identified during the Independent Environmental Audit 2018. The details of these non-compliances are explained on Table 6 below along with details of the actions taken to ensure compliance. At the time of reporting, all proposed actions were closed.

Table 6: Non-compliances during the reporting period

CC	Description	Proposed action	Status of action
C41	Viva Energy should consult with the DP&E to determine if consent condition C41 can be removed, particularly as safe assembly and evacuation is also addressed in CC # C42(e). If not removed, then the flood warning signs should be installed.	Install flood warning signs	Closed – signage installed (refer to Appendix A.4)
C42	The flood maps showing assembly points and evacuation routes should be updated in the Flood Action Card on the Emergency Response Plan.	Update the Flooding Tactical Checklist with revised flood maps	Closed – ERP updated and approved by DPE (refer to Appendix A.4)
C45 and EPLL3.5	Grass has been grown on the former Mobil tank farm site to minimise run-off of suspended solids. Hay bales and sediment barrier have also been provided – Viva Energy advised that these were installed after the TSS exceedances; therefore, this CC has been categorised as “non-compliant”	The issue was corrected as part of the TSS exceedance incident	Closed
C47	“Stormwater Only” signs should be provided on all of the relevant drains located in the car parking areas at the main office building.	Provide “Stormwater Only” signs	Closed – signage installed (refer to Appendix A.4)
C46 and EPL1.1	This condition has been assessed as “non-compliant” due to the occurrence of an incident since the previous IEA, which resulted in Viva Energy receiving a Penalty Notice from the EPA	Not applicable as discharge corresponded to a past incident	N/A
EPLM1.2	Records of the volume discharged have not been kept for 4 years because some data from the data logger on LDP1 has been lost due to a software update (this was identified in the previous IEA). The data logger information provided for the period since the previous IEA is complete.	The issue was corrected as part of the previous IEA	Closed
EPLG2.1	The location of LDP 24 should be clearly marked by a sign (as required by EPL # G2.1).	Erect sign for LDP24	Closed – LDP 24 has now been removed from the license. Refer to Figure 4

6 Actions required from previous Annual Review

DP&E Compliance acknowledged receipt of the Annual Review 2017 by letter dated 06 September 2018 (refer to Appendix A.2). DP&E advised that the Annual Review 2017 “generally met the requirement of the consent”. They required to include a status update on all non-compliances identified in the 2017 AR report in the 2018 AR report.

Two non-compliances were identified on the 2017 AR report. The details of these non-compliances are provided on Table 7 below along with details of the actions taken to ensure compliance. All actions were closed at the time of reporting.

Table 7: Non-compliances reported in 2017 Annual Review

CC	Description	Action	Status of action
C30	Annual emission survey for odour and VOC was not conducted in 2017	Air quality boundary survey was conducted in May 2018	Closed – refer to Section 4.2 above
C46	One exceedance of the TSS limit at Discharge Point 29	Additional sediment control and drain cleaning works	Closed

7 Improvement Plan

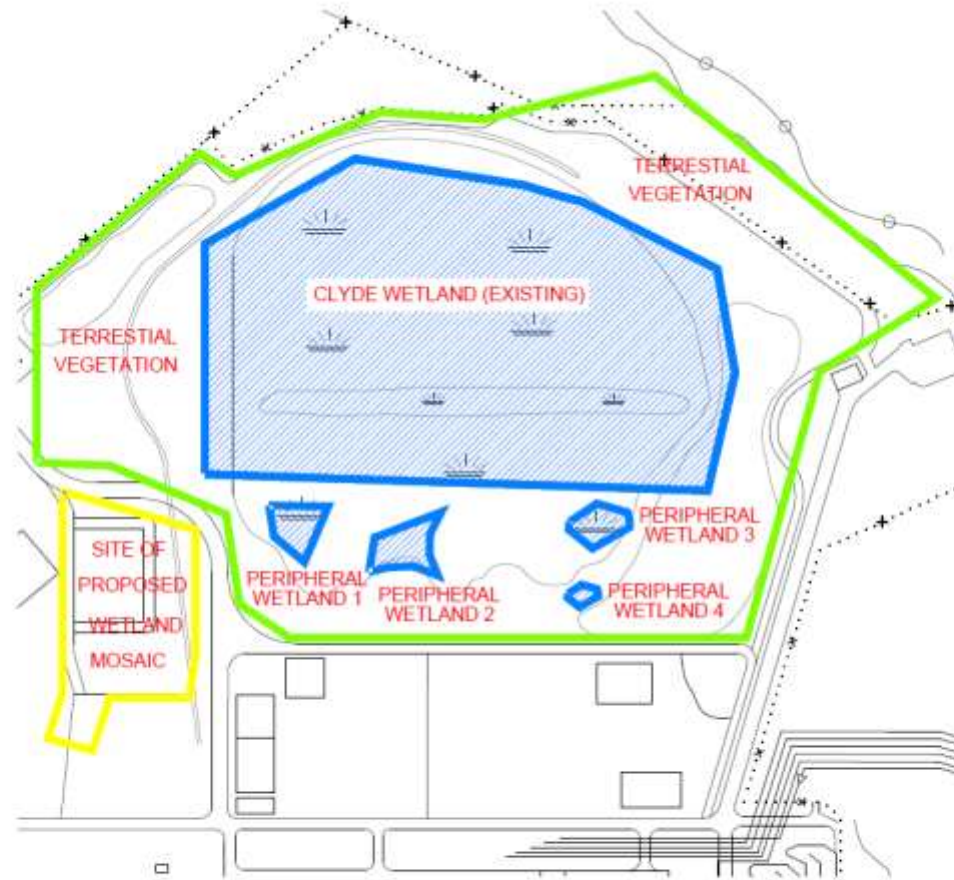
The Clyde Terminal environmental performance for the reporting period has been in line with the statutory requirements and limits and generally in accordance with the EIS predictions, as described in Section 4 below.

Over the current calendar year, the measures proposed in the Revised Plan of Management: Restoration of Green and Golden Bell Frog Habitat, Clyde Terminal, January 2019 will be implemented to improve the habitat conditions of the GGBF at Clyde Terminal.

Appendix A

- A.1 Figure A.1 Clyde Terminal GGBF habitat restoration project area
- A.2 Annual Environmental Performance Review (1 January to 31 December 2017) approval letter
- A.3 Surface water discharge monitoring results
- A.4 Documentary evidence of completed actions raised during the Independent Environmental Audit (2018)

A.1 Figure A.1 Clyde Terminal GGBF habitat restoration project area



<p>IMPORTANT INFORMATION</p> <p>This document is the property of Viva Energy Australia Pty Ltd. It is confidential and its use is restricted to the project for which it was prepared. It is not to be distributed to other parties without the written consent of Viva Energy Australia Pty Ltd.</p>										<p>PROJECT IDENTIFICATION</p> <p>PROJECT NAME: CLYDE TERMINAL GGBF HABITAT RESTORATION</p> <p>PROJECT NUMBER: 10000000000000000000</p>		<p>VIVA Energy Australia Pty Ltd</p>		<p>PROJECT AREA</p> <p>PROJECT AREA: CLYDE TERMINAL GGBF HABITAT RESTORATION</p> <p>PROJECT AREA: 10000000000000000000</p>						
DATE:	BY:	CHKD BY:	APP'D BY:	SCALE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:	DATE:

A2. Annual Environmental Performance Review (1 January to 31 December 2017) approval letter



Contact: Emmanuel Smith-Aspros
Phone: 02 6275 1232
Email: compliance@planning.nsw.gov.au
Our ref: 5F18/59538

Julia Seymour
Regional Operations Manager - South
Viva Energy Australia
GPO Box 8/2
Melbourne VIC 3001

Dear Ms Seymour,

Viva Energy Australia – Clyde Terminal Annual Review 2017

Reference is made to the 2017 Annual Review (AR) report (provided on 30 July 2018) for the Clyde Terminal operated by Viva Energy Australia Pty Ltd, as required by Schedule D, Condition D4 of SSD 5147 (the consent).

The Department considers the AR report for Clyde Terminal to generally meet the requirements of the consent. Please note that acceptance of the AR report is not an endorsement of the compliance status of the project.

Please include a status update on all non-compliances identified in the 2017 AR report in the 2018 AR report.

Non-compliances identified in the AR report have been assessed in accordance with the Department's Compliance Policy, with the Department on this occasion determining to record the breaches. At this stage no further enforcement action is proposed. However, please note that recording the breach does not preclude the Department from taking alternative enforcement action, if it becomes apparent that an alternative response is more appropriate.

Should you have any questions about this matter please contact Emmanuel Smith-Aspros, Compliance Officer, as per the details listed above.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'MD' followed by the date '6/9/18'.

Maria Divis
A/Team Leader – Compliance
as the Secretary's nominee

A.3 Surface water discharge monitoring results

EPA ID No.1 – Biotreater Effluent													
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	ug/L				mg/L	mg/L
Freq. as per EPL	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly				Monthly	Monthly
16/01/2018	<5	1.3	0.03	7	7.9	<0.05	1.2	<0.04	<0.05	<0.2	<0.2	0.22	<5
1/02/2018	<5	1.6	0.02	<5	7.6	<0.05	2	<0.04	<0.05	<0.2	<0.2	0.56	<5
8/03/2018	<5	1.6	0.03	<5	8	<0.05	0.65	<0.04	<0.05	<0.2	<0.2	0.3	<5
5/04/2018	<5	1.3	0.03	<5	7.3	<0.05	11	<0.04	<0.05	<0.2	<0.2	0.92	5
3/05/2018	<5	2.3	3	<5	7.4	<0.05	12	<0.04	<0.05	<0.2	<0.2	0.83	7
7/06/2018	<5	2.7	<0.01	<5	7.4	<0.05	2.9	<0.2	<0.05	<0.2	<0.2	0.27	<5
30/07/2018	<5	5.2	0.01	<5	6.8	<0.05	17	<0.2	<0.05	<0.2	<0.2	0.42	<5
2/08/2018	<5	4.1	<0.01	<5	6.8	<0.05	16	<0.2	<0.05	<0.2	<0.2	0.37	<5
6/09/2018	<5	2	<0.01	<5	6.9	<0.05	1	<0.2	<0.05	<0.2	<0.2	0.07	<5
10/10/2018	<5	2.6	<0.01	<5	7.2	<0.05	0.71	<0.2	<0.05	<0.2	<0.2	0.14	<5
1/11/2018	<5	1	<0.01	<5	7.1	<0.05	2.4	<0.2	<0.05	<0.2	<0.2	0.25	7
6/12/2018	<5	0.91	<0.01	<5	7.1	<0.05	3.8	0.23	<0.05	<0.2	<0.2	0.58	12

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 2018	No discharge			
February 2018	No discharge			
March 2018	No discharge			
April 2018	No discharge			
May 2018	No discharge			
June 2018	No discharge			
July 2018	No discharge			
August 2018	No discharge			
September 2018	No discharge			
October 2018	No discharge			
November 2018	No discharge			
December 2018	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	µg/L
Frequency as per EPL	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging
January 2018	No discharge				
February 2018	No discharge				
March 2018	No discharge				
April 2018	No discharge				
May 2018	No discharge				
June 2018	No discharge				
July 2018	No discharge				
August 2018	No discharge				
September 2018	No discharge				
October 2018	No discharge				
November 2018	No discharge				
December 2018	No discharge				

EPA ID No.23, 24, 25, 27 – Flexible discharge outlets

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	<24 hrs prior to discharge	<24 hrs prior to discharge	<24 hrs prior to discharge
January 2018	No discharge		
February 2018	No discharge		
March 2018	No discharge		
April 2018	No discharge		
May 2018	No discharge		
June 2018	No discharge		
July 2018	No discharge		
August 2018	No discharge		
September 2018	No discharge		
October 2018	No discharge		
November 2018	No discharge		
December 2018	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	ug/L		
Freq. as per EPL	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging		
January 2018				No discharge			
February 2018				No discharge			
March 2018				No discharge			
April 2018				No discharge			
May 2018				No discharge			
June 2018				No discharge			
July 2018				No discharge			
August 2018				No discharge			
September 2018				No discharge			
October 2018				No discharge			
November 2018				No discharge			
December 2018				No discharge			

EPA ID No. 28 – LBL Interceptor Bay 1&2 overflow			
Pollutant	pH	Total Organic Carbon	Total Suspended Solids
Licence Limit			80 (within 48hrs of rain event)
Units of Measure	units	mg/L	mg/L
Frequency	Daily when discharging	Daily when discharging	Daily when discharging
January 2018	No discharge		
February 2018	No discharge		
March 2018	No discharge		
April 2018	No discharge		
May 2018	No discharge		
June 2018	No discharge		
July 2018	No discharge		
August 2018	No discharge		
September 2018	No discharge		
5/10/2018	7.4	2	14
6/10/2018	7.6	3	9
7/10/2018	7.6	2.3	7
8/10/2018	7.6	2.4	<5
10/10/2018	7.5	2.5	<5
11/10/2018	7	2.9	<5
14/10/2018	7	2.5	<5
15/10/2018	7.4	2.6	<5
19/10/2018	7.5	2.3	10
21/10/2018	7.5	7.7	8
29/11/2018	7.8	5.8	<5
30/11/2018	7.9	2.5	<5
December 2018	No discharge		

EPA ID No. 29 – LBL Interceptor Bay 3&4 overflow

Pollutant	pH	Total Organic Carbon	Total Suspended Solids
Licence Limit			80 (within 48hrs of rain event)
Units of Measure	units	mg/L	mg/L
Frequency as per EPL	Daily when discharging	Daily when discharging	Daily when discharging
January 2018	No discharge		
February 2018	No discharge		
March 2018	No discharge		
April 2018	No discharge		
May 2018	No discharge		
June 2018	No discharge		
July 2018	No discharge		
August 2018	No discharge		
September 2018	No discharge		
5/10/2018	7.2	5.6	38
6/10/2018	7.6	6	19
29/11/2018	7.8	2.7	15
December 2018	No discharge		

EPA ID No.30 – LBL Interceptor

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 2018	No discharge			
February 2018	No discharge			
March 2018	No discharge			
April 2018	No discharge			
May 2018	No discharge			
June 2018	No discharge			
July 2018	No discharge			
August 2018	No discharge			
September 2018	No discharge			
October 2018	No discharge			
November 2018	No discharge			
December 2018	No discharge			

A.4 Documentary evidence of completed actions raised during the Independent Environmental Audit (2018)





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