



# Clyde Terminal

## Annual Environmental Performance Review

Reporting Period: 01 January to 31 December 2017

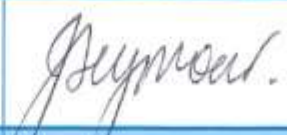
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**Table 1: Annual Review title block**

Document Details	
Name of Operation	Clyde Terminal
Name of Operator	Viva Energy Australia Pty Ltd (Viva Energy)
Development consent / project approval #	SSD 5147
Name of holder of development consent / project approval	Viva Energy
Annual review start date	01 January 2017
Annual review end date	31 December 2017
<p>I, Julie Seymour, certify that this audit report is a true and accurate record of the compliance status of the Clyde Terminal for the period 01 January to 31 December 2017 and that I am authorised to make this statement on behalf of Viva Energy.</p> <p>Note.</p> <p>a) <i>The Annual Review is an "environmental audit" for the purpose of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p>b) <i>The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement – maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents – maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Name of authorised reporting officer	Julie Seymour
Title of authorised reporting officer	Regional Operations Manager - South
Signature of authorised reporting officer	
Date	30 July 2018

# 1 Statement of compliance

Table 2 highlights the compliance status of Clyde Terminal with its relevant approval conditions with two identified non-compliances during the reporting period being discussed in Table 3.

**Table 2: Statement of compliance**

Were all conditions of the relevant approval(s) complied with?	
SSD 5147	NO
EPBC 2013/6878	YES

**Table 3: Non-compliances**

Condition #	Condition description (summary)	Compliance status	Comment	Report reference
<b>Approval: SSD 5147, 97 conditions in total</b>				
<b>C30</b>	Implementation of the Air Quality Monitoring Program	Administrative non-compliance	Annual emission survey for odour and VOC	Section 6.2
<b>C46</b>	Compliance with EPL water concentration limits	Low non-compliance	One exceedance of the TSS limit at Discharge Point 29	Section 6.3

**Compliance status key for Table 3**

Risk level	Colour code	Description
High	Non-compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> <li>potential for serious environmental consequences, but is unlikely to occur; or</li> <li>potential for moderate environmental consequences, but is likely to occur</li> </ul>
Low	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> <li>potential for moderate environmental consequences, but is unlikely to occur; or</li> <li>potential for low environmental consequences, but is likely to occur</li> </ul>
Administrative non-compliance	Non-compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

## 2 Introduction

Viva Energy operates 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.
- **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, to Sydney Airport, to Silverwater terminal and to Newcastle via existing infrastructure. 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. Also, this report follows the applicable structure outlined in the Department of Planning and Environment (DPE) Annual Review Guideline for State significant mining developments, October 2015.

**Table 4: 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 4
(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"> <li>• the relevant statutory requirements, limits or performance measures/criteria;</li> <li>• the monitoring results of previous years; and</li> <li>• the relevant predictions in the EIS;</li> </ul>	Section 6
(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	Sections 1, 6 and 9
(d) identify any trends in the monitoring data over the life of the Development;	Section 6
(e) identify any discrepancies between the predicted and actual impacts of the Development, and analyse the potential cause of any significant discrepancies; and	Section 6
(f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the Development.	Section 10

Contact details of key personnel who are responsible for the environmental management of Clyde Terminal are listed in Table 5 below.

**Table 5: Clyde Terminal management contact details**

Name and role	e-mail contact details
James Crowden, NSW Operations Manager	<a href="mailto:James.Crowden@vivaenergy.com.au">James.Crowden@vivaenergy.com.au</a>
Trent Youlten, Parramatta and Clyde Coordinator	<a href="mailto:Trent.Youlten@vivaenergy.com.au">Trent.Youlten@vivaenergy.com.au</a>
Adam Speers, Environmental Advisor	<a href="mailto:Adam.Speers@vivaenergy.com.au">Adam.Speers@vivaenergy.com.au</a>





Figure 1 – Clyde Terminal Site Area, Site Access and Receivers

## 3 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.

## 4 Development activities

This Section describes the works undertaken in accordance with Development Consent SSD 5147 during the reporting period (1 January to 31 December 2017).

### 4.1 Works undertaken during this reporting period

#### 4.1.1 Demolition works

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

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

#### 4.1.2 Construction works

The following construction works were undertaken during this reporting period:

- Refurbishment of the following storage tanks:
  - Tank farm B: Tank 53
  - Tank farm B1: Tank 42
  - Tank farm B2: Tank 33
  - Tank farm E1: Tanks 38, 40 & 41
  - Tank farm E2: Tanks 86 & 87
- Construction of the following storage tanks:
  - Firewater area: Firewater tanks x 2
  - Tank farm B2: Tanks 78 & 79
- Various piping installations and modifications, including;
  - Mogas tanks and Quick Flush Tanks (QFT's) in Tank farms E1 and E2
  - Jet tanks & transfer pit and QFT's in tank farm B1
  - Diesel tanks, manifold, pump pit and QFT's.
  - General utilities
- Various electrical and instrumentation works, including;
  - Decommissioning of 33kV switchyard
  - Electrical substations 2, 15 and 30 Low Voltage (LV)
- Instrumentation for tanks in Tank farms E1, E2 and B1, foam skids, jet filters
- Various civil works for associated equipment

Refer to Appendix A.1 for construction area locations.

Construction works are ongoing and remain within the approved period of four (4) years from date of the SSD 5147.

### 4.1.3 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 6 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 6: Operations summary**

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

## 4.2 Proposed works for the next reporting period

### 4.2.1 Demolition works

Stage 2 demolition works are planned to start by late 2018 and will be detailed in the next reporting period.

### 4.2.2 Construction works

Construction works planned for the next reporting period are as follows:

- 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 84, Tank 86 completion
  - Tank farm K: Tank 90 minor works
- 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
  - Lighting
- Instrumentation for tanks in Tank farms E1, E2 and B1, foam skids and jet filters completion
- Various civil works for associated equipment completion



Refer to Appendix A.1 for construction area locations.

### 4.2.3 Operations

Operational activities during the next reporting period will be consistent with those described on section 4.1.3 above.

## 5 Actions required from previous Annual Review

DPE Compliance acknowledged receipt of the Annual Review 2016 by letter dated 28 August 2017 (refer to Appendix A.2). DPE advised that the Annual Review 2016 “generally satisfied the requirement of the consent in relation to the Annual Environmental Performance Review”. They also recommended to consider using the structure outlined in the Annual Review Guideline for future reporting.

Following this recommendation, Viva Energy modified the structure of the Annual Review report to the applicable content of the DPE’s guideline. The revised structure is presented in this report.

## 6 Environmental performance

### 6.1 Noise

Construction noise at Clyde is managed in accordance with the Construction and Demolition Noise Management Plan. This plan was prepared to meet 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.

### 6.2 Air

Construction air emissions are managed in accordance with the Construction and Demolition Air Quality Management Plan. This plan was prepared to meet the requirements of condition C31 of the SSD 5147. During the reporting period, visual observations were conducted weekly throughout various areas of construction works. No dust complaints associated with construction works were received during the reporting period.

Operational air emissions are 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:

**Dust:** Visual monitoring for dust was undertaken during routine site activities. No dust complaints associated with Operations were received during the reporting period.

**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.

**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 2016 to 01 July 2017. Yearly VOC emissions estimates resulted in 0.44 ton Benzene and 128.51 ton VOC, well below the EPL load limits (26 ton and 1250 ton, respectively).

The Annual Emission Survey for odours and VOCs as specified in the Operational Air Quality Monitoring Program was not implemented during the reporting period and therefore is reported as a non-compliance on Section 1 above. The survey was undertaken in May 2018 by a suitably qualified and independent consultant with results to be presented in the next reporting period.

## 6.3 Soil and water

Construction soil and water environmental aspects are managed in accordance with the Soil and Water Management Plan. This plan was prepared to meet 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.

In May 2017, Clyde Terminal was audited by DPE as part of the NSW Government's "Get the Site Right" campaign to improve NSW construction site's management of erosion and sediment controls. Following this audit, Viva Energy amended the Soil and Water Management Plan to include a site specific Erosion and Sediment Control Plan (in addition to the already included and approved activity-specific Erosion and Sediment Control Plan requirement for contractors). This additional information will improve communication of requirements to contractors so that they can be taken into account in the development of work methods statements.

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

Two thousand tons of crushed sand stone was imported to Clyde Terminal for the foundation of the two diesel tanks constructed in tank farm B2. VENM certification for this imported material is presented in Appendix A.4.

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 2). This point was monitored monthly during the reporting period with pollutant concentrations well below the EPL limits as detailed in summary table 7 below. The average daily discharge flow at this point was 940 kL/day, with a maximum daily discharge volume recorded of 2,444 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 7: 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	0.89	1.34	2.10
Nitrogen (Ammonia)	6	30	n/a	<0.01	0.05	0.22
Oil and Grease (mg/L)	8	10	n/a	<5	<5	<5
ph			6.0-9.0	6.7	7.47	7.8
Phenols (mg/L)			0.5	<0.05	<0.05	<0.05
Total Nitrogen (mg/L)	35	100	n/a	0.6	5.70	10
Total Phosphorus (mg/L)	1.5	6	n/a	0.09	0.39	0.92
TSS (mg/L)	30	60	n/a	<5	6.42	19

Water discharge through approved flexible discharge points occurred twice during the reporting period. Water samples were taken and analysed prior to discharge with results well below the relevant EPL concentration limits with the maximum TSS levels detected at 18% of the EPL limit. Summary results for approved mobile discharge points are presented in Table 8 below.

**Table 8: Summary of monitoring results for mobile discharge to water (EPA ID No. 25)**

Pollutant	Concentration limits	Monitoring results	
	100 percentile	05/09/17	12/12/17
pH	6.0 -9.0	7.1	7.1
Total Organic Carbon (mg/L)	100	4.6	6.8
Total Suspended Solids (mg/L)	50	<5	9

Overflow events were recorded for the ex-Basell interceptors during March and June 2017 due to heavy rainfall. Rainfall was well above average in Sydney during March 2017, with several stations experiencing their wettest March on record. Rainfall was also above average across most of Sydney during June, most of the rain fell between 7 and 10 June, associated with a coastal trough and low pressure system (Bureau of Meteorology website).

A sample was taken for each overflow event in each of the ex-Basell interceptors with one exceedance of the EPL concentration limit for TSS (i.e. 80mg/L within 48 hours of rainfall event - Condition L3.5) recorded on the 01 March 2017 at the overflow point ID No.29 (Refer to Figure 2). This non-compliance was notified to the NSW EPA and NSW DPE, with further details included in the Clyde Terminal Annual Return submitted to NSW EPA on 5 September 2017. Summary results for the approved overflow discharge at the ex-Basell interceptors are presented in Table 9 below.

**Table 9: 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		7.4	7.65	8.1	7.4	7.87	8.4
Total Organic Carbon (mg/L)		3	4.22	7.8	5.3	6.81	7.9
Total Suspended Solids (mg/L)	80 (within 48hrs of a rain event)	<5	8.67	17	<5	42.85	<b>140</b>

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
23	Mobile Discharge to Water	Discharge to water, Water monitoring, Volume monitoring
24	Mobile Discharge to Water	Discharge to water, Water monitoring, Volume monitoring
25	Mobile Discharge to Water	Discharge to water, Water monitoring, Volume monitoring
26	B2 System Monitoring Point	Water Monitoring
27	Mobile Discharge to Water	Discharge to water
28	Ex-LBA Interceptor DP 1	Discharge to water
29	Ex-LBA Interceptor DP 2	Discharge to water
30	Ex-LBA Interceptor DP 3	Discharge to water

## Environmental Protection Licence No.570 Licenced Discharge Points

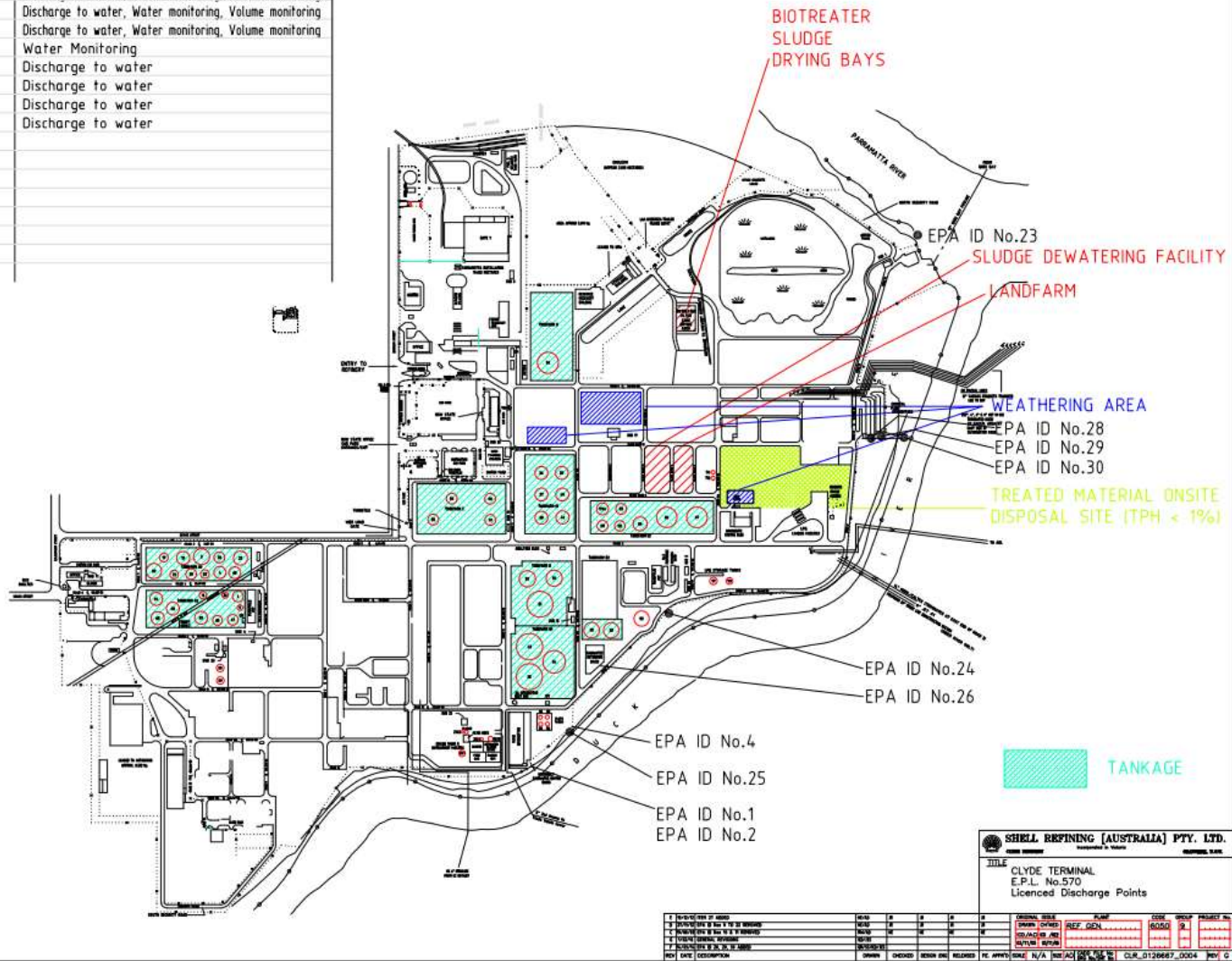


Figure 2 – Clyde Terminal Licensed Discharge Points



## 6.4 Biodiversity

Construction biodiversity aspects are managed in accordance with the Biodiversity Management Plan. This plan was prepared to meet 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).

An Annual Compliance Report is required under approval condition 7 of the EPBC 2013/6878. The latest report covered the period 12 February 2017 to 11 February 2018 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 2017 included:

- Engagement of University of New South Wales – Water Research Laboratory (WRL) to develop a water balance of the Wetlands
- Wetland management workshop with representatives of Viva Energy's wetland management consultant (Urban Bushland Management, UBM) and WRL to critically review the approved Plans
- Engagement of WRL as Principal Consultant for the revision of the conceptual design of the GGBF habitat restoration works in partnership with GGBF specialist from University of Newcastle (UoN) and UBM. The revised design will be adopted only if it would result in an equivalent or improved environmental outcome over time as requested by Condition 9 of the EPBC 2013/6878.

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

## 6.5 Waste

Construction wastes are managed in accordance with the Waste and Resource Recovery Management Plan. This plan was prepared to meet 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. A waste tracking audit was undertaken by an independent environmental consultant on the 18 July 2017 for quarters 1 and 2 of the reporting period. The auditor found that waste records were well maintained and easy to locate. Three actions and recommendations were identified, all of which were actioned and closed following the audit.

During the reporting period, construction and operation activities at Clyde Terminal generated approximately 3,113.48 tonnes of solid and liquid wastes, which was a significant decrease from the previous year's result of 18,549 tonnes, mainly related to the completion of demolition activities. Approximately, 80% of this waste is subject to chemical or physical treatment prior disposal, 9% is recycled and 11% is sent to landfill.

No asbestos waste was generated during the reporting period.

## 7 Community

Viva Energy operates its 24-hour hotline telephone number 02 9897 8704 to receive feedback and complaints associated with the Development. Responses to complaints, where reasonably possible, are made within 48 hours of receiving the complaint.

In addition to the 24-hour hotline telephone number, a postal address and an email address to receive general enquiries associated with the works are as follows:

Email: On-line feedback form on [www.vivaenergy.com.au/terminals---locations/clyde/community](http://www.vivaenergy.com.au/terminals---locations/clyde/community)

Postal: External Communications PO BOX 872 K, Melbourne 3001

No community complaints were received during the reporting period.

## 8 Independent audit

No Independent Environmental Audit (IEA) required under condition D7 of the development consent was undertaken during the reporting period.

The latest IEA was completed in May 2018 and will be covered in detail in the next reporting period.

## 9 Incidents and non-compliances during the reporting period

No reportable incidents occurred during the reporting period.

One non-compliance was identified on 01 March 2017 with one of the approved overflow discharges to Duck Creek resulting in a TSS level exceeding the approved concentration limit. The details of this non-compliance are explained in Section 6.3 above. Additional sediment control and drain cleaning works were undertaken in response to this non-compliance and are considered to have satisfactorily addressed the cause of the TSS exceedance.

A penalty notice was issued to Viva Energy by the NSW EPA on 19 June 2017 in relation to the discharge of dust suppressant wash water to Duck River on 4 November 2016. Details of this incident were included in previous NSW EPA and DPE Annual Reports.

## 10 Activities to be completed in the next reporting period

The Waste Tracking audit undertaken in February 2018 by an independent environmental consultant identified a number of actions and recommendations, majority of which has been addressed and completed. As part of this process, an internal training on Waste Management was provided to key Construction and Operations personnel with further actions identified to improve waste management practices at Clyde. These actions will be implemented in the next reporting period and include:

- Implement security measures to avoid entry of third parties waste on site and raise waste segregation awareness
- Develop waste management prescriptive process to be referred to in EMM, including waste streams and classification, classification guidelines, waste tracking and weight estimates guidelines
- Investigate the option of engaging a Waste Agent for relevant waste streams and define waste tracking assurance procedures

Additionally, actions resulting from the latest IEA undertaken in March 2018 will be addressed and reported in the next reporting period.

## Appendix A

- A.1 Figure A.1 Construction works plan
- A.2 Annual Environmental Performance Review (1 January to 31 December 2016) approval letter
- A.3 Surface water discharge monitoring results
- A.4 VENM Certificate for imported sandstone

A.1 Figure A.1 Construction works plan





## A2. Annual Environmental Performance Review (1 January to 31 December 2016) approval letter



Contact: Chase Dingle  
Phone: 9274 6403  
Email: [chase.dingle@planning.nsw.gov.au](mailto:chase.dingle@planning.nsw.gov.au)  
[compliance@planning.nsw.gov.au](mailto:compliance@planning.nsw.gov.au)  
Our ref: SSD 5147

Mr Adam Speers  
Viva Energy Australia Pty Ltd  
Level 31 (Suite 2), Governor Macquarie Tower  
1 Farrer Place  
Sydney NSW 2000

**28 August 2017**

Dear Mr Speers,

### **Clyde Terminal (SSD 5147) Annual Environmental Performance Review (1 January to 31 December 2016)**

I refer to your submission, which is dated 31 July 2017, of the document *Annual Environmental Performance Review* (the "report"), prepared in accordance with Schedule D, Condition D4 of SSD 5147 (the "consent") for the Clyde Terminal (the "project").

The Department has reviewed the report and considers it to generally satisfy the requirement of the consent in relation to the Annual Environmental Performance Review. Approval of this report is not an endorsement of the compliance status of the project.

In future reporting, you may find the structure outlined in the Department's Annual Review Guideline useful. A copy of this can be found at the following link:  
[http://www.planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/~/\\_media/3AA21D35168042FE813DD0FB92E00E58.ashx](http://www.planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/~/_media/3AA21D35168042FE813DD0FB92E00E58.ashx)

Should you need to discuss the above, please contact Chase Dingle as per the details provided above.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'C. Dingle', written over a horizontal line.

Chase Dingle  
Team Leader - Compliance

### 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
5/01/2017	<5	1.4	<0.01	<5	7.7	<0.05	2.5	<0.04	0.084	0.68	0.42	0.26	<5
2/02/2017	<5	1.3	0.01	<5	7.3	<0.05	5.1	<0.04	<0.05	<0.2	<0.2	0.52	<5
2/03/2017	<5	0.89	0.05	<5	7.5	<0.05	1.36	<0.2	<0.05	<0.2	<0.2	0.33	<5
5/04/2017	<5	0.9	<0.01	<5	7.8	<0.05	0.6	<0.04	<0.05	<0.2	<0.2	0.19	<5
4/05/2017	<5	1.2	0.07	<5	7.5	<0.05	2.4	<0.04	<0.05	<0.2	<0.2	0.53	8
1/06/2017	<5	1.7	0.22	<5	7.6	<0.05	3.4	<0.04	<0.05	<0.2	<0.2	0.18	<5
6/07/2017	<5	1	0.02	<5	7.6	<0.05	1.3	<0.04	<0.05	<0.2	<0.2	0.34	19
3/08/2017	<5	1.1	0.03	<5	7.8	<0.05	4.5	<0.04	<0.05	<0.2	<0.2	0.09	<5
7/09/2017	<5	1.1	0.02	<5	6.7	<0.05	3.5	<0.04	<0.05	<0.2	<0.2	0.92	<5
5/10/2017	<5	1.5	0.03	<5	7.3	<0.05	6.8	<0.04	<0.05	<0.2	<0.2	0.67	<5
2/11/2017	<5	2.1	0.08	<5	7.7	<0.05	2.7	<0.04	<0.05	<0.2	<0.2	0.38	5
14/12/2017	<5	1.9	0.02	<5	7.1	<0.05	10	<0.04	<0.05	<0.2	<0.2	0.27	<5

EPA ID No.2 – Main Interceptor Pumpout

<b>Pollutant</b>	<b>pH</b>	<b>Phenols</b>	<b>Total Organic Carbon</b>	<b>Total Suspended Solids</b>
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 2017	No discharge			
February 2017	No discharge			
March 2017	No discharge			
April 2017	No discharge			
May 2017	No discharge			
June 2017	No discharge			
July 2017	No discharge			
August 2017	No discharge			
September 2017	No discharge			
October 2017	No discharge			
November 2017	No discharge			
December 2017	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 2017	No discharge				
February 2017	No discharge				
March 2017	No discharge				
April 2017	No discharge				
May 2017	No discharge				
June 2017	No discharge				
July 2017	No discharge				
August 2017	No discharge				
September 2017	No discharge				
October 2017	No discharge				
November 2017	No discharge				
December 2017	No discharge				



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

<b>Pollutant</b>	<b>pH</b>	<b>Total Organic Carbon</b>	<b>Total Suspended Solids</b>
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 2017	No discharge		
February 2017	No discharge		
March 2017	No discharge		
April 2017	No discharge		
May 2017	No discharge		
June 2017	No discharge		
July 2017	No discharge		
August 2017	No discharge		
05/09/2017 (EPA ID No.25)	7.1	4.6	<5
October 2017	No discharge		
November 2017	No discharge		
12/12/2017 (EPA ID No.25)	7.1	6.8	9

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	C29-C36
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	Monthly			
January 2017	No discharge							
8/02/2017	7.3	<0.05	10	34	<40	89	1700	<200
27/02/2017	7.1	<0.05	6.6	49	<40	1300	1300	<200
28/02/2017	7.2	<0.05	7.1	14	<40	1100	1100	<200
1/03/2017	7.1	<0.05	5.6	33	<40	<50	250	<200
2/03/2017	8.9	<0.05	5.4	22	<40	<50	<200	<200
3/03/2017	7.4	<0.05	6.5	29	<40	<50	220	<200
4/03/2017	7.3	<0.05	8.1	23	<200	<50	<200	<200
5/03/2017	7.3	<0.05	7.2	11	<200	<50	<200	<200
6/03/2017	7.3	<0.05	9.6	<5	<40	<50	2500	<200
16/03/2017	7.7	<0.05	7.9	12	<40	<50	270	<200
18/03/2017	7.4	<0.05	6	18	<40	<50	420	<200
19/03/2017	7.4	<0.05	6.4	7	<40	<50	<200	<200
22/03/2017	7.6	<0.05	7.2	59	<40	<50	440	<200
23/03/2017	7.5	<0.05	5.1	21	<40	<50	270	<200
April 2017	No discharge							
19/05/2017	7.5	<0.05	4	21	<40	<50	280	<200
7/06/2017	8	<0.05	4.3	55	84	160	270	<200
8/06/2017	7.8	<0.05	4	26	<40	<50	<200	<200
July 2017	No discharge							
August 2017	No discharge							
September 2017	No discharge							
October 2017	No discharge							
November 2017	No discharge							
December 2017	No discharge							

EPA ID No. 28 – LBL Interceptor Bay 1&2 overflow				
Pollutant	pH	Oil and Grease	Total Organic Carbon	Total Suspended Solids
Licence Limit				80 (within 48hrs of rain event)
Units of Measure	units	mg/L	mg/L	mg/L
Frequency	Daily when discharging	Daily when discharging	Daily when discharging	Daily when discharging
January 2017	No discharge			
February 2017	No discharge			
18/03/2017	8.1	n/a	7.8	17
19/03/2017	7.5	n/a	3.3	<5
20/03/2017	7.6	n/a	3.4	<5
22/03/2017	7.4	n/a	4.3	9
April 2017	No discharge			
May 2017	No discharge			
5/06/2016	7.8	n/a	3.5	6
19/06/2016	7.5	n/a	3	10
July 2017	No discharge			
August 2017	No discharge			
September 2017	No discharge			
October 2017	No discharge			
November 2017	No discharge			
December 2017	No discharge			

EPA ID No. 29 – Basell Interceptor 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 2017	No discharge		
27/02/2017	7.7	7.3	64
28/02/2017	7.8	7.7	24
1/03/2017	7.4	6	140
2/03/2017	8.4	6.1	68
3/03/2017	7.8	6.4	36
4/03/2017	7.9	8	50
5/03/2017	7.9	6.6	49
18/03/2017	8.1	7.9	20
19/03/2017	7.9	7.2	15
20/03/2017	7.9	6.8	<5
22/03/2017	7.8	7.4	10
April 2017	No discharge		
May 2017	No discharge		
8/06/2017	7.8	5.3	39
9/06/2017	7.9	5.8	37
July 2017	No discharge		
August 2017	No discharge		
September 2017	No discharge		
October 2017	No discharge		
November 2017	No discharge		
December 2017	No discharge		

EPA ID No.30 – LBL Interceptor

<b>Pollutant</b>	<b>pH</b>	<b>Oil and Grease</b>	<b>Total Organic Carbon</b>	<b>Total Suspended Solids</b>
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 2017	No discharge			
February 2017	No discharge			
March 2017	No discharge			
April 2017	No discharge			
May 2017	No discharge			
June 2017	No discharge			
July 2017	No discharge			
August 2017	No discharge			
September 2017	No discharge			
October 2017	No discharge			
November 2017	No discharge			
December 2017	No discharge			



# A.4 VENM Certificate for imported sandstone

## WASTE CLASSIFICATION CERTIFICATE

EI Document Ref: E23269\_AA\_WCC003\_Rev0



PROJECT NO: E23269  
 CLIENT Details: Chelohi Pty Ltd  
 Office 1, 54-56 Harky Crescent  
 CONDELL PARK NSW  
 Project Name: Waste Classification Certificate  
 Work Phase: Bulk Excavation  
 Client Contact: Mr. Michael Abou-Rjabb  
 Certificate Date: 08-February-2017

LOCATION:  
 Site Address: 64-66 Cook Road, CENTENNIAL PARK NSW 2021 Lot / DP: Lot 1 DP 627602

LGA: Council of the City of Sydney  
 Current Zoning: R1 - General Residential Site Map Attached: Yes

Site History: During sampling the site was vacant. The site was previously occupied by two residential flat buildings. A review the 1943 aerial photograph (Stumps) indicated that the site was occupied by the same or similar dwellings.  
 Surrounding land use: The immediate landscape surrounding the site consisted of predominantly residential in nature, with recreational and special purpose areas within the vicinity.  
 Proposed site use: Construction of a new residential development with a double level basement of up to 6.0m in depth.

ACID SULFATE SOILS: The site is not located in an acid sulfate soils risk area.

RISKS:

MATERIAL SOURCE: In-situ natural material to be excavated as part of the proposed 6.0m deep double basement proposed as part of a new residential development for the site.

MATERIAL CHARACTERISATION:

Material Description: SANDSTONE: extremely weathered, yellow, with orange and red, dry, no odour.

Material Identification: Soil samples collected from test pits (TP1-TP5) located around the site, as identified in Figure 2.  
 Volume: 1620 m<sup>3</sup> (approx.)  
 Tonnage: 2916 Tonnes (approx.)  
 Bulk density taken as 1.8 t/m<sup>3</sup> for clay (Loos, 2014) 2

Sampling Procedure: All samples were collected from by a suitably qualified, trained and experienced environmental engineer / scientist in identifying asbestos in accordance with EPA requirements. Soil samples were collected using a dry grab method (unused, dedicated nitrile gloves) & placed into 250g laboratory prepared glass jars, which were capped using Teflon-sealed, screw caps and immediately refrigerated prior to being delivered to the contract environmental laboratory under strict Chain-of-Custody conditions. As soil samples were collected using dedicated nitrile gloves no decontamination of sampling equipment was required.

Tested Sample(s):<sup>1</sup> (applicable only) TP1\_0.3-0.4, TP2\_0.4-0.5, TP3\_0.7-0.8, TP4\_0.7-0.8, TP5\_0.3-0.4, TP6\_0.7-0.8, and CD1

Sampling Date: 27/01/2017 Sample No: 8  
 Primary Laboratory: NATA Accredited SGS, Alexandria NSW  
 Secondary Laboratory:

EPA (2014) Waste classification steps

Step 1 - Visual evidence Special Waste	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Step 2 - Is the waste liquid waste	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Step 3 - Is the waste Pre-classified	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	VENM
Step 4 - Are hazardous substances present	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>	
Step 5 - Is chemical assessment required	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
Analytical Data Attached	Yes	<input checked="" type="checkbox"/>			Note: Only data for above-listed samples tested are representative of classified material

MATERIAL SUITABILITY FOR BENEFICIAL ONSITE RE-USE AT: 64-66 COOK ROAD, CENTENNIAL PARK NSW 2021  
 Material meets Site Acceptance Criteria<sup>4</sup> of Residential with Minimal Access to Soils: Yes  No   
 Comment:

CLASSIFICATION FOR OFF-SITE DISPOSAL  
 Waste Classification:<sup>2</sup> Assessed class: VIRGIN EXCAVATED NATURAL MATERIAL (VENM)<sup>3\*</sup>  
 Special Waste: Not Applicable  
 Scheduled Waste: NO

Classification Comments:<sup>4</sup> The material delivered must be consistent with the description given in the Material Characterisation section above. This classification is only applicable to the in-situ natural bedrock material and DOES NOT include any overlying topsoil / M material. Classification of overlying materials is included on a separate classification certificate.

Disposal Options:<sup>5\*</sup> Suitable for disposal at facility licensed to receive:  
 VIRGIN EXCAVATED NATURAL MATERIAL (VENM)<sup>3\*</sup>

Joel Haininger  
 Environmental Scientist

Emmanuel Woolders  
 Senior Environmental Scientist

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