Stolthaven Annual Review 2023

Stolthaven Australia Pty Ltd

13 March 2024

→ **The Power of Commitment**

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Glossary

Abbreviation	Description
AHD	Australian Height Datum
ALS	Australian Laboratory Services
ANZECC	Australian and New Zealand Environment and Conservation Council
AST	Above ground storage tank
BTEX	Benzene, toluene, ethylbenzene and xylenes
BTEXN	Benzene, toluene, ethylbenzene, xylenes and naphthalene
COC	Chain of custody
COPC	Contaminants of potential concern
CRC CARE	Cooperative Research Centre for Contamination Assessment and Remediation of the Environment
CSM	Conceptual site model
CSMP	Contaminated Site Management Plan
DBYD	Dial Before You Dig
DNAPL	Dense non-aqueous phase liquid
DO	Dissolved oxygen
DPE	Department of Planning and Environment
DPHI	Department of Planning Housing and Infrastructure
DQI	Data quality indicator
DQO	Data quality objective
DTW	Depth to water
EC	Electrical conductivity
EIL	Ecological Investigation Level
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
EPL	Environment Protection License
ESA	Environmental Site Assessment
ESL	Ecological Screening Level
GAC	Groundwater assessment criteria
GIL	Groundwater Investigation Level
GME	Groundwater monitoring event
GPR	Ground penetrating radar
HCCDC	Hunter and Central Coast Development Corporation
HIL	Health Investigation Level
HSL	Health Screening Level
JSEA	Job Safety Environmental Analysis
LNAPL	Light non-aqueous phase liquid
LOR	Limit of reporting
m AHD	metres Australian Height Datum
m bgl	Metres below ground level

Abbreviation	Description
M bTOC	Metres below top of casing
MCP	Mayfield Concept Plan
MGA	Map Grid Australia
mg/L	Milligrams per litre
mg/m^3	Milligrams per $metre^3$
ML	Mega litre
MNA	Monitored Natural Attenuation
NAPL	Non-aqueous phase liquid
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
PID	Photo-ionisation detector
PON	Port of Newcastle
ppm	Parts per million
PSD	Particle size distribution
QA/ QC	Quality assurance/quality control
REDOX	Oxidation-reduction potential
RPD	Relative Percent Difference
SFOP	Standard field operating procedures
SPR	Source pathway receptor
SSD	State significant development
SWL	Standing water level
SWMP	Stormwater Management Plan
TIA	Traffic Impact Assessment
TDS	Total dissolved solids
TOC	Top of casing
TPH	Total petroleum hydrocarbons
TRH	Total recoverable hydrocarbons
TSS	Total suspended solids
µg/L	Micrograms per litre
µS/cm	Micro siemens per centimetre
UPSS	Underground Petroleum Storage System
USCS	Unified Soil Classification System
UST	Underground storage tank
VOC	Volatile organic compound
WMP	Waste Management Plan
WHS	Work health and safety
WPCG	Work Place Clearance Group

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1. Introduction

GHD Pty Ltd (GHD) was engaged by Stolthaven Australia Pty Ltd (Stolthaven) to prepare the 2023 Annual Review to assess the environmental performance of the fuel import storage and dispatch facility located at the former BHP Steelworks, approximately 5 km northwest of the Newcastle CBD (the site). The site is operated under the State Significant Development (SSD) development consent SSD_7065 issued on 15 December 2016 to expand the existing operations under SSD_6664 (now surrendered). The site was originally approved under the now superseded Part 3A of the EP&A Act, under Project Approval MP08_130 and SSD_6664, which have now been relinquished.

This Annual Review has been prepared in accordance with Condition D9 of SSD_7065 and the letter addressed to Stolthaven from Department of Planning and Environment (DPE), now the Department of Planning Housing and Infrastructure (DPHI)dated 23 February 2017. The 2023 Annual Review includes the reporting period from 1 January to 31 December 2023.

The site location and approved terminal layout are presented in Figure 1 and Figure 2 respectively in Appendix A. In Figure 2, the indicated blue “expansion area” and red “current area” make up the development consent boundary of SSD_7065.

1.1 Objective

The objective was to assess the environmental performance to the satisfaction of the Director General of DPHI to comply with Condition D9 of SSD_7065 and present results in the 2023 Annual Review.

1.2 Scope of works

The scope of work comprised:

– An overview of the site.
– A description of the operations undertaken throughout 2023 which represents the reporting period.
– Analysis of the environmental monitoring results for the reporting period with comparison to the relevant performance criteria and historical data.
– Analysis of trends in monitoring data over the life of the site (as reported by AECOM 2023a, 2023b, 2023c and 2023d).
– A summary of recommendations to improve the environmental performance of the site.

It is noted that GHD have not independently performed the trend analysis and have relied on data presented in the Quarterly Groundwater Monitoring Reports prepared by AECOM for 2023. This report has been based on the previous 2022 Annual Environmental Management Report (AEMR) (AECOM 2022) and for consistency with previous year reporting we have maintained a similar format level of content for ease of DPHI review.

1.3 Consultation

A copy of this report was provided to the Port of Newcastle (PON) on 19 February 2024 to review prior to finalisation. Following review of the draft report PON confirmed on 12 March 2024 that they had no comments or questions in regard to the content of this report.

1.4 Limitations

This report: has been prepared by GHD for Stolthaven Australia Pty Ltd and may only be used and relied on by Stolthaven Australia Pty Ltd for the purpose agreed between GHD and the Stolthaven Australia Pty Ltd as set out in Section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than Stolthaven Australia Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer Section 13.5 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Stolthaven Australia Pty Ltd and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

GHD has not been involved in the preparation of the AECOM monitoring reports and has had no contribution to, or review of the AECOM monitoring reports. GHD shall not be liable to any person for any error in, omission from, or false or misleading statement in, any other part of the AECOM monitoring reports.

2. Site description

The site is located on part of the former BHP Steelworks Site, within the Port of Newcastle. The site and surrounding area are characterised by a mixture of commercial/industrial uses, residential uses and port related activities.

2.1 Site identification

The site identification details are summarised in Table 2.1.

Table 2.1 Site identification details

Item	Description
Site Name	Stolthaven bulk fuel storage facility
Street Address	BHP Steelworks site - Steel Works Road and Iron Ore Road
Certificate of Title Details (Vol/Folio) and Parcel/Lot Number	Lot 2, DP 1177466 (operational area) Lots 36, 37 and 38, DP 1191723 (expansion area)
Owner	Port of Newcastle
Property Occupier	Stolthaven Australia Pty Ltd
Current Use	Bulk fuel storage facility
Site Zoning	SP1 – Special Activities

2.2 Surrounding land use and zoning

The surrounding land uses are summarised below in Table 2.2.

Table 2.2 Description of surrounding land use and respective zonings

Orientation	Description of Surrounding Land Use	Zoning (T&I SEPP 2021)
North	Mayfield Berth No. 7, the Hunter River (South Arm) NCIG and Port Waratah Coal Services Coal Loaders	SP1 (Special Activities)
South	Industrial land (including land that has been remediated as part of the BHP Steelworks remediation) followed by the South Channel Hunter River and Kooragang Island beyond	SP1 (Special Activities)
East	Former BHP Steelworks Site, currently remediated vacant land and Koppers Australia pipeline and pumping station	SP1 (Special Activities)
West	Iron Ore Road followed by industrial properties (One Steel operations)	SP1 (Special Activities)

2.3 Site layout

The approved terminal layout as presented in Figure 2, Appendix A consists of the following:

– Ship unloading facilities at the Mayfield Berth 7 (M7) wharf facility (not subject to SSD_7065 but operated by Stolthaven)
– A delivery pipeline from M4 (removed 2019) and M7 to the terminal
– Nine storage tanks from 535 m^3 to 18,003 m^3
– A four bay automated truck loading and unloading facility
– Pumping capacity for bulk tanker (truck loading)
– Appropriate drainage and spill containment systems
– Fire protection systems.

2.4 Identified aboveground storage tanks

The site plan indicates nine storage tanks predominantly located in the eastern portion of the site, adjacent to the truck loading gantry. Tank details are provided in Table 2.3.

Table 2.3 Tank details

Tank ID No	Product	Tank Diameter (m)	Shell Height (m)	Capacity (m^3)
NN1	Diesel	36.6	17.1	17,703
NN2	Diesel	36.6	17.1	17,695
NN3	Diesel	36.6	17.1	17,691
NN4	Biodiesel	7.6	12.0	535
NN5	Diesel	36.6	17.1	17,584
NN6	Diesel	36.6	17.1	17,611
NN7	Biodiesel	18.0	17.0	4,242
NN8	Diesel	36.6	17.1	17,998
NN9	Diesel	36.6	17.1	18,003

2.5 Site history

The site is located part of the former BHP Steelworks site. A summary of the site history has been summarised by GHD (2023) in Table 2.4 and is consistent with the site history summarised in the 2022 Annual Review prepared by GHD.

Table 2.4 Site history

Date	Ownership/operation
1915 – 1999	BHP Steelworks
1999	Closure of the steelworks operations. The site area was referred to as the Closure Area.
14 June 2001	The Environment Protection Authority (EPA) declared the Closure Area Site to be a remediation site under former Section 21 of the *Contaminated Land Management Act 1997* (CLM Act)
2002	Ownership transferred to the State Government
30 August 2005	APE issued a Voluntary Remediation Agreement (VRA No 26025) for the remediation of the site.
2007	The State Government created the Hunter and Central Coast Development Corporation (HCCDC) (formerly the Regional Land Management Corporation Pty Ltd) to manage the daily operations of the site. HCCDC have committed to undertake the requirements of the VRA.
March 2008	A Contaminated Site Management Plan (CSMP) for the Closure Area Site was prepared by HCCDC.
Mid 2008	HCCDC completed Stage 1 of the remediation works
2012	State government handed over ownership to Port of Newcastle (PON). A concept plan application for the future strategic development of the former BHP Steelworks Site was approved by the Minister for Planning in July 2012. The Concept Plan approval made provision for the future development of part of the former BHP site for bulk liquid related industries.
June 2012	Stolthaven received initial approval for the site and became the first operation active on the former BHP Steelworks Site. Currently there is one other operation currently active on the former BHP Steelworks Site, being the Cargo Storage Facility (DA 8137). PON also operates Mayfield No.4 berth (M4) within the Concept Plan area, which is a general purposes berth used by Stolthaven for the import of fuels until October 2018, when Mayfield 7 berth was commissioned.
2013	Stage 2 of the remediation works were completed.

2.6 Operations and approval

Operations and approval for the site as reported by GHD 2023 are as follows:

The site operated in accordance with SSD_6664 (issued on 16 April 2015 under Part 4 of the EP&A Act) until 8 May 2020 when it was surrendered. The site and Mayfield No. 7 Berth pipeline (but not the berth itself) now operate in accordance with SSD_7065.

The site was originally approved under Project Approval MP 08_0130, issued on 8 June 2012 under the former Part 3A (repealed) of the EP&A Act. Site operations are described in Table 2.5.

Table 2.5 Approvals

Approvals	Section	Expiry Date
Original Project Approval MP08_0130	Section 2.6.1	NA
Development Consent SSD_6664	Section 2.6.2	SSD_6664 was surrendered on 8 May 2020 as per letter from DPHI in Appendix B.
Current Development Consent SSD_7065	Section 2.6.3	As per Condition B5 of the SSD_7065, this consent lapses five years from the date of approval (i.e. 15 December 2021)[1]
Environment Protection Licence (EPL) 20193	Section 2.6.4	NA
Concept Plan MP09_0096	Section 2.6.5	NA

[1]Letter "Approval of Progressive Submission of Environmental Management Strategy and stage 1 Environmental Management Strategy signed on 24/10/18 from delegate of the Planning Secretary which has been provided to GHD by Stolthaven to demonstrate that the consent has been activated.

2.6.1 Original Project Approval MP08_0130

The original Project Approval MP08_0130 was approved by the Minister for Planning on 8 June 2012 under Part 3A (repealed) of the EP&A Act and was subsequently modified three times. The project approval was surrendered on 3 December 2015. The original project comprised the following elements:

– Use of an existing ship berthing facility via M4 to deliver fuels from bulk tankers. Fuel to be pumped along a 300 mm diameter steel pipeline from M4 to the site.
– Storage of bulk fuels in above ground tanks (3 x 18 ML diesel and 0.5 ML biodiesel) with a total permitted annual throughput of 300 ML combined.
– Distribution of fuels by road tankers.
– Ancillary components including site office, car parking and truck loading gantry.

Construction of the site as approved under the original Project Approval was completed in late 2013, with the first shipment of fuels commencing 19 November 2013.

Subsequent modification to the original Project Approval included the following:

– MOD 1 (Approved 26 July 2013) – Two additional 18 ML diesel tanks, one additional 4.2 ML biodiesel tank and an additional 100 ML pa throughput.
– MOD 2 (Approved 15 November 2013) – Paper modification to the wording of Condition 6 to remove reference to the Department of Health. i.e. no changes to the composition of the approved facility.
– MOD 3 (Approved 10 July 2014) – Increase throughput from 400 ML pa to a total of 500 ML pa. No additional tanks or infrastructure.

2.6.2 Development consent SSD_6664

Stolthaven operated under SSD development consent 6664 (SSD_6664) which was issued under Part 4 of the EP&A Act following a request for increase to the throughput of the facility and to construct two additional storage tanks. The SSD_6664 consent transferred the site from the MP08_0130 Part 3A approval to an SSD approval. One of the conditions of SSD_6664 included the requirement to surrender Project Approval MP08_0130. The SSD_6664 consent permitted the facility's capacity to be increased through an additional:

– Two 18 ML diesel storage tanks
– Throughput to total 1,010 ML pa

Following the approval of SSD_6664, a modification to SSD_6664 was approved to increase the annual throughput from 1,010 ML to 1,300 ML per year. SSD_6664 Modification 1 did not require an increase in storage capacity at the site nor did it require construction of additional fuel storage tanks or associated infrastructure. This modification was approved on 28 September 2015. SSD_6664 was surrendered on 8 May 2020 as per the letter from DPHI in Appendix B.

2.6.3 Development consent SSD_7065 (current approval)

Development consent SSD_7065 was issued on 15 December 2016 to expand the existing operations under SSD_6664.

Stolthaven applied to expand its existing fuel storage at Mayfield. This expansion involved:

– Increasing the throughput of the facility from 1,300 ML to 3,500 ML per year.
– Importing flammable fuels (petroleum, ethanol and jet fuel), in addition to combustibles (diesel and biodiesel) already imported.
– 17 new fuel storage tanks and bunds, in addition to the 10 existing tanks.
– A marine loading arm, pumps and dual pipeline to transfer fuels to the terminal from ships docking at the new Mayfield No.7 berth.
– A new six bay truck loading gantry, vapour control system, office and firefighting systems.

DPHI approved the application on 15 December 2016, which allows for an increase in throughput of 3,500 ML per year and the ability to store flammable liquids. SSD_7065 was partly triggered during the 2018 reporting period for the construction and operation of the new combustible pipeline following the completion of the Mayfield No. 7 Berth construction. The total allowable throughput of the facility is 1,800 ML. Further detail is provided in Section 3.2.2.

Accordingly, the site EPL 20193 was amended in September 2018 to support the change in development consent and is discussed further below in Section 2.6.4.

Correspondence from DPHI regarding a progressive submission of the Stage 1 Construction Environmental Management Plan (CEMP) and Stage 1 Pre-Construction Hazard Studies (PCHS) for the works involved with SSD_7065 is provided in Appendix B. It is noted that approval was received from DPHI for the CEMP and PCHS for Construction Stage 1 only.

2.6.4 Environmental Protection Licence

The site operates under EPL 20193, which is administered by the NSW EPA under the *Protection of the Environment Operations Act 1997* (POEO Act). A previous variation to EPL 20193 was approved on 2 October 2015 to incorporate the modifications made under SSD_6664 Modification 1.

Up until mid-2018, EPL 20193 permitted the scheduled activities of Chemical Storage, Shipping in Bulk and Extractive Activities on the site. The Extractive Activities approved under EPL 20193 related to the dredging operations being undertaken for construction of the Mayfield Berth No. 7, which is complying development.

Previously, the EPL 20193 was amended on 27 August 2021 (Variation notice number 1611736). This variation included the following changes to conditions:

– A1.4 (previous) - Removed -The condition reference throughput limits which no longer apply as the Premises adheres to load limits set in the Licence.
– A1.5 (previous) - Varied - The condition number has been changed to A1.4 and NOTE: now refers to (A1.3 and A1.4) due to the removal of the previous P1.4 as discussed above.
– E1.1 (previous) - Varied - Removed VRU requirement Part (a) which was triggered by the 1300 ML throughput limit for condition A1.4 which no longer applies.

The most recent amendment to EPL 20193 (Variation notice number 1635217) is as follows:

– Annual throughput was increased during the reporting period from 1,300 ML to 1,800 ML.
– The variation was approved on 9 January 2024, which is outside of the reporting period. The variation is attached in Appendix B with other DPHI correspondence.

2.6.5 Other relevant approvals

Mayfield concept plan approval

Concept Plan (MP09_0096) was approved by the Minister under Section 75M of the EP&A Act on 16 July 2012 to enable development of the former BHP Steelworks site (known as the Closure Area or Concept Plan area), a 90 hectare portside portion of land on the South Arm of the Hunter River within which the site sits. The approval under which the site now operates (SSD_7065) demonstrated that it was consistent with the Concept Plan approval in order for the Minister to approve SSD_7065.

Mayfield Berth No. 4 DA-293-08-00

Development Consent DA-293-08-00 MOD 9, dated 29 August 2013, is applicable to the M4 berth, and ships loading or unloading at this berth must comply with relevant conditions of this consent.

It is noted that, as of the previous variation approval on 31 January 2020, any associated infrastructure at Mayfield No. 4 Berth is no longer in control or operation of Stolthaven. In addition, the pipeline that previously connected the terminal to M4 has since been decommissioned and removed and all fuel imports now occur through M7 as described below.

Mayfield Berth No. 7 – Complying development certificate

Stolthaven constructed a dedicated bulk liquids berth to service both the site and other bulk liquid operators in mid-2018. Under the provisions of *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) the construction of the berth is complying development. A complying development certificate was obtained from Newcastle City Council. The berth became operational during the 2018 reporting period and began accepting fuels in late October 2018.

3. Site operations

3.1 Description of operations

Operations undertaken at the site include the receipt, storage and dispatch of bulk diesel and biodiesel, as well as bulk tanker loading at Mayfield No. 7 Berth (M7). The site operates 24 hours a day, seven days a week. The site is partially automated and manned with Stolthaven personnel undertaking daily inspections on business days. Primary operations include:

– The bulk storage of diesel and biodiesel at the site in the storage tanks listed in Table 2.3.
– The bulk transfer of diesel fuel or bio-diesel fuel (as required) from berthed ships to the site's above ground storage tanks.
– The filling of road tankers with diesel and biodiesel products for transfer to customers.

3.2 Operational changes in 2023

3.2.1 Independent Environmental Audit

The Independent Environmental Audit (IEA) was completed and issued on 28 April 2022. An update to any remaining actions and recommendations is provided in Section 13.4.

3.2.2 EPL variation

As Stolthaven was estimating early in the calendar year 2023 that they might exceed the annual throughput limits of 1,300ML contained in EPL 20193, consultation was undertaken with both DPHI and EPA to confirm any approval or EPL modification/variation requirements. Stolthaven identified it may require up to 1,800ML per year throughput to meet customer demand. The consultation included:

– DPHI:
  - Initial meeting on 7 March 2023 with DPHI (Joanna Bakopanos and Doris Yau) to describe the proposed throughout increase and discuss potential approval requirements.
  - Submission of a formal request dated 5 May 2023, to DPHI to confirm Stolthaven's position that the proposed throughput increase can occur under the existing development consent without need for a modification. This submission included additional air quality modelling to confirm emissions from the site would remain within the EPA's required limits whilst operating at the proposed higher throughput.
  - Response from DPHI by email dated 18 May confirming that no modification to the development consent was required to increase throughput to 1,800ML per year.
– EPA:
  - Initial meeting on 7 July 2023 with the EPA (Peter Jamieson and Nicholas Woodard) to describe the proposed throughout increase and discuss potential EPL variation requirements.
  - Subsequent application for a variation to amend Condition E1.5 to change throughput limit from 1,300ML to 1,800ML per year.
  - Confirmation by email from the EPA on 9 January 2024 that the licence variation has been made and that the EPL now allows throughout of 1,800ML per year.

The variation was approved and issued on 9 January 2024, which falls outside of the reporting period, however, affected the approved throughput for the reporting period and has therefore been appended below in Appendix B.

3.2.3 Other operational changes

The following operational changes or activities are noted as occurring during the reporting period:

– Tank NN3 was taken out of service for routine maintenance 10 year off stream inspection. The tank was cleaned and inspected including thickness testing to API 653 standards. The tank internal floor paint was removed, minor repairs undertaken and re-painted. New access and walkway were installed on NN2 and a bridge was installed from NN2 to NN3.
– Additional staff member employed 1st January 2023 as Site Operator to assist with Shore Officer and operational duties.

3.3 Site management plans and strategies

The site operates under an existing set of management plans and in accordance with the SSD_7065 consent and the site Operational Environmental Management Plan.

4. Groundwater

Groundwater quality at the site is monitored in accordance with a groundwater monitoring program (GMP) (AECOM 2023) and the conditions of EPL 20193.

The details of the groundwater wells and scheduled monitoring events are presented in Table 4.1. Groundwater wells MW05 to MW09 were installed in the Expansion Area in 2017. Temporary groundwater wells MW08A and MW08B were installed in 2018 following recorded exceedances of the criteria in MW08.

Table 4.1 Groundwater monitoring points at the site

EPA Identification Number	Monitoring Well Reference (AECOM 2019)	Installation date	Sampling Frequency
1	MW01	October 2013	Quarterly
2	MW02	October 2013	Quarterly
3	MW03	October 2013	Quarterly
4	MW04	October 2013	Quarterly
16	MW05	July 2017	Quarterly
17	MW06	July 2017	Quarterly
18	MW07	July 2017	Quarterly
19	MW08	July 2017	Quarterly
n/a	MW08A	2018	Temporary
n/a	MW08B	2018	Temporary
20	MW09	July 2017	Quarterly

Background monitoring was conducted prior to commencement of operations in 2013 to assess the condition of groundwater entering and leaving the site (particularly for the presence of petroleum hydrocarbons) in order to establish baseline groundwater quality within the site. Background monitoring was conducted in the Approved Expansion Area during the fourth quarter of 2017 to provide groundwater conditions at the site prior to operations within this area. Background concentration ranges are presented in the summary tables in Section 6.

Groundwater monitoring well locations are shown on Figure 4.1.

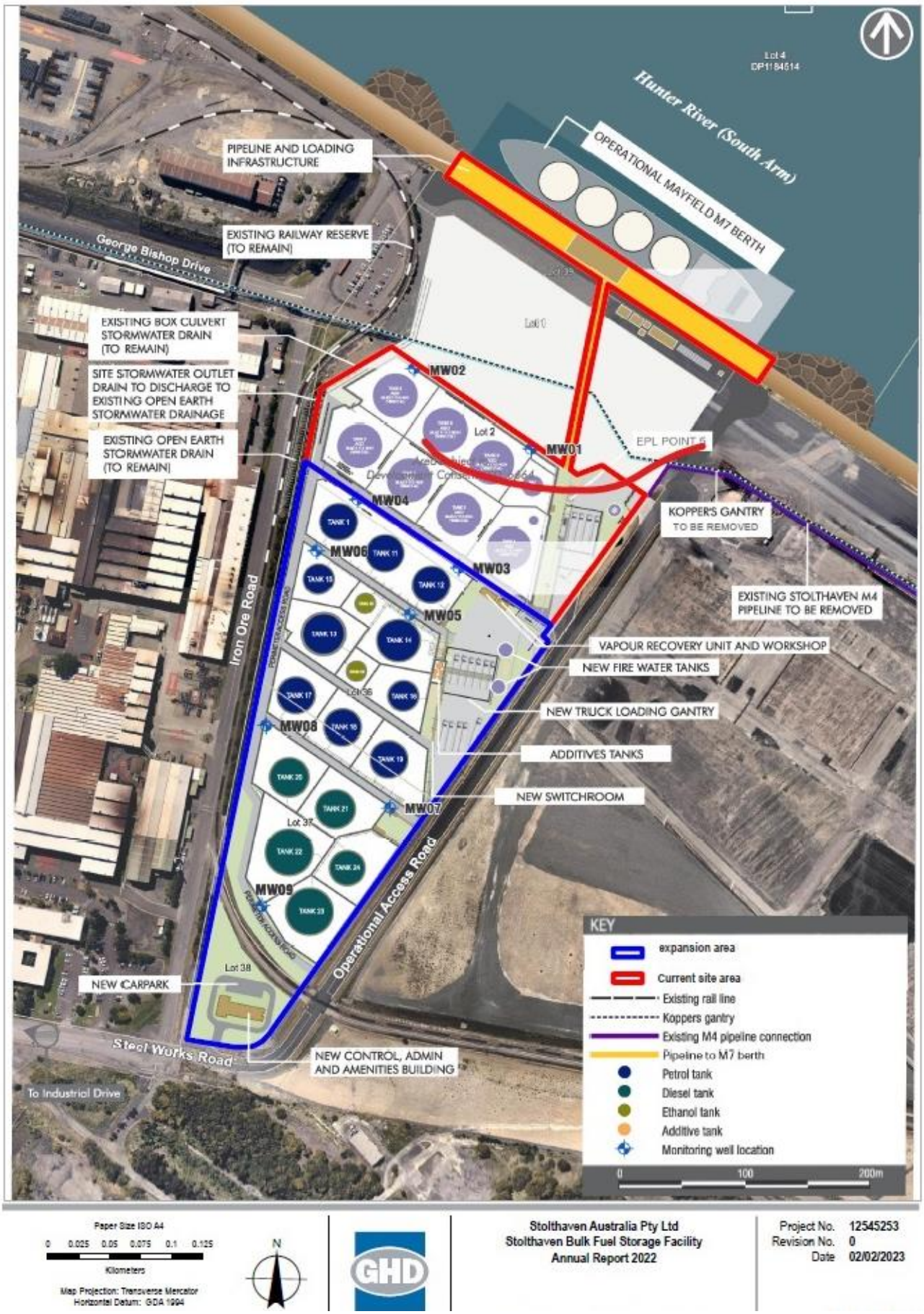


Figure 4.1 Groundwater monitoring well locations

5. Assessment criteria

AECOM assessed groundwater against the site Groundwater Assessment Criteria (GAC) as part of the GMP, and the background concentrations established in 2013. The thresholds that form the GAC are sourced from the ANZG (2018) *Australia New Zealand Water Quality Guidelines for Fresh and Marine Waters,* 95% Species Protection for Marine Waters Criterion. Where trigger values have not been published, ANZECC (2000) low reliability trigger values were adopted.

There are no groundwater quality requirements under the site's EPL. The GAC is set out in Table 5.1.

Table 5.1 Groundwater assessment criteria

Compound	Unit	ANZG (2018) 95% Trigger Values	ANZG (2018) 99% Trigger Values
BTEXN			
Benzene	(µg/L)	-	600
Ethylbenzene	(µg/L)	80	-
Toluene	(µg/L)	180	-
o-xylene	(µg/L)	350	-
p-xylene	(µg/L)	200	-
m-xylene	(µg/L)	75	-
Total Xylene	(µg/L)	-	-
Total Recoverable Hydrocarbons			
C6-C10 Fraction	(µg/L)	-	-
C6-C10 - BTEX	(µg/L)	-	-
>C10-C16 Fraction	(µg/L)	-	-
>C16-C34 Fraction	(µg/L)	-	-
>C34-C40 Fraction	(µg/L)	-	-

Samples are analysed for contaminants of concern (CoC) by a NATA accredited laboratory. Indicators of groundwater contamination or adverse quality impact include (but are not limited to) the following:

– Evidence of non-aqueous phase liquid (NAPL) (e.g. a separate hydrocarbon layer)
– Changes in clarity, colour and odour of groundwater
– Increases in concentrations of dissolved hydrocarbons.

6. Results

Groundwater results for the 2023 monitoring period are presented in Table 6.1 to Table 6.9.

Table 6.1 Groundwater monitoring results - MW01

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	8.94 - 9.06		0.01	9.03	9.07	8.84	8.96
BTEX (µg/L)							
Benzene	<1 to 5	600	1	<1	<1	<1	<1
Ethylbenzene	<2	80	2	<2	<2	<2	<2
Toluene	<2	180	2	<2	<2	<2	<2
Xylene (o)	<2	350	2	<2	<2	<2	<2
Xylene (m &p)	<2	75[1]	2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	<20	<20	<20	<20
C6-C10 minus BTEX	<20	-	20	<20	<20	<20	<20
>C10-C16 Fraction	<100	-	100	<100	<100	<100	<100
>C10-C16 Fraction minus naphthalene	<100	-	100	<100	<100	<100	<100
>C16-C34 Fraction	<100 to 380	-	100	<100	<100	<100	<100
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6.2 Groundwater monitoring results - MW02

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	7.38 - 9.05		0.01	7.82	7.84	7.65	7.97
BTEX (µg/L)							
Benzene	<1 to 5	600	1	<1	<1	<1	<1
Ethylbenzene	<2	80	2	<2	<2	<2	<2
Toluene	<2	180	2	<2	<2	<2	<2
Xylene (o)	<2	350	2	<2	<2	<2	<2
Xylene (m & p)	<2	75[1]	2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	<20	<20	<20	<20
C6-C10 minus BTEX	<20	-	20	<20	<20	<20	<20
>C10-C16 Fraction	<100	-	100	<100	<100	<100	<100
>C10-C16 Fraction minus naphthalene	<100	-	100	<100	<100	<100	<100
>C16-C34 Fraction	<100 to 380	-	100	<100	<100	<100	<100
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6.3 Groundwater monitoring results – MW03

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	7.57 - 9.05		0.01	7.72	7.89	7.98	7.82
BTEX (µg/L)							
Benzene	<1 to 5	600	1	<1	<1	<1	<1
Ethylbenzene	<2	80	2	<2	<2	<2	<2
Toluene	<2	180	2	<2	<2	<2	<2
Xylene (o)	<2	350	2	<2	<2	<2	<2
Xylene (m & p)	<2	75[1]	2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	<20	<20	<20	<20
C6-C10 minus BTEX	<20	-	20	<20	<20	<20	<20
>C10-C16 Fraction	<100	-	100	<100	<100	<100	<100
>C10-C16 Fraction minus naphthalene	<100	-	100	<100	<100	<100	<100
>C16-C34 Fraction	<100 to 380	-	100	<100	<100	<100	<100
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6.4 Groundwater monitoring results – MW04

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	7.47 - 9.05		0.01	7.47	7.86	7.81	7.87
BTEX (µg/L)							
Benzene	<1 to 5	600	1	<1	<1	<1	<1
Ethylbenzene	<2	80	2	<2	<2	<2	<2
Toluene	<2	180	2	<2	<2	<2	<2
Xylene (o)	<2	350	2	<2	<2	<2	<2
Xylene (m & p)	<2	75[1]	2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	<20	<20	<20	<20
C6-C10 minus BTEX	<20	-	20	<20	<20	<20	<20
>C10-C16 Fraction	<100	-	100	<100	<100	<100	<100
>C10-C16 Fraction minus naphthalene	<100	-	100	<100	<100	<100	<100
>C16-C34 Fraction	<100 to 380	-	100	<100	<100	<100	<100
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6.5 Groundwater monitoring results – MW05

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	8.27 – 9.89		0.01	8.66	8.94	9.44	8.26
BTEX (µg/L)							
Benzene	<1 to 5	600	1	<1	<1	<1	<1
Ethylbenzene	<2	80	2	<2	<2	<2	<2
Toluene	<2	180	2	<2	<2	<2	<2
Xylene (o)	<2	350	2	<2	<2	<2	<2
Xylene (m & p)	<2	75[1]	2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	<20	<20	<20	<20
C6-C10 minus BTEX	<20	-	20	<20	<20	<20	<20
>C10-C16 Fraction	<100	-	100	<100	<100	<100	<100
>C10-C16 Fraction minus naphthalene	<100	-	100	<100	<100	<100	<100
>C16-C34 Fraction	<100	-	100	<100	<100	<100	<100
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6.6 Groundwater monitoring results - MW06

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	7.47 - 10.00		0.01	7.42	7.64	7.56	7.56
BTEX (µg/L)							
Benzene	<1 to 5	600	1	<1	<1	<1	<1
Ethylbenzene	<2	80	2	<2	<2	<2	<2
Toluene	<2	180	2	<2	<2	<2	<2
Xylene (o)	<2	350	2	<2	<2	<2	<2
Xylene (m & p)	<2	75[1]	2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	<20	<20	<20	<20
C6-C10 minus BTEX	<20	-	20	<20	<20	<20	<20
>C10-C16 Fraction	<100	-	100	<100	<100	<100	<100
>C10-C16 Fraction minus naphthalene	<100	-	100	<100	<100	<100	<100
>C16-C34 Fraction	<100	-	100	<100	<100	<100	<100
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6.7 Groundwater monitoring results – MW07

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	8.86 - 9.55		0.01	8.86	8.84	9.36	8.66
BTEX (µg/L)							
Benzene	<1	600	1	<1	<1	<1	<1
Ethylbenzene	<2	80	2	<2	<2	<2	<2
Toluene	<2 to 6	180	2	<2	<2	<2	<2
Xylene (o)	<2	350	2	<2	<2	<2	<2
Xylene (m & p)	<2	75[1]	2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	<20	<20	<20	<20
C6-C10 minus BTEX	<20	-	20	<20	<20	<20	<20
>C10-C16 Fraction	<100	-	100	<100	<100	<100	<100
>C10-C16 Fraction minus naphthalene	<100	-	100	<100	<100	<100	<100
>C16-C34 Fraction	<100	-	100	200	<100	<100	<100
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6.8 Groundwater monitoring results – MW08

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	6.87 - 7.27		0.01	6.84	7.27	7.02	6.94
BTEX (µg/L)							
Benzene	6,140 to 16,800	600	1	**17,000**	**3,300**	**8,000**	**10,200**
Ethylbenzene	<50 to 30	80	2	<50	12	32	32
Toluene	248 to 725	180	2	**788**	**241**	**250**	**385**
Xylene (o)	<50 to 77	350	2	85	32	72	82
Xylene (m & p)	<50 to 183	75[1]	2	**220**	**93**	**185**	**179**
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	6,990 to 18,200	-	20	20,500	4,620	10,200	9,530
C6-C10 minus BTEX	<400 to 1360	-	20	2,410	940	1,660	<200
>C10-C16 Fraction	5,240 to 20,400	-	100	17,600	3,820	10,600	9,790
>C10-C16 Fraction minus naphthalene	1,170 to 12,000	-	100	9,040	<100	4,780	4,130
>C16-C34 Fraction	1,890 to 6,880	-	100	8,280	1,420	3,850	3,560
>C34-C40 Fraction	<100 to <280	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6.9 Groundwater monitoring results – MW09

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2023	Q2 2023	Q3 2023	Q4 2023
pH	7.09 - 7.95		0.01	7.24	7.39	7.14	7.25
BTEX (µg/L)							
Benzene	6 to 8	600	1	<1	<1	<1	<1
Ethylbenzene	<2	80	2	<2	<2	<2	<2
Toluene	<2	180	2	<2	<2	<2	<2
Xylene (o)	<2	350	2	<2	<2	<2	<2
Xylene (m & p)	<50 to <2	75[1]	2	<2	<2	<2	<2
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	<20	<20	<20	<20
C6-C10 minus BTEX	<20	-	20	<20	<20	<20	<20
>C10-C16 Fraction	<100	-	100	<100	<100	<100	<100
>C10-C16 Fraction minus naphthalene	<100	-	100	<100	<100	<100	<100
>C16-C34 Fraction	<100	-	100	<100	<100	<100	<100
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

6.1 Analysis of results

A statistical trend analysis was undertaken by AECOM for selected analytes at nine monitoring locations (MW01 to MW09) to determine if any statistically significant trends were apparent in the dataset. An upper confidence level of 95% was set in order to determine if any trends identified were statistically significant.

Published guidance states that a minimum of six data points are required to perform statistical trend analysis, with greater sample sizes resulting in greater confidence in any trends that are identified. As of this Annual Review, 39 data points are available for trend analysis for MW01 – MW04, with monitoring having commenced in October 2013 and 21 data points are available for trend analysis for MW05 – MW09 with monitoring having commenced in August 2017.

6.1.1 MW01

Recorded pH levels at MW01 for this reporting period ranged from 8.84 to 9.03 and were slightly below or within background concentrations. Mann Kendall trend analysis reported a statistically significant decreasing trend in pH levels; however the time series graph shows pH has remained relatively stable and largely within background concentrations throughout the monitoring program.

BTEX concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations, exhibiting no significant trends. The only exception being a recorded concentration of 2,230 µg/L of TRH >C_{10}-C_{40} during the Q4 GME undertaken in November 2017.

The statistical trend analyses for MW01 are presented in Figure 6.1 and Figure 6.2.

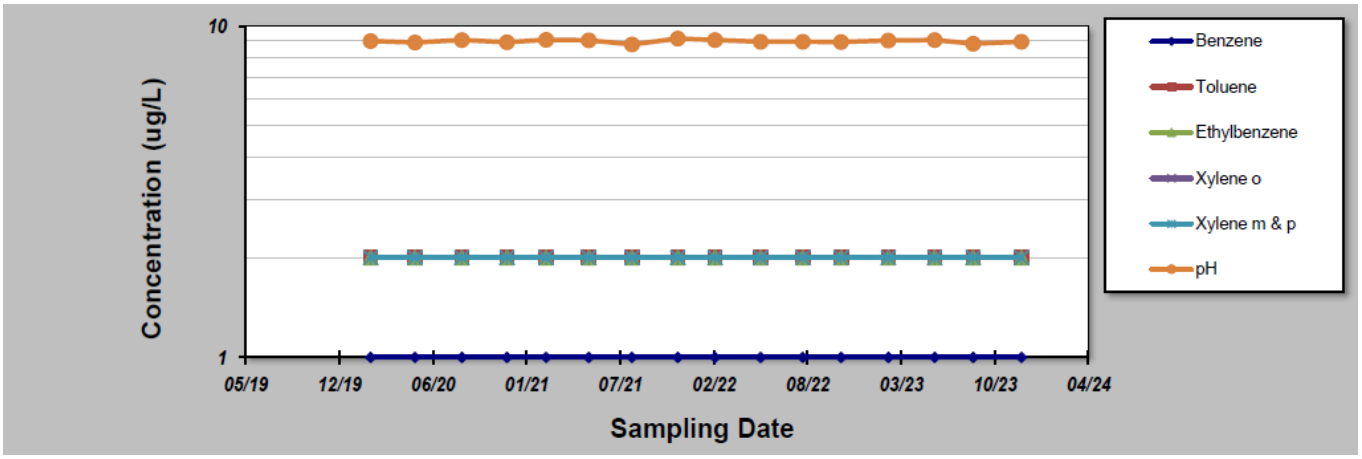


Figure 6.1 Statistical trend analysis of MW01– BTEX and pH (reference AECOM 2023d)

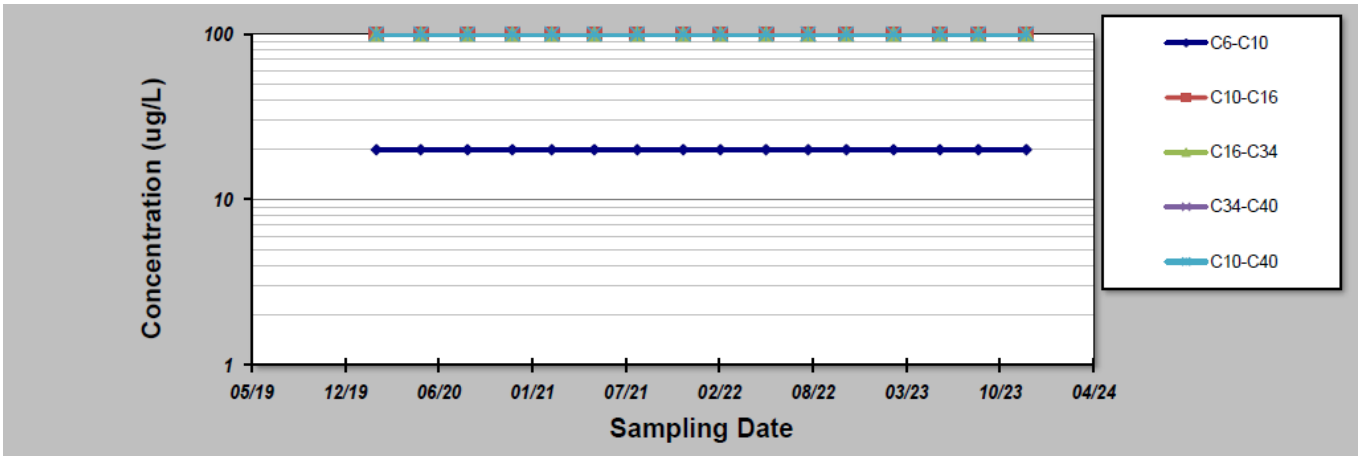


Figure 6.2 Statistical trend analysis of MW01 – TRH (reference AECOM 2023d)

6.1.2 MW02

Recorded pH levels at MW02 for this reporting period ranged from 7.65 to 7.97 and were within background concentrations. Mann Kendall trend analysis reported a statistically significant decreasing trend in pH levels, however the time series graph shows pH has remained relatively stable and were below background concentrations throughout the monitoring program.

BTEX concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations. BTEX concentrations have been reported below the LOR in all groundwater monitoring rounds with the exception of minor benzene concentrations reported between October 2013 and November 2014. Statistical analysis supports a stable benzene trend.

TRH concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations, exhibiting no significant trends. The only TRH detection throughout the monitoring program has been TRH C_{16}-C_{34} concentrations in October 2013. Statistical analysis reported a stable trend for all TRH fractions.

The statistical trend analyses for MW02 are presented in Figure 6.3 and Figure 6.4.

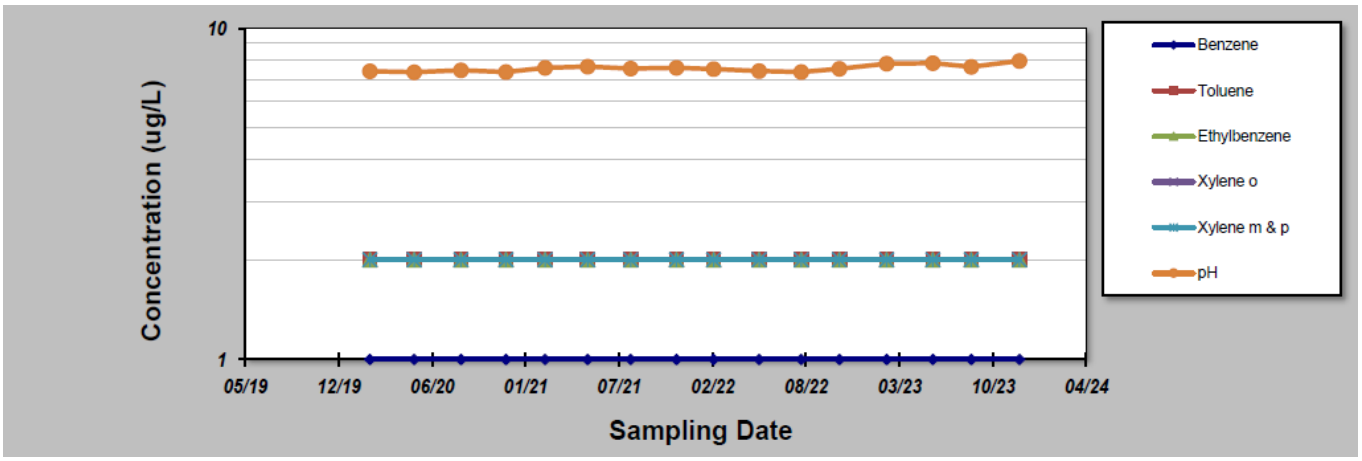


Figure 6.3 Statistical trend analysis of MW02– BTEX and pH (reference AECOM 2023d)

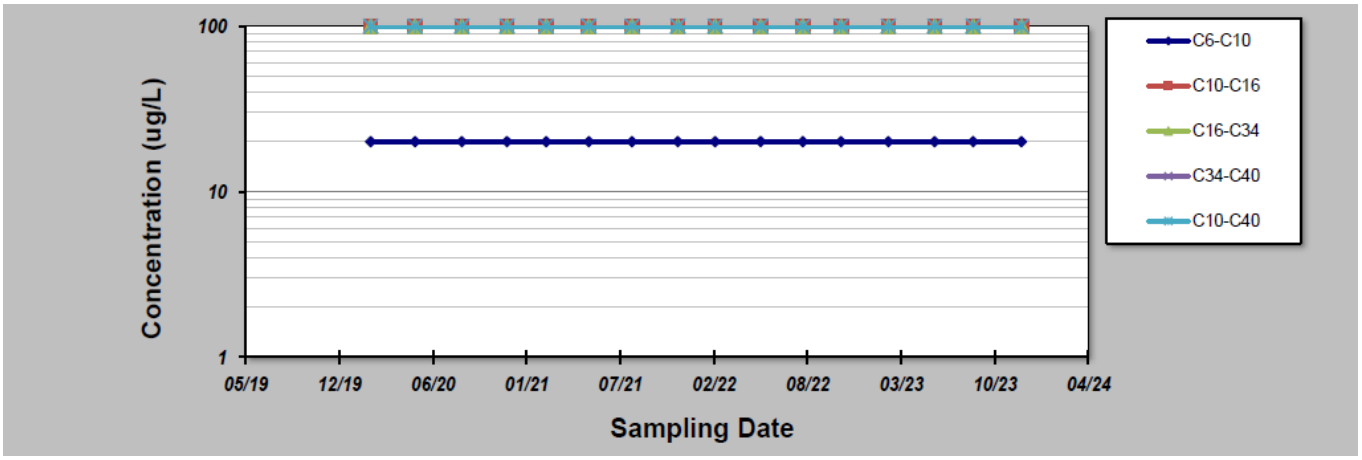


Figure 6.4 Statistical trend analysis of MW02 – TRH (reference AECOM 2023d)

6.1.3 MW03

Recorded pH levels at MW03 for this reporting period ranged from 7.72 to 7.98 and were within background concentrations. Mann Kendall trend analysis reported decreasing trends in pH levels, however the time series graph shows pH has remained relatively stable and largely within background concentrations throughout the monitoring program.

BTEX concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations, exhibiting no significant trends. The only TRH detection throughout the monitoring program has been TRH C_{16}-C_{34} concentrations in October 2013. Statistical analysis reported a stable trend for all TRH fractions.

The statistical trend analyses for MW03 are presented in Figure 6.5 and Figure 6.6.

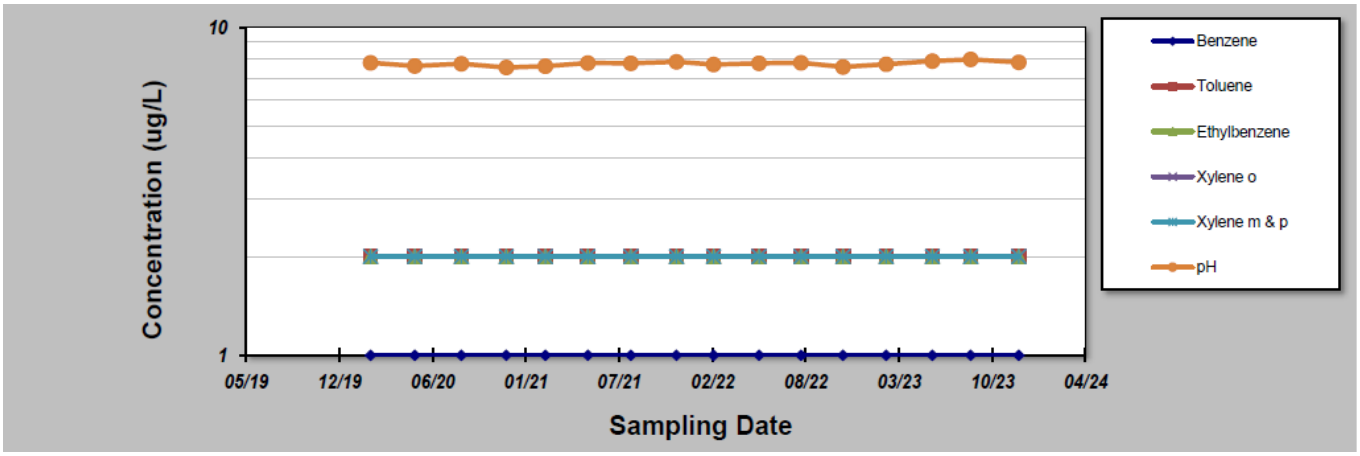


Figure 6.5 Statistical trend analysis of MW03– BTEX and pH (reference AECOM 2023d)

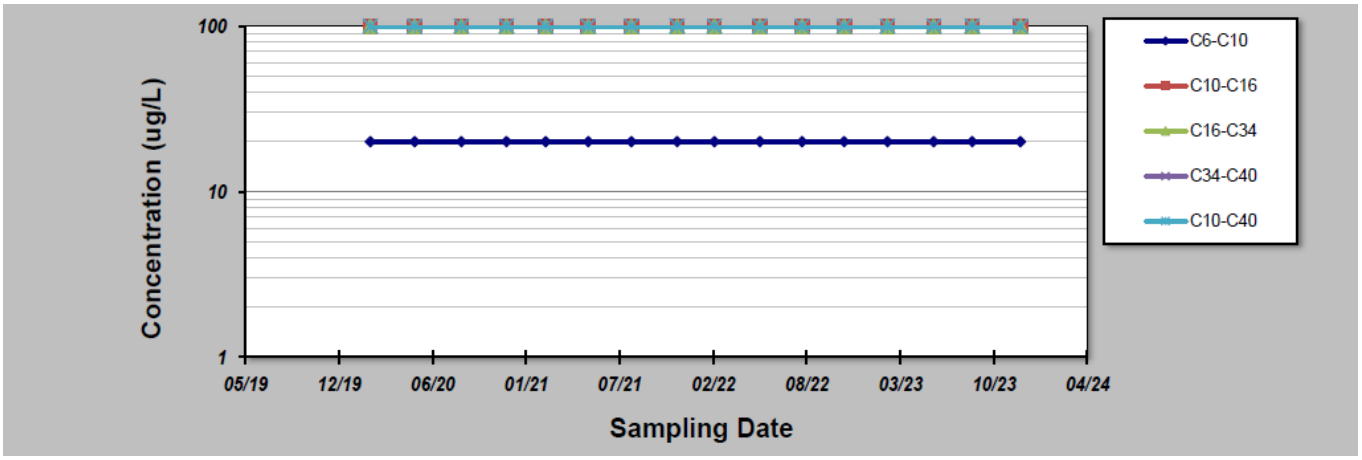


Figure 6.6 Statistical trend analysis of MW03 – TRH (reference AECOM 2023d)

6.1.4 MW04

Recorded pH levels at MW04 for this reporting period ranged from 7.47 to 7.87 and were within background concentrations. Mann Kendall trend analysis reported a statistically significant decreasing trend in pH levels, however the time series graph shows pH has remained relatively stable and largely within background concentrations throughout the monitoring program.

BTEX concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations, exhibiting no significant trends. Statistical analysis reported a stable trend for all TRH fractions.

The statistical trend analyses for MW04 are presented in Figure 6.7 and Figure 6.8.

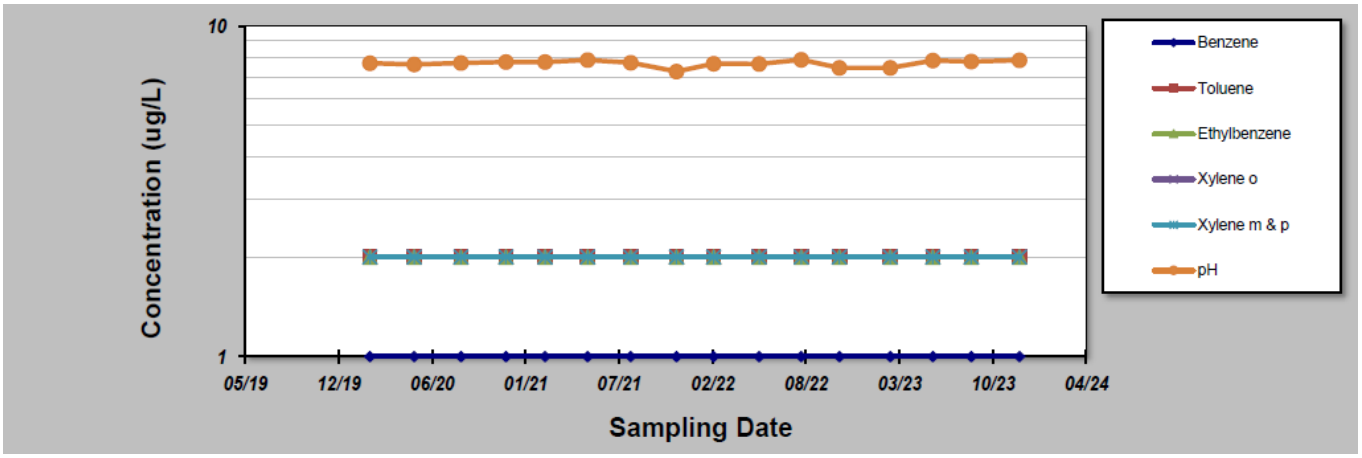


Figure 6.7 Statistical trend analysis of MW04– BTEX and pH (reference AECOM 2023d)

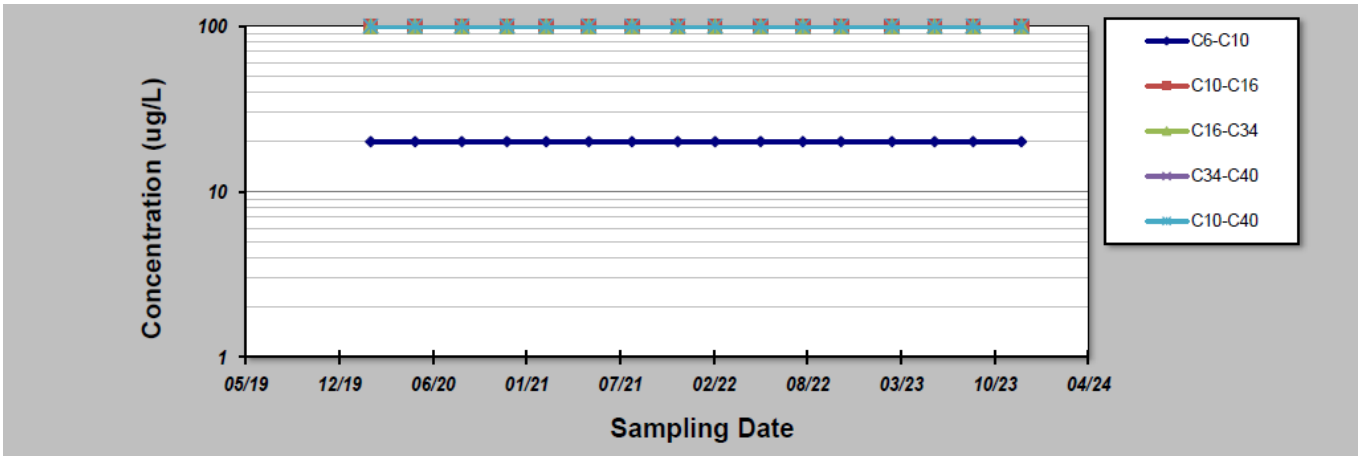


Figure 6.8 Statistical trend analysis of MW04 – TRH (reference AECOM 2023d)

6.1.5 MW05

Recorded pH levels at MW05 for this reporting period ranged from 8.26 to 9.44 and were slightly below or within the previously detected range for this location. Mann Kendall trend analysis reported no trend for pH levels.

BTEX concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2023 monitoring period, consistent with all previous concentrations. Statistical analysis reported a stable trend for all TRH fractions.

The statistical trend analyses for MW05 are presented in Figure 6.9 and Figure 6.10.

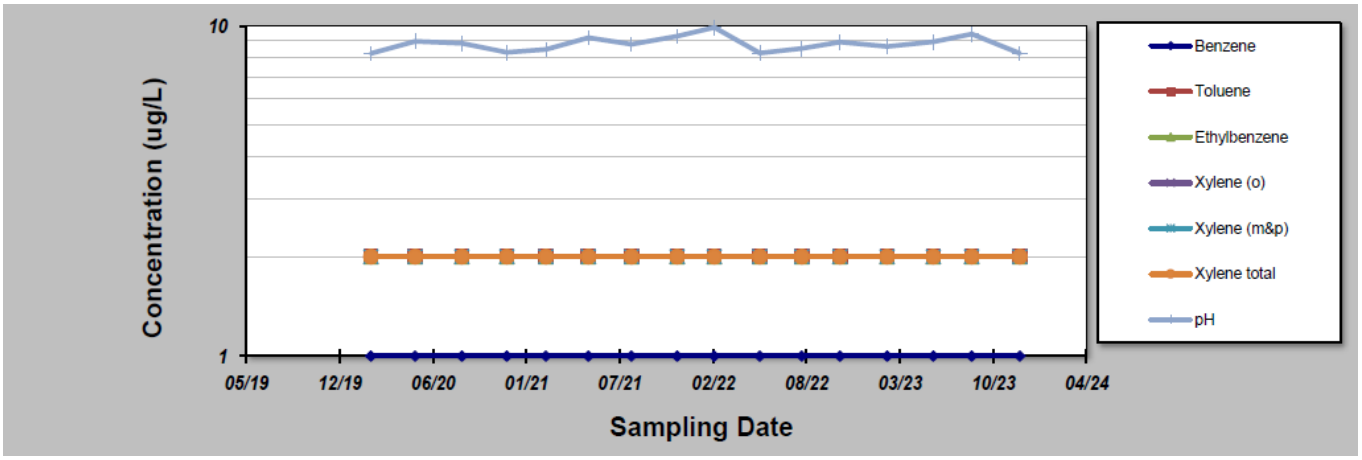


Figure 6.9 Statistical trend analysis of MW05– BTEX and pH (reference AECOM 2023d)

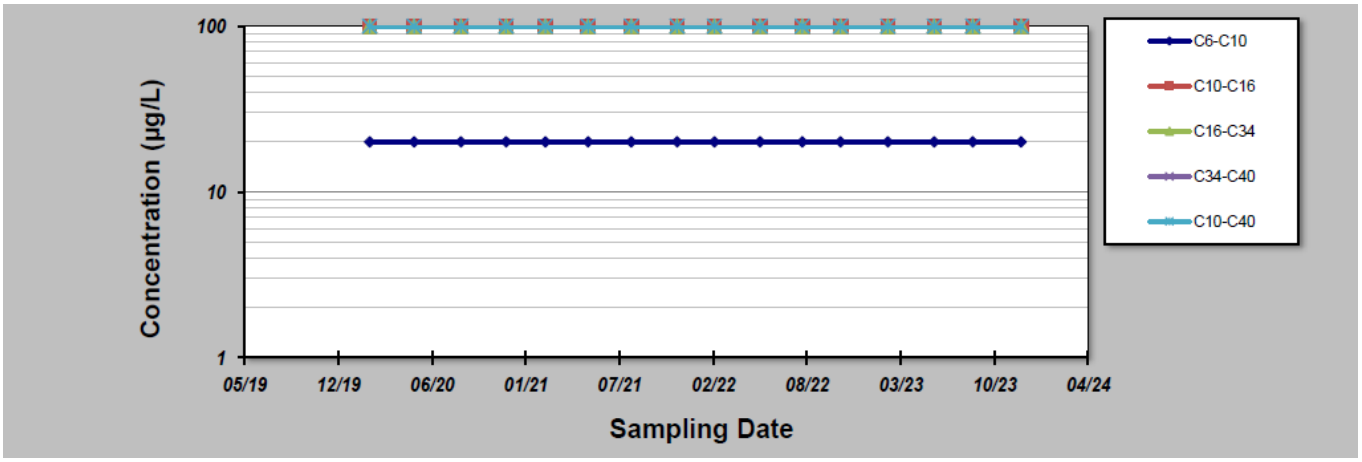


Figure 6.10 Statistical trend analysis of MW05 – TRH (reference AECOM 2023d)

6.1.6 MW06

Recorded pH levels at MW06 for this reporting period ranged from 7.42 to 7.64 and were below or within the previously detected range for this location. Mann Kendall trend analysis reported no trend for pH levels.

BTEX concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2023 monitoring period, consistent with all previous concentrations. Statistical analysis reported a stable or no trend for all TRH fractions.

Concentrations of TRH have been reported consistently less than the LOR since commencement of quarterly monitoring, with the exception of:

– Concentrations of TRH C_{16}-C_{34} fraction recorded at MW06 (150 µg/L) and TRH C_{10}-C_{40} fraction at MW06 (180 µg/L) recorded in the initial baseline GME (August 2020).

The statistical trend analyses for MW06 are presented in Figure 6.11 and Figure 6.12.

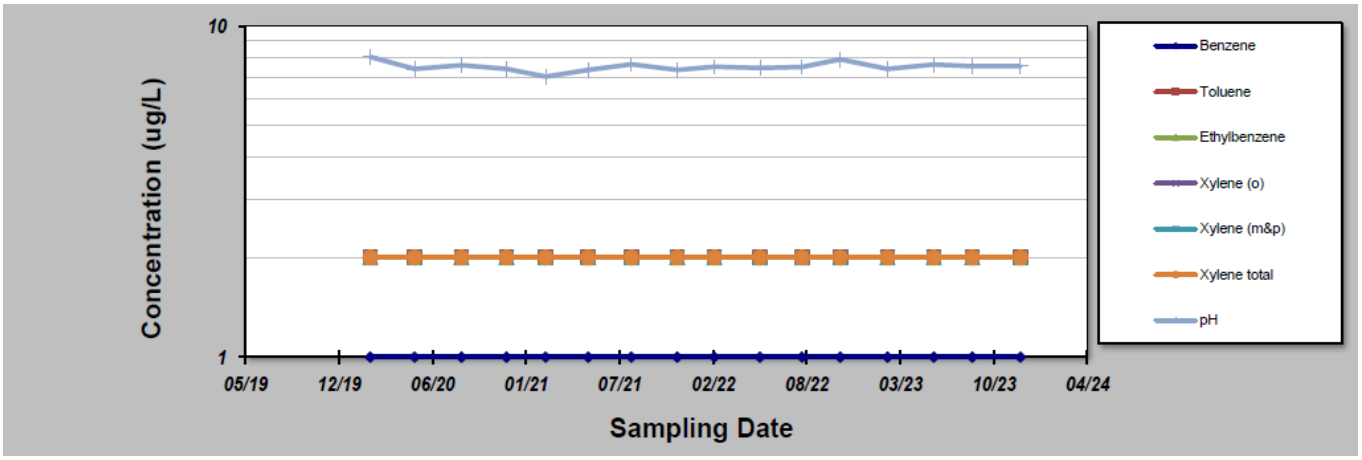


Figure 6.11 Statistical trend analysis of MW06– BTEX and pH (reference AECOM 2023d)

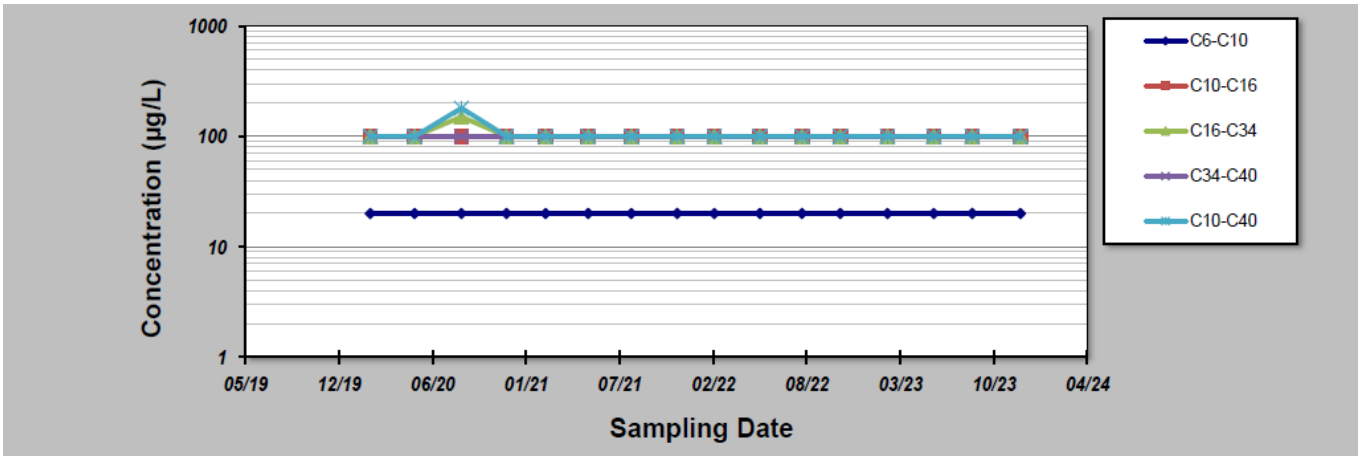


Figure 6.12 Statistical trend analysis of MW06 – TRH (reference AECOM 2023d)

6.1.7 MW07

Recorded pH levels at MW07 for this reporting period ranged from 8.66 to 9.36 and were slightly below or within the previously detected range at this location. Mann Kendall trend analysis reported no trends for pH levels.

BTEX concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2023 monitoring period, with the exception of the C_{16}-C_{34} Fraction in the February 2023 GME, where the reading exceeded the LOR. Other than this, the statistical analysis reported a stable trend for all TRH fractions.

The statistical trend analyses for MW07 are presented in Figure 6.13 and Figure 6.14.

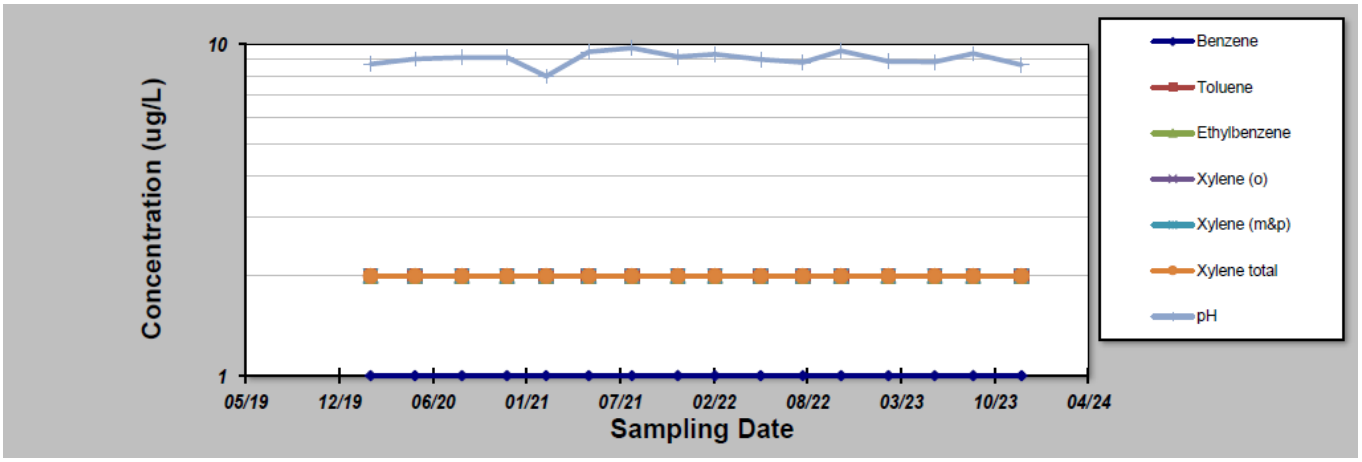


Figure 6.13 Statistical trend analysis of MW07– BTEX and pH (reference AECOM 2023d)

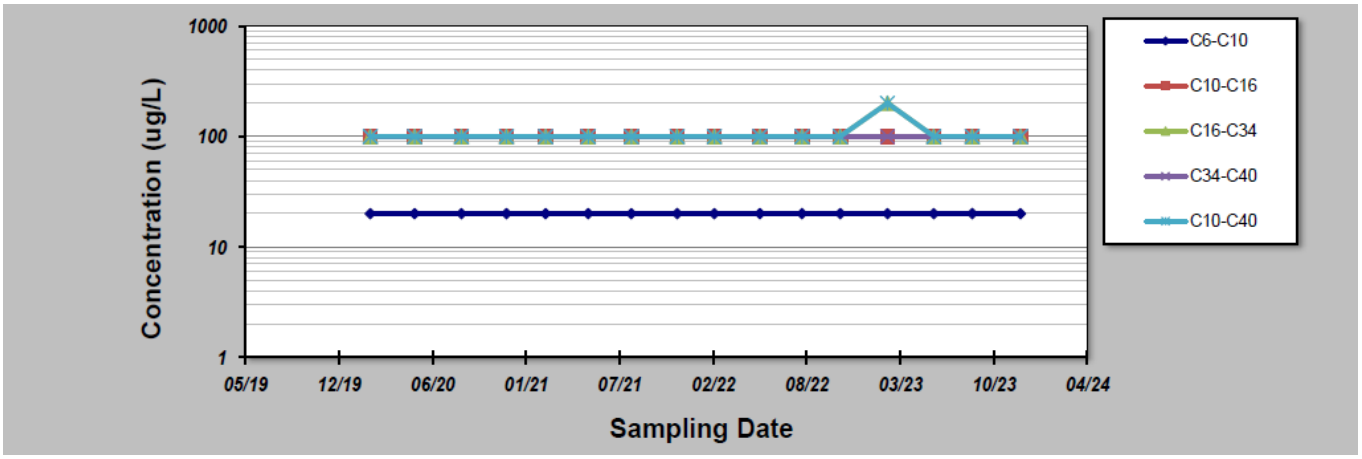


Figure 6.14 Statistical trend analysis of MW07 – TRH (reference AECOM 2023d)

6.1.8 MW08

Recorded pH levels at MW08 for this reporting period ranged from 6.84 to 7.27 and were within or slightly below the previously detected range at this location. Mann Kendall trend analysis reported a stable trend for pH levels.

All TRH concentrations were above the LOR throughout the 2023 monitoring period, consistent with all previous concentrations.

Sampling during subsequent monitoring events generally reported TRH concentrations within the LOR:

– Concentrations of TRH above the LOR were reported within and/or above the previously detected range (PDR's) at C_6-C_{10} Fraction, C_6-C_{10} minus BTEX and C_{16}-C_{34} Fraction.
– Concentrations of TRH above the LOR were reported within and/or below the previously detected range (PDR's) at MW08 with the exception of C_{10}-C_{16} Fraction, C_{10}-C_{16} Fraction less Naphthalene (F2) and C_{34}-C_{40} Fraction which were all reported marginally below the PDR.
– Residual contamination impacts are believed to be associated with the remediation of the former BHP Steelworks site and unrelated to Stolthaven operations. Notwithstanding, the elevated CoPC concentrations reported at MW08 appear localised to this monitoring location.

Stolthaven undertook installation of two wells in March 2018 to the north-east and south of MW08 to delineate impacts at MW08. Sampling of MW08A (north-east) and MW08B (south) was undertaken in April 2018 and during the Q3 2018 monitoring which indicated CoPC concentrations were less than the LOR at MW08A and negligible at MW08B. It was considered residual contamination impacts at MW08 were sufficiently delineated to the north-east and south by MW08A and MW08B, respectively. MW08A and MW08B were not sampled during the 2023 reporting period.

Suspected DNAPL was encountered at MW08. DNAPL comprised “coal tar”-like material and had a hydrocarbon-like odour. This was reported across all four GMEs in 2023 (AECOM 2023).

As stated, BTEX concentrations were above the previously detected range at MW08 during the 2023 monitoring period with the following exceedances of the GAC recorded:

– Benzene in all four quarters ranging between 3,300 µg/L and 17,000 µg/L
– Toluene in all four quarters ranging between 241 µg/L and 788 µg/L
– Xylene (m & p) in all four quarters ranging between 163 µg/L and 220 µg/L

The statistical trend analyses for MW08 are presented in Figure 6.15 and Figure 6.16.

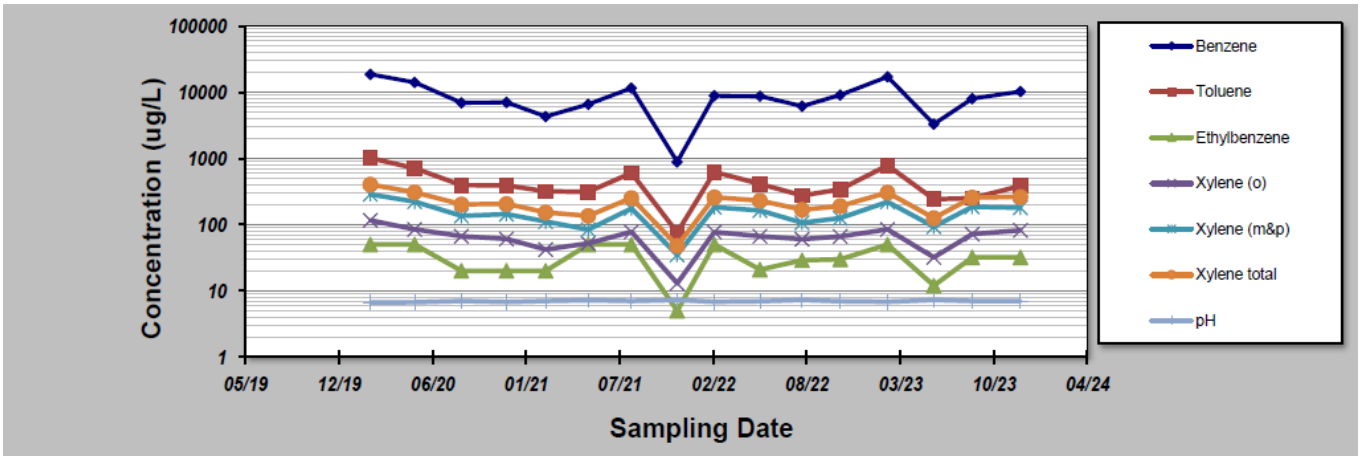


Figure 6.15 Statistical trend analysis of MW08– BTEX and pH (reference AECOM 2023d)

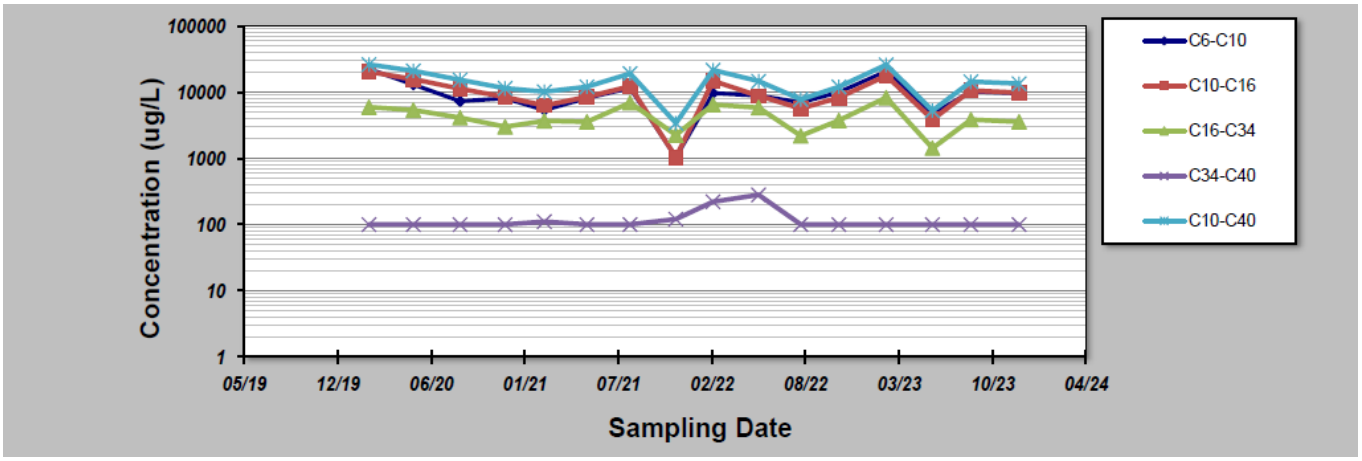


Figure 6.16 Statistical trend analysis of MW08 – TRH (reference AECOM 2023d)

6.1.9 MW09

Recorded pH levels at MW09 for this reporting period ranged from 7.14 to 7.39 and were within the previously detected range at this location. Mann Kendall trend analysis reported no trend in pH levels.

BTEX concentrations remained below the LOR throughout the 2023 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2023 monitoring period, consistent with all previous concentrations. Statistical analysis reported a stable trend for all TRH fractions.

Concentrations of TRH have been reported consistently less than the LOR since commencement of quarterly monitoring, with the exception of:

– Concentrations of TRH >C_{16}-C_{34} fraction recorded at MW09 (120 µg/L in) January and May 2018, (150 µg/L in) February 2020, and (180 µg/L in) May 2020.

The statistical trend analyses for MW09 are presented in Figure 6.17 and Figure 6.18.

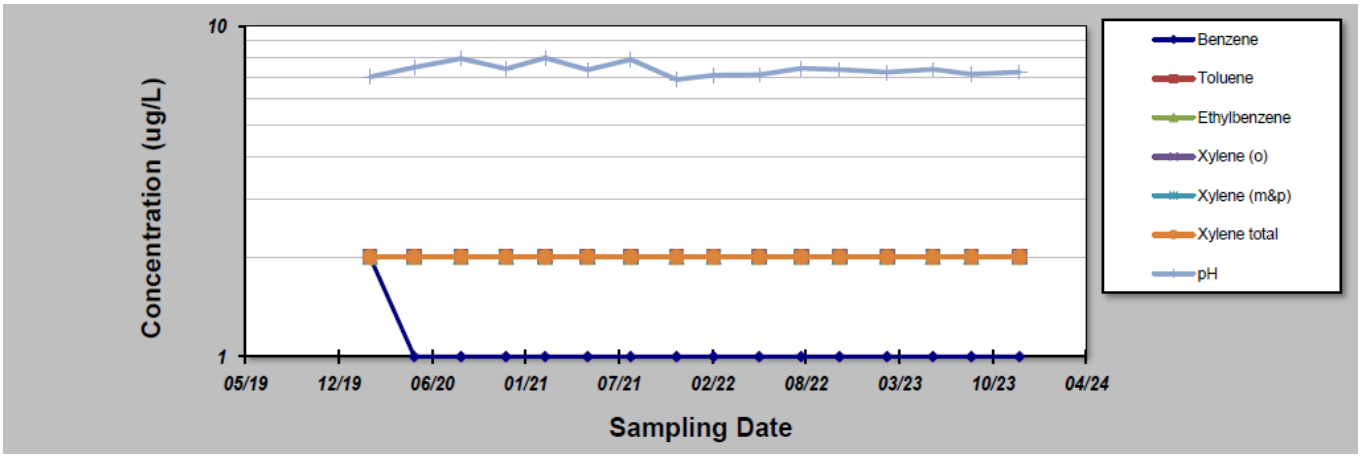


Figure 6.17 Statistical trend analysis of MW09– BTEX and pH (reference AECOM 2023d)

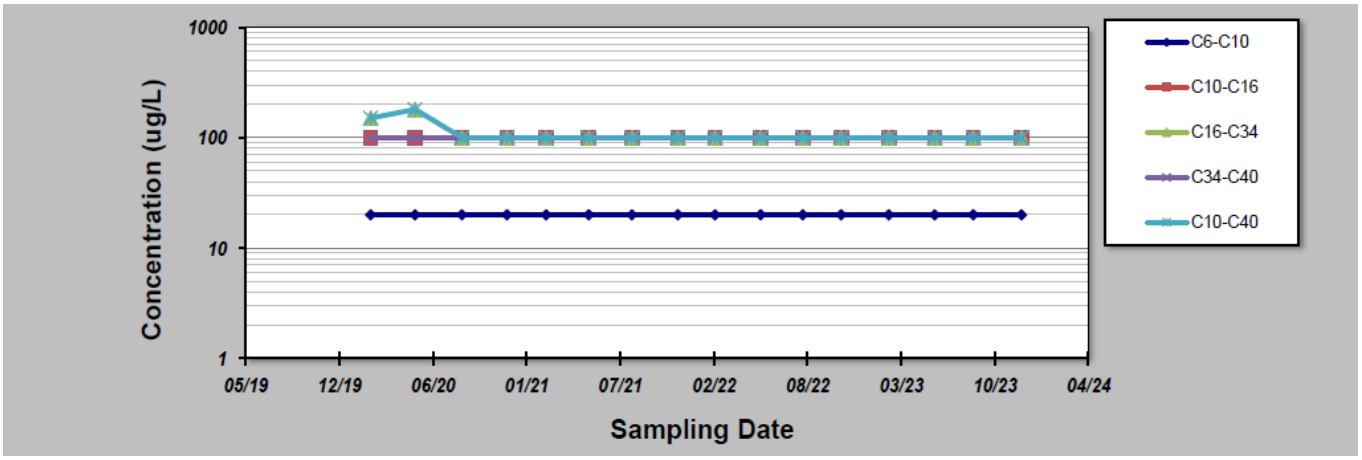


Figure 6.18 Statistical trend analysis of MW09 – TRH (reference AECOM 2023d)

6.1.10 Summary of groundwater results

Nine groundwater wells were sampled in accordance with the site's EPL.

Groundwater level monitoring and groundwater sampling was conducted at the Current Site Area (MW01 to MW04 – see Figure 2) and the Approved Expansion Area (MW05 to MW09 – see Figure 2) on the following dates in accordance with the Site's EPL.

– 16 and 24 February 2023
– 18 May 2023
– 16 August 2023
– 27 November 2023

The analytical results of the groundwater quality monitoring at the Site reported no exceedances of the adopted GAC at groundwater wells MW01, MW02, MW03, MW04, MW05, MW06 and MW09.

Review of analytical results and Mann Kendall Analysis (MKA) indicated results are generally consistent with historical data and confirmed that groundwater quality from this GME is comparable to pre-operational baseline conditions at the Site. It is considered that Site operations have not had any measurable impact on the quality of groundwater beneath the Site. Overall, it is considered that Stolthaven has complied with the groundwater monitoring requirements of the EPL and GMP.

As at the November GME, 39 rounds of baseline groundwater monitoring have been undertaken on monitoring wells MW01 to MW04 at the Current Site Area. Baseline analytical results have identified levels of TRH and BTEX were consistently below the limit of reporting.

As at the November GME, 21 rounds of baseline groundwater monitoring have been undertaken on monitoring wells MW05 to MW09 at the Proposed Expansion Area.

Baseline analytical results have identified consistent exceedances of the adopted GAC for Benzene, Toluene and meta and para Xylenes at MW08 and elevated TRH concentrations, at both MW08 and MW07. It is considered residual hydrocarbon impacts identified at MW08 are localised within fill deposits immediately surrounding MW08 and are effectively laterally delineated to the north-east and south by MW08A and MW08B.

To date, no infrastructure related to storage and transfer of hydrocarbons is in place at the Proposed Expansion Area. It is considered that the elevated results are related to residual historical contamination from the former BHP Steelworks (which previously occupied areas of the Current Site Area and Proposed Expansion Area) and are unrelated to current operations at the Site.

7. Stormwater

7.1 Stormwater monitoring

Monitoring of stormwater discharges is undertaken as part of the Site's Stormwater Management Plan (SWMP) to assess the effectiveness of stormwater runoff quality controls implemented at the site. Monitoring of stormwater at the site consists of:

– Visual inspection of the site and areas receiving runoff from the site
– Monitoring water quality following rainfall events

Indicators of potential adverse water quality impacts include:

– Evidence of erosion and scouring around the stormwater pipe discharge outlets
– Changes in clarity, colour and odour of receiving waters
– Presence of debris and rubbish
– Evidence of stress on flora or fauna
– Presence of an oily film on water surfaces
– Orange/brown coating on banks, water surfaces or substrate.

There are currently nine concrete bund walls around the site's bulk storage area designed to contain any spills onsite and prevent environmental harm. The bunds are referred to as Bund 1, Bund 2, Bund 3, Bund 5, Bund 6, Bund 7, Bund 8 and Bund 9. After every rainfall event all bunds are sampled and tested before release through the Puraceptor on site according to the SWMP. In order to ensure the quality of stormwater collected from the bunds, the outlet from the bunds is kept closed at all times.

The Puraceptor is a water quality and hydrocarbon detector located prior to the discharge point at the Hunter River. In order to confirm that stormwater measures implemented at the site do not adversely impact on the Hunter River, samples are collected following rainfall events that result in sufficient stormwater discharge to collect surface water samples.

The water samples at EPL Point 5 are analysed prior to discharge for the pollutants as shown in Table 7.1. Concentration limits are taken from EPL 20193. Once water quality results are obtained for the water in the Point 5 pit, water is discharged into the Hunter River via the Puraceptor. If water quality is found to be noncompliant with the parameters prescribed in the site's EPL it is retested and if the results are above prescribed limits again a licenced trade waste contractor is engaged to dispose of the wastewater. Further details of wastewater removed from site by the licenced waste contractor is presented in Section 10.1. It is noted that Biological Oxygen Demand (BOD) was removed from the EPL criteria on 27 August 2015 and was not sampled between the 2017 and 2023 reporting periods.

Table 7.1 Water quality criteria (EPL 20193)

Pollutant	Units of measure	Frequency	Method	100 percentile concentration limit
Dissolved oxygen	mg/L	Weekly during any discharge	Grab sample	>2
Oil and grease	mg/L	Weekly during any discharge	Grab sample	10
pH	pH units	Weekly during any discharge	Grab sample	6.5-8.5
Total suspended solids	mg/L	Weekly during any discharge	Grab sample	30

7.2 Stormwater monitoring results

Stolthaven conducted stormwater sampling onsite and provided the 2023 water quality results from the site's licenced discharge point which are presented in Table 7.2 below. Water quality results from bund water sampling are presented in Table 7.3. A full copy of the data from stormwater monitoring is provided in Appendix C.

Table 7.2 Discharged water quality results (EPA Point 5)

Sample Date	Dissolved oxygen (mg/L)	Oil and Grease (mg/L)	pH	Total Suspended Solids (TSS) (mg/L)	Volume discharged (L)
1/06/2023	7.90	4	7.40	**38**[1]	0
1/10/2023	5.86	< 2	7.40	5	10,000
19/01/2023	6.60	< 2	6.97	25	15,000
30/01/2023	6.30	< 2	7.52	17	15,000
14/02/2023	5.40	< 2	7.10	15	20,000
24/02/2023	7.80	< 2	7.82	12	20,000
14/03/2023	3.70	< 2	7.42	5	15,000
24/03/2023	7.30	< 2	6.68	20	35,000
4/04/2023	6.10	< 2	7.35	22	30,000
20/04/2023	8.00	< 2	6.93	22	30,000
5/08/2023	8.70	< 2	7.40	25	15,000
15/05/2023	8.60	< 2	6.84	21	15,000
29/05/2023	9.10	< 2	7.46	8	20,000
17/07/2023	8.60	< 2	6.85	25	20,000
25/07/2023	7.40	< 2	6.79	12	20,000
16/08/2023	6.70	< 2	6.66	26	30,000
9/01/2023	7.90	< 2	7.52	5	30,000
29/09/2023	6.00	< 2	6.70	8	20,000
29/09/2023	6.00	< 2	6.70	8	30,000
10/11/2023	4.30	< 2	6.84	9	5,000
27/10/2023	7.00	< 2	6.71	22	20,000
11/06/2023	7.30	< 2	6.74	9	20,000
28/11/2023	6.00	< 2	7.14	15	15,000
21/12/2023	6.10	< 2	6.77	14	30,000
Minimum	3.70	< 2	6.66	5	-
Maximum	9.10	4	7.82	**38**[1]	**-**
Average	6.86	4	7.07	16.66	**-**

BOLD denotes an exceedance of the criteria

[1] Indicates a resample and retest was subsequently taken

Where exceedances occurred (bold items in Table 7.2), bund water was re-tested, the results of the retest are indicated in the row below the bold results. All retested results met the EPA's criteria for discharge from site. This process is undertaken in accordance with the sites Stormwater Management Plan.

Table 7.3 Bund water quality results

Parameter	Minimum	Maximum	Average
pH	6.23	8.43	7.7
Total dissolved solids (ppm)	12.7	105.9	41.2
Dissolved oxygen (mg/L)	14.4	91.6	59.3
Conductivity (µS/cm)	19.8	736	63.0

7.3 Analysis of results

7.3.1 Discharged water quality results

While the water sampling identified one exceedance of the EPA criteria, any water which exceeded EPA criteria (1 June 2023) was not discharged and was subsequently resampled. Further sampling and testing provided acceptable results and discharges were then permitted. The site's Stormwater Management Plan states "*If laboratory analysis of the water samples failed against EPL limits, a resample will be taken and tested. If the second analysis fails, then effluent will be disposed off-site by approved waste disposal contractor & reported through the sites Incident management system."*

During the 2023 monitoring period, all water discharged from the site was compliant with all conditions of the site's EPL. The following sections discusses each analyte further, with reference to trends identified in AECOM 2023.

Dissolved Oxygen (DO)

The DO concentrations reported at Monitoring Point 5 complied with the site's EPL criteria, with all results above the prescribed minimum concentration limit of 2 mg/L. No exceedances of the criteria were recorded during the reporting period. The average dissolved oxygen level recorded during the 2023 reporting year was 6.86 mg/L, with a minimum level of 3.70 mg/L and a maximum of 9.10 mg/L. AECOM 2019 presented a trend plot of dissolved oxygen data between 2014 and 2018 which showed DO concentrations have been variable at Monitoring Point 5 with no obvious trends. Data reported during 2023 confirmed the variability of DO with no obvious trends.

Oil and grease

The oil and grease levels recorded at Monitoring Point 5 during the reporting period were compliant with the EPL concentration limit of 10 mg/L. There were no exceedances of the criterion recorded during the 2023 reporting period. The average level of oil and grease recorded during the reporting period was 4.0 mg/L, with a maximum of 4.0 mg/L.

pH

The pH levels recorded at Monitoring Point 5 complied with the site's EPL criteria, remaining within the prescribed pH range of 6.5 – 8.5. There were no exceedances of the criterion recorded during the 2023 reporting period. During the reporting period, the average pH level was 7.07 with a minimum of 6.66 and a maximum of 7.82. AECOM 2019 presented a trend plot of pH results between 2014 and 2018 which, along with results from 2019, 2020, 2021, 2022, and 2023 indicate that pH levels at Monitoring Point 5 generally remain within the range of 6.5 to 8.5.

Total Suspended Solids (TSS)

Concentrations of TSS recorded at Monitoring Point 5 varied throughout the reporting period. There was one occurrence where TSS was recorded to be above the maximum criteria at 38 mg/L. The exceedance was recorded on 1 June 2023. Water was not released and was instead held and resampled as per the site's Stormwater Management Plan.

During the reporting period, the average level of total suspended solids was 16.66 mg/L, with a minimum of 5 mg/L and a maximum recording of 38 mg/L.

AECOM 2019 presented a trend plot of TSS results between 2014 and 2018. The historical and current results indicate that the level of TSS at Monitoring Point 5 is variable, with no obvious trends identified.

7.3.2 Bund water quality results

There are no specific limits set for bund water quality. Bund water is sampled following rainfall and then released according to the site's Stormwater Water Management procedure through the site's Puraceptor to the Western channel.

The following sections discusses each analyte further, with reference to trends identified in AECOM 2023. In future reporting periods, the data series will grow in accuracy and bund water quality trend analysis can be undertaken. Appropriate management measures can be recommended to address any issues identified.

pH

The pH levels recorded in the bund water during the reporting period ranged from a minimum of 6.23 to a maximum of 8.43 with an average of 7.7. The pH levels during the reporting period were generally within the pH range of 6.5 – 8.5 prescribed in EPL criteria for the licensed discharge point (Monitoring Point 5), however there were periods of lower criteria exceedances. The pH of the bund water was lower than 6.5 on the following occasion:

– 10 May 2023 within Bund 8 (6.23).

The pH of the bund water was not recorded as being higher than 8.5 on any occasion during the 2023 reporting period.

Results from 2023 were generally within historical concentrations and are not indicative of any obvious trends.

Total Dissolved Solids (TDS)

TDS levels in bund water during the reporting period ranged from 12.7 to 105.9 ppm, with an average of 41.2 ppm. TDS levels at the site during the reporting period demonstrated greater variation than the previous period, with a higher maximum and average value than the previous reporting period.

During the reporting period, there was one sample tested at a higher level than 100 ppm at Bund 7 on 26 October 2023, with a value of 105.9 ppm.

AECOM 2019 presented a trend analysis of TDS concentrations between 2014 and 2018 indicating that there could be a decreasing trend. Results from 2019, 2020, 2021 and 2022 confirm this observation, however, an increased average value has been observed during 2023 which does not confirm a decreasing trend.

Dissolved Oxygen (DO)

DO Concentrations ranged from 14.4 mg/L to 91.6 mg/L, with an average concentration of 59.3 mg/L. AECOM 2019 presented a DO trend plot of concentrations between 2014 and 2018 which showed an increasing linear trend throughout the 2018 period. DO concentrations during the 2019, 2020, 2021, 2022 and 2023 monitoring periods did not confirm this trend with concentrations observed as variable over the testing period.

Conductivity

Conductivity levels in bund water during the reporting period ranged from 19.8 µS/cm to 736 µS/cm, with an average conductivity of 63.0 µS/cm.

AECOM 2019 presented a conductivity trend plot of concentrations between 2014 and 2018 which indicated a decreasing linear trend. While this trend was supported by data observed in 2022, the 2023 analysis produced contradicting results. While it the maximum value of 736 µS/cm does demonstrate an outlier within the dataset, the next highest conductivity tested across the 2023 period was 163.6 µS/cm, which remains over twice the maximum value observed in the preceding year.

While this increasing trend should be monitored for continued or sustained increase, it is likely to be attributed to long dry periods followed by short periods of heavy rain transporting pollutants through the bund system.

7.4 Summary of stormwater results

Stormwater management and monitoring measures implemented at the site have been successful in preventing environmental damage in this reporting period. Sampling identified one TDS exceedance of the EPL (1 June 2023) however, water was not released and upon resampling as per the site's Stormwater Management Plan, the water tested within the EPL value.

Consistent future monitoring of bund water after rainfall events will improve the site's available baseline data and ability to identify trends and issues as well as to identify necessary environmental management measures to improve the environmental performance of the site.

8. Noise

8.1 Operational noise

Operational noise generation is managed and monitored according to the Site's Noise Management Plan. Up until 2018, ships would dock at M4 and pump fuel into the storage tanks. Mayfield No. 7 Berth was commissioned within the 2018 reporting period and now services the facility for the import and export of petroleum products. Discussions between Stolthaven and NSW EPA (email dated 20 December 2018) confirmed that shipping activities associated with Mayfield No. 7 Berth are not required to be included as part of the facility's operational noise compliance assessments. Further, as per Condition 1.6 of the MCP, noise emissions associated with the berths, berthing or harbour operations (i.e. shipping activities) are excluded from contributing to the overall MCP noise emissions.

The main noise sources from AECOM 2023 at the site are summarised in Table 8.1.

Table 8.1 Noise emitters at the site

Operational Activity	Noise Source
Internal private access roads	Moving trucks, idling trucks
Industrial Noise Sources*	Fuel pumps
	Haulage tanker trucks filling

**Ships in berth and transferring fuel fall under the provisions of DA-293-08-00 as modified.*

AECOM 2020 reported that Stolthaven received correspondence from NSW EPA, PON and DPHI that noise generated from Steelworks Road operational activities (i.e. fuel truck movements) do not form part of the facility's operational activities. Therefore, fuel truck movements are no longer considered as part of the operational noise compliance assessments.

The nearest residential areas to the site are located to the south-west of the facility at Mayfield, with the closest receivers in Crebert Street, approximately 900 m away. To the south east there are residential receivers located in Carrington, approximately 2 km away, and residential receivers located in Stockton, approximately 3 km away.

Operational noise levels at the site are required to be within limits set out in Condition L5.1 of EPL 20193 and Condition 30 of SSD_7065. The operational noise criteria that have to be met as prescribed by the EPL are shown in Table 8.2.

Table 8.2 Operational noise criteria

Receiver	Location	Operational noise limits, db(A)			
		Day	Evening	Night	
		$L_{Aeq,\ 15\ min}$	$L_{Aeq,\ 15\ min}$	$L_{Aeq,\ 15\ min}$	$L_{Aeq,\ 1\ min}$
R1	1 Arthur St, Mayfield	35	35	35	45
R2	52 Arthur St, Mayfield	35	35	35	48
R3	2 Crebert St, Mayfield	41	41	41	49
R4	21 Crebert St, Mayfield	40	40	40	47
R5	24 Crebert St, Mayfield	42	42	42	51
R6	30 Crebert St, Mayfield	41	41	41	50
R7	50 Crebert St, Mayfield	35	35	35	50
R8	2 McNeil Cl, Mayfield	35	35	35	48

The SSD_7065 consent requires operational noise levels at the site to comply with the relevant noise goals contained in the Mayfield Concept Plan MP09_0096, or any noise quota established by the PON for the development. A methodology to deal with cumulative noise from the entire Mayfield Concept Plan (MCP) was developed by PON.

The MCP overall noise goals are presented in Table 8.3.

Table 8.3 MCP overall noise goals

Receiver	MCP Project specific noise goals, $L_{Aeq, period\ dB(A)}$		
	Day (7:00 am to 6:00 pm)	Evening (6:00 pm to 10:00 pm)	Night (10:00 pm to 7:00 am)
A – 1 Arthur St, Mayfield	47	36	30
B – 2 Crebert St, Mayfield	51	40	34
C – 32 Elizabeth St, Carrington	42	30	25
D – 186 Fullerton Rd, Stockton	39	28	22

The SSD_7065 consent requires operational noise levels at the site to comply with the relevant noise goals in Conditions C30 and C31. The noise limits under C30 and C31 are the same as the noise limits in Condition L5 of EPL 20193. Noise quotas have been allocated to the site as part of Stolthaven Stage 3 SSD 7065 Environmental Impact Statement. As part of SSD 7065, two key conditions are relevant to this noise compliance assessment, these include Conditions 32 and C35, which specify:

– Condition 32: The Applicant shall:
  - Ensure noise from the site does not exceed the noise quotas provided by the PON in accordance with the Site Noise Mode.
  - Comply with the directions of the PON in relation to the management of noise from the site.
– Condition 35: The Applicant shall monitor noise from the site. The monitoring shall:
  - Be undertaken annually, or to address genuine noise complaints related to the site as determined by the Secretary, EPA or the PON.
  - Be undertaken in accordance with the NSW Industrial Noise Policy and the Noise Verification Monitoring Plan, October 2015 or its latest version.
  - Demonstrate compliance with the noise limits in this consent and the noise quotas provided by PON in accordance with the Mayfield Concept Plan.
  - Be reported annually to the Secretary, EPA and the PON.

Stolthaven Stage 3 SSD 7065 specific cumulative amenity noise quotas are presented in Table 8.4.

Table 8.4 MCP overall noise goals – SSD 7065

Receiver	MCP Project specific noise goals, $L_{Aeq, period\ dB(A)}$		
	Day (7:00 am to 6:00 pm)	Evening (6:00 pm to 10:00 pm)	Night (10:00 pm to 7:00 am)
A – 1 Arthur St, Mayfield	47	36	30
B – 2 Crebert St, Mayfield	51	40	34
C – 32 Elizabeth St, Carrington	42	30	25
D – 186 Fullerton Rd, Stockton	39	28	22

8.2 Noise monitoring results

Attended noise measurements were undertaken on 2 and 3 November 2023 at the closest nearby residential receiver locations as per the EPL 20193, SSD 7065 and MCP. Attended noise measurements were conducted using Brüel and Kjaer Type 2250 noise monitors.

At all measurement locations, the measured noise levels exceeded the noise limits. However, it was noted by AECOM 2023 that noise from the Stolthaven facility was not clearly distinguishable or quantifiable at any of the attended receiver locations.

During the attended measurements it was not possible to measurably distinguish the noise contribution from the facility from other industrial sources in the surrounding area at all receiver locations. Thus, it was not possible to determine the noise contribution through direct measurement. The results of this assessment are provided in Table 8.5.

Table 8.5 Attended measurements at Assessment Receiver Locations between 2 and 3 November 2023

Location		Time of Measurement	Monitored noise levels		
			L_{A1} dB(A)	L_{Aeq} dB(A)	L_{A90} dB(A)
R1/A	1 Arthur St, Mayfield	2/11/2023 22:58 PM	56	51	49
R2	52 Arthur St, Mayfield	2/11/2023 22:22 PM	55	49	47
R3/B	2 Crebert St, Mayfield	3/11/2023 00:12 AM	68	56	48
R4	21 Crebert St, Mayfield	2/11/2023 23:56 PM	73	67	50
R5	24 Crebert St, Mayfield	3/11/2023 00:30 AM	79	68	48
R6	30 Crebert St, Mayfield	3/11/2023 00:48 PM	77	64	46
R7	50 Crebert St, Mayfield	3/11/2023 01:09 AM	79	67	48
R8	2 McNeil Cl, Mayfield	2/11/2023 22:41 PM	52	47	48
C	32 Elizabeth St, Carrington	2/11/2023 22:00 PM	47	44	43
D	186 Fullerton Rd, Stockton	2/11/2023 23:27 PM	62	52	46

Due to the existing noise level at the site, on-site measurements of individual plant items and typical operations were undertaken on 2 and 3 November 2023 at the facility and during previous compliance inspections. It was noted during all measurements that the specific noise source being measured was the dominant noise source throughout the measurement period.

Observations were made of the onsite operations, which have then been reviewed in conjunction with the facility operational data to model ‘reasonable’ worst case operational scenarios over the assessment periods. Key on-site attended measurement results are summarised in Table 8.6.

Table 8.6 On-site attended measurements at the facility on 2 and 3 November 2023

Operation	Time of measurement	Monitored noise levels			
		$L_{A1(t)}$, dB(A)	$L_{A10(t)}$, dB(A)	$L_{Aeq(t)}$, dB(A)	$L_{A90(t)}$, dB(A)
Front gate buzzer	13:48 PM	79	77	75	70
Operating pump	13:21 PM	83	82	80	79
Exit gate buzzer	13:42 PM	84	83	80	75
Truck leaving site	14:27 PM	75	73	70	67
Truck leaving, ignition, idle, drive out, gate alarm	14:14 PM	71.64	70.22	66.24	58.78
2 compressors operating	13:51 PM	67.85	67.5	66.89	66.32
Air release valve	13:35 PM	70	69	69	68

Table 8.7 presents predicted noise level results for the reasonable worst case intrusiveness scenario (15 minute period) for neutral and adverse weather conditions.

Table 8.7 Predicted intrusive noise levels

Receiver	EPL 20193 and SSD 7065 Noise Limits, $L_{Aeq, 15\ min}$, dB(A) [1]	Predicted noise level, $L_{Aeq, 15\ min}$, dB(A)	
		Neutral weather	Adverse weather[2]
R1	35	14	20
R2	35	15	20
R3	41	23	28
R4	40	23	28
R5	42	22	27
R6	41	21	26
R7	35	16	21
R8	35	15	20

1. Operational noise limits are based on the most stringent operational noise limits (i.e. night-time period).

2. Adverse weather considers the worst case of 3 m/s source to receiver wind and temperature inversions.

The facility's predicted noise levels in Table 8.7 indicate that under neutral and adverse weather conditions, the facility complies with EPL 20193 and SSD_7065 noise limits at all locations.

AECOM 2023 also prepared predicted modelled results to determine noise compliance against the EPL 20193 and SSD_7065 sleep disturbance noise limits. The sound power levels for the maximum noise events at the facility are included in Table 8.8.

Table 8.8 Predicted Noise Levels – Sleep Disturbance Assessment, Night-time Period

Receiver	EPL 20193 and SSD 7065 Noise Limits, $L_{Aeq, 15\ min}$, dB(A)	Predicted noise level, $L_{A1, 1\ min}$, dB(A)		Compliance
		Neutral weather	Adverse weather[1]	
R1	45	26	31	Yes
R2	48	25	30	Yes
R3	49	33	36	Yes
R4	47	37	42	Yes
R5	51	34	37	Yes
R6	50	33	36	Yes
R7	50	27	31	Yes
R8	48	26	31	Yes

[1] Adverse weather considers the worst case of 3 m/s source to receiver wind and temperature inversions.

The $L_{A1, 1min}$ night-time site operation assessment indicates that the predicted noise levels at all receiver locations comply with the EPL 20193 and SSD 7065 sleep disturbance noise limits during both neutral and adverse weather conditions.

AECOM 2023 also prepared predicted modelled results to determine noise compliance pertaining to fire pump testing. Condition L5.2 of EPL 20193 requires:

> *Fire pumps at the premises must be designed and operated so that noise from routine testing or maintenance is not more than LAeq (15min) 53 dB(A) at the most affected residential or sensitive receiver. Routine testing or maintenance must only occur during the daytime.*

Fire pump testing results are outlined in Table 8.9.

Table 8.9 Predicted Noise Levels – Fire pumps

Receiver	EPL 20193 and SSD 7065 Noise Limits, $L_{Aeq, 15\ min}$, dB(A)	Predicted noise level, $L_{A1, 1\ min}$, dB(A)		Compliance
		Neutral weather	Adverse weather[1]	
R1	53	18	23	Yes
R2	53	18	24	Yes
R3	53	33	38	Yes
R4	53	40	45	Yes
R5	53	28	33	Yes
R6	53	24	29	Yes
R7	53	19	25	Yes
R8	53	19	24	Yes

The fire pump testing operational noise assessment indicates that the predicted noise levels at all receiver locations comply with the EPL 20193 and SSD 7065 noise limits during both neutral and adverse weather conditions.

8.3 Analysis of results

The AECOM (2023) noise assessment reported that during the attended measurements, it was not possible to directly quantify the impacts of noise arising from operations at the facility due to the influence from extraneous noise sources. As such, an alternative method was required in order to demonstrate compliance with the project approval requirements. Compliance was found against the requirements of all site approval documents, at all receiver locations, during all assessment periods under all prevailing meteorological conditions.

A Noise and Vibration Impacts Assessment was prepared as part of the Environmental Impact Statement (EIS) for the SSD_7065 development consent application to increase throughput to 3,500 ML per year. Noise modelling was undertaken to examine the noise and vibration impacts of the construction and operational phases of the project, as well as the cumulative impacts which may result from each phase of the proposed facility. The assessment concluded that there would be no exceedance of the noise criteria under all operational scenarios, for day and night activities. The results of noise modelling undertaken during this reporting period indicate that the site is operating in accordance with the predictions made in the EIS.

Results of the noise compliance modelling showed that the operation of the facility complies with the noise limits stated in EPL 20193 and SSD_7065, in addition to the project specific noise goals in the MCP for all outlined receivers.

9. Fuel storage and transport

9.1 Fuel storage

Approximately 1,394 ML of fuel (including additive) was received on site and 1,385 ML of fuel (including additive) was transported off site during the reporting period. A breakdown of fuel stored, received, and dispatched is provided in Table 9.1. The combined volume of fuel initially stored at the start of the reporting period plus the volume of fuel received during the reporting period should approximately equal the combined volume of fuel dispatched throughout the reporting period plus the volume of fuel stored at the end of the reporting period. It should be noted however that site measurement equipment has a tolerance of 0.2% which over the course of a year can lead to these amounts not matching.

Other factors that contribute to the discrepancy include:

– Product volume onsite is accounted for by a daily and monthly reconciliation process.
– Some variation is caused by the heating and cooling of products being received and the temperature and therefore density at the different times of measurement/pumping.
– Bulk tanks are manually dipped by a third party surveyor before and after every shipping receipt.
– Gantry meters are calibrated on a 6 monthly schedule to minimise potential for measurement errors.

Table 9.1 Volume of fuel stored, received and dispatched

Fuel type	Volume stored (at start of reporting period)	Volume received (during reporting period)	Volume dispatched (during reporting period)	Volume stored (at end of reporting period)
Diesel (L)	55,962,497	1,393,556,834	1,384,500,692	65,809,537
Biodiesel (L)	0	0	0	0
Additive (L)	5,758	0	Note 2	2,642
Slops (L)	7,247	Note 1	462,525	9,014
TOTAL (L)	55,975,502	1,393,556,834	1,384,500,692	65,821,193

Note 1 – Slops are generated onsite and not imported

Note 2 – Additives are mixed with dieses for export and note exported separately

*Includes additives

Annual throughput was previously approved under SSD_6664 and was increased via modification from 1,010 ML to 1,300 ML on 28 September 2015. The annual throughput approved under the EPL was amended on 2 October 2015 with the same annual throughput limit approved under Condition A1.4 of the EPL being 1,300 ML.

The EPL was further amended on 27 August 2021 (Variation notice number 1611736), which removed the site's throughput limits as the Premises adheres to load limits set in the licence.

Most recently, the sites load limits were increased marginally to align with the site's absolute maximum throughput expectation of 1,800 ML via a variation to EPL 20193. The variation (Variation notice number 1635217) was approved on 9 January 2024, which is outside of the reporting period. The variation is attached in Appendix B along with other DPHI correspondence. More detail about the EPL is provided in Section 2.6.4.

No exceedances of throughput limits have occurred during the reporting period.

9.2 Truck movements

Over the reporting period there were a total of 55,726 truck movements at an average of approximately 4,644 each month. This equates to approximately 153 truck movements per day on average over the whole reporting period. A breakdown of hourly truck movements is provided at Appendix D. Note these are recorded as one truck only, so figures need to be doubled for total number of truck movements as one truck entering the site equals one movement and the same truck leaving the site is counted as one movement.

A Traffic Impact Assessment (TIA) was conducted in the previous reporting period (2022) as part of the EIS for the SSD_7065 application to increase throughput to 3,500 ML per year. The TIA assessed a worst case potential operational traffic scenario of 200 truck movements per day. Although there are no specific traffic movement requirements in either the Project approval or EPL, assessment of average daily truck movements at the site for this reporting period indicates compliance with this predicted traffic volume for all months.

9.2.1 Mayfield concept plan traffic movements

Condition 2.3 of the Mayfield Concept Plan Approval provides that the following truck numbers should not be exceeded prior to additional traffic monitoring being undertaken and any potential impacts to the road networks operation of infrastructure requirements identified:

– Total Mayfield Concept Plan Truck Movements per day – 1,268
– Total Mayfield Concept Plan Truck Movements per hour – 95.

The busiest months of operations throughout the review period were October with 5,594 movements and August with 5,076 movements. All other months had less than 5,000 movements. Stolthaven averaged approximately 153 movements per day during the reporting period which is within the Concept Plan's limits listed above. Stolthaven truck movements have shown a general decline since 2015 which recorded the highest number of truck movements to date. Activities which have the potential to generate additional heavy vehicle movement from the wider Mayfield Concept Plan site include Mayfield Berth 4 operations. These have remained at similar levels of operation since the facility began operation and there has been no other new additional land uses in the Concept Plan area which have the potential to generate cumulative heavy vehicle movements above the daily or hourly thresholds in the Concept Plan approval.

In comparing 2023 truck movements to 2022 truck movements, an increase is noted. This is attributed to increased operations and throughput at the site in the 2023 reporting period.

10. Waste

Waste is managed according to the Site's Waste Management Plan (WMP) and is minimised or recycled where possible. Solid waste is disposed of in appropriate receptacles and removed by local waste contractors.

Liquid waste generated on site is stored in the tanks listed in Table 2.3. Waste is discharged from the site once it has been treated to an acceptable quality or is disposed of by an appropriately licenced waste collector.

Waste levels in 2023 have shown an increase when compared to the 2022 reporting period. General waste bin pickups increased in 2023, with more waste generated as a result of higher terminal throughputs. Garnet waste from tank cleaning recorded in 2021 and 2022 was recorded again in 2023 due to the cleaning of the NN3 tank. Hazardous waste (liquid) production increased substantially in 2023, attributed to both higher transfers and the 19.04 ton of waste produced in November from the remote inbound basin pump out required for remediation of the BGL foam incident.

No further recycling opportunities were identified in 2023.

Waste removed from the site in the current reporting period is presented in Appendix H with the following amounts disposed:

Effluent Waste

– Terminal Effluent: 162,000 L (disposed at Veolia)
– Mayfield 7 Quantity: 55,050 L (disposed at Veolia)

Hazardous Waste (Liquid)

– Quantity (Veolia): 19,040 L
– Quantity (Cleanaway): 20,000 L
– Transfers (JLP Transfer): 462,525 L

Solid Waste

– 660 L Bins: 14
– 20 L Drums: 0
– 200 L Drums: 11
– 1,100 L Drums: 8

General – Recycled and Green Waste

– General Waste (Cleanaway): 76.5 m^3
– Recycling (Cleanaway): 25.3 m^3
– Printer Cartridge Recycling (Planet Ark): 1 x 16 kg cartridge
– Other (Veolia): 26.66 ton (as a result of the NN3 floor blast, disposed of by Veolia, no lead).

10.1 Spills and site contamination

Records of reportable spills and site contamination are described in the incident register provided in Appendix E. Following incidents, Stolthaven prepares an Incident Report in accordance with their internal Incident Investigation procedure. These reports are saved against the incident in the Incident Register (EcoPortal).

All but four incidents recorded during the reporting period were considered minor in severity ranking and were effectively managed on the site. Details of minor incidents are provided in Appendix E.

Four incidents were ranked as moderately serious. All incidents were effectively managed onsite with one incident requiring notice to the EPA. Further details of moderately serious incidents are provided in Appendix E. These incidents are discussed in Table 10.1 below along with the corrective actions taken for each incident.

Table 10.1 Incidents and corrective actions taken

Incident	Investigation and corrective action
On 21 February 2023, during the loading of diesel on A-trailer, a driver noticed diesel leaking from beneath compartment. Approximately 400 litres were captured in the terminal's secondary spill containment, which resulted in diesel covering the base of the remote inbound basin (RIB) pit.	Investigation found that a bracket that holds the truck's No.3 compartment run-down had broken. The breakage allowed for the run-down pipe to flex with the vehicle's movement and stress the No.3 compartment/pipework flange. Regular tanker maintenance service inspection had been completed approximately one month prior to the incident. The carrier inspection on the U-bolt clamps and brackets had been checked & cleared by the inspector. It is possible the bracket defect had been missed or bracket was not broken/fatigued enough to identify an issue at this time. It was also noted that flood impacts in the region have had detrimental impacts on the roads. Potholes and roadway defects are increasing the wear and tear (vibration) on vehicles and trailers. Stolthaven created a Lessons Learned document which was shared with Safe Load Pass (Australia wide) and Stolthaven globally to raise awareness around this issue.
On 21 August 2023, during truck loading diesel in Bay 1, an overfill of over 150 litres occurred. The overfill protection safeguards did not stop loading and resulted in loss of primary containment.	Review found the driver had failed to follow his load plan which resulted in an overloading on the truck's compartment. The truck probe failed to activate which allowed the overflow. The loading was stopped manually by the loading driver. Actions completed following investigation: 1. Driver buddy training and re-assessment/sign off required before solo loading can recommence (driver locked out) 2. Truck/Trailer Return to Service and probe replacement required before truck can load onsite again (truck locked out). 3. Requested carrier to highlight the requirement for drivers to remain attentive to the loading process and raise this incident with all drivers.
On 28 September 2023, during routine fire system testing, the gantry foam deluge system was inadvertently activated resulting in foam deployment. Approximately 3,325 litres of foam mixture (100 litres neat foam - 3%) was distributed before the system was shut down. No personal was in the gantry during the incident. Foam deployment was contained in the site's retention pit and disposed of using an accredited waste removalist as foam does contain PFAS. NSW EPA advised (reference REF-NO-24407).	Investigation (in brief summary) found the foam deluge system was activated due to the activation of two MCPs in the gantry area during testing & there was no awareness that two MCPs would activate the foam system. Incident actions completed: Re-program fire panel logic and remove MCP foam control. Foam should only be activated by the site's blue foam Call Points and/or the gantry Flame Detectors. Work with FORM1 to update procedures to ensure foam system is always isolated before any fire system testing is undertaken. Install signage at foam tank advising, the above requirement to isolate before testing.
On 18 December 2023, during work to install a new shelter over the Pig Receiver, a contractor was drilling a hole into 3 mm thin gauge steel roof purling when the drill bit grabbed and spun the drill striking the contractor in the mouth (lip). It appears the location and body positioning allowed for a 'line of fire' injury.	Contractor taken for medical attention, requiring 2 stiches. Investigation found the location and body positioning have allowed for a line of fire injury. Contractor returned to work the following day. Team safety discussion held, raising awareness around line of fire, body positioning, importance of new drill bits and pilot holes/progressive drill bits.

Other minor spills and leaks occurred during the reporting period and are provided in Appendix E.

11. Aesthetic

Weed control and vegetation management activities are conducted monthly according to the site's maintenance checklist and in accordance with the Site's Landscape Management Plan. These controls ensure fire and safety risks are managed effectively at the site through the prevention of any vegetation build-up.

No complaints were received by Stolthaven regarding aesthetic issues at the site during the 2023 monitoring period.

12. Community engagement and complaints

12.1 Community engagement

Stolthaven undertook ongoing community engagement through attendance and active engagement in the Port of Newcastle Community Liaison group meetings on the following dates during the reporting period:

– 14th June 2023
– 16 August 2023
– 17 October 2023.

Stolthaven also has a Stolthaven Community Group, which met on the following dates:

– 9 May 2023
– 11 December 2023.

Stolthaven was not the subject of any concerns raised by community members during engagement activities in 2023.

Other community engagement undertaken during the 2023 reporting period includes charitable donations made by Stolthaven to the Newcastle Toy Run and the Newcastle Mission to Seafarers in 2023.

12.2 Complaints

No complaints were received by Stolthaven during the 2023 reporting period.

13. Compliance

One non-compliance was identified during the reporting period.

The onsite weather station sensor failed which impacted wind speed and direction readings from 31 August 2022 onwards. The site had access to the neighbouring Mayfield 4 weather station and reports during this period. The replacement held significant lead time and full replacement occurred on 6 February 2023.

The weather station was fully replaced with another brand/provider and critical spares are now held onsite. This issue was reported in the 2022 Site Environmental Annual Review and recorded as a non-compliance in the Site's 2023 EPL Annual Return.

13.1 Statement of compliance

One non-compliance was reported for the reporting period. This non-compliance is detailed above in Section 13. Other conditions specified in SSD_7065 have been met during the reporting period.

13.2 Complaint trending

The historical complaints received by Stolthaven due to their operations are presented in Table 13.1. Since site operations began in November 2013, Stolthaven have not received any complaints.

Table 13.1 Complaints received

Reporting period	Number of complaints
2014	0
2015	0
2016	0
2017	0
2018	0
2019	0
2020	0
2021	0
2022	0
2023	0

13.3 Pipeline integrity

An Annual Pipeline Pressure Test was conducted at the Stolthaven Terminal on the wharf pipeline on 20 October 2023 by Hancock & Owen Services Pty Ltd. The test confirmed the integrity of the pipeline. A copy of the test report is included in Appendix G.

In addition, leak testing is performed prior to each ship discharge operation in accordance with EPL condition O7.2.

During the report period, no pipeline leaks were reported in the incident register, see Appendix E:

13.4 Independent environmental audit

In accordance with the facilities auditing schedule under the development consent, an IEA was undertaken for the facility during the previous reporting period. The IEA was completed and issued on 28 April 2022. A summary of the outcomes and recommendation from the IEA are provided in Table 13.2.

Only actions that remained open at the end of the 2022 reporting period are presented below with status updates provided.

Table 13.2 IEA Recommendations

Condition	Recommendation	Response	2023 update
SSD 7065 – C44	Undertake a review of the SWMP prior to commencement of further works under SSD 7065 to ensure it is consistent with the Managing Urban Stormwater Guidelines, including the addition of figures where relevant.	Noted, plan to be reviewed prior to commencement of further works under SSD 7065.	Action remains open, no further action until commencement of further works.
SSD 7065 – C45	Given the results of the groundwater monitoring as described in Section 3.6.1, it is recommended that the WMP is updated in consultation with the Site Auditor and the PON to include specific triggers for pH (time and/or value based) that clearly define when further investigations or actions are required.	Stolthaven has reviewed the recommendation in consultation with AECOM, the Site Auditor and Port of Newcastle. The site's operation has no material impact on pH levels in ground water. The site will seek an EPL variation/approval to remove pH testing from Groundwater testing criteria, planned in Q2 2022.	Stolthaven discussed this with the EPA during a site visit (23 February 2023), to review if the EPL condition to monitor pH Groundwater could be relaxed from EPL 20193. It was discussed that whilst the Stolthaven operation may not have an impact of groundwater pH, the EPA would want pH levels monitoring to continue to provide a wider picture of results across the Mayfield Concept Area and previous ground contamination movements. As a result, the recommendation to create specific pH trigger limits specifically for the Stolthaven operation is without value. Stolthaven will continue to sample, monitor and record pH in accordance with EPL 20193. – Item closed 1 March 2023.

13.5 Actions required from previous annual review

Under the provisions of Schedule B condition B4 of the consent, actions from the previous Annual Review are presented below:

– No outstanding actions from the 2022 Annual Review have been identified.

During the previous reporting period (2022), a DPHI letter from 5 April 2022 identified actions required to be completed for the 2022 Annual Review. Actions identified in this letter were completed in the 2022 reporting period as reported in the 2022 Annual Review.

13.6 Actions planned for 2024 reporting period

Works planned for 2024 are as follows:

– Three bulk tanks coming out of service for 10 yearly inspections
– Corrosion prevention works planned for Mayfield 7 berth
– Fire Fighting Foam replacement (PFAS to fluorine free foam.)
– Site Server replacement
– Operational access and safety improvements.

13.7 Cautions, warning letters, penalty notices or prosecution proceedings

No cautions, warning letters, penalty notices or prosecution proceedings occurred during the reporting period.

14. Conclusion and recommendations

The Annual Review has shown that the data collected and reviewed for the 2023 monitoring period is acceptable and in accordance with the SSD_7065 consent and the site Operational Environmental Management Plan. This level of environmental performance can be attributed to the design and operation of the facility as well as to the environmental management plans and measures undertaken at the site.

Monitoring data collected and analysed during this reporting period has been analysed against baseline monitoring data for the site. The dataset for groundwater wells in the initial area (MW01 to MW04) have a dataset from ten years of quarterly monitoring, however the dataset for the wells in the expansion area is still relatively smaller (6 full years of quarterly monitoring). In future reporting periods as the amount of monitoring data available for analysis increases, trends in monitoring data will be able to be identified with greater confidence. Trends identified in the expansion area will need to be further reviewed in future in order to confirm the trends and determine the potential environmental management actions from Stolthaven for the site.

pH concentrations had no discernible trends during the reporting period at all of the monitoring sites. Generally pH was within background levels previously observed at each monitoring site.

The groundwater monitoring network was expanded in the fourth quarter of 2017 to provide monitoring of the Approved Expansion Area as described in SSD_7065. At present the additional wells (MW05-MW09) have been assessed against background concentrations for the site, however background concentrations for the Expansion Area will be generated for future comparison. Elevated concentrations of TRH and BTEX above GAC (i.e. exceedances of the assessment criteria or background concentrations) were reported at MW08 and at MW07. For MW08, this is consistent with previous monitoring rounds.

Concentrations at MW08, and to a lesser extent MW07, will be closely monitored by future GME's, particularly given the continued significantly increasing trend of xylene concentrations. CoPC detected at MW08 are inferred to be residual contamination impacts believed to be associated with the former BHP Steelworks site and unrelated to Stolthaven operations. Notwithstanding, the elevated CoPC concentrations reported at MW08 appear localised to this monitoring location.

Additional investigations undertaken during the 2018 monitoring period in the areas upgradient and downgradient of MW08 (MW08A and MW08B) indicated that the hydrocarbon impacts at MW08 are localised within fill deposits immediately surrounding MW08 and have been effectively delineated to the north-east and south. These additional wells were not monitored during the 2023 monitoring period and are expected to be decommissioned during development of the Approved Expansion Area which is currently vacant land. If increasing trends continue to be reported at MW08 in future rounds, further investigations may be required.

Stormwater management and monitoring measures implemented at the site have been successful in preventing environmental damage in this reporting period. All stormwater discharged from the site was compliant with the requirements of EPL 20193. Consistent future monitoring of bund water after rainfall events will improve the site's available baseline data and ability to identify trends and issues as well as to identify necessary environmental management measures to improve the environmental performance of the site.

Noise monitoring identified compliance with all site approval documents at all receiver locations.

Truck movements during the reporting period remain well below the MCP limits and have shown a decrease since 2015, however, it is noted that truck movements have increased since the previous reporting period (2022) due to increased throughput.

15. References

AECOM (2019), Annual Review – 2018, Stolthaven Bulk Fuel Storage Facility, Mayfield, Rev 1, dated 26 February 2019.

AECOM (2023a), Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q1 February 2023, dated 6 March 2023.

AECOM (2023b), Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q2 May 2023, dated 2 June 2023.

AECOM (2023c), Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q3 August 2023, dated 25 August 2023.

AECOM (2023d), Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q4 November 2023, dated 12 December 2023.

AECOM (2023), Stolthaven Bulk Liquids Fuel Storage Facility, Mayfield, Operational Noise Compliance Assessment (2023), doc no. 60326869-RPNV-11_0, dated 12 December 2023.

ANZG 2018, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia.

Australian and New Zealand Environmental Conservation Council (ANZECC & ARMCANZ 2000) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.*

GHD (2022), Stolthaven Bulk Fuel Storage Facility, Mayfield, Annual Review 2022, dated June 2023.

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Amended Measure (NEPM) No. 1 – Schedule B1, Guideline on Investigation Levels for Soil and Groundwater.

Appendices

Appendix A

Figures

Paper Size ISO A4

0 2 4 6 8 10

Kilometers

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

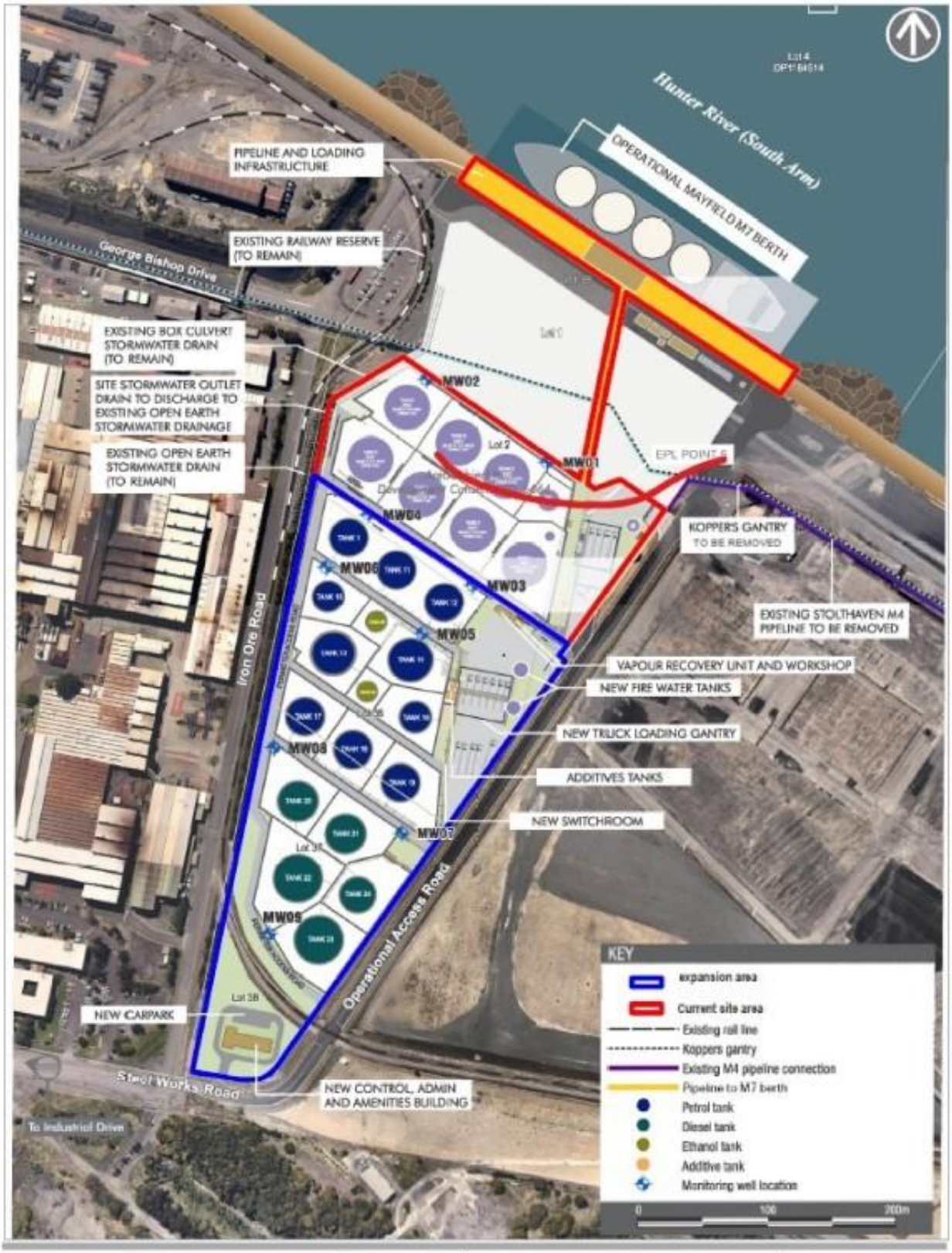
GHD

Stolthaven Australia Pty Ltd
Stolthaven Bulk Fuel Storage Facility
Annual Report 2022

Project No. 12545253
Revision No. 0
Date 02/02/2023

Site location

FIGURE 1


Hunter River (South Arm)
OPERATIONAL MAYFIELD M7 BERTH
PIPELINE AND LOADING INFRASTRUCTURE
EXISTING RAILWAY RESERVE (TO REMAIN)
George Bishop Drive
EXISTING BOX CULVERT STORMWATER DRAIN (TO REMAIN)
SITE STORMWATER OUTLET DRAIN TO DISCHARGE TO EXISTING OPEN EARTH STORMWATER DRAINAGE
EXISTING OPEN EARTH STORMWATER DRAIN (TO REMAIN)
MW01
MW02
MW03
MW04
MW05
MW06
MW07
MW08
MW09
EPL POINT 6
KOPPERS GANTRY TO BE REMOVED
EXISTING STOLTHAVEN M4 PIPELINE TO BE REMOVED
VAPOUR RECOVERY UNIT AND WORKSHOP
NEW FIRE WATER TANKS
NEW TRUCK LOADING GANTRY
ADDITIVES TANKS
NEW SWITCHROOM
Iron Ore Road
Operational Access Road
NEW CARPARK
Steel Works Road
To Industrial Drive
NEW CONTROL, ADMIN AND AMENITIES BUILDING
KEY
expansion area
Current site area
Existing rail line
Koppers gantry
Existing M4 pipeline connection
Pipeline to M7 berth
Petrol tank
Diesel tank
Ethanol tank
Additive tank
Monitoring well location
0
100
200m
Kilometers
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56
N
GHD
Stolthaven Australia Pty Ltd
Stolthaven Bulk Fuel Storage Facility
Annual Report 2022
Project No. 12545253
Revision No. 0
Date 02/02/2023
FIGURE 2

Appendix B

DPHI correspondence letters

Planning, Industry & Environment

Mr Gaetan Amodeo
Compliance & Risk Manager
Stolthaven Australia Pty Ltd
Level 6, 60 Albert Road
South Melbourne, Victoria 3205

Dear Mr Amodeo

Stolthaven Fuel Terminal – Stage 3 (SSD 7065)
Surrender of Development Consent

I refer to your letter dated 23 April 2020 providing formal notice of Stolthaven Australia Pty Ltd's surrender of State significant development (SSD) consent 6664 (as modified), as required by Condition B11 of Schedule B of SSD 7065.

The Department has reviewed the notice of surrender of development consent and is satisfied the information provided addresses the relevant requirements pursuant to clause 97(1) of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation).

Pursuant to clause 97(2) of the EP&A Regulation, the notice of surrender of development consent takes effect on the date it is received by the consent authority, as such, development consent SSD 6664 is surrendered effective 23 April 2020.

The requirement of Condition B11 of Schedule B of SSD 7065 has now been satisfied.

Should you have any queries, please do not hesitate to contact Olivia Hirst, Environmental Assessment Officer, on (02) 9274 6583 or via Olivia.hirst@planning.nsw.gov.au.

Yours sincerely

8 May 2020

Chris Ritchie
Director
Industry Assessments
as delegate of the Planning Secretary

Section 58(5) Protection of the Environment Operations Act 1997

Licence Variation

Licence - 20193

STOLTHAVEN AUSTRALIA PTY LTD
ABN 26 075 030 992 ACN 075 030 992
By email to: r.duckmanton@stolt.com

Attention: Mr Ryan Duckmanton

Notice Number	1635217
File Number	EF13/8175; DOC24/9283
Date	09-Jan-2024

NOTICE OF VARIATION OF LICENCE NO. 20193

BACKGROUND

A. STOLTHAVEN AUSTRALIA PTY LTD ("the licensee") is the holder of Environment Protection Licence No. 20193 ("the licence") issued under the *Protection of the Environment Operations Act 1997* ("the Act"). The licence authorises the carrying out of activities at 103 SELWYN STREET, MAYFIELD NORTH, NSW, 2304 ("the premises").

B. On 5 April 2023, the EPA issued a notice of the 5-year licence review, inviting the licensee to comment or request changes to the conditions of the licence. On 16 May and 27 July 2023, the EPA received correspondence and supporting documents regarding the 5-year licence review requesting the following variations to the licence as summarised below:

- Variation of Condition L2.2 Load Limits to increase the Load Base Limit (LBL) for Benzene from 423 kilograms (kg) to 443 kg and an increase to the LBL for Volatile Organic Compounds (VOC) from 21,469 kg to 21,894 kg. This variation to the LBLs is in response to increasing the diesel throughput from 1,300ML to 1,800ML per annum at the premises.
- Variation of Condition E1.5 to implement a maximum throughput limit of 1,800ML per annum.
- Variation of Condition O6.4 to remove "at least weekly" relating to sewage pumpouts, as the site has installed additional controls. In the licensee's letter dated 27 July 2023, a fortnightly pump out frequency was proposed.

C. The licensee also provided advice from the Department of Planning that under the existing consent the site can operate to a throughput of 1,800ML per annum of combustibles without the need for consent modification.

D. In regard to the proposed increase in LBLs, the EPA assessed the Protection of the Environment Operations (Clean Air) Regulation 2022 (Clean Air Regulation) to determine if the premises requires a Vapour Recovery System (VRS). The Clean Air Regulation requires a VRS to be fitted to large storage tanks where there is "volatile organic liquid" (Part 6 Division 2) or where volatile organic liquid is loaded into tanker trucks (Part 6 Division 4). The only fuel currently stored and handled on-site is diesel. As

diesel does not meet the Clean Air Regulation definition of a volatile organic liquid, the licensee does not meet the legislative requirements to install a VRS.

E. The EPA also reviewed the Air Quality Impact Assessment which assessed the potential air quality impacts associated with increasing throughput to 1,800ML/a and notes that the increase of diesel throughput from 1,300ML to 1,800ML is not predicted to have any significant air quality impacts.

F. The EPA has therefore increased the LBLs for Benzene and VOCs by the small margins requested.

G. The EPA has assessed the licensees request to vary Condition O6.4 and considers a minimum of fortnightly sewage pumpouts is reasonable based on the additional controls installed.

H. An review of the licence was also undertaken as part of the 5-year licence review. The licence review indicated that various other administrative issues with the licence required updating.

I. Variation of this licence does not authorise a significant increase in environmental impacts of the activity authorised or controlled by the licensee.

VARIATION OF LICENCE NO. 20193

1. By this notice the EPA varies licence No. 20193. The attached licence document contains all variations that are made to the licence by this notice.
2. The following variations have been made to the licence:
   - Condition L2.2 - Varied - Updated Benzene limits presented in the table from 423 to 443 kg and the Volatile Organic Compounds limit from 21,469 to 21,894 kg.
   - Condition O6.4 - Varied - "At lease weekly" has been changed to "at least fortnightly".
   - Note presented in Condition M3.1 - Varied - "Protection of the Environment Operations (Clean Air) Regulation 2010" Changed to "Protection of the Environment Operations (Clean Air) Regulation 2022".
   - Note presented in Condition M4 - Varied - "Division 3 of the Protection of the Environment Operations (General) Regulation 2009" Changed to Division 4 "Protection of the Environment Operations (General) Regulation 2022".
   - Condition E1.3, E1.4 and E.15 - Varied - updated email address presented to read "info@epa.nsw.gov.au".
   - Condition E1.5 - Varied - changed "1,300ML" to "1,800ML". A Note has also been added to make clear the reasoning behind this limit.

.....

Peter Jamieson

Head Regional Operations Unit

Environment Protection Authority

(by Delegation)

INFORMATION ABOUT THIS NOTICE

- This notice is issued under section 58(5) of the Act.
- Details provided in this notice, along with an updated version of the licence, will be available on the EPA's Public Register (http://www.epa.nsw.gov.au/prpoeo/index.htm) in accordance with section 308 of the Act.

Appeals against this decision

- You can appeal to the Land and Environment Court against this decision. The deadline for lodging the appeal is 21 days after you were given notice of this decision.

When this notice begins to operate

- The variations to the licence specified in this notice begin to operate immediately from the date of this notice, unless another date is specified in this notice.
- If an appeal is made against this decision to vary the licence and the Land and Environment Court directs that the decision is stayed the decision does not operate until the stay ceases to have effect or the Land and Environment Court confirms the decision or the appeal is withdrawn (whichever occurs first).

Environment Protection Licence

Licence - 20193

Licence Details	
Number:	20193
Anniversary Date:	11-October

Licensee
STOLTHAVEN AUSTRALIA PTY LTD
PO BOX 304
WICKHAM NSW 2293

Premises
MAYFIELD FUEL TERMINAL
103 SELWYN STREET
MAYFIELD NORTH NSW 2304

Scheduled Activity
Chemical storage
Shipping in bulk

Fee Based Activity	Scale
Petroleum products storage	> 100000 kL storage capacity
Shipping in bulk	> 500000 T of annual capacity to load and unload

Contact Us
NSW EPA
6 Parramatta Square
10 Darcy Street
PARRAMATTA NSW 2150
Phone: 131 555
Email: info@epa.nsw.gov.au
Locked Bag 5022
PARRAMATTA NSW 2124

Environment Protection Licence

Licence - 20193

Environment Protection Licence

Licence - 20193

Environment Protection Licence

Licence - 20193

Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

Environment Protection Licence

The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

STOLTHAVEN AUSTRALIA PTY LTD
PO BOX 304
WICKHAM NSW 2293

subject to the conditions which follow.

Environment Protection Licence

Licence - 20193

1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled development work listed below at the premises listed in A2:
Expansion of the facility in accordance with Development Consent SSD_7065 granted on 15 December 2016 under the Environmental Planning and Assessment Act 1979 (Stage 3).

A1.2 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Chemical storage	Petroleum products storage	> 100000 kL storage capacity
Shipping in bulk	Shipping in bulk	> 500000 T of annual capacity to load and unload

A1.3 The available storage capacity of tank farm must not exceed 131 ML.

A1.4 With the exception of the following tanks, the licensee must not store flammable liquids, as classified under the *Australian Code for the Transport of Dangerous Goods by Road and Rail*, in bulk at the premises.
(i) The 30,000 litre Slops Tank (UN 1268) identified on site as "SL1"; and
(ii) The 50,000 litre Additive Tank (UN 3082) identified on site as "AT1".

Note: It is the EPA's intention to amend conditions A1.3 and A1.4 once the Stage 3 construction works are completed.

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
MAYFIELD FUEL TERMINAL
103 SELWYN STREET
MAYFIELD NORTH
NSW 2304

Environment Protection Licence

LOT 36 DP1191723, LOT 37 DP1191723, LOT 38 DP1191723 AND LOT 39 DP1191723 (GENERALLY SHADED IN BLUE), LOT 2 DP1177466 (GENERALLY SHADED IN GREEN), AND THE AREA MARKED AS "PROPOSED LEASE AREA" (WITHIN THE RECTANGULAR RED LINED AREA WITH CORNER POINTS 80, 81, 113 AND 83 AND GENERALLY REFERRED TO AS THE MAYFIELD NO. 7 WHARF) ON THE PLAN TITLED "GENERAL LAYOUT STAGES 1, 2 AND 3", PREPARED BY AURECON, REVISION J, DATED 29/01/2020 (EPA REFERENCE DOC20/74895) HEREAFTER IN THE LICENCE REFERRED TO AS "THE PLAN".

A2.2 The premises, to which the licence applies, also includes the following:
a) The flexible pipeline whenever connecting the fixed pipeline at the Mayfield No. 7 Wharf (marked and shown as Points "96" and "97" on the Plan) and any vessel berthed at the Mayfield No. 7 Berth for the purpose of the import/export of petroleum products.
b) The pipe rack and associated infrastructure under the care and control of the Licensee within the area marked as "Koppers Pipeline Corridor" (shown in pink hatching) on The Plan.
c) The licence excludes the Koppers Carbon Materials & Chemicals Pty Ltd (Koppers) tar & pitch pipelines and associated infrastructure that Koppers have management and control of within the area marked as "Koppers Pipeline Corridor" (shown in pink hatching) on The Plan.

A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:
a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
15	Discharge to air Air emissions monitoring	Discharge to air Air emissions monitoring	Vapour recovery unit - location to be advised with an updated plan of the premises prior to commissioning.

P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring

and/or the setting of limits for discharges of pollutants to water from the point.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Groundwater monitoring		Groundwater Monitoring Well No. 1 shown as Point "49" marked on the Plan.
2	Groundwater monitoring		Groundwater Monitoring Well No. 2 shown as Point "50" marked on the Plan.
3	Groundwater monitoring		Groundwater Monitoring Well No. 3 shown as Point "51" marked on the Plan.
4	Groundwater monitoring		Groundwater Monitoring Well No. 4 shown as Point "52" marked on the Plan.
5	Discharge to waters Discharge quality monitoring Volume Monitoring	Discharge to waters Discharge quality monitoring Volume Monitoring	Discharge from the Collection Pit shown as Point "15" marked on the Plan.
16	Groundwater monitoring		Groundwater Monitoring Well No. 5 shown as Point "91" marked on the Plan.
17	Groundwater monitoring		Groundwater Monitoring Well No. 6 shown as Point "92" marked on the Plan.
18	Groundwater monitoring		Groundwater Monitoring Well No. 7 shown as Point "93" marked on the Plan.
19	Groundwater monitoring		Groundwater Monitoring Well No. 8 shown as Point "94" marked on the Plan.
20	Groundwater monitoring		Groundwater Monitoring Well No. 9 shown as Point "95" marked on the Plan.

P1.3 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

Noise/Weather

EPA identification no.	Type of monitoring point	Location description
6	Meteorological Station	Weather Station shown as Point "58" marked on the Plan.

Environment Protection Licence

3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
Benzene (Air)	443.00
Volatile organic compounds (Air)	21894.00

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table\s.

L3.4 Air Concentration Limits

POINT 15

Pollutant	Units of measure	100 percentile concentration limit	Reference conditions	Oxygen correction	Averaging period
Organic vapours	Measure 1	10			4 hours

L3.5 Water and/or Land Concentration Limits

Environment Protection Licence

POINT 5

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Dissolved Oxygen	milligrams per litre				>2
Oil and Grease	milligrams per litre				10
pH	pH				6.5-8.5
TSS	milligrams per litre				30

Note: For the purpose of the table(s) above Measure 1 means where organic vapours are recovered, the total concentration of unrecovered vapour emitted to the atmosphere during any continuous period of four hours must not exceed 10 milligrams per litre of volatile organic liquid passing out of the plant during that period.

L4 Waste

L4.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.

L4.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L5 Noise limits

L5.1 Noise generated at the premises must not exceed the noise limits specified in the table below:

Location	Day - LAeq (15 minute)	Evening - LAeq (15 minute)	Night - LAeq (15 minute)	Night - LA1(1 minute)
R1 - 1 Arthur Street, Mayfield	35	35	35	45
R2 - 52 Arthur Street, Mayfield	35	35	35	48
R3 - 2 Crebert Street, Mayfield	41	41	41	49
R4 - 21 Crebert Street, Mayfield	40	40	40	47
R5 - 24 Crebert Street, Mayfield	42	42	42	51

R6 - 30 Crebert Street, Mayfield	41	41	41	50
R7 - 50 Crebert Street, Mayfield	35	35	35	50
R8 - 2 McNeil Close, Mayfield	35	35	35	48

Note: The locations of the receptors listed in the table above in condition L5.1 are identified in Figure 2 and Table 2 of document titled 'Noise and Vibration Impact Assessment - Stolthaven Mayfield Bulk Terminal - SSD_7056", prepared by AECOM Australia Pty Ltd, dated 19 February 2016 (EPA ref. DOC16/187092-11).

L5.2 Fire pumps at the premises must be designed and operated so that noise from routine testing or maintenance is not more than LAeq (15min) 53dB(A) at the most affected residential or sensitive receiver. Routine testing or maintenance must only occur during the day time.

L5.3 For the purpose of conditions L5.1 and L5.2:

(a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays;
(b) Evening is defined as the period from 6pm to 10pm; and
(c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

L5.4 During construction, noise generated at the premises must not exceed:

(a) 53 dB(A) as LAeq(15min) at receptors R1, R2, R3, R4, R5, R6, R7, and R8;
(b) 54 dB(A) as LAeq(15min) at receptor R9 (32 Elizabeth Street, Carrington);
(c) 57 dB(A) as LAeq(15min) at receptor R10 (186 Fullerton Road, Stockton); and
(d) 55 db(A) as LAeq(15min) at the R11 (Mayfield East Public School).

Note: Unless otherwise specified, the locations of the receptors are defined in condition L5.1.

L5.5 The noise limits specified in conditions L5.1, L5.2 and L5.4 apply under all meteorolgical conditions except for any of the following:

(a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or
(b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
(c) Stability category G temperature inversion conditions.

L5.6 For the purpose of condition L5.5:
(a) Data recorded by the weather station on the premises must be used to determine meteorological conditions; and
(b) Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E of the NSW Industrial Noise Policy.

L5.7 To determine compliance:

(a) with the LAeq(15 minute) noise limits in conditions L5.1, L5.2 and L5.4, the noise measurement equipment must be located:
(i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property

boundary closest to the premises; or
(ii) within 30 metres of a dwelling façade, but not closer than 3 metres, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
(iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve;
(b) with the LA1(1 minute) noise limits in condition L5.1, the noise measurement equipment must be located within 1 metre of a dwelling façade;
(c) with the noise limits in conditions L5.1, L5.2 and L5.4, the noise measurement equipment must be located:
(i) at the most affected point at a location where there is no dwelling at the location; or
(ii) at the most affected point within an area at a location prescribed by conditions L5.7(a) or L5.7(b).

L5.8 A non-compliance with conditions L5.1, L5.2 and L5.4 will still occur where noise generated from the premises in excess of the appropriate limit is measured:

(a) at a location other than an area prescribed by conditions L5.7(a) and L5.7(b); and/or
(b) at a point other than the most affected point at a location.

L5.9 For the purposes of determining the noise generated at the premises, the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

Note: Definition of Terms

- NSW Industrial Noise Policy - the document titled "New South Wales Industrial Noise Policy" published by the EPA in January 2000.
- Noise - "sound pressure levels" for the purposes of conditions L5.1 to L5.9.

L6 Hours of operation

L6.1 Construction work association with the expansion project may be undertaken:

(a) between 7:00am and 6:00pm, Mondays to Fridays; and
(b) between 8:00am and 1:00pm on Saturdays;

however must not be undertaken on Sundays or Public Holidays.

L6.2 Construction work associated with the expansion project may be undertaken outside the hours specified in condition L6.1 if it is:

(a) Construction that causes LAeq (15min) noise levels that are:
(i) No more than 5dB above the Rating Background Level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009); and
(ii) No more than the Noise Management Levels specified in Table 3 of the *Interim Construction Noise Guideline* (DECC, 2009) at other sensitive land uses; or

(b) for the delivery of materials required by the Police or other authorities for safety reasons; or

(c) required for an emergency to avoid the loss of lives, property and/or to prevent environmental harm; or

(d) approved through processes under the relevant Development Consent.

L7 Potentially offensive odour

L7.1 No condition of this licence identifies a potentially offensive odour for the purposes of Section 129 of the Protection of the Environment Operations Act 1997.

L7.2 The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

L8 Other limit conditions

L8.1 The stack used to vent emissions from truck filling activities must be a minimum of 15 metres in height.

L8.2 The exit velocity of emissions from the stack used to vent emissions from truck filling activities must exceed 15 metres per second at all times.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.
This includes:
a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
a) must be maintained in a proper and efficient condition; and
b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

O3.2 All operations and activities occurring at the premises must be carried out in a manner that will minimise the emission of dust from the premises.

O3.3 Trucks entering and leaving the premises that are carrying loads of dust generating materials must have their loads covered at all times, except during loading and unloading.

O4 Emergency response

Note: The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The PIRMP must be developed in accordance with the requirements in Part 5.7A of the Protection of the Environment Operations (POEO) Act 1997 and POEO regulations. The licensee must keep the incident response plan on the premises at all times. The incident response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment. The PIRMP must be tested at least annually or following a pollution incident.

O5 Processes and management

O5.1 All above ground tanks containing material that is likely to cause environmental harm must be bunded or have an alternative spill containment system in place.

O5.2 Bunds must:
a) have walls and floors constructed of impervious materials;
b) be of sufficient capacity to contain 110% of the volume of the tank (or 110% volume of the largest tank where a group of tanks are installed);
c) have floors graded to a collection sump; and
d) not have a drain valve incorporated in the bund structure,

or be constructed and operated in a manner that achieves the same environmental outcome.

O6 Waste management

O6.1 The licensee must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the EPA's Waste Classification Guidelines as in force from time to time.

O6.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

O6.3 The licensee must not land apply or dispose sewage at the the premises.

O6.4 All wastewater generated on the premises must be collected and removed from the premises by a licensed waste transporter and taken to a facility that is able to lawfully receive it and reuse or dispose of it. The collected sewage must be pumped out at least fortnightly, or more frequently as required, to prevent discharges from the collection tank.

O7 Other operating conditions

Petroleum Product Pipeline Integrity and Pressure Testing

O7.1 The licensee must conduct annual integrity testing on the petroleum product pipeline extending between the tank farm and the Mayfield No. 7 Berth, according to the documents titled: 'Wharfline Integrity Checks - SHNC-OPS-004.04' dated October 2017; and 'Work Instruction Wharfline Integrity Checks - SHNC-OPS-004.04' dated October 2017 (as amended).

Note: The licensee must conduct surveillance checks on the pipeline prior to the commencement of and during transfer operations of any petroleum products.

O7.2 The licensee must conduct leak testing of the petroleum products pipeline extending from the main tank farm to the Mayfield No. 7 Berth, prior to each transfer of product operation.

O7.3 The licensee must maintain a register for all integrity and pressure tests conducted on the pipeline extending from the tank farm to the Mayfield No. 7 Berth.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:
a) in a legible form, or in a form that can readily be reduced to a legible form;
b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
a) the date(s) on which the sample was taken;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Air Monitoring Requirements

Environment Protection Licence

Licence - 20193

POINT 15

Pollutant	Units of measure	Frequency	Sampling Method
Organic vapours	milliequivalents per litre	Special Frequency 1	TM-20

M2.3 Water and/ or Land Monitoring Requirements

POINT 1,2,3,4,16,17,18,19,20

Pollutant	Units of measure	Frequency	Sampling Method
BTEX	milligrams per litre	Quarterly	Representative sample
pH	pH	Quarterly	Representative sample
Standing Water Level	metres	Quarterly	In situ
Total petroleum hydrocarbons	milligrams per litre	Quarterly	Representative sample

POINT 5

Pollutant	Units of measure	Frequency	Sampling Method
Dissolved Oxygen	milligrams per litre	Weekly during any discharge	Grab sample
Oil and Grease	milligrams per litre	Weekly during any discharge	Grab sample
pH	milligrams per litre	Weekly during any discharge	Grab sample
Total suspended solids	milligrams per litre	Weekly during any discharge	Grab sample

Note: For the purpose of the table(s) above Special Frequency 1 means the collection of a single four hour (continuous) sample on a quarterly basis - once the vapour recovery unit is first commissioned. The sample must be representative of the predicted maximum concentrations of organic vapours released from the Point during the quarterly period. Frequency of monitoring may be subject to review following the initial 12 months of operation.

M3 Testing methods - concentration limits

M3.1 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:
a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or

c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2022* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

M3.2 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Testing methods - load limits

Note: Division 4 of the *Protection of the Environment Operations (General) Regulation 2022* requires that monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.

M5 Weather monitoring

M5.1 At the point(s) identified below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively.

POINT 6

Parameter	Sampling method	Units of measure	Averaging period	Frequency
Temperature at 2 metres	AM-4	degrees Celsius	1 hour	Continuous
Temperature at 10 metres	AM-4	degrees Celsius	1 hour	Continuous
Wind Direction at 10 metres	AM-2 & AM-4	Degrees	15 minutes	Continuous
Wind Speed at 10 metres	AM-2 & AM-4	metres per second	15 minutes	Continuous
Sigma theta	AM-2 & AM-4	Degrees	15 minutes	Continuous
Total Solar Radiation	AM-4	Watts per square metre	15 minutes	Continuous
Rainfall	AM-4	millimetres	24 hours	Continuous
Siting	AM-2 & AM-4	-	-	-

Environment Protection Licence

M6 Recording of pollution complaints

M6.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M6.2 The record must include details of the following:
a) the date and time of the complaint;
b) the method by which the complaint was made;
c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
d) the nature of the complaint;
e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the licensee, the reasons why no action was taken.

M6.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M6.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M7 Telephone complaints line

M7.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M7.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

M7.3 The preceding two conditions do not apply until 3 months the date of the issue of this licence.

M7.4 The licensee must nominate a representative of the company who is available all all times and is capable of providing immediate assistance or response during emergencies or any other incidents at the premises. The name of the nominated representative and their contact details, including a telephone number, must be current at all times.
Note: This condition does not apply until two (2) weeks after the date of issue of this licence.

M8 Requirement to monitor volume or mass

M8.1 For each discharge point or utilisation area specified below, the licensee must monitor:
a) the volume of liquids discharged to water or applied to the area;
b) the mass of solids applied to the area;
c) the mass of pollutants emitted to the air;
at the frequency and using the method and units of measure, specified below.

POINT 5

Frequency	Unit of Measure	Sampling Method

Continuous during discharge	megalitres per day	Special Method 1

Note: Special Method 1 refers to EPA 2004 'Approved methods for the sampling and analysis of water pollutants in New South Wales' dependant upon whether insitu channel or insitu pipe sampling is required.

M9 Other monitoring and recording conditions

Noise monitoring

M9.1 To assess compliance with Condition L5.1, attended noise monitoring must be undertaken in accordance with Condition L5.7 and:

a) at each one of the locations listed in Condition L5.1;
b) occur annually during the licensed reporting period;
c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of:
(i) 1.5 hours during the day;
(ii) 30 minutes during the evening; and
(iii) 1 hour during the night;
d) occur for three consecutive operating days.

Recording changes in wharf occupation

M9.2 The licensee must record details of when (i.e. time and date) the occupation of the Mayfield No. 7 Wharf is temporarily transferred to another person, and also when the occupation is transferred back to the licensee. These records must be made immediately prior to the transfer to the person, and immediately after the transfer back to the licensee. The licensee must record the name and telephone contact of the person that the wharf is transferred to.

6 Reporting Conditions

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

1. a Statement of Compliance,
2. a Monitoring and Complaints Summary,
3. a Statement of Compliance - Licence Conditions,
4. a Statement of Compliance - Load based Fee,
5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and
7. a Statement of Compliance - Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:
a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:
a) the assessable pollutants for which the actual load could not be calculated; and
b) the relevant circumstances that were beyond the control of the licensee.

R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

R1.8 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
a) the licence holder; or
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
a) where this licence applies to premises, an event has occurred at the premises; or
b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:
a) the cause, time and duration of the event;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Other reporting conditions

Noise compliance assessment report

R4.1 A noise compliance assessment report detailing the attended noise monitoring undertaken under Condition M5.1 must be submitted to the EPA with the Annual Return each year. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:
a) an assessment of compliance with the noise limits detailed in Condition L5.1; and
b) an outline of any management actions proposed to be undertaken at address any exceedances of the noise limits detailed in Condition L5.1.

7 General Conditions

G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Signage

G2.1 The petroleum product pipelines extending between the main tank farm and the Mayfield No. 7 Berth must:

(a) Be identified in accordance with Australian Standard AS1345-2008: 'Identification of the contents of pipes, conduits and ducts'; and
(b) Have pipe markers that include the name of the licensee and emergency contact details of the licensee.

8 Special Conditions

E1 Vapour Recovery Unit

E1.1 A Vapour Recovery Unit (VRU) must be installed and commissioned at the premises prior to the bulk storage of any Class 3, Flammable Liquid Dangerous Goods (excluding from the generation of Slops).

E1.2 The Vapour Recovery Unit (VRU) must be designed, constructed, commissioned, operated and maintained at the premises to reduce the emission of volatile organic compounds (VOCs), including benzene, to the atmosphere from vehicle loading operations in respect of the Vehicle Fill Gantries (VFG). The VRU must include the following control equipment:

(a) A vapour collection system by which all vapour displaced from tanks during bulk road vehicle loading operations is collected and conveyed to a vapour recovery system through vapour lines having an internal diameter of not less than 65 percent of the largest fill-line used for connection to the delivery tank.

(b) An interlock system that prevents the loading of a delivery tank unless:
(i) the vapour collection system is first connected to that tank; or
(ii) the interlock system forms part of industrial plant used only for loading delivery tanks that are themselves fitted with such an interlock system.

(c) Fittings on all liquid and vapour lines that make vapour-tight connections with the respective mating fittings on the delivery tank and that close automatically when disconnected.

(d) The vapour recovery system is constructed so that the vapour resulting from loading operations is recovered, so that the concentration of unrecovered vapour emitted to the atmosphere during any period of four hours does not exceed 10 milligrams per litre of volatile organic liquid passing out of the plant during that period.

E1.3 The licensee must provide written notification to the EPA within seven days of commissioning the VRU. Notification must be provided to the EPA's Director - Hunter at PO Box 488G, Newcastle NSW 2300, or by email to info@epa.nsw.gov.au.

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E1.4 The licensee must provide written notification to the EPA at least one month prior to receiving and storing any Class 3, Flammable Liquid Dangerous Goods (excluding in respect of additives and slops in tanks "SL1" and AT1"). Notification must be provided to the EPA's Director - Hunter at PO Box 488G, Newcastle NSW 2300, or by email to info@epa.nsw.gov.au.

E1.5 The licensee must provide written notification to the EPA within seven days if, and when, the annual throughput of petroleum products at the premises in the reporting period exceeds 1,800ML. Notification must be provided to the EPA's Director - Hunter at PO Box 488G, Newcastle NSW 2300, or by email to info@epa.nsw.gov.au.

Note: This condition has been applied as the air quality impacts of the premises have been assessed up to a limit of 1800 ML/a throughput. Any higher throughput would need to be assessed to determine if a Vapour Recovery Unit needs to be installed at the premises.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder describe d at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 mo nths. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*.

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste
Wellhead	Has the same meaning as in Schedule 1 to the Protection of the Environment Operations (General) Regulation 2021.

Mr Mark Hartwell

Environment Protection Authority

(By Delegation)

Date of this edition: 11-October-2013

Environment Protection Licence

Licence - 20193

End Notes

2	Licence varied by notice	1524251 issued on 28-Aug-2014
3	Licence varied by notice	1530040 issued on 14-May-2015
4	Licence varied by notice	1532172 issued on 27-Aug-2015
5	Licence varied by notice	1533689 issued on 02-Oct-2015
6	Licence varied by notice	1536191 issued on 03-Dec-2015
7	Licence varied by notice	1539980 issued on 22-Apr-2016
8	Licence varied by notice	1548417 issued on 15-Mar-2017
9	Licence varied by notice	1550506 issued on 11-Apr-2017
10	Licence varied by notice	1555054 issued on 28-Aug-2017
11	Licence varied by notice	1567916 issued on 14-Sep-2018
12	Licence varied by notice	1587230 issued on 31-Jan-2020
13	Licence varied by notice	1611736 issued on 27-Aug-2021

Appendix C

Stormwater Monitoring

First Flush Results (Max Capacity 38,500 Litres)

		Samples Collected:	Samples Tested:	Dissolved Oxygen (mg/L)	Oil and Grease (mg/L)	pH	Total Suspended Solids (TSS)	Volume (L)	Comments
2023	0	1/06/2023	1/09/2023	7.90	4	7.40	38	0	No release - recirculate 10 Jan and resample. Determined that incorrect recirc time was allowed for prior sampling
	1	1/10/2023	1/11/2023	5.86	< 2	7.40	5	10,000	Results rec'd late. Release 12 Jan AM.
	2	19.01.2023	20.01.2023	6.60	< 2	6.97	25	15,000	Results rec'd late. Release 23 Jan AM.
	3	30.01.2023	31.01.2023	6.30	< 2	7.52	17	15,000	Results rec'd late. Release 01 Feb AM.
	4	14.02.2023	15.02.2023	5.40	< 2	7.10	15	20,000	Results rec'd late. Release 16 Feb AM
	5	24.02.2023	28.02.2023	7.80	< 2	7.82	12	20,000	
	6	14.03.2023	15.03.2023	3.70	< 2	7.42	5	15,000	
	7	24.03.2023	27.03.2023	7.30	< 2	6.68	20	35,000	Results rec'd late 27, release 28 Mar
	8	4/04/2023	4/06/2023	6.10	< 2	7.35	22	30,000	Results rec'd late 06 Apr, held over for release after Doric Pioneer discharge
	9	20.04.2023	21.04.2023	8.00	< 2	6.93	22	30,000	Results rec'd late 21 Apr, due shipping event held over for release after Proteus Sinead, release 24/04
	10	5/08/2023	5/09/2023	8.70	< 2	7.40	25	15,000	Results rec'd late 09 May, held over for release 10/05
	11	15.05.2023	16.05.2023	8.60	< 2	6.84	21	15,000	Results rec'd late 16 May, release 17 May
	12	29.05.2023	30.05.2023	9.10	< 2	7.46	8	20,000	Results rec'd late 30 May, release 31 May
	13	17.07.2023	18.07.2023	8.60	< 2	6.85	25	20,000	Results rec'd late 18 Jul, release 19 Jul
	14	25.07.2023	26.07.2023	7.40	< 2	6.79	12	20,000	Results rec'd late 26 Jul, release delayed due Doric Pioneer discharge
	15	16.08.2023	17.08.2023	6.70	< 2	6.66	26	30,000	Results rec'd late 17 Aug, release delayed until 18 Aug 08:30hrs
	16	9/01/2023	9/04/2023	7.90	< 2	7.52	5	30,000	Results rec'd late 04 Oct (Labour Day weekend), release delayed until05 Oct 07:30hrs
	17	29.09.2023	10/04/2023	6.00	< 2	6.70	8	20,000	Resuts Rec'd late 12 Oct released 13th Oct
	18	29.09.2023	10/04/2023	6.00	< 2	6.70	8	30,000	Results rec'd late 04 Oct (Labour Day weekend), release delayed until05 Oct 07:30hrs
	19	10/11/2023	10/12/2023	4.30	< 2	6.84	9	5,000	Resuts Rec'd late 12 Oct released 13th Oct
	20	27.10.2023	30.10.2023	7.00	< 2	6.71	22	20,000	Results Rec'd late 30 Oct released 31st Oct
	21	11/06/2023	11/07/2023	7.30	< 2	6.74	9	20,000	Results Rec'd late 07 Nov released 08 Nov
	22	28.11.2023	29.11.2023	6.00	< 2	7.14	15	15,000	Results Rec'd late 29 Nov released 30 Nov
	23	21.12.2023	22.12.2023	6.10	< 2	6.77	14	30,000	Results Rec'd late 07 Nov released 08 Nov
				9.10			16.16666667		

Appendix D

Hourly Truck Movements

REPORTING PERIOD: December

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	16	19	34	24	21	27	25	22	23	23	16	22
Bay 2	11	21	29	17	23	23	16	26	25	21	15	27
Bay 3	29	36	41	24	31	26	32	41	29	35	29	34
Bay 4	16	22	41	21	27	21	27	29	21	28	18	22
Total	**72**	**98**	**145**	**86**	**102**	**97**	**100**	**118**	**98**	**107**	**78**	**105**

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	26	30	25	23	19	16	9	16	13	12	13	3
Bay 2	28	30	34	22	21	13	14	19	12	9	9	1
Bay 3	32	37	35	33	22	27	21	24	20	18	20	7
Bay 4	26	27	41	20	16	18	20	15	11	11	8	4
Total	**112**	**124**	**135**	**98**	**78**	**74**	**64**	**74**	**56**	**50**	**50**	**15**

Traffic Movement Assessment Data

	00:00 to 01:00	01:00 to 02:00	02:00 to 03:00	03:00 to 04:00	04:00 to 05:00	05:00 to 06:00	06:00 to 07:00	07:00 to 08:00	08:00 to 09:00	09:00 to 10:00	10:00 to 11:00	11:00 to 12:00
Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
1/12/2023	3	6	5	0	1	2	2	3	8	2	1	4
2/12/2023	2	2	5	1	1	3	0	4	2	1	2	0
3/12/2023	3	1	3	1	2	1	2	2	0	2	1	2
4/12/2023	3	4	3	6	3	3	9	3	4	5	7	4
5/12/2023	4	4	4	4	3	3	3	3	3	10	6	1
6/12/2023	5	3	7	5	4	1	3	4	4	7	3	3
7/12/2023	1	4	6	2	7	4	1	5	6	5	3	5
8/12/2023	3	6	3	1	7	3	4	8	1	9	6	2
9/12/2023	2	5	5	3	5	3	4	4	4	2	4	5
10/12/2023	2	4	3	3	0	1	3	2	1	3	1	6
11/12/2023	1	5	4	3	3	6	3	4	2	3	4	4
12/12/2023	1	2	7	1	3	4	3	3	4	3	2	6
13/12/2023	0	5	6	3	7	5	3	6	4	8	3	4
14/12/2023	6	1	4	2	5	4	5	6	3	5	6	4
15/12/2023	3	3	8	4	2	4	3	5	6	5	5	4
16/12/2023	2	3	2	3	3	3	3	1	2	4	3	3
17/12/2023	1	0	1	2	4	1	2	3	1	0	3	6
18/12/2023	2	4	6	6	7	4	6	4	3	6	4	9
19/12/2023	4	1	7	7	2	9	6	6	3	6	1	6
20/12/2023	3	5	7	3	5	9	7	4	6	7	2	1
21/12/2023	2	7	4	3	6	8	2	6	5	4	2	7
22/12/2023	2	2	6	4	4	3	6	5	6	1	2	2
23/12/2023	3	3	7	2	4	1	2	3	2	1	2	2
24/12/2023	1	7	2	1	3	1	0	3	1	2	0	0
25/12/2023	0	0	0	0	0	2	0	0	1	0	0	0
26/12/2023	0	0	0	0	1	1	0	2	0	0	0	0
27/12/2023	1	2	6	5	3	1	2	5	5	1	1	1
28/12/2023	2	1	9	4	2	0	6	4	4	2	1	3
29/12/2023	1	2	7	3	3	2	2	5	5	2	1	6
30/12/2023	6	2	3	3	1	1	4	3	1	1	2	4
31/12/2023	3	4	5	1	1	4	4	2	1	0	0	1
Total	**72**	**98**	**145**	**86**	**102**	**97**	**100**	**118**	**98**	**107**	**78**	**105**

	12:00 to 13:00	13:00 to 14:00	14:00 to 15:00	15:00 to 16:00	16:00 to 17:00	17:00 to 18:00	18:00 to 19:00	19:00 to 20:00	20:00 to 21:00	21:00 to 22:00	22:00 to 23:00	23:00 to 24:00
Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
1/12/2023	3	4	7	3	3	1	3	2	2	1	2	0
2/12/2023	2	5	5	1	1	0	2	2	2	3	2	0
3/12/2023	1	5	3	2	1	3	3	2	0	2	1	1
4/12/2023	4	4	5	0	3	5	3	1	3	3	1	1
5/12/2023	4	6	7	2	3	2	3	1	2	3	3	0
6/12/2023	3	6	8	6	5	2	0	2	6	2	5	0
7/12/2023	7	6	3	3	7	7	1	3	1	4	4	0
8/12/2023	8	6	5	5	2	5	3	2	2	1	2	1
9/12/2023	2	5	3	0	4	0	4	1	1	0	1	0
10/12/2023	5	1	4	2	1	1	6	5	2	1	2	1
11/12/2023	6	9	6	5	1	5	3	6	2	2	5	1
12/12/2023	5	7	5	7	7	2	3	3	2	2	3	0
13/12/2023	5	5	5	5	2	3	3	3	4	5	0	0
14/12/2023	2	7	9	4	4	2	3	3	0	4	1	0
15/12/2023	3	6	4	3	4	3	1	3	4	3	3	0
16/12/2023	3	3	4	2	3	2	1	3	1	1	2	2
17/12/2023	5	2	3	2	2	3	4	0	2	1	0	0
18/12/2023	6	3	4	4	6	2	2	4	3	2	3	2
19/12/2023	8	4	7	5	4	0	6	5	1	2	0	1
20/12/2023	3	6	9	5	2	4	1	2	2	0	3	1
21/12/2023	4	3	4	6	4	2	2	1	0	1	2	1
22/12/2023	2	2	8	7	2	4	1	6	1	2	0	0
23/12/2023	1	3	6	1	1	2	1	2	1	1	2	0
24/12/2023	0	0	0	1	0	0	0	0	0	0	0	0
25/12/2023	3	0	0	1	0	1	1	0	1	0	0	0
26/12/2023	0	1	3	1	0	1	0	1	1	1	0	0
27/12/2023	4	2	2	3	3	2	0	0	3	1	1	1
28/12/2023	2	4	1	3	1	2	2	2	1	1	1	1
29/12/2023	2	4	4	4	1	3	0	5	3	1	1	0
30/12/2023	2	3	0	2	0	1	2	3	1	0	0	0
31/12/2023	7	2	1	3	1	4	0	1	2	0	0	1
Total	**112**	**124**	**135**	**98**	**78**	**74**	**64**	**74**	**56**	**50**	**50**	**15**

Appendix E

Incident Register

Date of event	Unique ID	Type of event:	Type of incident:	Severity of event:	Reportable / notifiable?	Describe what happened:
01.05.2023	EVN-02095	Non-Conformance	Unsafe behaviour	N/Ap	No	Driver was seen on truck bay camera during loading with the following non compliances & observation: * Driver did not switch load prior to loading Diesel on A trailer. * Driver was wearing sunglasses not safety eyewear. * Note truck was hard against righthand curb/driver side making unsafe access for driver (trip hazard.)
01.09.2023	EVN-02109	Incident	Damage / Malfunction	0 Minor	No	Arriving at the Terminal office at site approx 06:00hrs found the CCTV screens and Fuels Manager desktop systems were all powered down. On investigation found DB04 CB29 had tripped and wouldn't reset. No affect on operation of site purely the feed to control room for CCTV visuals (which could still be accessed remotely and was working in the backgrtound, as was the FM server)
01.12.2023	EVN-02118	Incident	Damage / Malfunction	0 Minor	No	Heavy vehicle break down in front of Bay 2. Driver was not able to disengage trailer interlocking braking system to allow vehicle to move.
01.22.2023	EVN-02134	Incident	Damage / Malfunction	1 Minor	No	Discharge of LR2 vessel DONG-A THETIS. Once vessel was 'all fast' and gangaway down and netted our wharf crew boarded ship and connected 2 x 8" wharf hoses to manifolds #02 and #03 whilst being observed by 4 x Viva Energy site visitors. During the intial phases of pressure testing from ships manifold through to Terminal wharf attendant spotted a pin hole leak on 8m hose (138772-1) connected to manifold #02 on underside at ship rail. A steady stream of air bubbles (very small, similar to leak you might see on a bicycle tube with pin hole) was evident although no press drop noted at 4bar.
01.26.2023	EVN-02146	Incident	Damage / Malfunction	0 Minor	No	Approx 14:30hrs recieved call via Duty Mobile from driver advising the the kitchen bench area and floor was flooded in the drivers room. He suspected a water line to the Out of Service water dispenser / hot water urn was the culprit. Attended site and found the floor flooded, as was the entire workbench area with water running off down cupboard facia etc. Under bench fridge all soaked. Firt impression was that the water could have come from the isolated urn but the sheer volume of water didn't make sense as the water line was still isolated at two points.
01.29.2023	EVN-02150	Incident	Damage / Malfunction / Other	1 Minor	No	Approx 14:50hrs received a call from driver whose truck was experiencing battery / starter motor issues in Bay 2 after loading his A trailer combination. Carriers maintenance manager advised that nearest tow truck was over 2 hrs away.
02.06.2023	EVN-02177	Non-Conformance	Driver error	N/Ap	No	Report made regarding a driver crossing the gantry loading arms to load his vehicle.
02.09.2023	EVN-02183	Non-Conformance	Damage /Malfunction	N/Ap	No	A monthly check is undertaken to ensure the dead man system is effective for gantry loadings. During the test on Bay one the dead man siren/light and dial out system worked as intended however the loading process did not stop/shut down.
02.10.2023	EVN-02184	Near Miss	Unsafe situation	N/Ap	No	Unsafe hazard noted at the outside smoking area. Cigarette bin located next to fence line with high (dry) grass on the other side. Potential for fire if smoking butt not disposed of correctly.
02.13.2023	EVN-02197	Incident	Damage /Malfunction	0 Minor	No	During daily checks it was noted the coolant level on Fire Pump FP03 was dropping. Leak traced to leaking air bleed on rubber hose.
02.20.2023	EVN-02210	Non-Conformance	Quality	N/Ap	No	Prolonged hazy Diesel received off vessel Proteus Sinead.
02.20.2023	EVN-02216	Non-Conformance	Damage /Malfunction	N/Ap	No	During the daily checks a fault light was noted on the ADT Fire panel.
02.21.2023	EVN-02217	Incident	Spill / Environmental Accident	3 Moderately Serious	No	During the loading of Diesel on A-trailer, driver noticed diesel leaking from beneath compartment. Approx. 400L captured in terminal's secondary spill containment. Whole bottom of the RIB pit was covered in diesel
02.21.2023	EVN-02218	Incident	Damage /Malfunction	0 Minor	No	Heavy vehicle breakdown in bay 2. Driver loaded A trailer then could not start prime mover.
02.18.2023	EVN-02229	Feedback / Suggestion	Unsafe situation	N/Ap	No	During the berthing of the Proteus Sinead, the head line surpassed the end of the rope rail at the western end of the berth making it difficult to pull the ship's rope tail, knuckle and wire onto the berth.
02.24.2023	EVN-02235	Non-Conformance	Unsafe situation	N/Ap	No	During an EPA site visit it was noted that some operational IBCs / Drums were not labelled correctly with old content labels displayed.
03.28.2023	EVN-02318	Incident	Damage / Malfunction	0 Minor	No	As precaution the zone was disabled on the fire panel whilst basic fault finding process was actioned. The fault finding process was unable to resolve the issue & the zone was isolated as precaution until a technician could attend the site & run diagnostic testing. Comment: The technician found & treplaced a faulty resistor in the detector & then re-tested & confirmed the system was operational before resetting the detector head. A secondary reset was done to ensure no repeat fault & the system was put back online on 29/3
04.14.2023	EVN-02351	Incident	Spill / Environmental Accident	0 Minor	No	During decommissioning of tank NN3 (for 10 yearly offline inspection) thermal pressure was encountered unexpectedly by contractors releasing the Outlet low point suction line. Approximately 15L recovered in drip tray and spill pads. No environmental impact or injuries.
04.16.2023	EVN-02359	Incident	Damage / Malfunction	1 Minor	No	At 16:07 hrs a text alert was received by Site Supt indicating fire panel alarm / fault. Attended site to find that the infra red flame detector in RTFS Bay 1 Zone 9 (1 of 2 providing flame detection for that Bay) had gone into fault. This unit was recently subject to investigation, testing and attempted repair (replaced resistor).
04.25.2023	EVN-02377	Non-Conformance	Quality	N/Ap	No	Carrier advised wrong grade of Diesel was loaded on vehicle. Diesel with additive was loaded where order should only allow for non-additive grade.
04.29.2023	EVN-02391	Non-Conformance	Unsafe behaviour	N/Ap	No	During discharge of 'PS Atene' at Newcastle the Duty Shore Officer overheard an exchange on the radio between the Wharf Attendant and Security clarifying if a person about to board the vessel had been checked. In the course of the conversation it became clear that whilst the person boarding the vessel had signed in, was inducted with a current Maritime Security Identification Card (MSIC) the guard had not checked if they were on the Approved Visitors list.

Date of event	Unique ID	Type of event:	Type of incident:	Severity of event:	Reportable / notifiable?	Describe what happened:
05.05.2023	EVN-02407	Incident	Spill / Environmental Accident	0 Minor	No	During discharge of 'Arizona Lady' the drain valve for the wharf line pig chamber was left partially open (cracked). Approximately 1h 50m after start of cargo operations the tundish (fed from the upper sample point and the pig chamber drain valve) was observed to be over flowing. Approximately 15 L of diesel was contained within the bunded wharf area.
05.30.2023	EVN-02459	Incident	Unsafe situation	1 Minor	No	Weather event halted truck loading operations. Significant weather front with strong wind, rain, hail and lightning impacted Newcastle region. Truck loading was stopped for a short period until lightning event passed & during this time one of the site's compressors failed due to water ingress in circuit board during service.
06.14.2023	EVN-02494	Non-Conformance	Unsafe situation	N/Ap	No	Vessel "Lafayette Bay" attending Mayfield 7 berth reported incident via AMSA (Australia Maritime Safety Authority) of failure to the vessel's grey water discharge line & valve. Repair not approved at Mayfield 7 berth.
06.14.2023	EVN-02495	Near Miss	Spill / Environmental Accident	N/Ap	No	Tank NN3 is undergoing final stages offline tank works (10 yrly) and contactors were working on the handrails from the basket of a JLG boom. During operation of the JLG 860 series Telescopic Boomlift the spotter noted what he thought were drops of oil dripping from the base of the basket onto the roof of the tank.
06.26.2023	EVN-02524	Incident	Spill / Environmental Accident	0 Minor	No	Diesel spill noticed down the side of NN2. Spill originated from tank sampling/ullaging point on top of tank.
07.12.2023	EVN-02560	Incident	Damage / Malfunction	0 Minor	No	Approx 01:20hrs 12/7 on call Terminal Operator received a call from a driver whose truck (prime mover/combination) would not start in Bay 1. Driver had completed loading A trailer and was trying to move to load the B trailer but prime mover would not start.
07.14.2023	EVN-02570	Incident	Damage /Malfunction	0 Minor	No	Fuels Manager server (FM) performed 3 uncommanded software reboots whilst trucks were loading resulting in loads from Bay 1 and Bay 4 not recording some compartment volumes post loading.
07.17.2023	EVN-02590	Near Miss	Driver error	N/Ap	No	Whilst loading truck in Bay 1 driver failed to note the downrated compartment quantity on his load plan for his combination and filled compartment to the preset SFL volume. When he competed loading his A trailer he realised his mistake and approached Terminal staff for assistance. After consultation with carriers scheduler it was estimated he had exceeded the Gross Mass for the drive axle on his combination and needed to transfer a minimum of 3,000L from his A trailer to the B trailer.
07.18.2023	EVN-02574	Incident	Damage /Malfunction	0 Minor	No	Driver alerted Terminal staff that he had issue after loading his B trailer. The sightglass / visual tell tale on his #4 compartment was leaking product. No product to ground - all contained in the bonded spill tray put in position prior loading & later recovered.
07.22.2023	EVN-02599	Incident	Damage / Malfunction	0 Minor	No	Infrabuild's Security Manager notified site of minor incident involving a carrier's DG vehicle impacting a post / plastic chain.
07.26.2023	EVN-02612	Incident	Damage / Malfunction	1 Minor	No	Approx 30mins prior to arrival of MR class vessel 'Doric Pioneer' the contract wharf attendant noted that one our 4m composite 200mm hoses in the hose string had slight discolouration over approx 20-25% of the outer sheath on 1 location. He contacted the Duty Shore Officer to inspect and with contractor assistance we lifted the hose off the trolleys to inspect and found a white glue oozing from the underside of the ferrul collar onto the trolley support (not visible from above).
08.15.2023	EVN-02648	Non-Conformance	Unsafe behaviour	N/Ap	No	Driver failed to drain compartments prior to loading, breaching site and SLP procedures. Subsequently another driver from the same company was noted doing the same minutes later.
08.16.2023	EVN-02653	Non-Conformance	Quality	N/Ap	No	Pre-discharge Diesel samples taken from Polar bright vessel contained traces of water. Ships tanks were re-sampled and cleared without any further signs of water. Discharge commenced into one shore tank, terminal received prolonged hazy Diesel product.
08.20.2023	EVN-02659	Non-Conformance	Quality	N/Ap	No	Discharge of 'Grand Ace 8' - discharge commenced into one shore tank, terminal received prolonged hazy Diesel product. Cargo ex Mailiao, Taiwan.
08.21.2023	EVN-02662	Incident	Spill / Environmental	3 Moderately Serious	No	During truck loading Diesel in Bay 1, an overfill of >150L occurred. The overfill protection safeguards did not stop loading and resulted in loss of primary containment.
08.21.2023	EVN-02663	Incident	Spill / Environmental / Injury	0 Minor	No	During incident EVN-02662 - overfill of truck compartment with Diesel, the trucks vapour hose was observed as full of product and under pressure. No drain points were available for safe draining and it was decided to slowly release pressure through the camlock. In this process an operator was lightly sprayed in the face with Diesel.
09.04.2023	EVN-02710	Non-Conformance	Quality	N/Ap	No	Discharge of 'A LEOPARD' - discharge commenced into one shore tank, terminal received prolonged hazy Diesel product. Cargo ex Mailiao, Taiwan
09.14.2023	EVN-02728	Non-Conformance	Quality	N/Ap	No	Discharge of 'KAVAFIS' - discharge commenced into one shore tank, terminal received prolonged hazy Diesel product. Cargo ex Mailiao, Taiwan
09.19.2023	EVN-02743	Non-Conformance	Unsafe behaviour	N/Ap	No	Infrabuild Security Operations Manager advised breach of traffic management procedures had occurred. A carrier (Stolthaven facility user) had overtaken a car at the security gatehouse when overtaking is not permitted. The rule is signposted in the area.
09.24.2023	EVN-02754	Incident	Damage / Malfunction	0 Minor	No	Driver loading A trailer in Bay finished loading and moved truck forward to load B trailer. Bonded spill trays were still in position under his API's and one tray was crushed.
09.28.2023	EVN-02759	Incident	Spill / Environmental Accident	3 Moderately Serious	Yes	During routine fire system testing, the gantry foam deluge system was inadvertently activated resulting in foam deployment. Approx 3325L of foam mixture (100 L neat foam - 3%) was distributed before the system was shut down. No personnel were in the gantry during the incident.
10.04.2023	EVN-02779	Incident	Spill / Environmental Accident	1 Minor	No	SHIP SIDE INCIDENT During discharge of STI Guard at Mayfield 7 (Diesel cargo) the Wharf Attendant observed activity near the ships deck seal. Terminal was able to reposition a PTZ camera and get partial line of sight on approx 6 - 8 crew members cleaning what looked like a spill on the deck of the ship and crew climbing over pipework with spill gear. 2 Terminal Shore Officers attended vessel to assess and offer assistance and shore spill gear was repositioned to base of ships gangway by wharf crew. Deck officer confirmed that a 'Dresser Coupling' on the 14" overhead line had started to leak. With the trim of the ship the spill was contained within the ribbed deck.

Date of event	Unique ID	Type of event:	Type of incident:	Severity of event:	Reportable / notifiable?	Describe what happened:
10.10.2023	EVN-02793	Incident	Damage / Malfunction	0 Minor	No	Driver reported an issue in Bay 1, with loading stopped and unable to continue. Upon investigation it was found the A trailer compartment 1 had exceeded safe fill and tripped the high level probe.
10.11.2023	EVN-02798	Incident	Driver error	0 Minor	No	Bay stop activated in Bay 2. Staff attended and Driver advised he had a high level trip on his compartment during loading. He activated the Bay Stop as a precaution post the trip.
10.24.2023	EVN-02844	Near Miss	Damage / Malfunction	N/Ap	No	During weekly dewatering process it was found that the low point / dewater line on tank NN3 that two valves (gate valve and deadman) were passing allowing product to weep into the dewater tundish.
10.27.2023	EVN-02845	Incident	Damage / Malfunction	0 Minor	No	Overnight note left by anonymous driver that they had chained out Bay 1 Arm 1 'for safety reasons' - no calls to Duty Mobile for this item.
10.30.2023	EVN-02860	Incident	Damage / Malfunction	0 Minor	No	Truck breakdown in Bay 4 (failed to start) - towed from site for repair
11.03.2023	EVN-02925	Incident	Security	1 Minor	No	Customer vessel 'Grand Winner 5' was scheduled to arrive in the midst of a climate change protest and floating port blockade. Due potential interaction with protestors and the potential security issues once alongside Terminal investigated possibility with customer to delay vessel or reschedule prior it leaving load port. Ultimately request via NSW Port Authority, Port of Newcastle and NSW Police - in agreement with customer - vessel was rescheduled to enter port 16hrs after protest was due to finish and in daylight hours.
11.07.2023	EVN-02874	Incident	Spill / Environmental Accident	0 Minor	No	As site operator was walking through the load gantry, he noted a Diesel leak coming from NN7 supply line to Bay 1.
11.08.2023	EVN-02875	Incident	Damage / Malfunction	0 Minor	No	Heavy vehicle breakdown in Bay 3, with vehicle unable to start post loading.
11.08.2023	EVN-02878	Incident	Spill / Environmental Accident	0 Minor	No	Site operator noted Diesel leaking from gantry pump 24. On further inspection it was also noted Diesel was leaking from NN7 outlet valve, indicating a lack of thermal relief.
11.21.2023	EVN-02913	Incident	Damage / Malfunction	0 Minor	No	Driver loading B double combination in Bay 2. After loading 'A' trailer was able to lower crash protection bar over the connected scully plug, and despite having red light (traffic signal), moved truck forward ripping plug from trailer connection and drove over the scully plug head and damaged the cable.
11.21.2023	EVN-02917	Incident	Unsafe behaviour	N/Ap	No	Driver loading in Bay 3 - wrong arm onto wrong compartment. Compartment safe fill probe activated and stopped loading
11.23.2023	EVN-02923	Incident	Damage / Malfunction	0 Minor	No	After an earlier call from our IT Support company noting they had spotted a possible power outage or issue on our Firewall / External network gateway at site. Subsequent checks found that whilst all systems were running ok we'd lost the ability to 'remote in' on our out of hours devices (iPad and phones).
11.28.2023	EVN-02931	Non-Conformance	Security	N/Ap	No	A review of CCTV footage for the duration of the discharge 'Grand Winner 5' was required when an cursory inspection of security logs highlighted some inconsistencies and some shortcomings in the guard's duties. Missing customs forms and no basic security checks being carried out, personnel being allowed access to the berth without signing in/out including vehicle access without permission by the Duty Shore Officer or Wharf Attendant and being uncontactable by radio.
12.27.2023	EVN-03005	Incident	Damage / Malfunction	0 Minor	No	Drain plug on Air compressor dryer filter casing failed resulting in loss of air and excessive noise in the local shed. Incident occurred between 21:00 25/12/23 (last site inspection) - 06:00 27/12/23, site unmanned during this period.
12.18.2023	EVN-02996	Incident	Injury	3 Moderately Serious	No	During work to install a new shelter over the Pig Receiver, a contractor was drilling a hole into 3mm thin gauge steel roof purling when the drill bit grabbed and spun the drill striking the contractor in the mouth (lip). It appears the location and body positioning have allowed for a 'line of fire' injury.
12.27.2023	EVN-03006	Non-Conformance	Unsafe situation	N/Ap	No	Truck combination identified as overweight (B trailer overloaded by 740 kg) by SLP (Safe Load Pass) contractor engaged to undertake offsite HV weight inspections.
12.25.2023	EVN-03003	Non-Conformance	Damage / Malfunction	N/Ap	No	Exit gate alarm. CCTV movements reviewed and found the exit gate opened by itself and remained in open state.
12.16.2023	EVN-02990	Non-Conformance	Unsafe situation	N/Ap	No	Discharge of LR vessel 'Elandra Swallo' completed at 03:24hrs 16/12. Whilst hose disconnection was underway the customer surveyor had to confirm discharge volume on vessel, surveyors 'sampler' had to dip and sample 2 x shore tanks post line pigging then take the samples to Sydney for testing. The night shift shore officer
12.31.2023	EVN-03013	Incident	Damage / Malfunction	0 Minor	No	Truck combination break down in Bay 1
12.07.2023	EVN-02992	Non-Conformance	Quality	N/Ap	No	During discharge of 'PROTEUS JESSICA' (Cargo ex Mailiao, Taiwan) a prolonged hazy diesel product was received into shore tank. A secondary slug of hazy diesel was also received near end of discharge from 5P requiring swing back to quarantine tank
12.06.2023	EVN-02972	Non-Conformance	Unsafe situation	N/Ap	No	Truck noted in Bay 4 parked in a position that would stress connection of loading arms (vehicle too far right.)
12.02.2023	EVN-02965	Non-Conformance	Unsafe behaviour	N/Ap	No	A generic SMS alarm received from Terminal at 02:22. CCTV/Fuels Manager reviewed and found the Driver had activated the Bay Stop which was preventing him loading. The Driver then relocated to Bay 3, leaving Bay 2 in an inoperable state.
12.05.2023	EVN-02969	Non-Conformance	Unsafe behaviour	N/Ap	No	Driver in Bay 4 started reversing truck out of Bay 4 (no spotter) and reversed so far back that 3 Terminal Operators and another driver all ran out to alert driver as it appeared he was going to reverse into the closed entry gates. Driver claimed he was repositioning to avoid scratching barrels with hoses.
12.29.2023	EVN-03014	Incident	Damage / Malfunction	0 Minor	No	Low site air pressure alarm received. Investigation found the site pressure was low and both compressors had tripped out.
12.18.2023	EVN-02993	Incident	Damage / Malfunction	0 Minor	No	Truck combination break down in Bay 4

Appendix F

Conditions of Consent SSD_7065

Schedule B – General Administrative Conditions – Compliance Requirements		
No	Description	Statement of Compliance
B1.	**Obligation to Minimise Harm to the Environment** In addition to meeting the specific performance criteria established under this consent, the Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the Development.	Noted
B2.	**Terms of Consent** The Applicant shall carry out the Development in accordance with the: a) State Significant Development Application SSD 7065; b) EIS and RTS; c) the plans and drawings at Appendix 1; and **a)** d) the Management and Mitigation Measures at Appendix 2.	Noted
B3.	If there is any inconsistency between the plans and documentation referred to in Condition B2 above, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.	Noted
B4.	The Applicant shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of: a) any reports, plans or correspondence submitted in accordance with this consent; and b) the implementation of any actions or measures contained in these documents.	Noted
B5.	**Limits of Consent** This consent lapses five years after the date from which it operates, unless the Development has physically commenced on the land to which the consent applies before the date on which the consent would otherwise lapse under Section 95 of the EP&A Act.	Noted, Physical commencement has been triggered.
B6	The Applicant shall not increase the throughput of combustible liquids above 1,300 million litres (ML) per year until SSD 6664 has been surrendered in accordance with Condition B11, and an amended EPL has been issued for the Development. The Applicant shall provide a copy of the amended EPL to the Secretary prior to increasing throughput above 1,300 ML per year.	No exceedance of annual throughput limits (refer to **Section 9.0** of this Annual Review)
B7	Following the receipt of an amended EPL for the Development and the surrender of SSD 6664 in accordance with Condition B11, the Applicant shall: a) not receive, store and dispatch more than 3,500ML of flammable and combustible liquids on the Site per year; and b) ensure the storage capacity at the Site does not exceed 355.7 ML of flammable and combustible liquids at any one time.	Noted (refer to **Table 2-3** of this Annual Review)
B8	The Applicant shall not receive flammable liquids from the M4 berth at any time.	No flammable liquids other than those specified in this condition were stored in bulk at the Site (refer to **Section 9.0** of this Annual Review)

Schedule B – General Administrative Conditions – Compliance Requirements		
No	Description	Statement of Compliance
B9	Following the receipt of an amended EPL for the storage of additives on the Site, the Applicant may receive, store and use additives on Site in Intermediate Bulk Containers (IBCs) as described in the RTS, subject to implementation of the following measures, to the satisfaction of the Secretary: a) storage of additives in IBCs within a bund constructed in accordance with Australian Standard 1940-2004: The storage and handling of flammable and combustible liquids; and b) implementation of relevant safety procedures for fire safety and protection of personnel as required by Condition C4b). Note: If an amended EPL is not required for the storage of additives in IBCs on the Site, the Applicant may store and used additives in IBCs on the Site from the date of this consent, subject to satisfactory implementation of Conditions B9a) and B9b) above.	MP 08_0130 has been surrendered.
B10	The Applicant shall not use more than 30,000 litres of additives from IBCs on the Site per year, until the vapour recovery unit is installed and commissioned in accordance with Conditions C15 and C16.	EPL last updated 31 January 2020
B11	**Other Consents and Approvals** Prior to operation of the Development, or as otherwise agreed with the Secretary, the Applicant shall surrender development consent SSD 6664 for the Site in accordance with the EP&A Regulation. Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of a consent should not be understood as implying that works legally constructed under a valid consent can no longer be legally maintained or used.	Noted
B12	Prior to the commencement of operation, the Applicant shall provide written evidence to the satisfaction of the Secretary, demonstrating the M7 berth has all relevant approvals and licenses to receive flammable and combustible liquids by ship.	A new pipeline connecting the terminal to Mayfield Berth No. 7 was built during the 2018 reporting period as per the requirements of SSD_7065. The pipeline is not subject to the requirements of the BCA. No new buildings were built during this reporting period. No other elements of the project as approved under SSD_7065 have subsequently been initiated.
B13	Nothing in this consent impacts on the following consents/approvals: a) PA 12/001 issued under Section 111 of the EP&A Act dated 20 February 2012; and b) DA 293-08-00 as modified issued under Section 80 of the EP&A Act dated 6 April 2001.	Noted
B14	**Mayfield Concept Plan** The Applicant shall carry out the Development generally in accordance with the requirements of the Mayfield Concept Plan approval (09_0096), as modified.	There was no construction of utility works during the reporting period.

Schedule B – General Administrative Conditions – Compliance Requirements		
No	Description	Statement of Compliance
B15	Within six months of the commencement of operation, or as otherwise agreed with the PON, the Applicant shall decommission and remove the existing pipeline connection and associated infrastructure between the Site and the M4 berth, to the satisfaction of the PON. The Applicant shall provide a copy of the approval to undertake the demolition works and provide evidence of completion of the works, to the satisfaction of the Secretary.	The M4 pipeline has been removed in consultation with PON.
B16	**Statutory requirements** The Applicant shall ensure that all necessary licences, permits and approvals are obtained and kept up-to-date as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approvals.	A set of the sites operational environmental management plans were submitted and approval by DPIE prior to the installation of the Mayfield Berth No. 7 pipeline.
B17	**Structural adequacy** The Applicant shall ensure new buildings and structures, and alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.	Consent previously received.
B18	Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works. Part 8 of the EP&A Regulation sets out the requirements for the certification of the Development.	Paid
B19	**Protection of Public Infrastructure** The Applicant shall: a) repair, or pay the full costs associated with repairing public infrastructure that is damaged by the Development; and b) relocate, or pay the full costs associated with relocating public infrastructure that needs to be relocated as a result of the Development.	Noted
B20	**Utilities and services** Utilities, services and other infrastructure potentially affected by the construction and operation of the Development shall be identified prior to construction, to determine requirements for access to, diversion, protection, and/or support. Consultation with the relevant owner and/or provider of services that are likely to be affected by the Development shall be undertaken to make suitable arrangements for access to, diversion, protection, and/or support of the affected infrastructure as required. The cost of any such arrangements shall be borne by the Applicant.	Hazard audit was not required during the reporting period.
B21	**Operation of Plant and Equipment** The Applicant shall ensure plant and equipment used for the Development is: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	Noted
B22	**Staged Submission of Plans or Programs** With the approval of the Secretary, the Applicant may: a) submit any strategy, plan or program required by this consent on a progressive basis; and/or b) combine any strategy, plan or program required by this consent.	Noted

Schedule B – General Administrative Conditions – Compliance Requirements		
No	Description	Statement of Compliance
B23	**Development Contribution** Prior to operation of the Development, the Applicant shall pay Council $228,600 in development contributions. Note: This contribution is subject to indexation to reflect quarterly variations in the Consumer Price Index All Group Index Number for Sydney, as published by the Australian Bureau of Statistics.	A partial development contribution was paid to council during the previous reporting period for the operation of the new M7 pipeline where it falls within the consent area. The balance of constitutions would be paid when the remainder of the consent (additional tankage and truck loading gantry) is constructed.
B24	**Dispute Resolution** In the event that a dispute arises between the Applicant and Council, PON or a public authority, in relation to a requirement under this consent, or relevant matter relating to the Development, either party may refer the matter to the Secretary for resolution. The Secretary's determination of the dispute shall be final and binding on the parties.	Noted
B25	**Compliance** The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.	Noted
B26	The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the Site, including contractors, sub-contractors and visitors.	Noted

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
C1.	**Hazards** The Applicant shall implement: a) all control measures proposed in the PHA; b) all relevant actions, as listed in Appendix C of the PHA, in response to the recommendations from the Buncefield incident investigation report; and c) all recommendations of the PHA.	Copy of site auditor correspondence previously provided.
C2.	Prior to completion of detailed design of the Development, or within such further period as the Secretary may agree, the Applicant shall prepare a Surge Study for the Development. The Study shall: a) be prepared in consultation with SafeWork NSW; b) consider scenarios including, but not limited to, pump trips and operation of the dry break coupling on marine loading arms; c) take into account the maximum pumping and tank filling rates when evaluating the pressures that can occur in the pipeline in a surge scenario; and d) evaluate the controls such as valve closing times and pressure rating of pipes and related equipment. The findings of the Surge Study shall be included in the Final Hazard Analysis required under Condition C4d).	No construction works took place during the reporting period.
C3.	Prior to finalising the detailed design of the Development, the Applicant shall consult with SafeWork NSW regarding any requirements under the Work Health and Safety Act 2011 and Work Health and Safety Regulation 2011.	No construction works took place during the reporting period.
C4	**Pre-construction** At least one month prior to the commencement of construction of the Development (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Secretary may agree, the Applicant shall prepare and submit for the approval of the Secretary the studies set out under subsections a) to d) (the pre-construction studies). Construction, other than of preliminary works, shall not commence until approval has been given by the Secretary and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW (FRNSW). a) CONSTRUCTION SAFETY STUDY A Construction Safety Study prepared in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety Study Guidelines'. For developments in which the construction period exceeds six (6) months, the commissioning portion of the Construction Safety Study may be submitted two months prior to the commencement of commissioning. b) FIRE SAFETY STUDY The Applicant's Fire safety Study (FSS) shall be updated to incorporate any changes due to the Development. This Fire Safety Study shall be prepared with consultation with the FRNSW. This study shall cover the relevant aspects of the Department's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems'.	Copy of site auditor correspondence previously provided.

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
	Any outstanding issues from FRNSW shall be resolved and reported on in the FSS. c) HAZARD AND OPERABILITY STUDY A Hazard and Operability Study (HAZOP) for the Development chaired by an independent qualified person approved by the Secretary prior to the commencement of the study. In addition, the following shall be covered in the HAZOP: • surge issues for the various operating scenarios; • the ullage (in the tanks) above the high high alarm/emergency shutdown level, taking into account the slow closing time assigned to the emergency shutdown valves by the surge study required under Condition C2 above; and • the study shall be carried out in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'. The study report must be accompanied by a program for the implementation of all recommendations made in the study. Safety related recommendations must be included in the final design of the Development. If the Applicant intends to defer the implementation of a recommendation, justification must be included. NSW Government Department of Planning and Environment 5 d) FINAL HAZARD ANALYSIS A Final Hazard Analysis of the overall Site, consistent with the Department's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'. The FHA shall report on the implementation of the recommendations of the PHA. The FHA shall: • demonstrate that the tank overfill protection system (for all tanks) reduces the risk so far as reasonably practicable, and it achieves as a minimum safety integrity level (SIL) 2 rating. A SIL allocation and verification report for the Development shall be undertaken and enclosed in the FHA; • re-evaluate and confirm all relevant data and assumptions from the PHA, in particular, the outcomes of the surge analysis that may result in changes in the risk assessment and impact on the overall risk from the facility; • re-evaluate and confirm all control measures proposed for prevention and mitigation of incidents; and • report on implementation of the recommendations of the PHA.	

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
C5.	**Pre-commissioning** The Applicant shall develop and implement the plans and systems set out under subsections a) to c). No later than two months prior to the commencement of commissioning of the Development, or within such further period as the Secretary may agree, the Applicant shall submit, for the approval of the Secretary, documentation describing those plans and systems. Commissioning shall not commence until approval has been given by the Secretary. a) TRANSPORT OF HAZARDOUS MATERIALS Arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the Site. The routes selected shall be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 11, 'Route Selection'. Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies. b) EMERGENCY PLAN The Applicant's Emergency Plan and detailed emergency procedures shall be updated to incorporate any changes due to the Development. The plan shall include detailed procedures for the safety of all people outside of the Site who may be at risk from the Site. The plan shall be in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Industry Emergency Planning Guidelines'. c) SAFETY MANAGEMENT SYSTEM The Applicant's Safety Management System shall be updated to include any changes due to the Development. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on Site and shall be available for inspection by the Secretary upon request. The Safety Management System shall be developed in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'. An inspection, testing and preventive maintenance program should be developed, implemented and maintained to ensure the reliability and availability of the key safety critical equipment is, at a minimum, consistent with the data estimated in the PHA.	No soil imported during the reporting period.
C6.	**Pre-startup Compliance Report** One month prior to the commencement of operation of the Development, the Applicant shall submit to the Secretary, a report detailing compliance with Conditions C4 and C5, including: a) dates of study/plan/system submission, approval, commencement of construction and commissioning; b) actions taken or proposed, to implement the recommendations and safety-related control measures in the studies/plans/systems; c) a pre-startup safety review/checklist; and d) responses to each requirement imposed by the Secretary under Condition C9 of this Schedule.	Existing Groundwater Monitoring bores installed pursuant to the Water Management Act 2000.

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
C7.	**Post-startup Compliance Report** Three months after the commencement of operation of the Development, the Applicant shall submit to the Secretary, a report verifying that: a) the Emergency Plan required under Condition C5b) is effectively in place and that at least one emergency exercise has been conducted; and NSW Government Department of Planning and Environment 6 b) the Safety Management System required under Condition C5c) has been fully implemented and that records required by the system are being kept.	All water discharged from the Site complied with the relevant EPL conditions (refer to **Section 7.3** of this Annual Review)
C8.	**Ongoing** HAZARD AUDIT Twelve months after the commencement of operation of the Development and every three years thereafter, or at such intervals as the Secretary may agree, the Applicant shall carry out a comprehensive Hazard Audit of the Site and within one month of each audit submit a report to the Secretary. The audits shall be carried out at the Applicant's expense by a qualified person or team, independent of the Site, approved by the Secretary prior to commencement of each audit. Hazard Audits shall be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines' (HIPAP No. 5). The audit reports shall, in addition to the requirements provided in HIPAP No 5: a) verify implementation of all actions proposed by the Applicant in response to the recommendations from the Buncefield incident investigation report as contained in Appendix C of the PHA; b) verify that an inspection, testing and preventative maintenance program has been developed, implemented and maintained to ensure the reliability and availability of key safety critical equipment; c) confirm the throughput and storage quantities of potentially hazardous materials are consistent with the PHA; and d) verify implementation of any measures arising from the reports submitted in respect of Conditions C1 to C5 of this Schedule. The audit report must be accompanied by a program for the implementation of all recommendations made in the audit report. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented. This audit report must also be submitted to SafeWork NSW.	Refer Aurecon Design Compliance Statement previously provided to DPIE.
C9.	**Further requirements** The Applicant shall comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from the reports submitted in respect of Conditions C1 to C8, within such time as the Secretary may agree.	No changes occurred to the stormwater management system previously approved by PON.

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
C10.	The Applicant shall contribute to, in so far as it relates to the Site, preparation of or updates to the following plans and audits for the Mayfield Concept Plan, in consultation with the PON: a) the Mayfield Site Precinct Emergency Management Plan, February 2016 consistent with the Department's Hazardous Industry Advisory Paper No. 1 – Emergency Planning; b) a Safety Management System, consistent with the Department's Hazardous Industry Advisory Paper No. 9 – Safety Management; and c) hazard audits, consistent with the Department's Hazardous Industry Advisory Paper No. 5 – Hazard Audit Guidelines. Notes: • The intent of the condition is to ensure any cumulative hazard issues across the Mayfield Concept Plan area are identified and managed; and • The relative contribution by the Applicant and timing shall be determined in consultation with the PON, to the satisfaction of the Secretary.	Updated. See letter from DPIE
C11	**Air Quality Limits** The Applicant shall install and operate equipment to ensure the Site complies with all load limits, air quality criteria and air quality monitoring requirements as specified in an EPL for the Site.	Noted
C12	**Offensive Odour** The Applicant shall not cause or permit the emission of offensive odours beyond the boundary of the Site, as defined under Section 129 of the POEO Act.	Noted
C13	**Dust Minimisation** The Applicant shall carry out all reasonable and feasible measures to minimise dust generated by the Site	Noted
C14	During construction and operation of the Development, the Applicant shall ensure: a) all vehicles on Site do not exceed the designated on Site speed limit; b) all loaded vehicles entering or leaving the Site have their loads covered; and c) all vehicles leaving the Site are cleaned of dirt, sand and other materials before they leave the Site, to avoid tracking these materials on to public roads.	Noted
C15	**Vapour Recovery Unit** The Applicant shall install and commission a vapour recovery unit on the six bay truck loading gantry prior to: a) annual throughput of petroleum products exceeding 1,300 ML; or b) bulk storage of any Class 3 Flammable Liquid Dangerous Goods, described in the EIS.	No flammable products or products in excess of 1,300ML have been through thre site during the reporting period therefore the need for Vapour Recovery Unit (VRU) has not yet been triggers.
C16	The vapour recovery unit shall be designed, constructed and operated in accordance with the requirements of the EPL.	Noted

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
C17	The Applicant shall monitor emissions from the vapour recovery unit stack in accordance with the requirements of the EPL. The monitoring data shall be reported to the PON on a quarterly basis, or in accordance with the monitoring frequency required in the EPL	Noted. The VRU is not yet required and therefore hasn't been installed.
C18	If the results of monitoring show any impact greater than that predicted by the air quality modelling in the EIS, the Applicant shall investigate and implement further air quality mitigation measures as directed by the Secretary or the EPA.	Noted.
C19	**Air Quality Management Plan** The Applicant shall update the existing Air Quality Management Plan for the Site to include the Development, to the satisfaction of the Secretary. This plan shall: a) be approved by the Secretary prior to operation of the Development; b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this consent and the EPL; c) describe the air quality monitoring to measure the performance of the Development against the conditions of this consent and the EPL; and d) demonstrate the air quality measures for the Development are consistent with the PON's Mayfield Air Quality Monitoring Plan, October 2015, or its latest version	Plan has been previously updated
C20	**Greenhouse Gas** The Applicant shall implement all reasonable and feasible measures to minimise energy use on Site and greenhouse gas emissions produced on Site.	Noted
C21	**Meteorological Monitoring** The Applicant shall install, operate and maintain a meteorological weather station on the Site that complies with the requirements of an EPL for the Site.	
C22	**Traffic Movements** The Applicant shall: a) keep accurate records of truck movements including: • total hourly truck movements in peak periods; • total truck movements per day; • total truck movements per annum; • the volume of flammable and combustible liquids received, stored and dispatched; b) report these records in the Annual Review; and c) provide these records to PON on a bi-monthly basis.	Records are maintained and reported in accordance with this condition (Refer to **Section 9.2, 9.2.1** and **Appendix D** of this Annual Review)
C23	The Applicant shall ensure: a) all internal roads and parking (including driveways, grades, lighting, aisle widths, aisle lengths, turning paths, sight distance requirements and parking bay dimensions) associated with the Development are designed and constructed in accordance with the latest versions of the Australian Standards 2890.1:2004 and 2890.2:2002;	Noted

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
	b) internal roads accessed by heavy vehicles are designed to ensure the swept paths of the longest vehicle and maneuverability through the site is in accordance with AUSTROADS – Guide to Road Design; and NSW Government Department of Planning and Environment 8 c) car, motorbike and bicycle parking spaces are provided on site in accordance with the requirements of the Newcastle Development Control Plan, 2012, where relevant.	
C24	The Applicant shall ensure: a) all heavy vehicle movements to and from the Site are made in a forward direction; and b) vehicles associated with the Site do not park or queue on the public road network outside the Mayfield Concept Plan area.	Noted
C25	The Applicant shall update the existing operational Traffic Management Plan for the Site to include the Development. The plan shall: a) be approved by RMS and the Secretary prior to operation of the Development; b) be prepared in consultation with PON, PNSW, Council, RMS, adjoining land owners and the local community; c) detail vehicle routes, access arrangements and coordination with other developments in the Mayfield Concept Plan area; d) include details of driver training awareness to minimise noise, in particular from reversing alarms and compression braking; e) detail procedures for assessing the effectiveness of measures to minimise heavy vehicles accessing residential streets; f) detail procedures for managing operational traffic, including adherence to the Australian Code for Transport of Dangerous Goods by Road and Rail, January 1998 or its latest version; and g) be updated to be consistent with the PON's Traffic Management Plan, Mayfield Concept Plan, November 2015 or its latest version.	Updated. See letter from DPIE
C26	The Applicant shall comply with the hours of work in Table 1: **Construction:** Monday to Friday - 7 am – 6 pm Saturday 8 am – 1 pm Sunday & Public Holidays – nil **Operation** Monday – Sunday – 24 hours	Noted

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
C27	The Applicant shall implement all reasonable and feasible management and mitigation measures to ensure noise generated during construction of the Development does not exceed the construction noise goals in Table 2 of the consent conditions.	Noted
C28	Construction outside of the hours identified in Condition C26 may be undertaken in the following circumstances: a) works that are inaudible at the nearest sensitive receivers; b) works agreed to in writing by the Secretary; c) for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or d) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm	Noted
C29	**Mayfield Concept Plan Site Noise Model** Prior to the commencement of construction of the Development, the Applicant shall provide the Noise and Vibration Impact Assessment, prepared by AECOM dated 19 February 2016, including all modelling data, to the PON for the purposes of updating the Site Noise Mode	Previously provided to PON
C30	The Applicant shall ensure noise from the Site does not exceed the noise limits in Table 3	Noise limits comply with this consent condition (Refer to **Section 8.0** of this Annual Review)
C31	The Applicant shall ensure fire pumps on the Site are designed and operated so that noise from routine testing or maintenance is not more than $L_{eq(15min)}$ 53 dB(A) at sensitive receivers. Routine testing or maintenance must only occur during the day time	Noise limits comply with this consent condition (Refer to **Section 8.0** of this Annual Review)
C32	The Applicant shall: a) ensure noise from the Site does not exceed the noise quotas provided by the PON in accordance with the Site Noise Model; and b) comply with the directions of the PON in relation to the management of noise from the Site.	Noise limits comply with this consent condition (Refer to **Section 8.0** of this Annual Review)
C33	The Applicant shall: a) implement all reasonable and feasible noise management and mitigation measures to prevent and minimise noise from the Site; b) implement, where possible, a safe system of work so that tonal movement alarms, such as reversing beepers, are not needed on the Site; c) maintain the effectiveness of any noise suppression equipment or plant at all times and ensure defective plant that may generate offensive noise is not used operationally until fully repaired; and d) regularly assess noise monitoring data and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent	Noted

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
C34	**Noise Management Plan** The Applicant shall update the existing Noise Management Plan for the Site to include the Development. The plan shall: a) be prepared by a suitably qualified expert, in accordance with EPA Guidelines; b) be approved by the Secretary prior to operation of the Development; c) describe the measures that would be implemented to ensure compliance with the: i. noise limits in Condition C30; and ii. noise quotas provided by PON, to maintain compliance with the noise goals in the Mayfield Concept Plan; d) include a procedure for implementing noise mitigation measures, should the Applicant be directed to by the EPA, PON or the Secretary, or should non-compliances be detected; and e) include procedures to receive, record and respond to complaints.	Previously updated
C35	The Applicant shall monitor noise from the Site. The monitoring shall: a) be undertaken annually, or to address genuine noise complaints related to the Site as determined by the Secretary, EPA or the PON; b) be undertaken in accordance with the NSW Industrial Noise Policy and the Noise Verification Monitoring Plan, October 2015 or its latest version; c) demonstrate compliance with the noise limits in this consent and the noise quotas provided by PON in accordance with the Mayfield Concept Plan; and d) be reported annually to the Secretary, EPA and the PON. Note: The monitoring requirements could be satisfied by the monitoring network required for the Mayfield Concept Plan once established.	Noise monitoring reports prepared and included in **Section 8.0** of this Annual Review
C36	**Statutory Requirements** The Applicant shall carry out the Development in accordance with the requirements of the: a) Remediation Notice; and b) CSMP	Copy of site auditor correspondence previously provided.
C37	Prior to commencement of construction, the Applicant shall provide written evidence to the Secretary from the Site Auditor confirming that all construction works associated with the Development meet the requirements of the documents listed in Condition C36 above	Copy of site auditor correspondence previously provided.
C38	Prior to commencement of operation, the Applicant shall provide written evidence to the Secretary from the Site Auditor confirming that all works associated with the Development have been constructed in accordance with the requirements of the documents listed in Condition C36 above.	Copy of site auditor correspondence previously provided.
C39	**Human Health Risk** The Applicant shall provide written advice from the Site Auditor confirming that all works associated with the Development would be constructed to address any risk of harm to human health posed by the potential ingress of volatile vapours into buildings and confined spaces	Copy of site auditor correspondence previously provided.

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
C40	**Imported Soil** The Applicant shall: a) ensure that only VENM or ENM or other material approved in writing by the EPA or the Site Auditor is used as fill on the Site; b) keep accurate records of the volume and type of fill to be used on Site; and c) make these records available to PON and the Secretary upon request.	No soil imported to site during this reporting period
C41	**Water licences** The Applicant is required to obtain the necessary water licences for the Development under the Water Act 1912 and/or the Water Management Act 2000. Note: Licences are required for groundwater bores, excavations that may intercept groundwater, dewatering activities and extraction or interception of surface water.	Groundwater monitoring bores installed pursuant to the *Water Management Act 2000*
C42	**Discharge Limits** The Applicant shall ensure all water discharges from the Site comply with the requirements specified in an EPL for the Site	All water discharged from the Site complied with the relevant EPL conditions (refer to **Section 7.3** of this Annual Review)
C43	**Stormwater and Drainage System** The Applicant shall maintain the stormwater and drainage system for the Site to the satisfaction of PON	No changes occurred to the stormwater management system previously approved by PON.
C44	**Stormwater and Drainage Management Plan** The Applicant shall update the existing Stormwater and Drainage Management Plan for the Site to include the Development, to the satisfaction of the Secretary. The plan shall: a) be updated prior to operation of the Development; b) be prepared in accordance with OEH's Managing Urban Stormwater and other relevant guidelines; c) detail the stormwater infrastructure to be installed for the Development and detail how it integrates with the existing stormwater system on the Site; d) describe the measures to be implemented to maintain this infrastructure over time; e) include a program to monitor stormwater quality and quantity; and f) detail how the stormwater infrastructure integrates and is consistent with the PON's Concept Stormwater Management Strategy dated 9 July 2015 or its latest version.	This plan was reviewed and updated to be consistent with SSD_7065 during the 2018 reporting period. DPIE subsequently approved the updated plan.
C45	**Water Management Plan** The Applicant shall update the existing Water Management Plan for the Site to include the Development, to the satisfaction of the Secretary. The plan shall: a) be updated prior to operation of the Development; b) include procedures for the prevention and management of spills and leaks from the Development, including the terminal, M7 berth and pipeline; c) include a surface water monitoring program to measure the quality and quantity of water discharges from the Site in accordance with an EPL for the Site; d) include a groundwater monitoring program to evaluate the integrity of the surface capping in minimising groundwater contamination and monitor in accordance with the requirements of an EPL for the Site; and	This plan was reviewed and updated to be consistent with SSD_7065 during the 2018 reporting period. DPIE subsequently approved the updated plan.

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
	e) include a surface and groundwater response plan, including remedial actions and procedures to be followed in the event of an incident.	
C46	**Bunding and Storage of Liquids** The Applicant shall store all chemicals, fuels and oils used on the Site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, and/or the EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook.	Noted
C47	The Applicant shall ensure all bunds: a) have impervious walls and floors; b) are of sufficient capacity to contain 110% of the volume of the tank (or 110% of the volume of the largest tank where a group of tanks are installed); c) have floors graded to a collection sump; and d) do not have a drain valve incorporated in the bund structure, or are constructed and operated in a manner that achieves the same environmental outcome.	Refer Aurecon Design Compliance Statement previously provided to DPIE
C48	**Leak Prevention** The Applicant shall: a) conduct annual integrity testing on the petroleum product pipeline extending between the terminal and the M7 berth; b) conduct leak testing of the petroleum products pipeline extending between the terminal and the M7 berth prior to each transfer of product; c) conduct surveillance checks on the pipeline prior to the commencement of and during transfer operations of any petroleum products; and d) maintain a register for all integrity and pressure tests conducted on the pipeline extending between the terminal and the M7 berth	Annual pipeline integrity testing undertaken (Refer **Section 13.3** and **Appendix G** of this Annual Review
C49	**UTILITIES AND SERVICES** The Applicant shall update the existing Utilities and Services Plan for the Site to include the Development. The plan must: a) be updated prior to operation of the Development; b) be prepared in consultation with relevant utility and service providers and adjacent landowners, where relevant; c) include an implementation schedule which shows how all essential utilities and services are to be provided to the Site; d) provide a copy of all necessary consents from relevant utility and service providers showing that access to these utilities and services is available and secured; and e) include a strategy to integrate all utilities and services with the broader system to be provided by PON for the Mayfield Concept Plan, and be consistent with the Utilities Infrastructure Plan, July 2015, or its latest version.	This plan was reviewed and updated to be consistent with SSD_7065 during the reporting period. DPIE subsequently approved the updated plan
C50	**Landscaping** The Applicant shall update the existing Landscape Management Plan for the Site to include the Development, to the satisfaction of the Secretary. The Plan must: a) be prepared in consultation with PON and in accordance with the relevant requirements of the Newcastle Development Control Plan, 2012; b) be updated and implemented prior to operation of the Development;	Plan has been previously updated

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
	c) demonstrate the building treatments are of sufficient design quality to minimise the visual impacts of the Site, and include a variety of materials and external finishes; d) illustrate the location, species and mature heights of plants to be established on Site; e) provide for the maintenance of the landscaping on Site; and f) ensure the administration building and landscaping is consistent with the requirements of the PON acknowledging the Site's location at the entrance to the Mayfield Concept Plan area.	
C51	**Building Materials** Where possible the Applicant shall utilise building materials that minimise the potential visibility of the Development, including non-reflective materials	Noted
C52	**Lighting** The Applicant shall ensure any lighting associated with the Site: a) complies with the latest version of Australian Standard AS 4282 (INT)-Control of Obtrusive Effects of Outdoor Lighting, where relevant; and b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.	Complete
C53	**Signage** The petroleum product pipeline extending between the terminal and the M7 berth must: a) be identified in accordance with Australian Standard AS1345-2008: Identification of the contents of pipes, conduits and ducts; and b) include pipe markers including the name of the Applicant and emergency contact details.	Noted
C54	The Applicant shall not install any advertising signs on the Site without consultation with the PON and the written consent of the Secretary.	Noted
C55	**Site Security** The Applicant shall: a) install and maintain a perimeter fence and security gates on the Site; b) ensure the security gates on Site are locked whenever the Site is unattended; and c) consult with the PON with regards to minimum fencing specifications.	Noted
C56	**WASTE** The Applicant shall ensure any waste generated on the Site is classified in accordance with the EPA's Waste Classification Guidelines (DECCW, 2009), or any superseding document and disposed of to a facility that may lawfully accept the waste.	Noted
C57	Waste generated outside the Site shall not be received at the Site for storage, treatment, processing, reprocessing, or disposal on the Site, except as expressly permitted by an EPL, if such a licence is required in relation to that waste	Noted
C58	The Applicant shall: a) implement all reasonable and feasible measures to minimise waste generated on Site; and b) ensure any waste generated on Site is appropriately stored, handled and disposed of.	Noted

Schedule C – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
F59	**AVIATION SAFETY** Prior to the commencement of construction, the Applicant shall provide the Secretary with a copy of all necessary approvals from the Air Base Command Post of RAAF Base Williamstown and the Directorate of External Land Planning within the Defence Support Group of the Department of Defence for the erection of all structures that constitute transient/temporary or permanent obstructions in accordance with the Operation of cranes and tall structures in the vicinity of Newcastle Airport (Department of Defence, 2013).	Complete

Schedule D – Environmental Management Reporting – Compliance Requirements		
No	Description	Statement of Compliance
D1	**Construction Environmental Management Plan** The Applicant shall prepare a Construction Environmental Management Plan (CEMP) for the Development, to the satisfaction of the Secretary. The Plan must: a) be approved by the Secretary prior to construction of the Development; b) identify the statutory approvals that apply to the Site; c) outline all environmental management practices and procedures to be followed during construction; d) describe all activities to be undertaken on the Site during construction, including a clear indication of construction stages; e) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts; f) describe the roles and responsibilities for all relevant employees involved in construction works; and g) include the management plans under Condition D2 of this consent.	Noted
D2	As part of the CEMP for the Development, required under Condition D1 of this consent, the Applicant shall include the following: a) a soil and water management plan; b) a contaminated materials management plan, prepared in consultation with the PON; c) a traffic management plan; d) a noise and vibration management plan; e) an air quality (dust) management plan; f) a utilities and services provision plan; and g) a waste management plan.	Noted
D3	The Applicant shall carry out construction of the Development in accordance with the CEMP approved by the Secretary (and as revised and approved by the Secretary from time to time), unless otherwise agreed by the Secretary.	Noted
D4	**Environmental Management Strategy** The Applicant shall update the existing Environmental Management Strategy (EMS) for the Site to include the Development, to the satisfaction of the Secretary. The EMS shall: a) be submitted to the Secretary for approval prior to operation of the Development;	Previously updated

Schedule D – Environmental Management Reporting – Compliance Requirements		
No	Description	Statement of Compliance
	b) be prepared by a suitably qualified and experienced expert; c) provide the strategic framework for environmental management of the Site; d) identify the statutory requirements that apply to the Site; e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Site; f) describe in general how the environmental performance of the Site would be monitored and managed; g) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the Site; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise in relation to operations at the Site; • respond to any non-compliance; • manage cumulative impacts; • respond to emergencies; h) include the management plans under Condition D5 of this consent; and i) be provided to the PON once approved by the Secretary, including any approved amendments to the EMS.	
D5	As part of the EMS for the Site, required under Condition D4 of this consent, the Applicant shall include the following: a) air quality; b) traffic; c) noise; d) stormwater and drainage; e) water; f) utilities and services; and g) landscape.	Noted
D6	The Applicant shall operate the Site in accordance with the EMS approved by the Secretary (and as revised and approved by the Secretary from time to time), unless otherwise agreed by the Secretary	Noted
D7	**Management Plan Requirements** The Applicant shall ensure the management plans required under this consent are prepared in accordance with any relevant guidelines, and include: a) detailed baseline data; b) a description of: • the relevant statutory requirements (including any relevant consent, licence or lease conditions); • any relevant limits or performance measures/criteria; and • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Site or any management measures; c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; d) a program to monitor and report on the: • impacts and environmental performance of the Site; and • effectiveness of any management measures (see c) above); e) a contingency plan to manage any unpredicted impacts and their consequences; f) a program to investigate and implement ways to improve the environmental performance of the Site over time; g) a protocol for managing and reporting any: • incidents; • complaints; • non-compliances with statutory requirements; and • exceedances of the relevant limits and/or performance measures / criteria; and h) a protocol for periodic review of the plan.	Previously complete

Schedule D – Environmental Management Reporting – Compliance Requirements		
No	Description	Statement of Compliance
D8	**Revisions to Strategies, Plans and Programs** Within three months of the submission of an: a) audit submitted under Condition D12; b) incident report under Conditions D10 and D11; c) annual review under Condition D9; and/or d) a modification to this consent, the Applicant shall review, and if necessary, revise the strategies, plans, and programs required under this consent to the satisfaction of the Secretary.	Noted
D9	**Annual Review** By the end of December each year, and annually thereafter, the Applicant shall review the environmental performance of the Site, to the satisfaction of the Secretary. This review must: a) be prepared in consultation with PON; b) describe the operations that were carried out in the past year; c) analyse the monitoring results and complaints records of the Site over the past year, including a comparison of these results against the: • relevant statutory requirements, limits or performance measures/criteria; • monitoring results of previous years; and • predictions in the EIS; d) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; e) identify any trends in the monitoring data; f) identify any discrepancies between the impacts predicted in the EIS and the actual impacts of the Site and analyse the potential cause of any significant discrepancies; and g) describe what measure will be implemented over the next year to improve the environmental performance of the Site.	This Annual Review is prepared in accordance with this condition.
D10	**Incident Reporting** Upon detecting an exceedance of the limits/performance criteria in this consent or the occurrence of an incident that causes (or may cause) material harm to the environment, the Applicant shall immediately (or as soon as practical thereafter) notify the Secretary, PON and any other relevant agencies of the exceedance/incident.	Noted
D11	Within seven days of the date of the incident, the Applicant shall provide the Secretary, PON and any relevant agencies with a detailed report on the incident, and such further reports as may be requested	Noted
D12	**INDEPENDENT ENVIRONMENTAL AUDIT** Within one year of the date of this consent, and every three years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the Site. The audit must: a) be carried out by a suitably qualified, experienced and independent audit team whose appointment has been endorsed by the Secretary; b) include consultation with PON; c) assess the environmental performance of the Site, and its effects on the surrounding environment; d) determine whether the Site is complying with the relevant standards, performance measures and statutory requirements, including the Mayfield Concept Plan;	NA Independent Environmental Audit was undertaken during the reporting period. A copy of the IEA was has been previously provided to DPIE compliance.

Schedule D – Environmental Management Reporting – Compliance Requirements		
No	Description	Statement of Compliance
	e) review the adequacy of the EMS for the Site, compliance with this consent, and any other licences and consents; and, if necessary; f) recommend measures or actions to improve the environmental performance of the Site, and/or any plan/program required under this consent.	
D13	Within three months of commissioning the audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, EPA and PON with a response to all recommendations contained in the audit report	Noted
D14	**COMMUNITY CONSULTATION** The Applicant shall contribute to the Community Communication Strategy required for the Mayfield Concept Plan. The level and timing of the contribution by the Applicant shall be determined in consultation with the PON	Community consultation has been undertaken as described in **Section 12.0** of this Annual Review
D15	**ACCESS TO INFORMATION** The Applicant shall make the following information publicly available on its website and keep the information up to date: a) the EIS; b) current statutory consents for the Site; c) approved strategies, plans and programs; d) a summary of all monitoring data for the Site as required under this consent and the Mayfield Concept Plan; e) a complaints register, updated on an annual basis; f) Annual Reviews, Independent Environmental Audits and the Applicant's response to the recommendations; and g) any other matter required by the Secretary. Note: This condition does not require any confidential information to be made available to the public.	This information is available on Stolthaven's website: https://www.stolt-nielsen.com/en/our-businesses/stolthaven-terminals/terminal-network/stolthaven-newcastle

Appendix G

Pipeline Integrity Test Report

Hancock & Owen Services Pty Ltd

PIPELINE PRESSURE TEST CERTIFICATE

Customer Site: Stolthaven	**Certificate No. HO 201023**

Project Name: Wharfline	**System**:
Flow Medium: Diesel	**Location**: Newcastle
Site Drawing No. (s) :	

Piping Code: ASME B31.3	**Design Temp.**: 0-40 deg C

Test Medium: Diesel	**Test Pressure**: 1500 kpa		
Test Duration: 1 hour	**Start** 2.30pm	**Finish**	3.30pm
Test Date: 20/10/23	**Testing Officer: Russell Hancock**		
ISO No.	**LINE No.**		
	Wharfline		

Gauge No: HO01

	Completed By	Approved By	Accepted By
Company	H&O	H&O	Stolthaven
Name	Russell Hancock	Tom Relf	Ryan Duckmanton
Signature			
Date	20/10/23	20/10/23	20/10/23

Appendix H

2023 Waste Management

Environmental - Waste Management

Effluent

Date	Terminal Quantity	Mayfield 7 Quantity	Company
5/01/23	2,500	1,000	Veolia
11/01/23	2,000	500	Veolia
18/01/23	3,500	1,500	Veolia
25/01/23	3,000	1,000	Veolia
2/02/23	3,000	1,500	Veolia
9/02/23	2,500	500	Veolia
16/02/23	3,000	500	Veolia
24/02/23	3,000	1,500	Veolia
2/03/23	2,500	500	Veolia
9/03/23	2,500	1,000	Veolia
16/03/23	3,000	1,000	Veolia
23/03/23	3,000	1,500	Veolia
30/03/23	2,500	1,000	Veolia
6/04/23	2,500	500	Veolia
13/04/23	2,500	1,500	Veolia
20/04/23	4,000	500	Veolia
27/04/23	3,000	1,250	Veolia
4/05/23	2,700	500	Veolia
11/05/23	2,400	1,000	Veolia
18/05/23	3,000	750	Veolia
25/05/23	3,000	1,200	Veolia
1/06/23	3,900	3,000	Veolia
8/06/23	4,000	1,550	Veolia
15/06/23	3,000	1,700	Veolia
22/06/23	3,500	1,300	Veolia
29/06/23	3,500	1,200	Veolia
6/07/23	3,000	1,300	Veolia
13/07/23	3,000	1,400	Veolia
20/07/23	3,200	1,000	Veolia
27/07/23	3,100	2,000	Veolia
3/08/23	3,000	1,200	Veolia
10/08/23	3,000	900	Veolia
17/08/23	3,500	700	Veolia
24/08/23	3,000	1,100	Veolia
31/08/23	3,500	600	Veolia
7/09/23	3,500	2,200	Veolia
14/09/23	3,200	1,500	Veolia
22/09/23	3,500	1,200	Veolia
28/09/23	3,000	1,000	Veolia
7/10/23	3,200	1,000	Veolia
12/10/23	3,500	1,000	Veolia
19/10/23	3,300	1,000	Veolia
26/10/23	4,000	500	Veolia
2/11/23	4,800	800	Veolia
9/11/23	4,000	1,000	Veolia
16/11/23	3,500	700	Veolia
23/11/23	3,000	800	Veolia
30/11/23	3,500	1,200	Veolia
7/12/23	3,000	800	Veolia
14/12/23	3,000	400	Veolia
21/12/23	3,000	500	Veolia
28/12/23	1,700	300	Veolia

Hazardous Waste (Liquid)

Date	Quantity	Transfers	Company
19/01/23	0	18,000	JLP Transfer
7/02/23	0	21,000	JLP Transfer
16/02/23	0	23,530	JLP Transfer
24/02/23	0	28,000	JLP Transfer
14/03/23	0	20,000	JLP Transfer
4/04/23	0	21,200	JLP Transfer
18/04/23	20,000	0	Cleanaway
24/04/23	0	19,000	JLP Transfer
10/05/23	0	22,000	JLP Transfer
5/06/23	0	23,000	JLP Transfer
26/06/23	0	21,500	JLP Transfer
24/07/23	0	23,000	JLP Transfer
9/08/23	0	21,000	JLP Transfer
24/08/23	0	20,795	JLP Transfer
7/09/23	0	25,500	JLP Transfer
19/09/23	0	25,000	JLP Transfer
9/10/23	0	24,000	JLP Transfer
26/10/23	0	21,000	JLP Transfer
3/11/23	19.04 Tonne	0	Veolia
15/11/23	0	18,000	JLP Transfer
6/12/23	0	20,000	JLP Transfer
14/12/23	0	24,000	JLP Transfer
21/12/23	0	23,000	JLP Transfer

2018

Hazardous Waste (Solid)

Date	Bin 1,100lt	Bin 660lt	Drums (Empty) 20lt	Drums (Empty) 200lt	Soil (Removed from Site - kg)	Other	Company
6/01/23	1	1	0	0	0	0	A.E.S
31/01/23	1	1	0	0	0	0	A.E.S
10/03/23	1	1	0	4	0	0	A.E.S
28/03/23	0	1	0	0	0	0	A.E.S
17/04/23	1	0	0	0	0	0	A.E.S
23/05/23	1	1	0	0	0	0	A.E.S
19/06/23	0	1	0	0	0	0	A.E.S
11/07/23	1	1	0	0	0	0	A.E.S
9/08/23	1	1	0	0	0	0	A.E.S
29/08/23	0	1	0	0	0	0	A.E.S
31/08/23	0	0	0	4	0	0	A.E.S
28/09/23	0	1	0	0	0	0	A.E.S
24/10/23	0	1	0	1	0	0	A.E.S
1/11/23	1	1	0	0	0	0	A.E.S
23/11/23	0	1	0	0	0	0	A.E.S
19/12/23	0	1	0	2	0	0	A.E.S

General - Recycled & Green Waste (Non Hazardous)

Date	General Waste Bin (1.5 M3)	Recycled Bin Co-Mingled 1,100 lt	Printer Cartridge Recycle (16 kg)	Vegetation (kg)	Other (ton)	Company	Recycling Review Period - Annually
3/01/23	1	0	0	0	0	Cleanaway	
10/01/23	1	0	0	0	0	Cleanaway	
17/01/23	1	0	0	0	0	Cleanaway	
18/01/23	0	1	0	0	0	Cleanaway	
24/01/23	1	0	0	0	0	Cleanaway	
31/01/23	1	0	0	0	0	Cleanaway	
1/02/23	0	1	0	0	0	Cleanaway	
7/02/23	1	0	0	0	0	Cleanaway	
9/02/23	0	0	1	0	0	Planet Ark	Post Office
14/02/23	1	0	0	0	0	Cleanaway	
15/02/23	0	1	0	0	0	Cleanaway	
21/02/23	1	0	0	0	0	Cleanaway	
28/02/23	1	0	0	0	0	Cleanaway	
1/03/23	0	1	0	0	0	Cleanaway	
7/03/23	1	0	0	0	0	Cleanaway	
14/03/23	1	0	0	0	0	Cleanaway	
15/03/23	0	1	0	0	0	Cleanaway	
21/03/23	1	0	0	0	0	Cleanaway	
28/03/23	1	0	0	0	0	Cleanaway	
29/03/23	0	1	0	0	0	Cleanaway	
4/04/23	1	0	0	0	0	Cleanaway	
11/04/23	1	0	0	0	0	Cleanaway	
12/04/23	0	1	0	0	0	Cleanaway	
18/04/23	1	0	0	0	0	Cleanaway	
25/04/23	1	0	0	0	0	Cleanaway	
26/04/23	0	1	0	0	0	Cleanaway	
2/05/23	1	0	0	0	0	Cleanaway	
9/05/23	1	0	0	0	0	Cleanaway	
10/05/23	0	1	0	0	0	Cleanaway	
16/05/23	1	0	0	0	0	Cleanaway	
23/05/23	1	0	0	0	0	Cleanaway	
24/05/23	0	1	0	0	0	Cleanaway	
30/05/23	1	0	0	0	0	Cleanaway	
6/06/23	1	0	0	0	0	Cleanaway	
7/06/23	0	1	0	0	0	Cleanaway	
13/06/23	1	0	0	0	0	Cleanaway	
20/06/23	1	0	0	0	0	Cleanaway	
21/06/23	0	1	0	0	0	Cleanaway	
27/06/23	1	0	0	0	0	Cleanaway	
29.06.23	0	0	0	0	26.66	Veolia	
4/07/23	1	0	0	0	0	Cleanaway	
5/07/23	0	1	0	0	0	Cleanaway	
11/07/23	1	0	0	0	0	Cleanaway	
18/07/23	1	0	0	0	0	Cleanaway	
19/07/23	0	1	0	0	0	Cleanaway	
25/07/23	1	0	0	0	0	Cleanaway	
1/08/23	1	0	0	0	0	Cleanaway	
2/08/23	0	1	0	0	0	Cleanaway	
9/08/23	1	0	0	0	0	Cleanaway	
15/08/23	1	0	0	0	0	Cleanaway	
29/08/23	1	0	0	0	0	Cleanaway	
30/08/23	0	1	0	0	0	Cleanaway	
5/09/23	1	0	0	0	0	Cleanaway	
12/09/23	1	0	0	0	0	Cleanaway	
13/09/23	0	1	0	0	0	Cleanaway	
19/09/23	1	0	0	0	0	Cleanaway	
26/09/23	1	0	0	0	0	Cleanaway	
3/10/23	1	0	0	0	0	Cleanaway	
10/10/23	1	0	0	0	0	Cleanaway	
11/10/23	0	1	0	0	0	Cleanaway	
17/10/23	1	0	0	0	0	Cleanaway	
24/10/23	1	0	0	0	0	Cleanaway	
25/10/23	0	1	0	0	0	Cleanaway	
1/11/23	1	0	0	0	0	Cleanaway	
7/11/23	1	0	0	0	0	Cleanaway	
8/11/23	0	1	0	0	0	Cleanaway	
14/11/23	1	0	0	0	0	Cleanaway	
21/11/23	1	0	0	0	0	Cleanaway	
22/11/23	0	1	0	0	0	Cleanaway	
28/11/23	1	0	0	0	0	Cleanaway	
5/12/23	1	0	0	0	0	Cleanaway	
6/12/23	0	1	0	0	0	Cleanaway	
12/12/23	1	0	0	0	0	Cleanaway	
19/12/23	1	0	0	0	0	Cleanaway	
20/12/23	0	1	0	0	0	Cleanaway	
26/12/23	1	0	0	0	0	Cleanaway	RDK Reviewed - see comments

Appendix I

IEA response to recommendations

Department of Planning and Environment

NSW GOVERNMENT

Mr Ryan Duckmanton
Site Manager
Stolthaven Newcastle
Awabakal Country
Lot 2 Steelworks Road
MAYFIELD NORTH NSW 2304

20/07/2022

Dear Mr Duckmanton

Stolthaven Mayfield Terminal (SSD-7065)
2022 Independent Environmental Audit

Reference is made to the Independent Environmental Audit (IEA) report and Response to Audit Recommendations (RAR) for the Stolthaven Mayfield Terminal , submitted as required by Schedule 4 condition 9 of development consent SSD-6664 and condition D10 of development consent SSD-7065 (the consents) to the Department of Planning and Environment (the department) on 28 April 2022.

The department considers the IEA report to generally satisfy the reporting requirements of the consent/approval. Please note that acceptance of this report is not an endorsement of the compliance status of the project.

Non-compliances identified in the IEA have been assessed in accordance with the department's Compliance Policy with the department on this occasion, determining to record the breaches with no further enforcement action. However, please note that recording the breach does not preclude the department from taking alternative enforcement action, should it become apparent that an alternative response is more appropriate.

Please make a copy of the IEA report and RAR available on the company website, as required by condition D15 of SSD-7065.

Finally, please include a status update for all actions provided in the RAR in the next Annual Review, until all actions are completed.

Should you wish to discuss the matter further, please contact Ann Hagerthy, Senior Compliance Officer on 02 6575 3407 or compliance@planning.nsw.gov.au

Yours sincerely

HWatters

Heidi Watters
Team Leader Northern
Compliance

As nominee of the Planning Secretary

Stolthaven Australasia Pty Ltd

A subsidiary of
Stolt-Nielsen Limited

PO Box 304
Wickham, NSW 2293
Australia

Tel: +61 3 498 762 177
www.stolt-nielsen.com

28 April 2022

NSW Government
Department of Planning & Environment
PO Box 3145
Singleton NSW 2330
compliance@planning.nsw.gov.au

Attention: Heidi Watters

Subject: Independent Environmental Audit Response to Recommendation
Reference : Development Consents SSD 6664 & SSD 7065

This letter is provided in response to the recommendations noted at Section 4 of the April 2022 Independent Environmental Audit (Audit) of the Stolthaven Fuel Storage Facility (the Facility) at Steelworks Rd, Mayfield, NSW. The Audit is required under the Conditions of Project Approval for SSD 6664, Schedule 4, Condition 8 (consent surrendered during the audit period) and SSD 7065 Schedule D, Condition D12, outlining Stolthaven's response to the recommendation contained within the Audit. Stolthaven Responses to Recommendations of the Audit are as follows:-

Condition ID	Recommendation	Response
SSD 7065 – B2 SSD7065 – D7	Include a description of the complaints management in the LMP at the next update or reference to the procedure in the Environmental Management Plan.	The Stolthaven Landscape Management Plan to be amended to include complaints management at the next review date – June 2022.
SSD 6664 – 2-2 SSD 6664 – 4-2	Include a description of the complaints management in the LMP at the next update or reference to the procedure in the Environmental Management Plan.	As above
SSD 7065 – C44	Undertake a review of the SWMP prior to commencement of further works under SSD 7065 to ensure it is consistent with the *Managing Urban Stormwater* Guidelines, including the addition of figures where relevant.	Noted, plan to be reviewed prior to commencement of further works under SSD 7065. Action recorded site's action register.
SSD 7065 – C45	Given the results of the groundwater monitoring as described in **Section 3.6.1**, it is recommended that the WMP is updated in consultation with the Site Auditor and the PON to include specific triggers for pH (time and/or value based) that clearly define when further investigations or actions are required.	Stolthaven will review in consultation with the Site Auditor & PoN as recommended. The Water Management Plan will be amended following any agreed outcome.

If you require any additional information or clarification in relation to the above, please contact the under-signed by email on R.Duckmanton@stolt.com

Kind Regards,

Ryan Duckmanton
Stolthaven Newcastle – Site Manager
Mob: 0498 762 177 Email: R.Duckmanton@stolt.com

ghd.com

The Power of Commitment