Stolthaven Annual Review 2021

Stolthaven Australia Pty Ltd

14 April 2022

→ **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
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 2021 Annual Review to assess the environmental performance of the fuel import storage and dispatch facility located at the former BHP Steelworks, approximately 5 km north west 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) dated 23 February 2017. The 2021 Annual Review includes the reporting period from 1 January to 31 December 2021.

The site location and approved terminal layout are presented in Figure 1 and Figure 2 respectively in Appendix A.

1.1 Objective

The objective was to assess the environmental performance to the satisfaction of the Director General of DPE to comply with Condition D9 of SSD_7065 and present results in the 2021 Annual Review:

1.2 Scope of works

The scope of work comprised:

– An overview of the site.
– A description of the operations undertaken throughout 2021 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 2021a, 2021b, 2021c and 2021d).
– 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 AECOM. This report has been based on the previous 2020 Annual Environmental Management Report (AEMR) (AECOM 2020) and for consistency with previous year reporting we have maintained a similar format level of content for ease of DPE review.

1.3 Consultation

A copy of this report was provided to the Port of Newcastle (PON) on 22 February 2022 to review prior to finalisation. Following review of the draft report PON confirmed on 1 March 2022 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(s) 14 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 is 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 (Three Ports SEPP 2013)
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)
1	Diesel	36.6	17.1	17,703
2	Diesel	36.6	17.1	17,695
3	Diesel	36.6	17.1	17,691
4	Biodiesel	7.6	12.0	535
5	Diesel	36.6	17.1	17,584
6	Diesel	36.6	17.1	17,611
7	Biodiesel	18.0	17.0	4,242
8	Diesel	36.6	17.1	17,998
9	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 from GHD (2021) in Table 2.4.

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 2021 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 no the berth itselt) 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 DPE 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 DPE 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.

DPE 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 currently remains at 1,300 ML. This has not changed during this reporting period.

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 DPE 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 DPE 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 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.

EPL 20193 has most recently been 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.

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 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 (Three Ports) 2013* (Three Ports 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 2021

3.2.1 EPL

The most recent variation to EPL 20193 was issued on 27 August 2021 as described in Section 2.6.4. The Application requested the update and removal of references to annual petroleum throughput limits and removal of throughput trigger for Vapour Recovery Unit (VRU) requirement as implementation is not possible with no bulk flammable storage onsite.

3.2.2 Other operational changes

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

– Due to COVID-19, Stolthaven staff undertook split shifts to reduce potential exposure and ensure continuation of safe business. Stolthaven Newcastle is also a part of the NSW Health Maritime COVID-19 group which hold regular Port user meetings.
– Tank NN1 was taken out of service for routine maintenance 10 year off stream inspection. The tank was cleaned and inspected including thickness testing to American Petroleum Institute *API 653 Aboveground Storage Tank Inspector Certification Program*. The tank internal floor paint was removed, minor repairs undertaken and re-painted. Brackets have been installed for future replacement of the stairway in 2022.
– A plan has been agreed in consultation with the Mayfield Concept Area Site Auditor and Port of Newcastle to reuse material stockpiled on Lot 1 following the Mayfield 7 berth construction (level 1 material.) The material will be used to form a roadway at the northwest end of Lot 1. Works are planned for 2022.
– Stolthaven Newcastle has been included in the governments Boosting Australia's Diesel Storage Program, to secure Australia's long-term fuel supply. Stolthaven is currently working with the Commonwealth to progress the project. Future development will occur under SSD 7065 and in consultation with the Department of Planning and Environment and EPA.

3.3 Site management plans and strategies

An Independent Environmental Audit (IEA) is required to be undertaken every three years. The last IEA was undertaken during 2019 (as reported in GHD 2020. There are no remaining actions from the 2019 IEA that required action during the reporting period.

Further details outlining the outcomes and follow-up actions from the IEA are provided in Section 13.

4. Groundwater

Groundwater quality at the site is managed in accordance with a groundwater monitoring program (GMP) (AECOM 2021) 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 proposed 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.

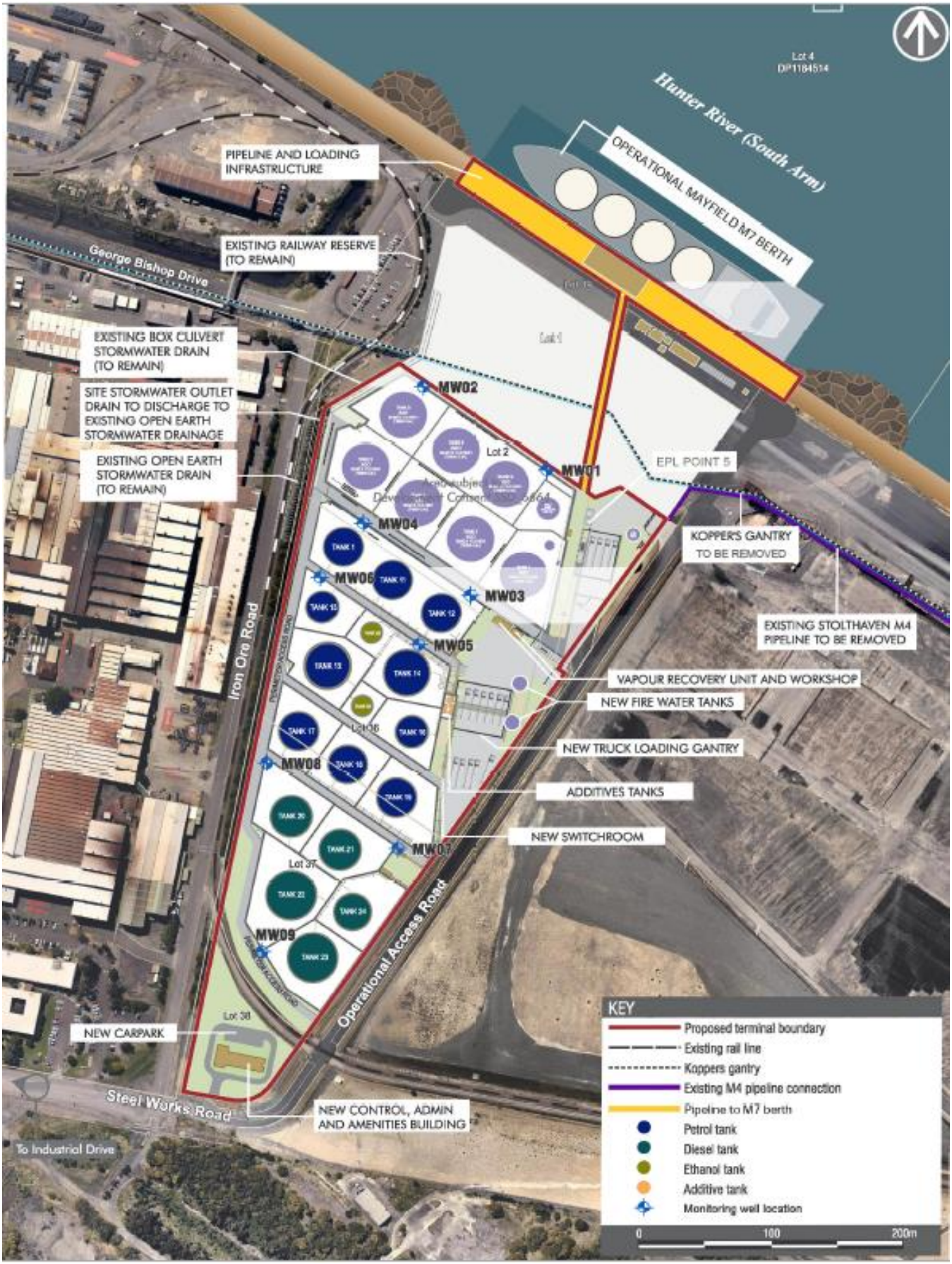


Figure 4.1 Groundwater monitoring well locations

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 2021 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 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	9.08	9.05	8.79	9.16
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 to 380	-	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 6.2 Groundwater monitoring results - MW02

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	7.60	7.66	7.55	7.60
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 to 380	-	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 6.3 Groundwater monitoring results – MW03

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	7.61	7.78	7.77	7.85
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 to 380	-	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 6.4 Groundwater monitoring results – MW04

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	7.78	7.89	7.74	7.28
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 to 380	-	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 6.5 Groundwater monitoring results – MW05

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	8.48	9.21	8.80	9.30
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 to 380	-	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 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	7.03	7.36	7.66	7.37
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 to 380	-	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 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	8.00	9.48	9.73	9.16
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 to 380	-	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 6.8 Groundwater monitoring results – MW08

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	7.00	7.22	7.05	7.26
BTEX (µg/L)							
Benzene	<1 to 5	600	1	4,290	6,560	11,500	886
Ethylbenzene	<2	80	2	<20	<50	<50	<5
Toluene	<2	180	2	319	312	605	76
Xylene (o)	<2	350	2	42	52	78	13
Xylene (m & p)	<2	75[1]	2	111	84	175	35
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	5,340	8,120	11,500	1,040
C6-C10 minus BTEX	<20	-	20				
>C10-C16 Fraction	<100	-	100	6,290	8,460	12,200	1,040
>C10-C16 Fraction minus naphthalene	<100 to 380	-	100	1,240	2,870	5,290	<100
>C16-C34 Fraction	<100	-	100	3,660	3,540	6,880	2,240
>C34-C40 Fraction	<100	-	100	110	<100	<100	120

[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 2021	Q2 2021	Q3 2021	Q4 2021
pH	7.0 - 9.79		0.01	8.00	7.37	7.91	6.88
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 to 380	-	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, 35data points are available for trend analysis for MW01 – MW04, with monitoring having commenced in October 2013 and 18 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 8.79 to 9.16 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 within background concentrations throughout the monitoring program.

BTEX concentrations remained below the LOR throughout the 2021 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2021 monitoring period, consistent with previous concentrations, exhibiting no significant trends. The only exception being a recorded concentration of 2230 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.

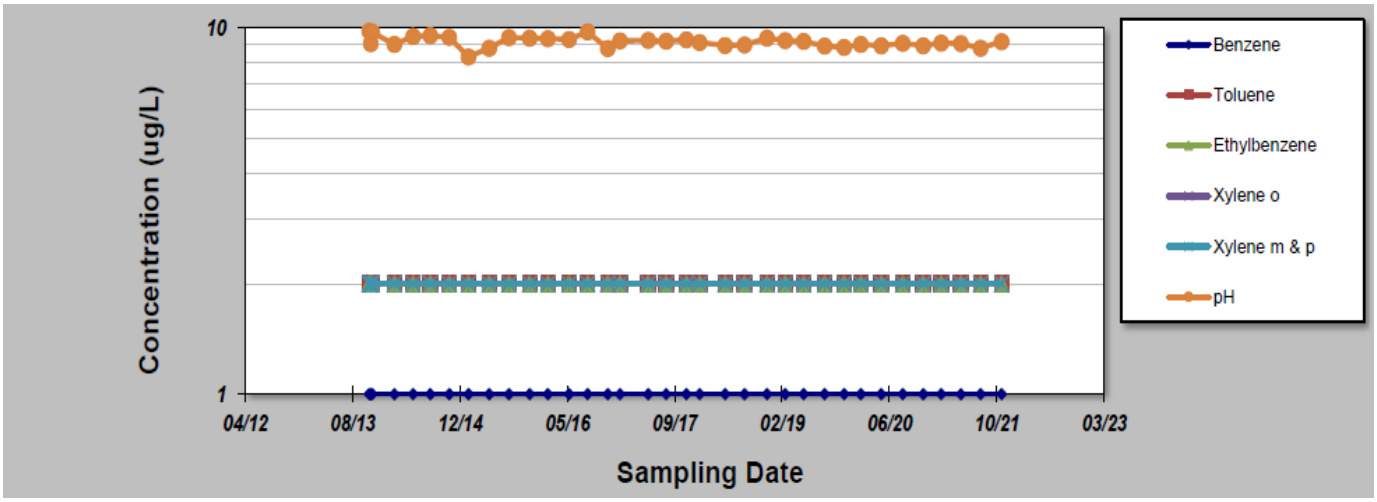


Figure 6.1 *Statistical trend analysis of MW01 – BTEX and pH (reference AECOM2021d)*

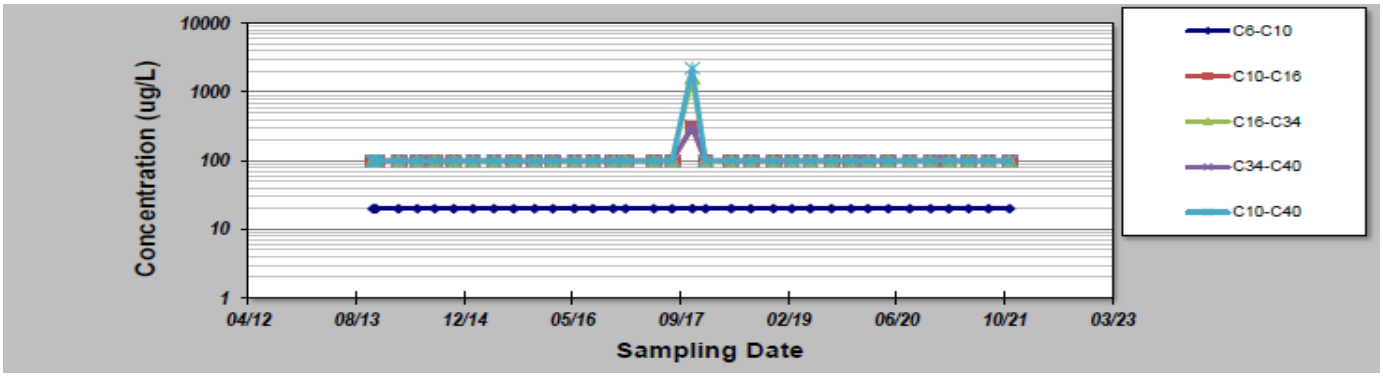


Figure 6.2 *Statistical trend analysis of MW01 – TRH (reference AECOM 2021)*

6.1.2 MW02

Recorded pH levels at MW02 for this reporting period ranged from 7.55 to 7.66 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 within background concentrations throughout the monitoring program.

BTEX concentrations remained below the LOR throughout the 2021 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 decreasing benzene trend.

TRH concentrations remained below the LOR throughout the 2021 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.

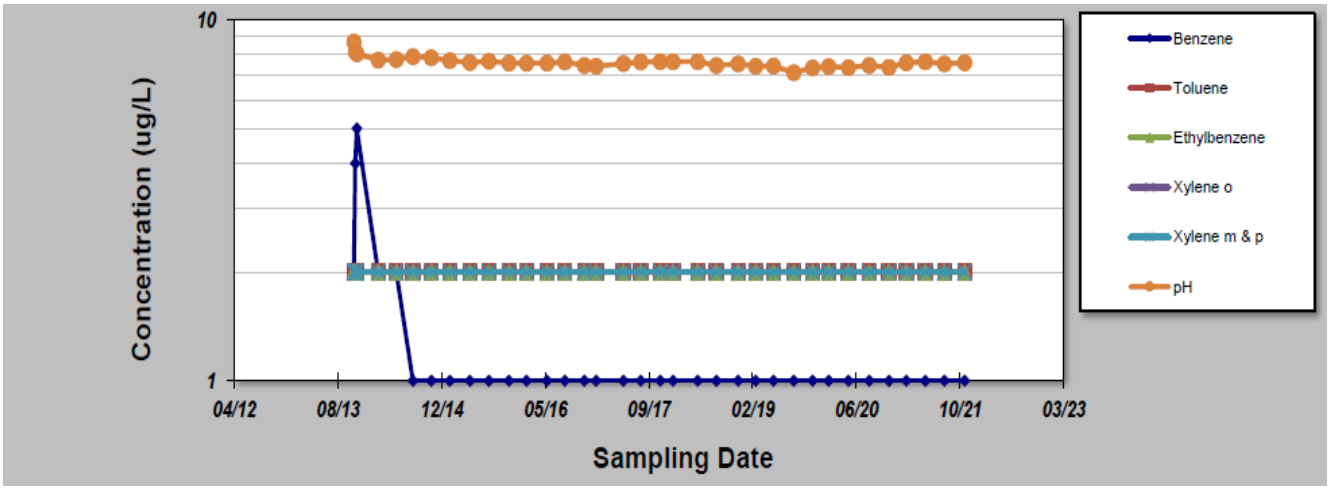


Figure 6.3 Statistical trend analysis of MW02 – BTEX and pH (reference AECOM 2021d)

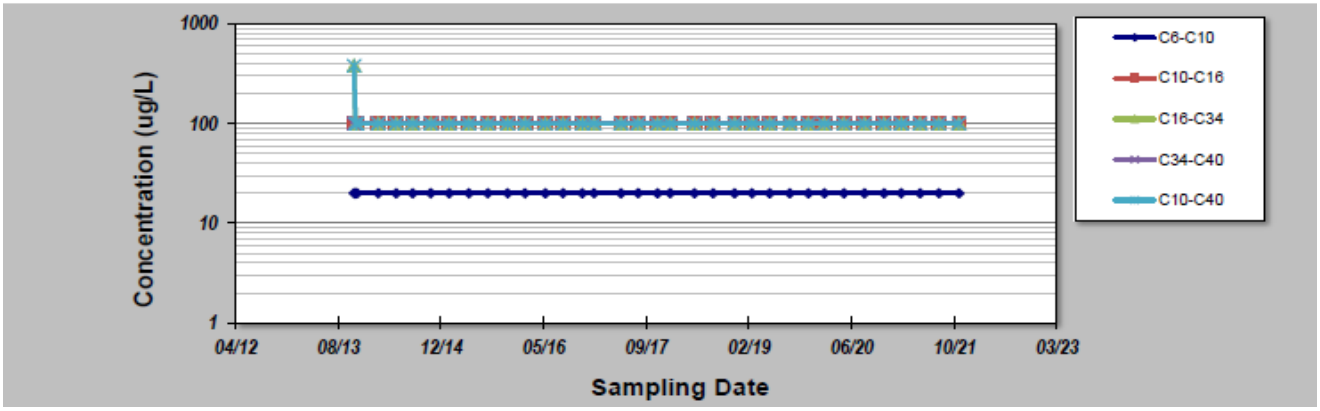


Figure 6.4 Statistical trend analysis of MW02 – TRH (reference AECOM 2021d)

6.1.3 MW03

Recorded pH levels at MW03 for this reporting period ranged from 7.61 to 7.85 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 within background concentrations throughout the monitoring program.

BTEX concentrations remained below the LOR throughout the 2021 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2021 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.

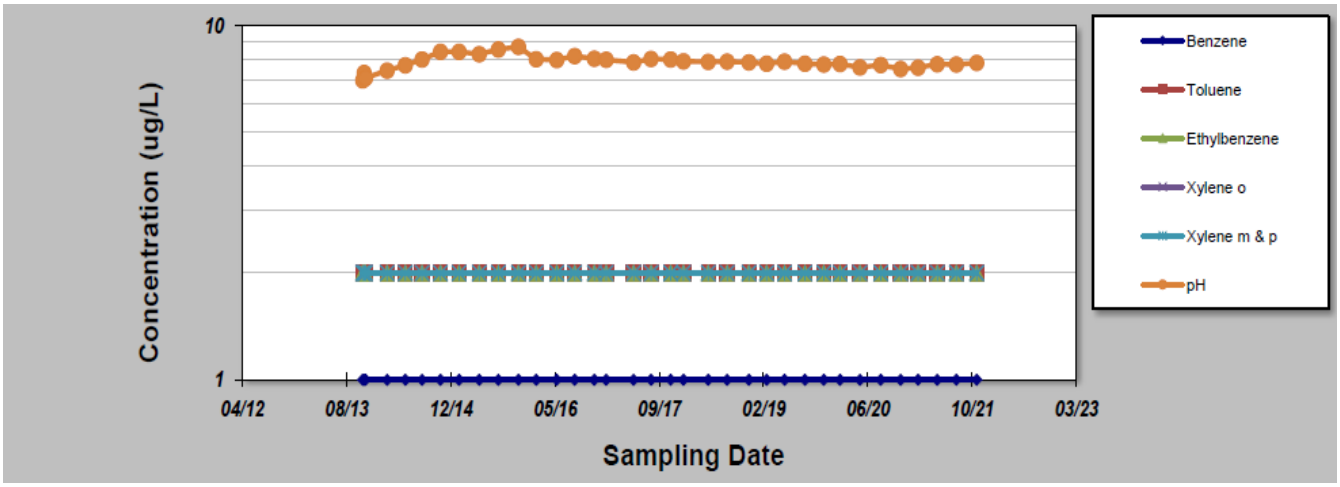


Figure 6.5 Statistical trend analysis of MW03 – BTEX and pH (reference AECOM 2021d)

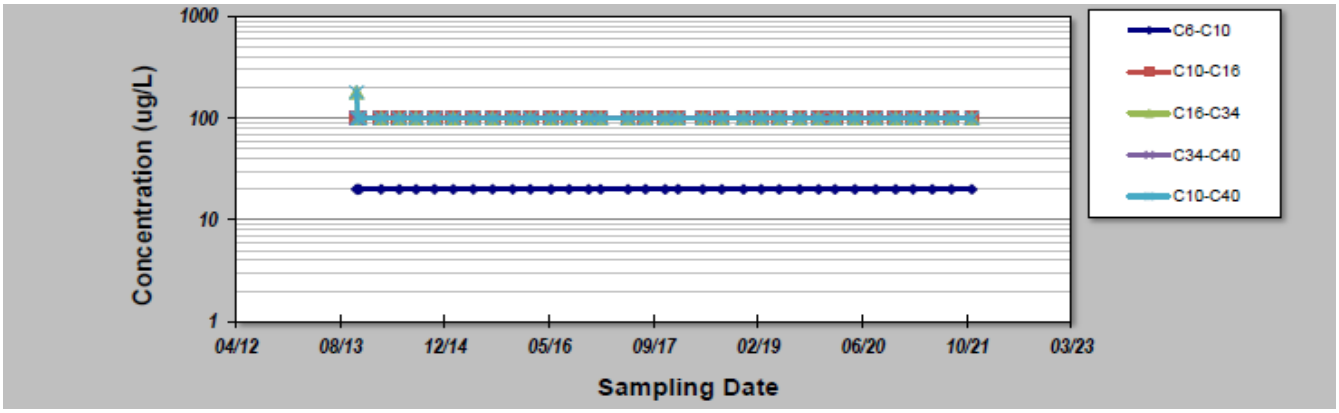


Figure 6.6 Statistical trend analysis of MW03 – TRH (reference AECOM 2021d)

6.1.4 MW04

Recorded pH levels at MW04 for this reporting period ranged from 7.28 to 7.89 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 within background concentrations throughout the monitoring program.

BTEX concentrations remained below the LOR throughout the 2021 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2021 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.

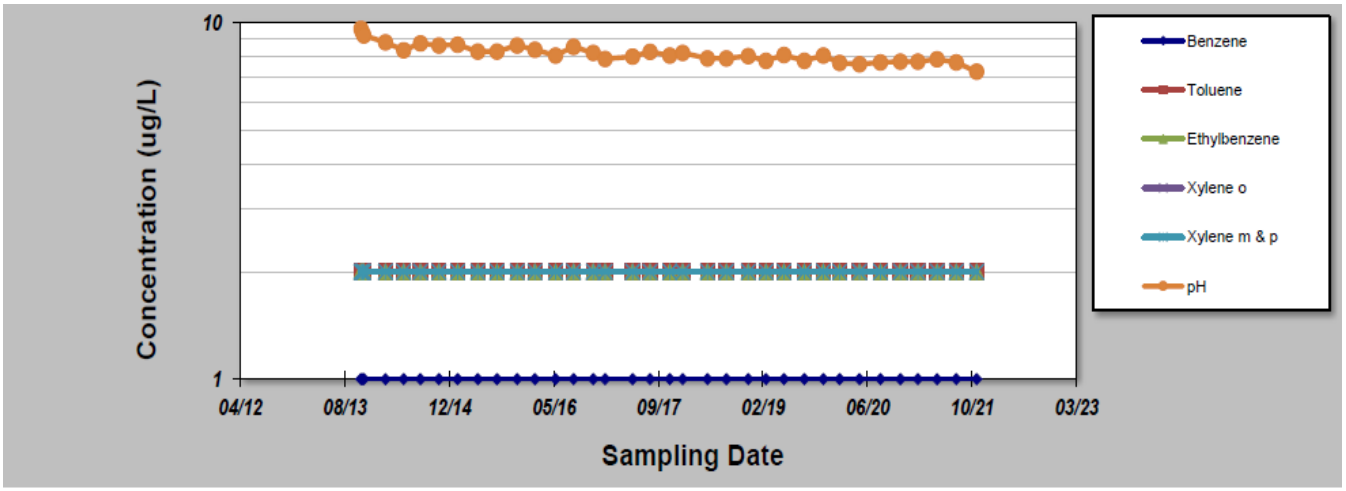


Figure 6.7 Statistical trend analysis of MW04 – BTEX and pH (reference AECOM 2021d)

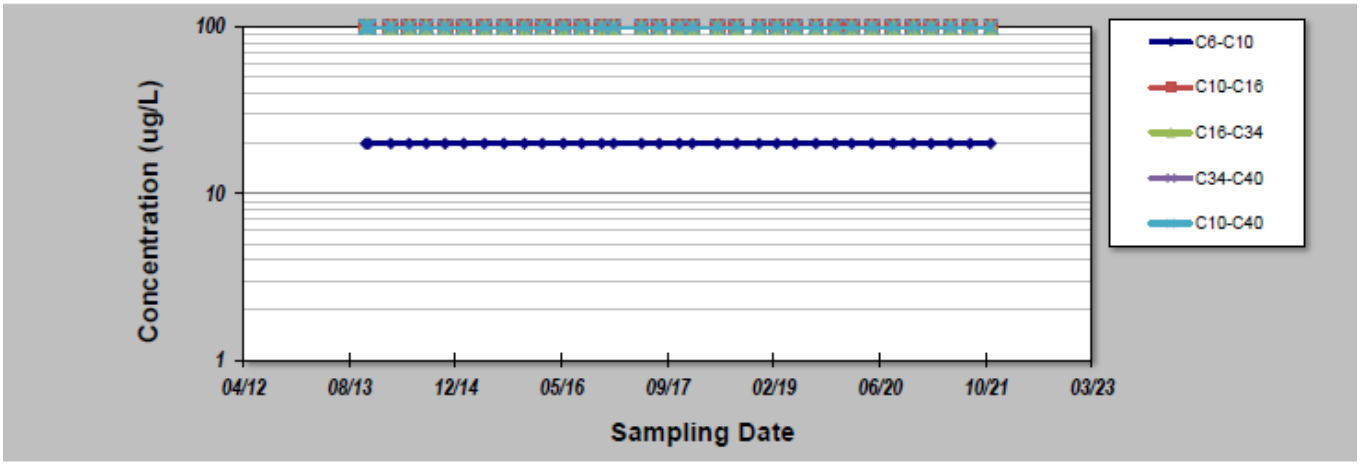


Figure 6.8 Statistical trend analysis of MW04 – TRH (reference AECOM 2021d)

6.1.5 MW05

Recorded pH levels at MW05 for this reporting period ranged from 8.48 to 9.30 and were slightly below 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 2021 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2021 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.

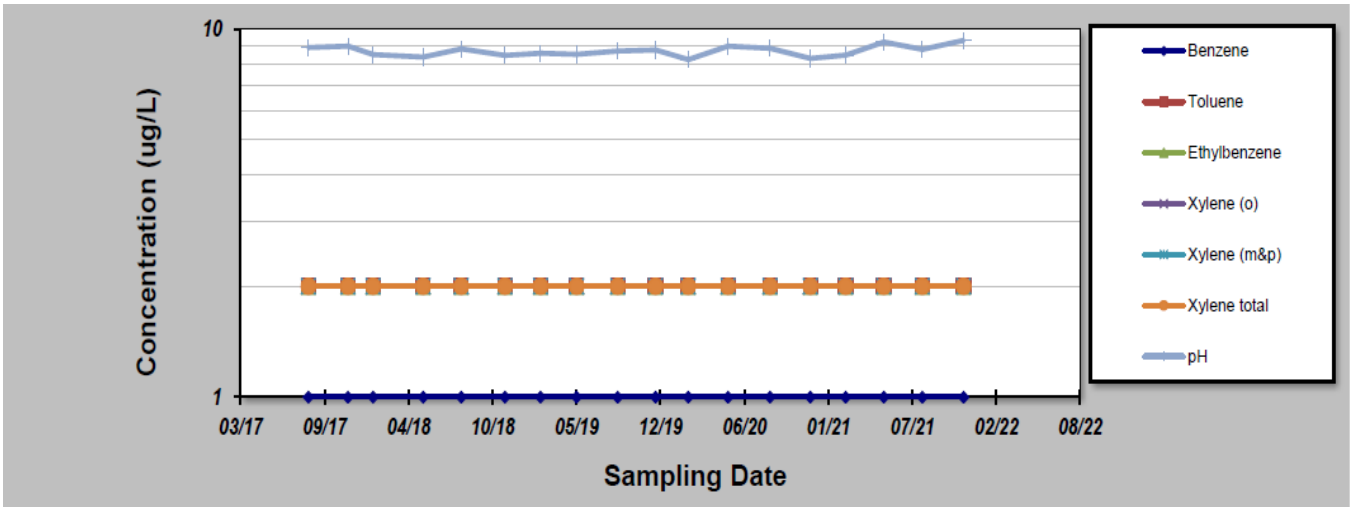


Figure 6.9 Statistical trend analysis of MW05 – BTEX and pH (reference AECOM 2021d)

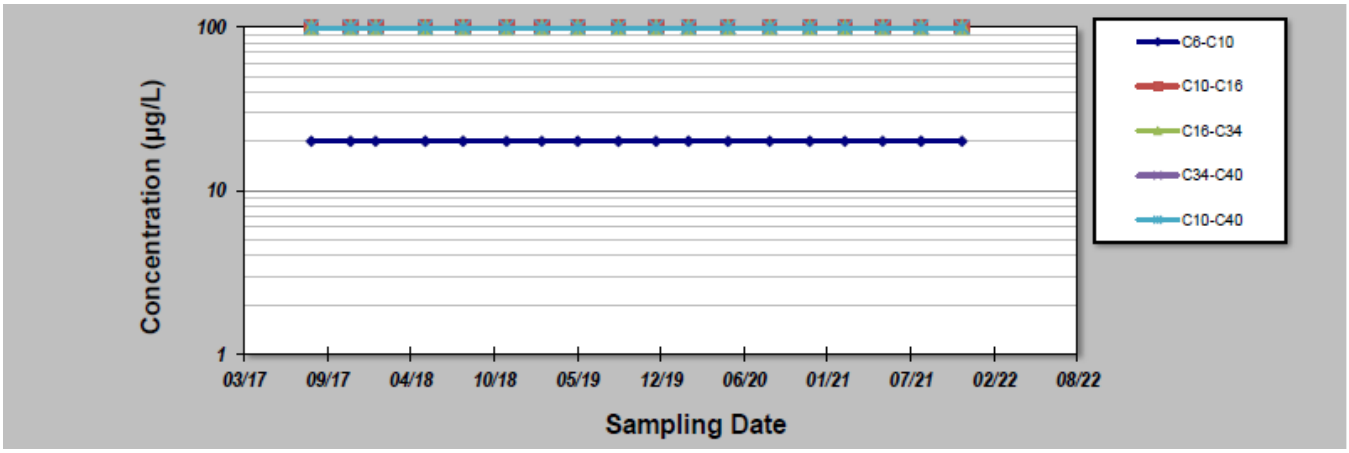


Figure 6.10 Statistical trend analysis of MW05 – TRH (reference AECOM 2021d)

6.1.6 MW06

Recorded pH levels at MW06 for this reporting period ranged from 7.03 to 7.66 and were below the previously detected range for this location. Mann Kendall trend analysis reported decreasing trends for pH levels. The time series graph supports the overall decreasing trend at this location which may require further assessment.

BTEX concentrations remained below the LOR throughout the 2021 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2021 monitoring period, consistent with all previous concentrations. Statistical analysis reported a stable or no trend for all TRH fractions.

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

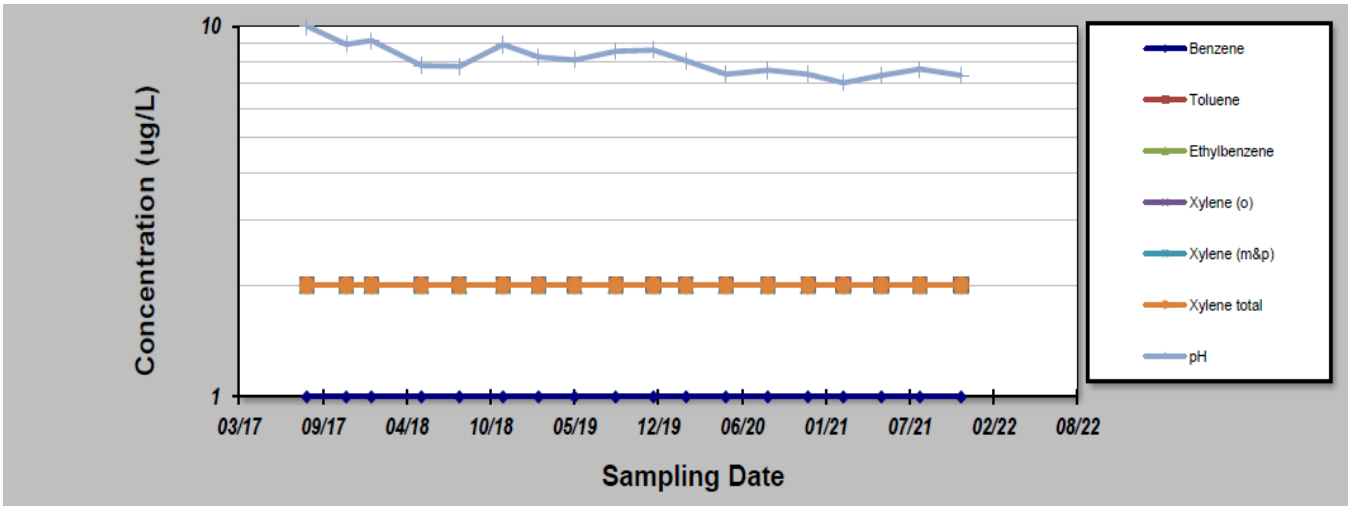


Figure 6.11 Statistical trend analysis of MW06 – BTEX and pH (reference AECOM 2021d)

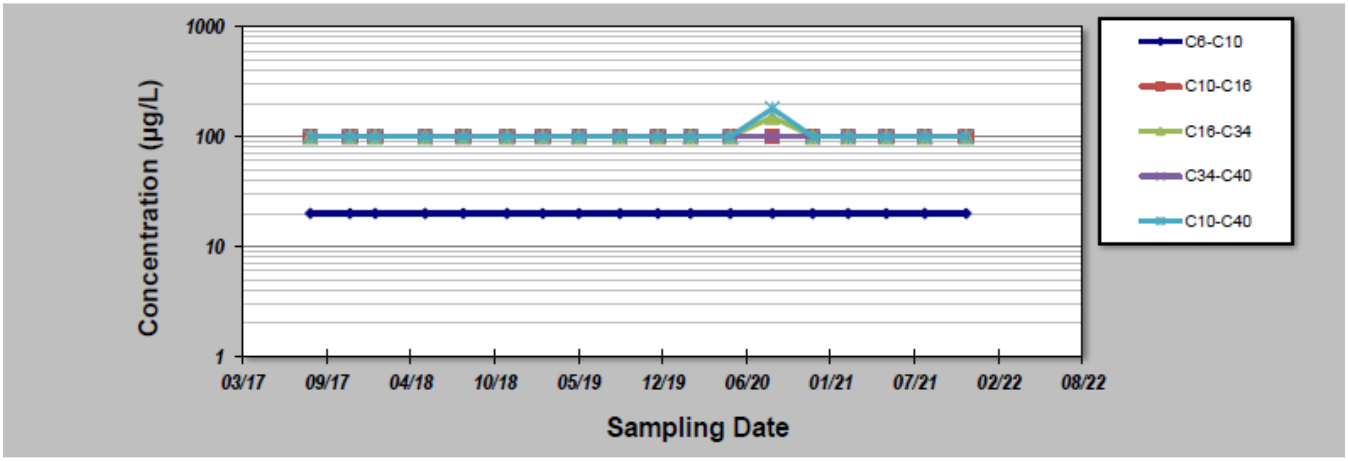


Figure 6.12 Statistical trend analysis of MW06 – TRH (reference AECOM 2021d)

6.1.7 MW07

Recorded pH levels at MW07 for this reporting period ranged from 8.00 to 9.73 and were within or slightly below 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 2021 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2021 monitoring period, consistent with all previous concentrations. 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.

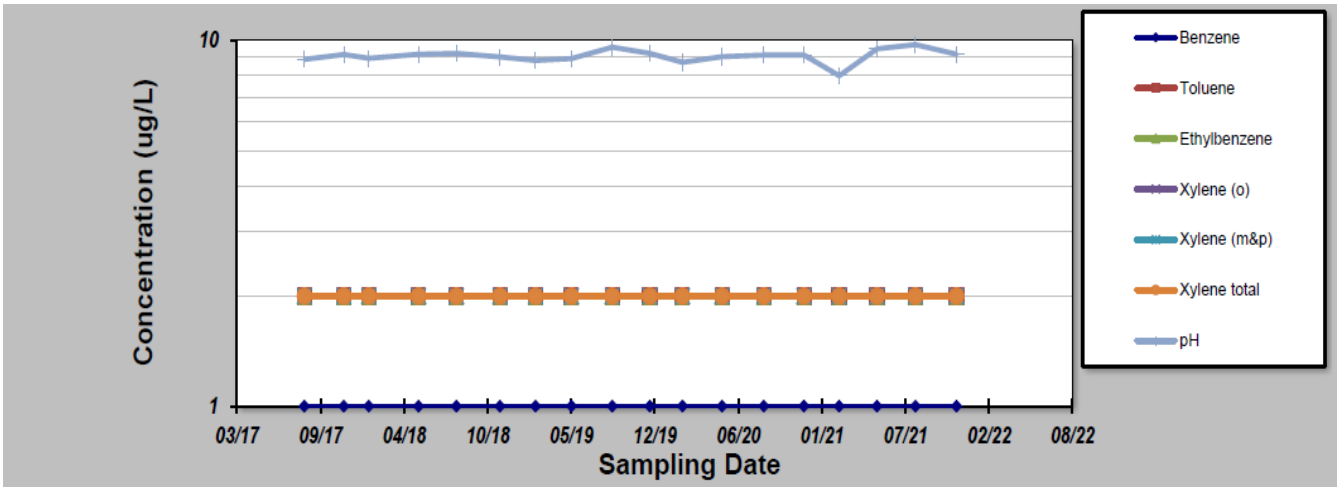


Figure 6.13 Statistical trend analysis of MW07 – BTEX and pH (reference AECOM 2021d)

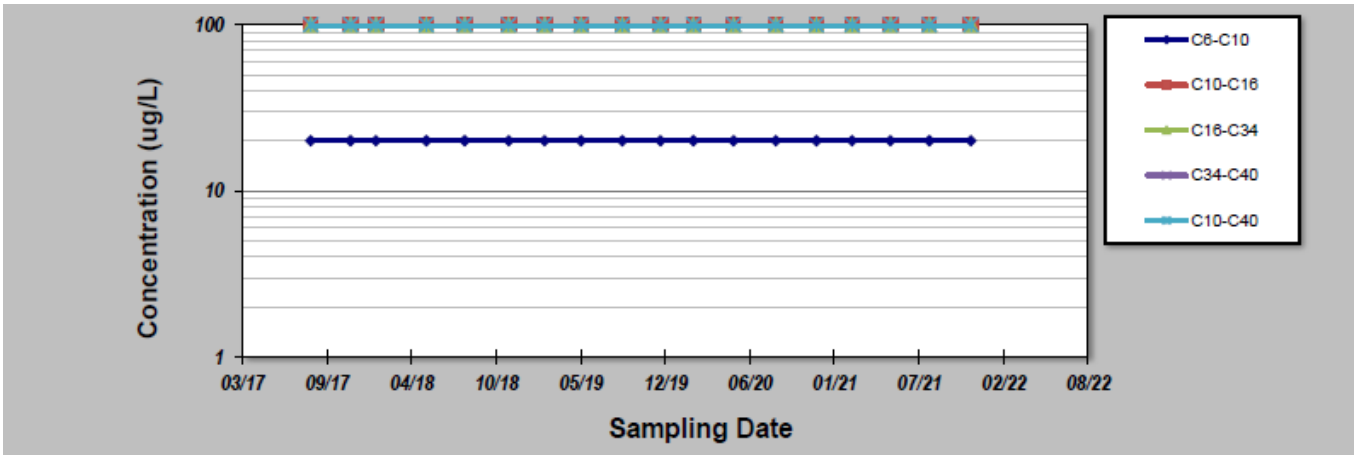


Figure 6.14 Statistical trend analysis of MW07 – TRH (reference AECOM 2021d)

6.1.8 MW08

Recorded pH levels at MW08 for this reporting period ranged from 7.00 to 7.26 and were within or slightly below the previously detected range at this location. Mann Kendall trend analysis reported no trend for pH levels.

Suspected DNAPL was encountered at MW08. DNAPL comprised “coal tar”-like material and had a hydrocarbon-like odour, with an approximate thickness of 0.005m. Baseline analytical results have identified consistent exceedances of the adopted GAC for Benzene, Toluene and meta & para Xylenes at MW08 and elevated TRH concentrations, also at MW08. CoPC detected at MW08 are inferred to be residual contamination impacts believed to be associated with the remediation of the former BHP Steelworks site and unrelated to Stolthaven operations.

As stated, BTEX concentrations were all above the previously detected range at MW08 during the 2021 monitoring period with the following exceedances of the GAC recorded:

– Benzene in all four quarters ranging between 886 µg/L and 11,500 µg/L
– Toluene in all quarters 1, 2 and 3 ranging between 312 µg/L and 605 µg/L
– Xylene (m & p) in quarters 1, 2 and 3 ranging between 84 µg/L and 175 µg/L.

Stolthaven (in conjunction with PON) installed two additional groundwater monitoring wells upgradient and downgradient of MW08 to investigate the extent of the contamination plume. Investigations in 2018 at MW08A and MW08B found that contamination impacts are limited to the area of MW08 and were sufficiently delineated to the north-east (MW08A) and south (MW08B). These additional wells were not monitored during the 2021 monitoring period and are expected to be decommissioned during development of the Proposed Expansion Area which is currently vacant land. If increasing trends continue to be reported at MW08 in future rounds, further investigations may be required.

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

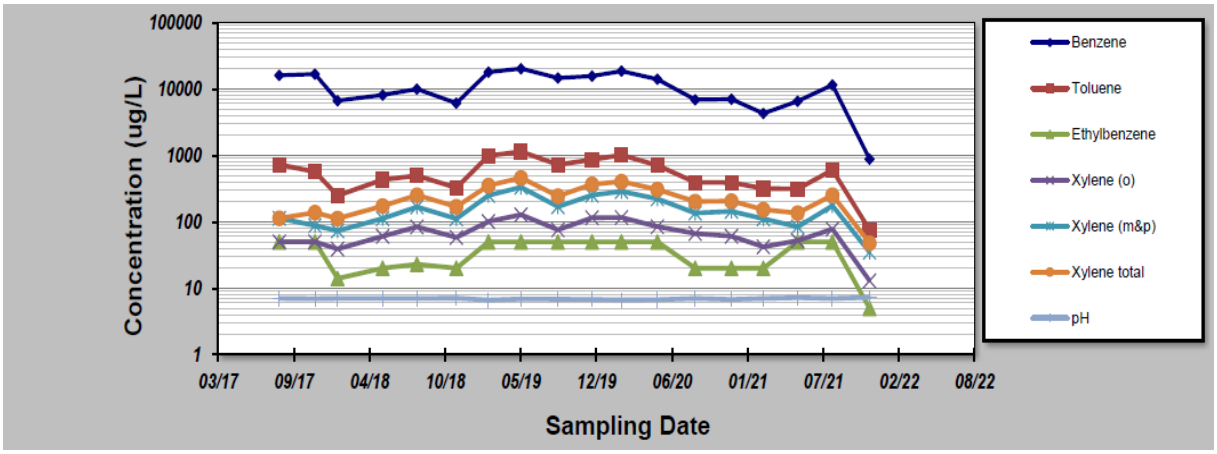


Figure 6.15 Statistical trend analysis of MW08 – BTEX and pH (reference AECOM 2021d)

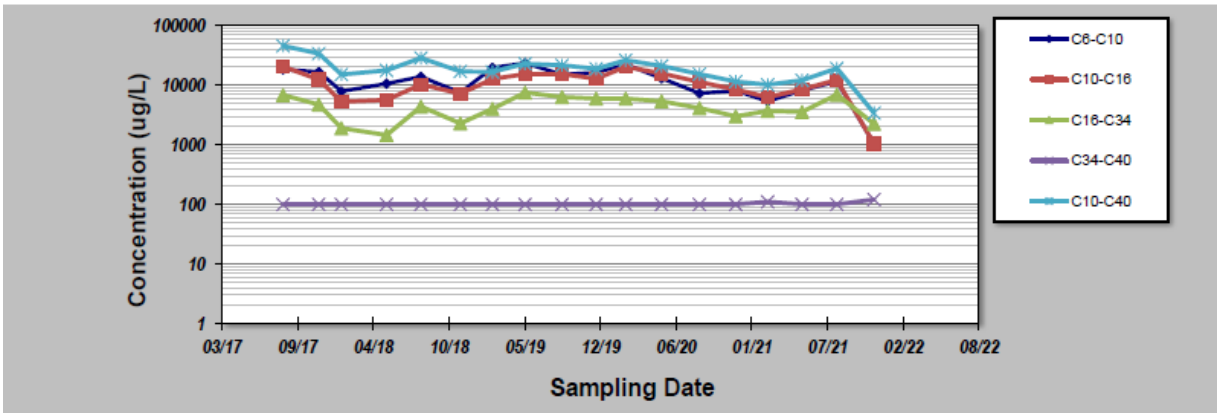


Figure 6.16 Statistical trend analysis of MW08 – TRH (reference AECOM 2021d)

6.1.9 MW09

Recorded pH levels at MW09 for this reporting period ranged from 6.88 to 8.00 and were slightly outside the previously detected range at this location. Mann Kendall trend analysis reported a stable trend in pH levels.

BTEX concentrations remained below the LOR throughout the 2021 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2021 monitoring period, consistent with all previous concentrations. Statistical analysis reported a stable trend for all TRH fractions.

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

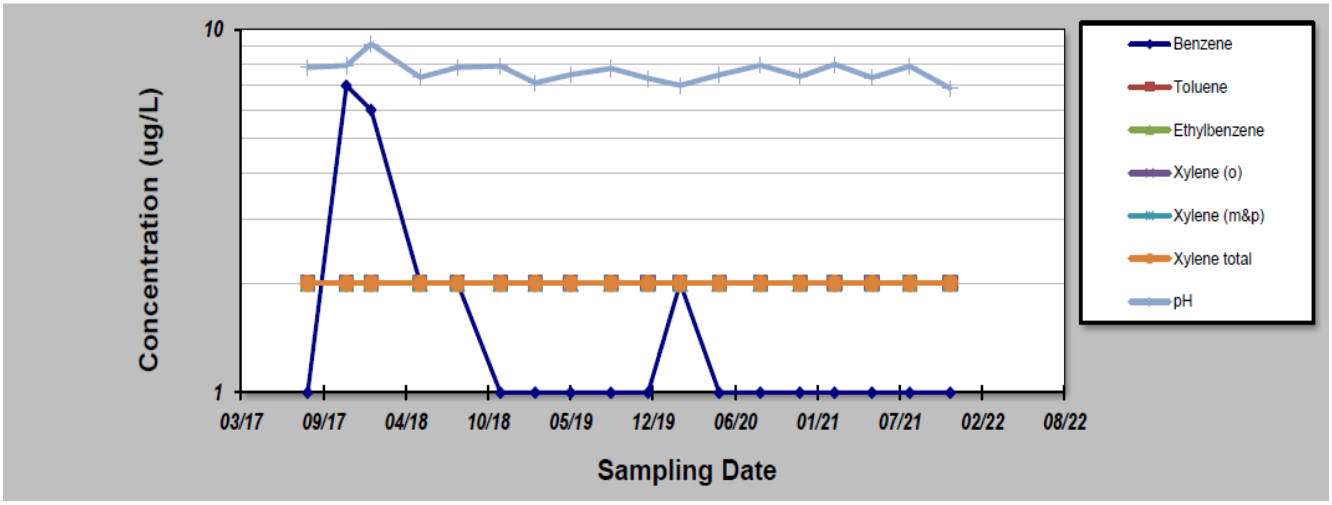


Figure 6.17 Statistical trend analysis of MW09 – BTEX and pH (reference AECOM 2021d)

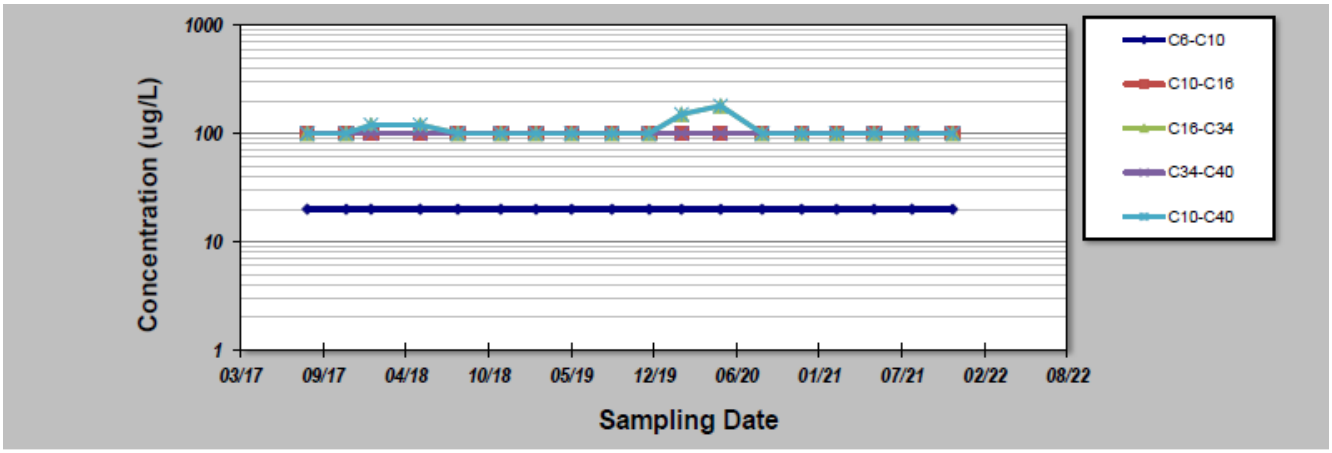


Figure 6.18 Statistical trend analysis of MW09 – TRH (reference AECOM 2021d)

6.1.10 Summary of groundwater results

Statistical trend analysis was undertaken by AECOM on individual analytes at all monitoring wells (MW01 to MW09) using an upper confidence level of 95%.

As with the 2020 monitoring period, decreasing trends were reported for pH at MW01, MW02 and MW04. In addition, a further decreasing trend was reported for pH at MW03. pH levels remain within background concentrations at these locations and time series graphs show that levels have been generally stable so this is not considered to be an issue at this stage. Trends in BTEX and TRH concentrations were stable or decreasing at locations MW01 to MW04.

As at the Q4 2021 groundwater monitoring event (GME), eighteen rounds of baseline groundwater monitoring have been undertaken on monitoring wells MW05 to MW09 at the Proposed Expansion Area. Statistical trend analysis in these wells identified decreasing trend in pH for MW06 and a probably decreasing trend in pH for MW08 and MW09 with stable or no trends at MW05 and MW07. The decreasing trend at MW09 is considered to be erroneous due to the outlier reported in January 2018, however decreasing trends at MW06 and MW08, along with the decreasing trends in wells MW01 to MW04 provide evidence that groundwater is becoming more acidic at the site. Future monitoring at the site will be required to confirm these trends.

Concentrations of benzene, toluene, meta & para xylenes and TRH have consistently exceeded background concentrations with concentrations of BTEX also exceeding the adopted GAC at MW08. Further, as with 2020, statistically significant increasing trends were reported for xylene concentrations. Following additional investigations in 2018, AECOM considered residual hydrocarbon impacts identified at MW08 to be localised within fill deposits immediately surrounding MW08, and effectively laterally delineated to the north-east and south by MW08A and MW08B. This may need to be confirmed in further investigations due to the increasing trends reported for xylene concentrations.

No infrastructure related to storage and transfer of hydrocarbons is in place at the Proposed Expansion Area. It was considered that the elevated results 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. AECOM reported that DNAPL was observed at MW08 which comprised coal tar like material and had a strong naphthalene/hydrocarbon odour, further supporting this suggestion.

It is noted that concentrations at MW05 to MW09 were compared with the previously detected range rather than the background concentrations developed at MW01-MW04. These background ranges were developed from analytical results collected in previous monitoring rounds at the site and may be further refined from results reported the current reporting period and future monitoring events before any site operations occur in the proposed Expansion Area.

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 waste water. Further details of waste water 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 2021 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 2021 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)
4/01/2021	7.86	< 2	7.34	5	35,000
11/02/2021	7.46	< 2	**8.57**[1]	5	0
13/01/2021	6.98	< 2	7.70	28	10,000
28/01/2021	8.11	< 2	7.49	5	35,000
9/02/2021	6.51	< 2	7.74	5	20,000
16/02/2021	8.02	<2	7.63	5	35,000
22/02/2021	6.34	< 2	7.56	6	35,000
4/03/2021	6.51	< 2	7.56	17	35,000
15/03/2021	7.60	< 2	7.35	5	35,000
22/03/2021	8.40	5	7.41	5	35,000
1/04/2021	8.08	< 2	7.42	5	20,000
2/04/2021	8.08	< 2	7.44	5	20,000
3/04/2021	8.08	< 2	7.53	19	30,000
24/05/2021	7.40	< 2	7.59	8	25,000
4/06/2021	9.10	< 2	7.41	19	25,000
8/06/2021	8.80	3	7.32	7	25,000
21/06/2021	8.10	< 2	7.20	18	30,000
28/06/2021	7.20	< 2	7.37	17	30,000
12/07/2021	8.10	< 2	8.10	10	30,000
9/08/2021	8.50	< 2	7.77	8	15,000
24/08/2021	9.00	< 2	7.46	13	30,000
13/09/2021	9.40	< 2	7.53	20	35,000
27/09/2021	8.00	< 2	7.63	5	35,000
12/10/2021	7.40	< 2	7.57	5	35,000
11/05/2021	7.77	< 2	7.71	5	35,000
11/12/2021	7.80	< 2	7.75	6	5,000
22/11/2021	7.20	< 2	6.85	8	35,000
26/11/2021	7.50	< 2	7.62	5	25,000
12/09/2021	7.90	< 2	7.56	21	25,000
30/12/2021	8.00	< 2	7.64	5	15,000
Minimum	**6.34**	**< 2**	**6.85**	**5**	**-**
Maximum	**9.40**	**5**	**8.57**	**28**	**-**
Average	**7.80**	**4**	**7.56**	**9.83**	**-**

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	6.3	8.4	7.6
Total dissolved solids (ppm)	15.7	62.4	44.53
Dissolved oxygen (mg/L)	30.9	103.6	70.56
Conductivity (µS/cm)	23.9	96.2	66.98

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 (11 February 2021) was not discharged & subsequently resampled. Further sampling & testing provided acceptable results and discharges are 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 2021 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 2021.

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 2021 reporting year was 7.8 mg/L, with a minimum level of 6.30 mg/L and a maximum of 9.40 mg/L. AECOM 2021 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 trend. Data reported during 2021 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 2021 reporting period. The average level of oil and grease recorded during the reporting period was 4.0 mg/L, with a maximum of 5.0 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 with the exception of one exceedance reported in February 2021. Water was recirculated and re-sampled following this event. During the reporting period, the average pH level was 7.56 with a minimum of 6.85 and a maximum of 8.57. AECOM 2021 presented a trend plot of pH results between 2014 and 2018 which, along with results from 2019, 2020 and 2021, 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 were no occurrences where TSS were recorded to be above the maximum criteria.

During the reporting period, the average level of total suspended solids was 9.83 mg/L, with a minimum of 5 mg/L and a maximum recording of 28 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 2021. 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 6.3 to 8.42 with an average of 7.6. 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:

– 14 September 2021 within Bund 1 (6.3)
– 8 November 2021 within Bund 1 (6.4)

The pH of the bund water was not higher than 8.5 on any occasion during the 2021 reporting period.

AECOM 2020 included a trend plot of concentrations between 2014 and 2018 which showed pH trends at the site were stable. Results from 2021 were within historical concentrations and indicative of any obvious trends.

Total Dissolved Solids (TDS)

TDS levels in bund water during the reporting period ranged from 15.7 to 62.4 ppm, with an average of 44.53 ppm. TDS levels at the site during the reporting period were slightly lower than in the previous reporting period but were broadly consistent with historical concentrations which have been relatively stable between 0 and 100 ppm. During the reporting period, there were no samples recorded at a higher level than 100 ppm. AECOM 2019 presented a trend analysis of TDS concentrations between 2014 2018 indicating that there could be a decreasing trend. Results from 2019, 2020 and 2021 confirm this observation.

Dissolved Oxygen (DO)

DO Concentrations ranged from 47.6 mg/L to 90.1 mg/L, with an average concentration of 70.56 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 and 2021 monitoring periods did not confirm this trend with concentrations appearing to be variable.

Conductivity

Conductivity levels in bund water during the reporting period ranged from 23.9 to 96.2 µS/cm, with an average conductivity of 66.98 µS/cm. AECOM 2019 presented a conductivity trend plot of concentrations between 2014 and 2018 which indicated a decreasing linear trend was identified. Concentrations reported in 2021 confirm the possibility of a decreasing trend, with reported concentrations being lower than those reported in 2020. This decreasing trend is not a concern and possibly attributed to periods of heavy rainfall introducing fresh water into the 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 pH exceedance of the EPL. The pH exceedance is thought to be attributed to the low levels during sampling.

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 (2021) 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 DPE 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	60	49	43
B – 2 Crebert St, Mayfield	60	50	43
C – 32 Elizabeth St, Carrington	57	44	45
D – 186 Fullerton Rd, Stockton	55	37	37

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 between 9 and 10 December 2021 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 (2021) 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 9 and 10 December 2021

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	9/12/2021 10:00 PM	59	50	45
R2	52 Arthur St, Mayfield	10/12/2021 12:11 AM	60	49	38
R3/B	2 Crebert St, Mayfield	9/12/2021 10:37 PM	71	59	42
R4/R5[1]	21 Crebert St, Mayfield	9/12/2021 10:53 PM	75	62	42
R6/R7[2]	30 Crebert St, Mayfield	9/12/2021 10:18 PM	53	46	41
R8	2 McNeil Cl, Mayfield	10/12/2021 12:29 AM	53	46	35
C	32 Elizabeth St, Carrington	9/12/2021 11:13 PM	46	40	37
D	186 Fullerton Rd, Stockton	9/12/2021 11:43 PM	72	59	45
-	Mayfield East Public School (west side, Ingall St)	9/12/2021 2:01 PM	74	76	52

[1] Attended noise measurements at Location R4 (21 Crebert Street, Mayfield), are representative of ambient noise conditions at locations R4 (21 Crebert Street, Mayfield) and R5 (24 Crebert Street, Mayfield).

[2] Attended noise measurements at Location R6 (30 Crebert Street, Mayfield), are representative of ambient noise conditions at locations R6 (30 Crebert Street, Mayfield) and R7 (50 Crebert Street, Mayfield).

Due to the existing noise level at the site, on-site measurements of individual plant items and typical operations were undertaken on 9 and 10 December 2021 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 10 December 2021

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)
Truck idling	13:29 PM	71	71	70	70
Truck leaving site	13:46 PM	81	80	75	65
Entry gate siren	13:24 PM	79	78	76	68
Exit gate siren	12:57 PM	76	72	69	63
Pump operations	12:40 PM	82	81	79	76
Fire pump testing	12:55 PM	91	90	89	88

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	19
R2	35	14	19
R3	41	23	28
R4	40	24	29
R5	42	23	28
R6	41	21	26
R7	35	17	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 (2021) 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 (2021) 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 out 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	17	23	Yes
R2	53	18	23	Yes
R3	53	33	38	Yes
R4	53	40	45	Yes
R5	53	28	33	Yes
R6	53	24	29	Yes
R7	53	20	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 2021 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 861 ML of fuel (including additive) was received on site and 823 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)	54,922,276	861,423,521	823,251,530*	93,850,420
Biodiesel (L)	0	0	0	0
Additive (L)	3,853	43,920	Note 2	8828
Slops (L)	12,394	Note 1	263,832	5924
TOTAL (L)	54,938,523	861,467,441	823,515,362	93,865,172

Note 1 – Slops are generated onsite and not imported

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

*Includes additives

The annual throughput approved under SSD_6664 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 current annual throughput limit approved under Condition A1.4 of the EPL being 1,300 ML. The annual throughput will not be increased up to 3,500 ML until the remaining features approved under SSD_7065 have been constructed and are operational.

No exceedances of throughput limits occurred during the reporting period.

9.2 Truck movements

Over the reporting period there were a total of 32,166 trucks at an average of approximately 2,681 each month. This equates to approximately 88 truck movements per day. 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 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

During the busiest month of operations throughout the review period (August 2021), movements from Stolthaven averaged up to 103 movements per day 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.

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

Effluent Waste (disposed at Cleanaway)

– Terminal Effluent: 137,500 L
– Mayfield 7 Quantity: 40, 200 L

Hazardous Waste (Liquid)

– Quantity (Veolia/Cleanaway): 18,460 L
– Transfers (JLP Transfer): 263,832 L

Solid Waste

– 660 L Bins: 11
– 20 L Drums: 20
– 220 L Drums: 0
– 1,100 L Drums: 7

General – Recycled and Green Waste

– General Waste: 40.5 m^3
– Recycling: 28.6 m2
– Printer Cartridge Recycling: 1 x 16 kg cartridge
– Other: 2750 kg (NN1 tank clean, spent garnet from tank floor blasting (non-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).

On 18 April 2021, a diesel spill from a filtration skid occurred owing to the failure of a Nitrile bellow connecting two filtration skids. Approximately 700-800 litres of diesel was released into a bunded area with splash entering into the site's stormwater drain system. The site's Emergency Response Plan, action card 2 – Loss of Contamination & Pollution Incident Response Management Plan was activated, stopping the operation and spill equipment was deployed. The spilled volume was contained on the premises and recovered. As the incident had the potential to harm the environment, 7 agencies were notified of the incident.

An incident report was written on 20 April 2021. No process or behavioural causes were identified for the incident. No injuries or health impacts were identified. A post review of the incident was undertaken and learnings developed, which included removal of the rubber bellows from operation, improvements to bunding, the installation of additional spill kits at the stormwater discharge point and minor changes to the site's Emergency Response Plan.

A learning from incidents report was also developed and shared at further locations. Copies of the incident notification and subsequent investigation report are attached at Appendix I.

All other incidents recorded during the reporting period were considered minor in severity ranking and effectively managed on the site. Details of minor incidents 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 2021 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:

– 15 February
– 24 May
– 17 August
– 23 November

Stolthaven have reformed the Stolthaven Community Group. A meeting occurred onsite on the 27th of May 2021 with a site walk around. COVID restrictions have prevented further face to face meetings however further updates have been provided via email. The Correct Planning and Consultation for Mayfield (CPCFM) group have been notified in relation to Stolthaven's selection as a potential site in support of the Commonwealth Government's Boosting Australia's Diesel Storage and have provided Stolthaven with a letter of support.

Stolthaven was not the subject of any issues from community engagement activities during 2021.

12.2 Complaints

No complaints were received by Stolthaven during the reporting period.

13. Compliance

No non-compliances or reportable incidents were identified during the reporting period.

13.1 Statement of compliance

The statement of compliance against the conditions specified in SSD_7065 is presented in Table 13.1. There are no non-compliances to report for 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

13.3 Pipeline integrity

An Annual Pipeline Pressure Test was conducted at the Stolthaven Terminal on the wharf pipeline on 11 October 2021 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. No leaks were identified as a result of leak testing during the monitoring period.

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 2019 reporting period. A summary of the outcomes and recommendation from the IEA are provided in Table 13.2. It is noted that most of the outstanding items were completed in the 2019 reporting period.

Table 13.2 IEA Recommendations

Condition	Recommendation	Response	Update
SSD 6664 2-2c, SSD 6664 2-2e, SSD 7065 B2a	It is recommended all actions arising from this IEA are completed to avoid future non-compliances with the development consents and commitments.	Recommendation accepted	All recommendations are being actioned.
SSD 6664 4-2a, SSD 7065 D7a	Update management plans to include detailed baseline data at the next review.	Now the site has 5 years of operational data, the Management plans can be updated with baseline data, where applicable, upon the next review. Action added to site's action register.	Completed Oct 2019. Advice of completion submitted to DPE.
SSD 6664 4-2g, SSD 7065 D7g	Include a section in the TMP, USMP and LMP with protocols to receive, handle and respond to complaints in each management plan at next update or reference to the procedure in the OEMP.	Plans to be updated at next review. Action added to the site's action register.	Completed Oct 2019 Advice of completion submitted to DPE.
SSD 6664 4-2g, SSD 7065 D7g	Although not required under SSD 7065, it is recommended that the TMP for SSD 7065 is updated to include expected traffic numbers as a result of the Project to inform any management and mitigation measures that may be required.	Plan to be updated at next review. Action added to the site's action register.	Completed Oct 2019. Advice of completion submitted to DPE.
SSD 6664 AMMM 26	Monthly testing of the fire pumps is undertaken and weekly testing is required in this condition, and therefore this is a non-compliance. It should be noted, however, that the Hazard Audit assessment states "Testing of the fire system is done monthly by an accredited 3rd party provide This was found to be in order"; and it is not a requirement under SSD 7065.	Fire pump testing is managed monthly. Applicants Management & Mitigation Measures should be amended to correct this however Stolthaven intent is to surrender SSD 6664.	Stolthaven has surrendered SSD 6664 as at 8 May 2020. Copy of surrender letter is included in Appendix B.

14. Conclusion and recommendations

The Annual Review has shown that the data collected and reviewed for the 2021 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 eight years of quarterly monitoring, however the dataset for the wells in the expansion area is still relatively smaller (4 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.

Some decreasing trends were identified for pH levels, including a decreasing trend at MW01, MW02, MW03 and MW04, however pH concentrations remained within background concentrations. These decreasing trends are not considered to be an issue at this stage, but will be reviewed in the next monitoring period. A decreasing trend for pH was reported for MW06 and the graphs support the trend. This may require further assessment.

MW05 and MW07 all exhibited no trend in pH levels, although all recordings were generally consistent with previous readings and within background levels. MW09 exhibited a stable trend in pH levels.

The groundwater monitoring network was expanded in the fourth quarter of 2017 to provide monitoring of the proposed 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, consistent with previous monitoring rounds. Concentrations at MW08 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 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.

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 2021 monitoring period and are expected to be decommissioned during development of the Proposed 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.

As part of Stolthaven's management system and continuous improvement procedures opportunities for not only meeting but exceeding environmental performance outcomes of the facility are constantly reviewed. In addition to those items identified for actioning out of the IEA process Stolthaven is currently, or is planning to undertake the following during the next reporting period:

– Energy efficiency improvement - site part completed an LED lighting replacement in 2020, with 42 x 400W flood lights replacement with 120W LED lightings reducing the site demand on electricity. A further 22 LED replacements were completed in 2021 during the monitoring period, thereby completing the project.
– Solar panels are still under consideration in 2022 however the site has now converted to 100% renewable energy sourced from Bodangora Wind Farm in Central NSW via the Port of Newcastle supply agreements. This change helps support Stolthaven' s sustainability targets which have become a key focus on a National and Global level.
– Capping integrity and erosion control - Stolthaven's vacant lease land (located to the immediate North & South of the terminal) is under constant monitoring with the long term aim to protect the land capping integrity. Works are planned in Q1 2022 to repair areas on Lot 1 where the two-coat seal is breaking down. These works have been discussed with the Site Auditor in conjunction with addressing the stockpile following the Mayfield 7 berth construction.

15. References

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

AECOM (2021a), Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q1 February 2021, dated 3 March 2021

AECOM (2021b), Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q2 May 2021, dated 27 May 2021

AECOM (2021c), Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q3 August 2021, dated 31 August 2021

AECOM (2021d), Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q4 November 2021, dated 14 December 2021

AECOM (2021), Stolthaven Bulk Liquids Fuel Storage Facility, Mayfield, Operational Noise Compliance Assessment (2021), doc no. 60326869-RPNV-09_A, dated 05 January 2022

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 (2021), Stolthaven Bulk Fuel Storage Facility, Mayfield, Annual Review 2020, dated February 2021

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 2021

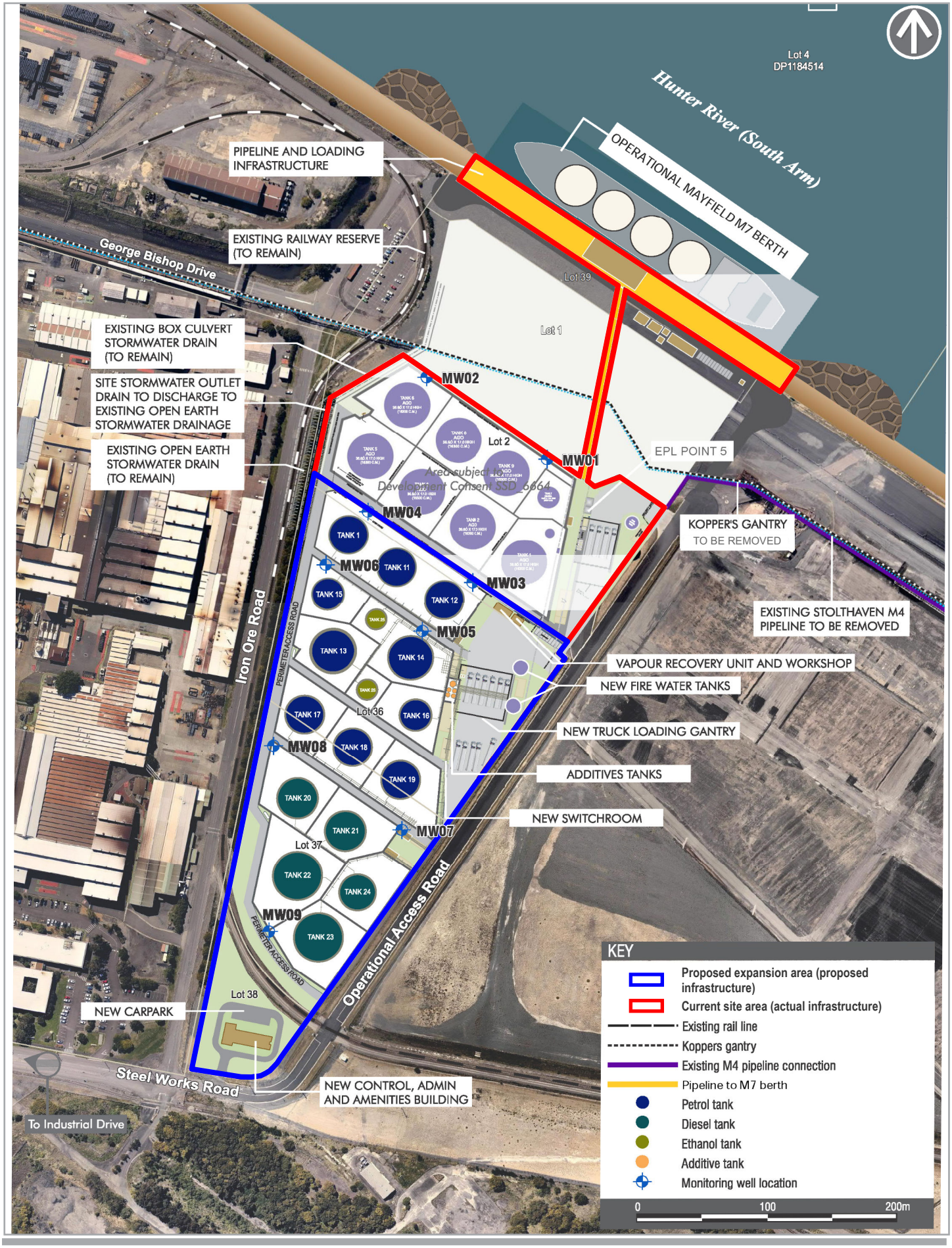
Project No. **12545253**
Revision No. **0**
Date **01/02/2021**

Site location

FIGURE 1

G:\22\12524848\GIS\Maps\12524848_ProjectData\AnnualReport_2021_0.aprx
Print date: 14 Apr 2022 - 13:22

Data source: AECOM: Background images, 20200225. . Created by: kpsroba



Paper Size ISO A4

0 0.025 0.05 0.075 0.1 0.125

Kilometers

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

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Stolthaven Australia Pty Ltd
Stolthaven Bulk Fuel Storage Facility
Annual Report 2021

Project No. **12545253**
Revision No. **0**
Date **10/02/2021**

Proposed terminal layout

FIGURE 2

G:\22\12524848\GIS\Maps\12524848_ProjectData\AnnualReport_2021_0.aprx
Print date: 14 Apr 2022 - 10:43

Data source: AECOM: Background images, 20200225. Approximate imagery date 2014 . Created by: kpsroba

Appendix B

DPE Correspondence Letters

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

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
2021	161	4/01/2021	5/01/2021	7.86	< 2	7.34	5	35,000	
	162	11/02/2021	12/01/2021	7.46	< 2	8.57	5	0	No release, failed on pH - recirc and retest.
	163	13/01/2021	14/01/2021	6.98	< 2	7.70	28	10,000	Resample test pass
	164	28/01/2021	29/01/2021	8.11	< 2	7.49	5	35,000	
	165	9/02/2021	9/02/2021	6.51	< 2	7.74	5	20,000	
	166	16/02/2021	17/02/2021	8.02	< 2	7.63	5	35,000	Late receipt of results, release started 18 Feb
	167	22/02/2021	23/02/2021	6.34	< 2	7.56	6	35,000	
	168	4/03/2021	5/03/2021	6.51	< 2	7.56	17	35,000	Late receipt of results Fri 05 Mar, release started Mon 08 Mar
	169	15/03/2021	16/03/2021	7.60	< 2	7.35	5	35,000	Late receipt of results 16 Mar, release started Weds 17 Mar
	170	22/03/2021	23/03/2021	8.40	5	7.41	5	20,000	
	171	1/04/2021	7/04/2021	8.08	< 2	7.42	5	20,000	
	172	19/04/2021	21/04/2021	8.30	< 2	7.44	5	20,000	
	173	5/05/2021	7/05/2021	6.60	< 2	7.53	19	30,000	Late receipt of results 07, release started Mon 10 May
	174	24/05/2021	25/05/2021	7.40	< 2	7.59	8	25,000	Results issued 25 May late morning
	175	4/06/2021	7/06/2021	9.10	< 2	7.41	19	25,000	Results issued 07 Jun 10:00hrs
	176	8/06/2021	9/06/2021	8.80	3	7.32	7	25,000	Results issued 10 jun 13:59hrs
	177	21/06/2021	22/06/2021	8.10	< 2	7.20	18	30,000	Results issued 22 jun 10:42hrs
	178	28/06/2021	29/06/2021	7.20	< 2	7.37	17	30,000	Results issued 30 Jun 11:34hrs
	179	12/07/2021	13/07/2021	8.10	< 2	8.10	10	30,000	Results issued 13 Jul 16:15hrs
	180	9/08/2021	10/08/2021	8.50	< 2	7.77	8	15,000	Results issued 10 Aug 16:00hrs
	181	24/08/2021	25/08/2021	9.00	< 2	7.46	13	30,000	Results issued 25 Aug 11:41hrs
	182	13/09/2021	14/09/2021	9.40	< 2	7.53	20	35,000	Tankship alongside, release planned 15 Sept
	183	27/09/2021	27/09/2021	8.00	< 2	7.63	5	35,000	Tankship alongside 27/09 - 30/09
	184	12/10/2021	13/10/2021	7.40	< 2	7.57	5	35,000	Results issued 13 Oct 15:00hrs
	185	11/05/2021	11/08/2021	7.77	< 2	7.71	5	35,000	Results issued 08 Nov 16:00hrs - release 09 Nov
	186	11/12/2021	16.11.2021	7.80	< 2	7.75	6	5,000	
	187	22.11.2021	23.11.2021	7.20	< 2	6.85	8	35,000	Results issued 23 Nov 17:00hrs - release 24 Nov
	188	26.11.2021	29.11.2021	7.50	< 2	7.62	5	25,000	Released 29 Nov late AM
	189	12/09/2021	12/10/2021	7.90	< 2	7.56	21	25,000	Release held over until 13/12 due shipping event Zaliv Amurskiy
	190	30.12.2021	31.12.2021	8.00	< 2	7.64	5	15,000	Release 04 Jan due public holidays
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Appendix D

Hourly Truck Movements

REPORTING PERIOD: January

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	11	14	15	19	27	27	12	14	9	17	13	16
Bay 2	6	11	20	15	22	17	11	12	15	11	9	16
Bay 3	12	4	12	7	17	10	6	7	7	8	13	6
Bay 4	1	7	5	6	12	6	11	11	11	7	13	5
Total	**30**	**36**	**52**	**47**	**78**	**60**	**40**	**44**	**42**	**43**	**48**	**43**

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	20	20	15	21	21	10	8	6	9	7	8	3
Bay 2	17	23	17	17	14	5	5	8	0	4	3	1
Bay 3	14	11	8	12	8	5	9	8	4	4	11	0
Bay 4	9	11	9	7	7	3	3	6	10	2	5	0
Total	**60**	**65**	**49**	**57**	**50**	**23**	**25**	**28**	**23**	**17**	**27**	**4**

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
1/01/2021	0	0	2	1	1	0	0	1	0	3	1	0
2/01/2021	0	1	0	0	1	1	0	1	1	0	0	0
3/01/2021	0	1	0	0	1	0	1	0	0	0	1	3
4/01/2021	1	4	1	5	2	1	0	0	0	1	0	1
5/01/2021	1	0	2	0	4	1	3	1	0	1	1	0
6/01/2021	0	0	2	1	2	2	1	3	0	1	0	0
7/01/2021	0	0	2	2	4	1	1	0	1	1	0	1
8/01/2021	1	0	1	1	2	2	0	2	2	2	0	0
9/01/2021	0	0	2	0	2	1	0	3	0	0	2	2
10/01/2021	0	1	0	0	0	1	0	0	2	0	2	3
11/01/2021	1	2	1	0	2	0	2	0	0	1	2	1
12/01/2021	0	0	4	2	5	2	2	0	1	1	0	0
13/01/2021	0	1	0	2	3	3	1	1	0	1	1	2
14/01/2021	0	0	2	2	6	3	1	2	0	0	2	0
15/01/2021	0	1	3	3	3	3	0	0	1	1	1	1
16/01/2021	0	0	0	1	0	2	0	1	3	0	1	1
17/01/2021	0	0	0	0	0	2	1	2	0	1	2	1
18/01/2021	0	2	0	3	2	0	1	1	1	1	0	1
19/01/2021	2	5	2	0	2	4	2	2	3	3	1	4
20/01/2021	2	1	3	3	4	3	2	3	1	3	2	1
21/01/2021	3	1	1	3	4	3	1	2	1	4	1	2
22/01/2021	2	2	2	1	4	1	2	5	4	1	3	0
23/01/2021	3	2	1	2	1	4	2	3	1	1	3	1
24/01/2021	3	1	0	1	0	3	1	0	2	4	2	2
25/01/2021	2	2	2	2	4	3	2	2	2	2	2	3
26/01/2021	2	3	2	0	1	2	3	1	2	1	1	2
27/01/2021	2	0	4	3	5	1	3	1	3	2	4	3
28/01/2021	0	2	4	4	6	3	4	1	4	3	2	2
29/01/2021	2	1	4	0	6	5	1	3	3	1	5	1
30/01/2021	2	1	4	2	1	2	2	2	2	0	3	3
31/01/2021	1	2	1	3	0	1	1	1	2	3	3	2
Total	**30**	**36**	**52**	**47**	**78**	**60**	**40**	**44**	**42**	**43**	**48**	**43**

	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
1/01/2021	2	2	2	3	0	0	0	1	0	0	0	1
2/01/2021	2	1	0	0	0	0	0	0	0	0	1	0
3/01/2021	0	0	1	1	0	2	1	0	0	0	1	0
4/01/2021	2	2	2	1	0	1	0	0	0	0	0	0
5/01/2021	1	2	0	3	1	1	0	1	0	0	0	0
6/01/2021	0	3	2	1	0	1	0	0	1	0	1	0
7/01/2021	0	3	1	2	2	1	2	0	0	1	0	0
8/01/2021	0	1	1	2	1	0	1	0	0	1	0	0
9/01/2021	2	2	0	0	0	0	0	0	0	0	0	0
10/01/2021	2	0	0	0	0	0	0	0	0	0	1	0
11/01/2021	5	2	0	4	1	0	1	0	0	0	0	0
12/01/2021	0	6	1	2	2	0	1	0	0	0	0	0
13/01/2021	0	1	0	3	1	0	0	0	0	0	2	0
14/01/2021	1	3	1	1	1	1	0	0	1	0	0	0
15/01/2021	1	3	1	2	3	1	1	0	0	0	0	0
16/01/2021	2	1	0	0	0	0	0	0	0	0	0	0
17/01/2021	1	3	1	1	0	1	1	0	0	0	3	0
18/01/2021	4	1	1	2	3	0	0	0	1	0	2	0
19/01/2021	1	3	5	2	3	1	0	3	0	2	1	0
20/01/2021	2	4	2	3	5	0	1	2	0	2	0	0
21/01/2021	1	2	4	0	4	0	1	3	1	2	0	0
22/01/2021	3	2	3	1	4	0	3	6	0	0	1	1
23/01/2021	3	2	1	1	1	3	4	0	1	0	3	0
24/01/2021	3	0	3	2	1	1	1	1	2	1	2	1
25/01/2021	4	3	2	4	2	2	1	1	3	0	0	0
26/01/2021	4	3	4	2	5	1	1	4	2	4	2	0
27/01/2021	1	3	2	6	2	2	2	1	3	2	1	0
28/01/2021	4	1	5	3	2	0	1	2	3	0	3	1
29/01/2021	1	3	3	3	5	3	1	2	2	1	2	0
30/01/2021	3	0	1	1	1	0	0	0	1	1	1	0
31/01/2021	5	3	0	1	0	1	1	1	2	0	0	0
Total	**60**	**65**	**49**	**57**	**50**	**23**	**25**	**28**	**23**	**17**	**27**	**4**

REPORTING PERIOD: February

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	8	9	11	26	23	16	11	18	12	14	17	14
Bay 2	8	5	11	13	19	13	11	9	18	6	17	7
Bay 3	16	17	19	12	27	17	16	13	13	17	19	19
Bay 4	3	7	12	10	13	12	10	5	13	10	7	10
Total	**35**	**38**	**53**	**61**	**82**	**58**	**48**	**45**	**56**	**47**	**60**	**50**

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	8	15	13	18	13	16	14	8	10	13	16	2
Bay 2	14	10	11	12	7	11	8	6	8	4	6	0
Bay 3	17	17	19	19	15	10	12	10	8	10	18	4
Bay 4	8	9	10	9	5	5	4	4	3	5	9	1
Total	**47**	**51**	**53**	**58**	**40**	**42**	**38**	**28**	**29**	**32**	**49**	**7**

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
1/02/2021	5	3	3	1	1	0	3	2	4	2	3	2
2/02/2021	2	2	2	3	0	4	2	1	2	4	3	3
3/02/2021	1	2	2	3	2	6	3	0	2	2	6	4
4/02/2021	0	1	2	5	3	1	4	4	4	3	3	5
5/02/2021	3	4	3	2	4	4	1	0	5	2	2	2
6/02/2021	3	0	2	2	2	2	1	4	4	4	3	1
7/02/2021	2	2	2	1	3	0	2	3	2	1	3	2
8/02/2021	2	2	3	3	6	3	3	3	4	4	1	4
9/02/2021	2	1	3	2	6	1	4	1	4	2	3	3
10/02/2021	2	2	1	4	5	3	2	2	1	2	2	3
11/02/2021	1	3	2	3	4	2	3	1	1	1	2	2
12/02/2021	0	1	3	5	2	2	3	3	1	1	3	0
13/02/2021	2	1	2	1	0	2	1	0	0	0	0	1
14/02/2021	0	1	1	1	2	1	2	1	0	2	0	0
15/02/2021	2	1	2	3	6	3	1	3	2	0	3	0
16/02/2021	0	3	1	1	4	3	1	4	1	2	1	0
17/02/2021	0	0	1	2	1	1	1	1	1	0	1	2
18/02/2021	0	1	3	0	4	2	3	4	1	1	3	1
19/02/2021	0	1	0	3	4	4	1	0	2	3	4	1
20/02/2021	1	0	1	1	1	1	1	1	3	0	1	1
21/02/2021	0	1	0	1	0	0	0	0	0	2	2	0
22/02/2021	1	2	3	2	5	2	0	0	2	2	1	3
23/02/2021	1	0	3	1	5	4	3	0	2	4	1	5
24/02/2021	1	1	1	6	2	2	0	1	1	1	1	2
25/02/2021	0	0	1	4	3	2	0	1	3	1	1	1
26/02/2021	1	2	4	1	4	2	0	2	4	0	3	1
27/02/2021	2	0	1	0	2	0	2	1	0	0	2	1
28/02/2021	1	1	1	0	1	1	1	2	0	1	2	0
1/03/2021	0	0	0	0	0	0	0	0	0	0	0	0
2/03/2021	0	0	0	0	0	0	0	0	0	0	0	0
3/03/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**35**	**38**	**53**	**61**	**82**	**58**	**48**	**45**	**56**	**47**	**60**	**50**

	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
1/02/2021	4	5	3	4	4	0	1	3	2	4	3	0
2/02/2021	2	4	4	4	4	2	3	2	1	4	1	0
3/02/2021	2	1	1	2	3	5	1	2	4	0	4	0
4/02/2021	6	4	4	2	3	6	4	3	3	0	2	1
5/02/2021	0	1	4	5	0	7	2	0	3	0	4	0
6/02/2021	0	3	4	3	1	0	1	1	2	0	1	0
7/02/2021	4	1	5	1	1	1	3	1	0	3	2	0
8/02/2021	2	5	5	2	3	4	0	3	1	2	2	0
9/02/2021	2	0	0	3	2	1	0	1	1	1	2	0
10/02/2021	0	1	1	2	1	2	0	3	0	0	2	1
11/02/2021	1	1	1	1	1	1	2	0	0	2	0	1
12/02/2021	0	1	1	0	0	0	1	2	1	0	1	1
13/02/2021	2	4	0	1	0	0	0	1	0	1	1	0
14/02/2021	1	2	0	1	0	1	0	1	1	0	2	0
15/02/2021	1	4	1	2	2	0	4	1	0	3	1	0
16/02/2021	2	4	0	3	1	0	1	1	0	2	1	0
17/02/2021	1	0	3	3	1	1	2	1	1	0	1	1
18/02/2021	3	2	1	6	1	2	0	1	0	1	1	1
19/02/2021	2	0	2	1	1	0	0	0	2	0	2	0
20/02/2021	0	0	2	1	1	0	2	0	1	0	3	0
21/02/2021	2	0	1	2	0	0	3	0	1	1	3	0
22/02/2021	1	1	2	3	1	1	2	0	2	1	3	1
23/02/2021	1	3	2	1	1	2	1	0	1	1	0	0
24/02/2021	2	0	1	0	2	2	3	0	0	3	2	0
25/02/2021	1	1	1	2	3	0	1	0	1	1	3	0
26/02/2021	3	0	2	2	1	2	0	1	0	0	1	0
27/02/2021	1	1	0	1	1	1	0	0	0	2	1	0
28/02/2021	1	2	2	0	1	1	1	0	1	0	0	0
1/03/2021	0	0	0	0	0	0	0	0	0	0	0	0
2/03/2021	0	0	0	0	0	0	0	0	0	0	0	0
3/03/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**47**	**51**	**53**	**58**	**40**	**42**	**38**	**28**	**29**	**32**	**49**	**7**

REPORTING PERIOD: March

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	8	11	18	17	28	17	22	20	14	12	12	16
Bay 2	7	10	18	14	21	14	10	12	6	14	6	9
Bay 3	21	13	28	20	24	18	17	17	15	16	13	21
Bay 4	6	12	16	12	18	13	7	7	10	8	9	12
Total	**42**	**46**	**80**	**63**	**91**	**62**	**56**	**56**	**45**	**50**	**40**	**58**

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	15	16	20	15	15	12	15	15	8	12	3	2
Bay 2	11	15	19	14	10	4	8	12	10	10	4	3
Bay 3	20	21	27	19	18	21	11	11	18	12	14	7
Bay 4	15	12	15	9	12	9	7	5	10	9	6	3
Total	**61**	**64**	**81**	**57**	**55**	**46**	**41**	**43**	**46**	**43**	**27**	**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
1/03/2021	4	3	5	3	1	4	2	3	4	1	3	3
2/03/2021	2	2	5	5	3	4	2	3	1	2	1	5
3/03/2021	1	2	6	2	4	1	2	4	2	4	1	2
4/03/2021	3	1	2	0	8	3	3	1	2	3	2	2
5/03/2021	4	1	1	1	4	3	0	0	2	3	2	1
6/03/2021	0	1	3	0	2	1	0	3	0	0	2	1
7/03/2021	1	0	1	0	1	0	1	0	1	1	0	0
8/03/2021	2	4	1	4	2	3	1	3	0	1	1	3
9/03/2021	0	3	1	4	8	3	2	5	5	1	2	3
10/03/2021	0	2	3	0	3	5	3	2	0	0	2	3
11/03/2021	0	1	2	3	3	2	3	4	2	0	2	1
12/03/2021	1	1	3	3	2	1	2	1	1	1	0	1
13/03/2021	1	0	1	1	2	3	1	1	1	2	1	3
14/03/2021	2	0	0	1	0	1	1	0	1	0	0	2
15/03/2021	2	2	3	0	3	0	2	0	1	0	1	3
16/03/2021	1	0	2	2	1	3	2	1	1	2	2	1
17/03/2021	1	3	1	4	8	2	1	1	0	7	0	5
18/03/2021	1	1	5	4	4	1	1	0	2	2	2	2
19/03/2021	1	2	3	1	3	2	2	3	2	0	0	1
20/03/2021	1	2	2	1	0	1	2	2	0	0	0	1
21/03/2021	0	1	1	0	1	0	1	0	1	1	0	1
22/03/2021	2	1	1	2	3	0	2	2	2	2	1	2
23/03/2021	0	1	3	5	2	0	0	1	1	2	2	0
24/03/2021	1	2	0	2	2	3	0	0	1	2	0	1
25/03/2021	0	1	3	3	6	2	4	2	2	2	2	1
26/03/2021	1	2	4	4	3	2	2	1	2	1	0	2
27/03/2021	1	0	3	2	2	3	0	2	2	3	1	1
28/03/2021	2	2	1	1	1	1	2	2	1	1	3	2
29/03/2021	2	1	4	2	3	2	5	1	2	1	3	3
30/03/2021	4	1	5	1	4	4	3	3	1	2	2	1
31/03/2021	1	3	5	2	2	2	4	5	2	3	2	1
Total	**42**	**46**	**80**	**63**	**91**	**62**	**56**	**56**	**45**	**50**	**40**	**58**

	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
1/03/2021	4	1	4	2	3	2	1	2	5	1	1	0
2/03/2021	3	1	6	3	5	2	2	2	4	3	0	2
3/03/2021	3	2	5	1	3	2	3	2	3	1	2	1
4/03/2021	3	1	4	4	4	4	1	3	1	2	3	0
5/03/2021	3	1	2	1	2	1	2	1	0	1	1	0
6/03/2021	2	2	0	1	1	0	1	0	1	1	0	2
7/03/2021	2	2	1	1	0	1	0	3	2	0	2	1
8/03/2021	2	6	2	6	3	1	1	2	3	4	3	0
9/03/2021	4	5	5	2	2	2	1	4	1	1	2	0
10/03/2021	0	1	4	1	4	2	1	1	1	0	1	0
11/03/2021	0	2	2	1	0	1	0	1	0	1	0	1
12/03/2021	1	0	2	2	1	1	0	2	0	2	0	0
13/03/2021	1	2	0	0	3	0	0	0	0	0	2	0
14/03/2021	1	0	0	2	0	1	2	0	2	0	1	0
15/03/2021	2	1	0	2	1	0	3	0	0	0	1	1
16/03/2021	0	3	2	1	1	2	0	1	1	1	0	1
17/03/2021	2	1	2	3	3	4	2	1	4	2	0	0
18/03/2021	1	4	2	2	1	1	3	0	0	1	0	1
19/03/2021	2	1	5	0	3	0	0	1	1	1	0	0
20/03/2021	1	3	2	1	2	0	0	0	0	2	0	1
21/03/2021	1	1	3	0	2	1	1	3	0	3	1	0
22/03/2021	2	4	2	1	1	1	1	2	1	0	0	1
23/03/2021	1	1	2	0	0	1	2	1	1	0	0	0
24/03/2021	3	0	0	0	1	4	1	0	1	1	2	1
25/03/2021	2	4	1	1	0	2	4	1	2	0	1	0
26/03/2021	2	2	4	4	4	0	4	1	1	3	1	0
27/03/2021	2	3	1	3	1	3	0	0	2	2	0	0
28/03/2021	3	1	3	0	0	2	1	1	1	2	0	1
29/03/2021	0	6	4	2	1	2	1	4	1	1	1	0
30/03/2021	4	1	4	7	2	1	1	1	4	4	1	0
31/03/2021	4	2	7	3	1	2	2	3	3	3	1	1
Total	**61**	**64**	**81**	**57**	**55**	**46**	**41**	**43**	**46**	**43**	**27**	**15**

REPORTING PERIOD: April

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	10	9	17	23	24	16	11	11	23	14	12	13
Bay 2	5	9	16	13	23	13	11	17	9	9	11	7
Bay 3	13	25	29	24	38	18	18	27	24	19	18	18
Bay 4	6	12	20	9	25	11	6	11	15	20	15	10
Total	**34**	**55**	**82**	**69**	**110**	**58**	**46**	**66**	**71**	**62**	**56**	**48**

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	17	12	19	15	19	8	9	14	15	14	11	3
Bay 2	14	10	21	14	14	9	11	15	9	5	6	1
Bay 3	24	24	23	24	24	20	17	18	19	12	17	2
Bay 4	10	12	15	17	17	10	5	14	8	4	8	3
Total	**65**	**58**	**78**	**70**	**74**	**47**	**42**	**61**	**51**	**35**	**42**	**9**

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
1/04/2021	0	4	4	4	6	2	2	3	6	2	0	6
2/04/2021	1	0	2	3	3	3	3	3	2	1	0	0
3/04/2021	2	1	2	4	1	3	2	1	3	0	1	1
4/04/2021	1	0	7	0	1	2	1	4	2	0	2	3
5/04/2021	4	1	3	4	5	0	3	4	1	2	1	2
6/04/2021	2	1	3	2	3	1	1	1	2	3	1	1
7/04/2021	0	2	4	0	5	1	1	1	2	1	2	0
8/04/2021	0	4	2	2	5	5	1	2	2	2	4	0
9/04/2021	0	5	3	6	3	3	2	2	3	4	6	0
10/04/2021	1	1	2	1	2	2	2	2	3	1	2	1
11/04/2021	2	0	4	2	2	1	0	1	2	3	1	1
12/04/2021	1	4	4	7	3	1	1	2	4	3	2	2
13/04/2021	0	2	4	3	3	1	1	5	3	3	3	1
14/04/2021	1	3	0	3	6	3	3	4	0	1	5	1
15/04/2021	0	4	4	1	6	3	2	4	4	5	1	3
16/04/2021	1	0	3	2	5	5	1	2	3	5	2	3
17/04/2021	1	0	1	0	1	2	1	1	1	0	0	2
18/04/2021	0	0	0	1	1	1	0	1	3	1	0	0
19/04/2021	0	1	1	3	4	2	0	2	0	0	3	0
20/04/2021	2	2	4	2	6	1	2	2	1	3	0	1
21/04/2021	0	1	3	1	4	2	1	0	1	1	1	2
22/04/2021	2	0	2	1	7	2	1	3	1	1	3	3
23/04/2021	0	2	3	2	3	1	0	1	3	1	1	0
24/04/2021	0	1	1	2	3	2	0	3	1	2	1	0
25/04/2021	2	2	2	0	0	1	2	1	2	0	1	2
26/04/2021	1	4	4	5	3	0	1	2	3	2	3	3
27/04/2021	1	3	2	1	2	2	1	3	2	2	3	2
28/04/2021	1	2	3	2	4	0	7	1	5	3	2	4
29/04/2021	2	3	4	2	5	5	2	3	4	7	3	1
30/04/2021	6	2	1	3	8	1	2	2	2	3	2	3
1/05/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**34**	**55**	**82**	**69**	**110**	**58**	**46**	**66**	**71**	**62**	**56**	**48**

	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
1/04/2021	1	2	4	6	2	3	2	1	2	3	1	0
2/04/2021	6	4	3	1	1	3	1	3	2	1	2	0
3/04/2021	3	2	2	3	1	2	2	1	2	1	2	0
4/04/2021	3	2	2	2	1	2	0	3	2	4	1	0
5/04/2021	5	1	5	1	2	2	2	5	2	3	2	1
6/04/2021	1	3	2	0	1	0	1	2	0	2	3	0
7/04/2021	2	2	1	2	1	3	0	2	1	2	0	0
8/04/2021	1	4	8	2	2	2	1	3	2	1	1	0
9/04/2021	3	1	4	3	3	1	1	1	3	0	2	0
10/04/2021	2	1	3	2	4	1	0	2	1	2	2	0
11/04/2021	2	3	5	3	1	0	2	2	2	1	1	0
12/04/2021	2	3	4	1	3	2	1	3	0	1	3	0
13/04/2021	2	3	2	4	5	1	1	3	4	1	3	1
14/04/2021	2	1	3	4	3	3	3	3	4	1	1	0
15/04/2021	2	2	1	3	7	2	4	3	3	1	3	3
16/04/2021	4	3	3	1	5	1	3	2	1	2	1	0
17/04/2021	2	1	0	1	2	0	0	0	0	0	1	0
18/04/2021	2	3	1	2	0	1	1	1	2	0	1	0
19/04/2021	3	1	2	3	0	0	0	1	2	0	0	0
20/04/2021	0	3	1	3	2	0	0	1	0	1	0	0
21/04/2021	0	2	1	2	3	1	0	2	1	1	1	0
22/04/2021	0	1	2	0	1	3	1	2	0	0	1	1
23/04/2021	0	0	0	4	2	2	1	0	1	0	1	0
24/04/2021	2	2	0	0	0	0	1	1	0	0	0	0
25/04/2021	2	2	6	1	1	5	3	3	2	0	3	0
26/04/2021	1	0	4	4	6	1	2	3	2	2	1	1
27/04/2021	4	2	1	3	3	0	6	0	5	0	1	1
28/04/2021	2	2	2	3	5	3	0	2	2	1	0	1
29/04/2021	4	1	4	4	4	1	0	3	2	4	1	0
30/04/2021	2	1	2	2	3	2	3	3	1	0	3	0
1/05/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**65**	**58**	**78**	**70**	**74**	**47**	**42**	**61**	**51**	**35**	**42**	**9**

REPORTING PERIOD: May

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	13	17	14	15	15	11	12	17	10	15	15	9
Bay 2	12	12	13	17	19	14	9	16	9	16	13	14
Bay 3	25	17	26	17	29	22	13	24	18	23	26	26
Bay 4	9	14	9	19	23	15	8	15	15	11	13	13
Total	**59**	**60**	**62**	**68**	**86**	**62**	**42**	**72**	**52**	**65**	**67**	**62**

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	13	18	16	18	16	11	9	15	16	16	14	1
Bay 2	10	18	16	13	11	9	9	10	7	3	6	2
Bay 3	27	23	29	20	16	14	22	11	17	12	14	4
Bay 4	15	23	17	14	7	11	8	7	8	6	8	0
Total	**65**	**82**	**78**	**65**	**50**	**45**	**48**	**43**	**48**	**37**	**42**	**7**

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
1/05/2021	5	3	1	2	2	3	1	2	4	0	1	3
2/05/2021	5	2	1	1	2	0	2	4	1	1	2	1
3/05/2021	3	3	7	2	4	3	1	8	2	3	2	3
4/05/2021	7	2	5	4	3	2	5	2	2	2	5	1
5/05/2021	3	2	2	2	5	1	3	2	2	5	1	1
6/05/2021	1	3	2	4	4	5	3	3	4	6	5	1
7/05/2021	4	0	1	2	2	4	3	4	1	2	3	3
8/05/2021	0	2	0	1	1	2	0	2	1	2	0	1
9/05/2021	0	1	0	2	1	0	0	1	2	0	1	2
10/05/2021	1	2	0	3	6	1	0	3	1	2	3	1
11/05/2021	0	3	1	0	4	1	0	4	1	2	1	0
12/05/2021	0	2	1	0	2	4	2	0	1	2	1	2
13/05/2021	1	0	2	4	5	3	1	1	4	2	2	0
14/05/2021	1	1	2	2	4	2	0	2	2	2	3	3
15/05/2021	1	2	1	1	2	2	2	2	0	0	3	3
16/05/2021	0	0	3	1	0	0	0	1	0	1	2	1
17/05/2021	2	4	1	2	3	2	0	2	1	1	3	4
18/05/2021	1	1	5	5	3	3	2	3	2	2	1	4
19/05/2021	1	1	3	6	1	2	1	1	0	5	1	1
20/05/2021	2	3	0	4	3	1	2	0	2	3	1	3
21/05/2021	0	1	3	3	4	1	0	1	1	4	3	1
22/05/2021	2	1	0	0	3	3	0	3	2	2	2	1
23/05/2021	2	2	2	0	1	1	1	1	1	0	1	0
24/05/2021	2	1	1	3	3	1	1	1	1	1	3	2
25/05/2021	4	4	0	0	2	3	1	2	0	3	1	2
26/05/2021	0	2	2	0	4	2	3	0	3	4	3	1
27/05/2021	2	1	3	5	1	1	0	3	3	1	2	3
28/05/2021	5	3	5	1	4	5	3	4	0	1	5	3
29/05/2021	0	2	3	4	0	1	0	6	2	1	2	1
30/05/2021	1	2	1	2	2	0	1	2	3	3	0	4
31/05/2021	3	4	4	2	5	3	4	2	3	2	4	6
Total	**59**	**60**	**62**	**68**	**86**	**62**	**42**	**72**	**52**	**65**	**67**	**62**

	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
1/05/2021	3	1	4	2	2	2	1	0	3	1	1	0
2/05/2021	6	4	3	1	1	2	5	2	1	3	2	0
3/05/2021	5	6	3	4	0	3	2	2	2	1	2	0
4/05/2021	3	6	2	3	4	0	2	3	3	2	3	1
5/05/2021	3	4	4	3	2	4	4	3	1	2	4	0
6/05/2021	2	3	5	4	4	2	3	2	4	4	4	1
7/05/2021	1	2	0	0	2	1	1	1	1	1	0	0
8/05/2021	0	1	1	1	0	1	0	2	1	0	1	0
9/05/2021	2	3	0	1	0	1	0	2	2	0	1	0
10/05/2021	1	2	4	1	3	1	2	1	3	3	0	0
11/05/2021	2	2	2	3	2	1	0	1	0	2	0	0
12/05/2021	2	3	1	3	1	1	1	5	1	0	0	0
13/05/2021	2	1	3	4	2	0	2	1	0	2	1	0
14/05/2021	0	0	3	0	1	1	3	0	1	1	1	0
15/05/2021	2	1	2	2	0	0	2	1	0	0	0	0
16/05/2021	2	0	3	2	1	1	0	1	3	0	2	0
17/05/2021	1	5	2	1	1	2	1	1	2	0	2	0
18/05/2021	1	3	1	2	3	1	0	2	1	1	0	1
19/05/2021	2	3	2	2	4	0	2	0	3	2	1	0
20/05/2021	1	3	4	4	1	1	1	1	2	1	3	0
21/05/2021	1	3	0	1	2	2	1	2	1	0	0	0
22/05/2021	3	1	0	1	1	1	0	0	0	0	1	0
23/05/2021	2	1	2	3	0	2	1	0	2	2	0	0
24/05/2021	2	2	2	2	2	0	1	0	1	1	0	0
25/05/2021	2	2	3	0	3	3	1	0	1	0	1	0
26/05/2021	0	1	3	0	1	1	1	0	1	3	1	0
27/05/2021	4	2	5	5	4	2	2	1	3	0	3	0
28/05/2021	3	4	5	3	1	5	0	3	1	2	2	2
29/05/2021	1	5	3	2	1	2	2	1	1	1	2	1
30/05/2021	4	2	2	3	1	1	3	2	1	1	3	0
31/05/2021	2	6	4	2	0	1	4	3	2	1	1	1
Total	**65**	**82**	**78**	**65**	**50**	**45**	**48**	**43**	**48**	**37**	**42**	**7**

REPORTING PERIOD: June

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	8	12	23	21	24	11	15	12	19	15	15	11
Bay 2	5	6	20	15	16	15	17	15	14	13	10	13
Bay 3	23	15	35	28	31	27	25	27	28	17	23	25
Bay 4	14	6	24	18	26	17	17	11	15	15	13	25
Total	**50**	**39**	**102**	**82**	**97**	**70**	**74**	**65**	**76**	**60**	**61**	**74**

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	8	15	18	20	14	5	17	9	21	9	14	2
Bay 2	10	17	23	19	13	9	4	8	7	10	5	0
Bay 3	29	26	30	30	26	21	17	15	19	19	18	4
Bay 4	19	18	22	24	16	11	7	10	14	13	12	3
Total	**66**	**76**	**93**	**93**	**69**	**46**	**45**	**42**	**61**	**51**	**49**	**9**

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
1/06/2021	1	2	6	5	3	1	4	7	6	1	3	3
2/06/2021	2	1	6	6	7	2	2	3	5	4	5	2
3/06/2021	1	2	4	4	4	2	4	2	5	2	0	3
4/06/2021	0	2	3	4	1	2	2	2	3	2	2	1
5/06/2021	0	0	1	2	2	1	0	2	2	1	0	0
6/06/2021	0	1	1	1	1	1	0	1	0	1	0	0
7/06/2021	1	2	2	1	4	2	1	2	1	0	0	2
8/06/2021	1	0	5	0	4	2	1	1	2	2	1	1
9/06/2021	1	3	2	4	3	2	2	0	1	2	1	0
10/06/2021	3	2	5	5	6	6	2	4	1	2	1	2
11/06/2021	0	0	3	4	4	3	1	0	1	4	2	1
12/06/2021	3	0	2	1	2	3	2	2	1	2	3	2
13/06/2021	2	0	2	2	2	0	0	4	1	1	1	4
14/06/2021	2	0	4	2	4	2	3	1	2	2	1	4
15/06/2021	3	3	2	3	3	6	5	3	2	2	2	5
16/06/2021	3	2	4	2	4	2	2	2	3	4	1	2
17/06/2021	4	0	5	3	4	1	2	0	4	2	3	4
18/06/2021	2	1	4	3	4	2	6	1	3	0	4	5
19/06/2021	1	0	2	0	0	3	5	0	2	0	2	1
20/06/2021	0	0	0	3	0	3	0	1	2	1	2	3
21/06/2021	2	1	2	4	4	2	0	2	3	2	2	3
22/06/2021	1	2	4	0	3	4	3	4	3	2	3	2
23/06/2021	1	3	6	1	3	2	6	2	3	3	1	2
24/06/2021	5	2	4	3	6	4	4	2	2	5	4	5
25/06/2021	4	2	3	1	4	4	4	1	1	5	3	3
26/06/2021	2	3	1	4	2	0	2	5	1	1	3	1
27/06/2021	2	0	5	3	1	1	2	2	3	1	4	3
28/06/2021	0	1	6	5	1	4	3	3	5	1	3	3
29/06/2021	0	2	4	3	6	1	3	4	3	3	1	6
30/06/2021	3	2	4	3	5	2	3	2	5	2	3	1
1/07/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**50**	**39**	**102**	**82**	**97**	**70**	**74**	**65**	**76**	**60**	**61**	**74**

	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
1/06/2021	2	4	5	2	1	2	1	2	3	3	2	0
2/06/2021	5	4	4	4	4	2	1	1	3	3	1	0
3/06/2021	1	1	3	5	1	2	1	3	1	1	1	0
4/06/2021	0	0	5	2	1	0	0	0	2	2	1	0
5/06/2021	0	0	1	0	2	0	1	0	0	0	2	0
6/06/2021	2	2	1	1	2	0	1	0	1	2	3	0
7/06/2021	1	3	2	4	2	1	1	1	2	0	3	0
8/06/2021	2	2	3	4	2	0	2	1	1	0	1	1
9/06/2021	1	4	2	1	2	0	1	1	1	1	1	0
10/06/2021	1	0	4	5	3	3	2	1	0	1	2	0
11/06/2021	1	3	4	2	2	3	1	0	2	3	1	0
12/06/2021	3	2	2	3	2	0	1	1	2	1	0	0
13/06/2021	1	4	3	0	1	1	1	4	0	2	1	2
14/06/2021	2	2	6	1	4	1	2	3	3	2	3	0
15/06/2021	2	6	1	5	3	2	1	2	2	3	1	0
16/06/2021	2	0	2	6	3	2	2	2	6	3	0	1
17/06/2021	5	4	4	3	3	5	1	2	3	2	4	0
18/06/2021	2	1	4	5	2	1	0	1	1	2	2	0
19/06/2021	2	1	2	0	0	1	1	0	1	0	0	0
20/06/2021	0	2	1	1	0	1	1	1	1	1	1	0
21/06/2021	2	3	2	3	1	0	2	1	2	1	0	0
22/06/2021	5	4	3	4	1	2	3	3	3	0	3	1
23/06/2021	3	0	5	3	3	2	2	2	3	3	2	0
24/06/2021	4	2	4	3	6	3	1	3	3	2	4	1
25/06/2021	2	2	3	3	3	1	3	0	4	3	1	1
26/06/2021	2	3	3	2	1	2	3	2	1	1	2	0
27/06/2021	2	4	2	3	0	3	2	0	2	2	2	1
28/06/2021	4	5	6	6	3	2	1	0	5	3	1	1
29/06/2021	4	3	3	7	3	2	2	3	2	2	1	0
30/06/2021	3	5	3	5	8	2	4	2	1	2	3	0
1/07/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**66**	**76**	**93**	**93**	**69**	**46**	**45**	**42**	**61**	**51**	**49**	**9**

REPORTING PERIOD: July

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	2	9	24	20	22	13	13	14	22	15	11	10
Bay 2	8	7	18	20	26	16	10	22	15	17	13	10
Bay 3	15	20	26	17	37	30	18	23	26	19	20	20
Bay 4	15	8	24	13	32	17	9	15	23	19	17	18
Total	**40**	**44**	**92**	**70**	**117**	**76**	**50**	**74**	**86**	**70**	**61**	**58**

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	8	15	9	21	17	8	10	8	21	19	11	4
Bay 2	10	15	17	16	13	9	5	10	5	5	4	1
Bay 3	17	26	23	24	21	17	14	14	14	10	18	2
Bay 4	15	19	24	16	17	11	10	8	12	8	12	2
Total	**50**	**75**	**73**	**77**	**68**	**45**	**39**	**40**	**52**	**42**	**45**	**9**

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
1/07/2021	0	2	2	3	7	4	3	3	4	2	4	1
2/07/2021	1	3	6	1	5	4	1	2	2	3	4	2
3/07/2021	2	0	4	3	1	2	3	2	2	4	2	1
4/07/2021	1	1	2	1	1	2	1	0	3	1	3	0
5/07/2021	2	2	8	2	3	2	1	2	3	4	1	0
6/07/2021	2	2	3	4	4	2	4	2	2	2	1	1
7/07/2021	3	1	2	5	5	3	2	1	3	4	3	4
8/07/2021	4	1	5	1	5	3	0	5	4	0	2	2
9/07/2021	2	0	5	2	4	6	1	5	2	4	2	3
10/07/2021	1	1	4	0	0	1	3	4	4	2	2	1
11/07/2021	1	1	1	0	1	1	3	0	3	2	0	2
12/07/2021	4	1	1	4	4	3	3	2	5	3	0	2
13/07/2021	1	1	3	5	5	2	1	6	4	3	2	2
14/07/2021	3	5	3	2	4	5	1	6	3	2	4	3
15/07/2021	0	0	4	2	5	2	2	0	4	1	2	0
16/07/2021	2	0	4	3	5	1	1	2	3	1	1	1
17/07/2021	1	0	1	2	2	2	1	0	2	1	3	0
18/07/2021	0	2	1	0	1	1	0	3	0	2	1	1
19/07/2021	0	4	3	3	6	1	1	2	1	1	0	3
20/07/2021	1	1	1	2	2	2	2	1	3	3	1	0
21/07/2021	1	2	0	4	3	4	0	3	3	0	3	2
22/07/2021	0	1	2	3	5	2	3	4	1	3	0	1
23/07/2021	0	1	3	2	4	2	3	1	2	4	0	6
24/07/2021	0	2	1	0	3	1	1	2	3	3	0	3
25/07/2021	0	1	0	1	2	2	0	0	0	1	1	1
26/07/2021	0	1	1	6	7	3	0	0	4	1	1	2
27/07/2021	0	1	6	1	3	4	0	1	2	1	4	2
28/07/2021	1	3	4	5	4	1	2	4	1	4	5	3
29/07/2021	5	1	4	2	8	1	3	5	5	1	1	4
30/07/2021	2	2	6	0	6	5	3	4	6	6	4	3
31/07/2021	0	1	2	1	2	2	1	2	2	1	4	2
Total	**40**	**44**	**92**	**70**	**117**	**76**	**50**	**74**	**86**	**70**	**61**	**58**

	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
1/07/2021	1	2	3	3	6	0	1	3	3	0	0	0
2/07/2021	0	3	4	3	4	1	2	1	2	2	2	0
3/07/2021	1	1	2	2	1	2	2	0	4	0	2	1
4/07/2021	1	3	1	3	0	1	2	3	1	3	2	1
5/07/2021	4	3	6	3	1	1	1	4	2	3	2	0
6/07/2021	2	4	5	5	3	0	3	4	2	3	2	1
7/07/2021	1	4	3	6	3	3	1	1	1	1	3	2
8/07/2021	4	1	4	6	3	2	3	1	4	3	2	0
9/07/2021	1	1	4	1	4	1	0	2	0	2	1	0
10/07/2021	3	2	2	0	2	3	0	1	1	1	1	1
11/07/2021	5	1	2	1	1	2	1	0	1	1	1	0
12/07/2021	0	5	4	5	3	1	1	2	0	1	0	1
13/07/2021	1	4	5	3	1	3	2	2	2	2	0	0
14/07/2021	4	4	2	4	3	1	1	3	1	0	3	0
15/07/2021	0	3	1	2	3	0	1	1	2	0	0	0
16/07/2021	0	0	2	0	3	1	1	0	2	2	2	1
17/07/2021	2	2	0	0	1	1	0	0	0	1	0	0
18/07/2021	1	2	1	0	0	3	1	0	0	1	2	0
19/07/2021	0	1	2	3	1	1	2	1	1	1	1	0
20/07/2021	3	5	1	2	1	1	0	0	2	1	0	0
21/07/2021	1	3	0	1	1	0	0	0	1	1	1	0
22/07/2021	0	1	3	3	2	1	0	3	0	2	1	1
23/07/2021	2	0	2	1	2	2	1	2	0	1	0	0
24/07/2021	0	1	1	2	2	1	0	1	0	2	0	0
25/07/2021	2	0	0	3	2	1	2	0	4	2	0	0
26/07/2021	2	5	1	3	2	1	0	1	1	0	1	0
27/07/2021	1	1	1	1	2	2	0	0	3	1	3	0
28/07/2021	4	3	3	2	3	4	4	2	2	0	3	0
29/07/2021	1	5	5	4	3	3	2	1	2	3	3	0
30/07/2021	2	2	2	4	3	0	3	1	5	1	4	0
31/07/2021	1	3	1	1	2	2	2	0	3	1	3	0
Total	**50**	**75**	**73**	**77**	**68**	**45**	**39**	**40**	**52**	**42**	**45**	**9**

REPORTING PERIOD: August

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	5	10	24	24	16	17	10	14	13	18	13	12
Bay 2	3	8	21	23	17	20	8	9	23	17	20	11
Bay 3	19	14	30	23	29	29	13	32	29	25	33	24
Bay 4	13	13	21	20	26	18	16	19	22	19	21	24
Total	**40**	**45**	**96**	**90**	**88**	**84**	**47**	**74**	**87**	**79**	**87**	**71**

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	6	12	22	27	17	9	10	17	14	17	6	0
Bay 2	11	7	19	14	9	14	2	9	10	12	8	0
Bay 3	21	17	35	31	27	21	21	17	20	20	25	6
Bay 4	18	8	22	23	20	14	8	9	17	16	16	5
Total	**56**	**44**	**98**	**95**	**73**	**58**	**41**	**52**	**61**	**65**	**55**	**11**

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
1/08/2021	1	1	2	2	0	4	1	2	1	2	3	2
2/08/2021	1	1	3	4	5	3	2	3	4	5	5	4
3/08/2021	1	2	3	5	4	4	1	3	2	5	3	1
4/08/2021	2	0	4	6	3	4	1	1	2	4	4	2
5/08/2021	1	1	6	3	2	0	3	3	4	3	1	3
6/08/2021	1	2	4	4	3	1	0	2	4	5	5	2
7/08/2021	0	3	1	3	2	2	1	1	2	1	1	1
8/08/2021	1	1	0	2	0	0	1	3	2	1	1	1
9/08/2021	2	0	1	2	3	1	1	2	1	3	3	2
10/08/2021	0	0	1	3	5	0	2	3	1	1	3	3
11/08/2021	2	0	8	3	3	2	0	2	3	2	3	2
12/08/2021	0	2	4	2	4	3	2	2	1	4	1	2
13/08/2021	0	1	3	6	1	5	1	1	4	2	5	1
14/08/2021	0	2	2	2	2	2	1	1	1	4	4	2
15/08/2021	1	0	4	2	1	3	0	2	2	2	2	2
16/08/2021	1	3	6	5	2	1	3	4	4	2	3	1
17/08/2021	2	1	2	7	4	1	1	5	4	1	6	1
18/08/2021	2	3	4	3	3	2	3	1	3	3	1	3
19/08/2021	1	4	3	0	5	2	3	5	5	3	2	3
20/08/2021	2	2	3	1	4	2	2	2	3	4	3	1
21/08/2021	2	2	3	2	0	2	2	3	2	3	0	3
22/08/2021	1	0	3	2	0	3	2	2	2	3	1	2
23/08/2021	2	2	4	3	3	5	1	2	6	1	2	2
24/08/2021	2	3	2	3	3	5	1	5	1	1	4	6
25/08/2021	1	1	1	2	6	5	1	1	5	3	2	1
26/08/2021	0	2	3	2	2	4	2	3	5	2	3	4
27/08/2021	1	1	3	2	4	4	3	1	2	1	3	0
28/08/2021	3	2	2	2	1	4	0	2	4	2	1	1
29/08/2021	2	2	2	3	0	3	1	2	2	1	3	1
30/08/2021	4	1	5	0	9	3	3	1	3	4	4	6
31/08/2021	1	0	4	4	4	4	2	4	2	1	5	6
Total	**40**	**45**	**96**	**90**	**88**	**84**	**47**	**74**	**87**	**79**	**87**	**71**

	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
1/08/2021	2	1	3	0	3	1	3	4	1	3	2	1
2/08/2021	2	1	4	3	4	0	1	3	3	1	2	0
3/08/2021	3	1	2	4	5	1	3	1	2	4	1	0
4/08/2021	0	0	3	4	1	1	4	1	4	2	3	1
5/08/2021	2	0	5	4	2	0	0	3	3	2	4	0
6/08/2021	2	1	5	5	2	3	1	4	2	1	1	0
7/08/2021	2	1	1	3	0	0	0	0	1	0	1	0
8/08/2021	1	1	1	2	1	1	1	0	1	2	2	0
9/08/2021	1	0	3	2	3	1	2	3	0	1	1	0
10/08/2021	1	0	1	3	1	1	1	1	2	1	1	0
11/08/2021	0	1	4	3	1	2	2	3	1	3	1	0
12/08/2021	0	3	5	2	2	0	1	3	1	3	2	1
13/08/2021	2	0	4	5	4	0	0	0	2	3	2	1
14/08/2021	1	1	4	3	1	1	1	2	2	3	2	1
15/08/2021	1	3	2	1	2	1	2	1	2	1	1	0
16/08/2021	1	2	5	2	7	3	0	2	3	4	1	0
17/08/2021	2	1	1	3	2	4	1	1	2	2	2	0
18/08/2021	2	3	4	3	3	4	0	3	1	2	0	0
19/08/2021	2	3	4	1	4	2	1	4	1	1	2	0
20/08/2021	1	3	4	5	2	1	2	0	2	2	2	1
21/08/2021	2	1	3	2	5	3	2	1	2	3	1	0
22/08/2021	5	1	2	1	0	3	2	1	1	3	1	1
23/08/2021	5	2	6	2	1	4	3	1	2	1	3	0
24/08/2021	2	0	5	4	2	4	0	0	3	0	4	0
25/08/2021	1	3	2	4	3	3	0	1	2	1	2	0
26/08/2021	2	0	4	3	2	4	0	0	3	4	3	0
27/08/2021	3	2	2	5	1	0	2	3	6	1	2	0
28/08/2021	2	3	3	2	1	1	4	1	1	2	1	1
29/08/2021	3	1	3	1	0	1	0	2	2	2	1	1
30/08/2021	1	1	2	8	5	3	1	2	1	4	2	1
31/08/2021	2	4	1	5	3	5	1	1	2	3	2	1
Total	**56**	**44**	**98**	**95**	**73**	**58**	**41**	**52**	**61**	**65**	**55**	**11**

REPORTING PERIOD: September

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	9	5	18	15	15	24	12	12	17	14	13	22
Bay 2	6	8	15	13	17	21	17	18	8	12	11	19
Bay 3	16	16	23	24	28	28	21	24	21	27	22	32
Bay 4	11	6	17	16	18	21	13	18	14	18	19	26
Total	**42**	**35**	**73**	**68**	**78**	**94**	**63**	**72**	**60**	**71**	**65**	**99**

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	8	8	12	18	16	13	11	6	12	12	13	1
Bay 2	16	17	13	13	17	16	12	5	6	4	9	3
Bay 3	27	19	27	30	23	20	19	14	11	19	18	4
Bay 4	20	11	13	17	14	18	7	8	6	16	16	2
Total	**71**	**55**	**65**	**78**	**70**	**67**	**49**	**33**	**35**	**51**	**56**	**10**

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
1/09/2021	0	0	2	2	1	3	1	1	1	4	3	1
2/09/2021	2	0	0	1	3	6	1	1	0	3	2	2
3/09/2021	0	2	2	2	4	2	1	1	1	1	3	0
4/09/2021	0	0	1	0	0	3	0	1	1	2	2	1
5/09/2021	0	1	0	0	1	1	0	1	2	1	1	1
6/09/2021	2	1	4	2	3	3	2	0	3	3	1	2
7/09/2021	0	1	3	4	4	3	1	1	2	4	1	1
8/09/2021	1	2	4	3	2	2	2	2	4	2	1	1
9/09/2021	1	3	3	3	2	7	1	7	0	3	1	1
10/09/2021	1	1	3	3	6	4	3	1	1	2	4	3
11/09/2021	3	0	1	0	4	1	5	1	0	2	6	6
12/09/2021	2	1	2	1	1	3	3	3	3	1	2	5
13/09/2021	2	1	3	6	4	3	5	4	1	4	3	6
14/09/2021	0	0	2	2	2	2	0	1	1	1	1	3
15/09/2021	0	0	4	2	2	2	1	2	4	2	0	4
16/09/2021	4	2	2	4	3	5	3	4	3	2	5	3
17/09/2021	2	4	4	3	6	3	1	4	4	4	0	7
18/09/2021	1	0	3	2	0	0	1	5	3	0	1	3
19/09/2021	1	1	2	2	2	1	3	3	1	3	3	5
20/09/2021	3	3	3	0	5	3	3	2	2	5	0	6
21/09/2021	2	2	3	1	4	4	3	4	3	4	2	7
22/09/2021	2	3	2	2	2	5	3	4	0	2	1	3
23/09/2021	3	1	1	4	3	5	3	4	2	4	6	4
24/09/2021	2	2	0	4	3	4	7	2	2	3	2	6
25/09/2021	0	1	2	0	1	3	1	2	2	1	1	3
26/09/2021	2	0	3	0	1	0	1	0	1	0	2	1
27/09/2021	0	2	5	3	2	3	2	3	1	4	3	3
28/09/2021	3	0	3	6	2	4	1	4	6	2	2	7
29/09/2021	2	1	3	2	3	5	2	1	2	1	3	3
30/09/2021	1	0	3	4	2	4	3	3	4	1	3	1
1/10/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**42**	**35**	**73**	**68**	**78**	**94**	**63**	**72**	**60**	**71**	**65**	**99**

	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
1/09/2021	1	2	1	3	2	4	1	0	0	1	1	0
2/09/2021	1	0	3	3	3	4	1	1	2	1	1	0
3/09/2021	1	2	0	4	2	2	0	0	0	2	0	1
4/09/2021	4	0	3	1	1	1	0	1	1	1	0	0
5/09/2021	2	1	2	0	0	1	0	0	0	0	0	0
6/09/2021	1	1	1	3	2	1	2	1	1	2	0	0
7/09/2021	1	1	1	2	0	3	2	0	2	0	2	0
8/09/2021	3	3	0	6	5	3	0	2	2	4	1	0
9/09/2021	4	0	3	3	4	2	2	0	1	5	3	0
10/09/2021	3	0	1	7	3	2	1	2	1	1	5	1
11/09/2021	4	1	3	1	1	4	3	2	0	2	3	1
12/09/2021	3	3	1	1	0	3	3	1	1	1	3	2
13/09/2021	2	3	4	3	2	0	0	1	1	2	1	0
14/09/2021	0	1	3	1	2	2	1	0	0	1	0	0
15/09/2021	1	2	2	4	1	2	2	0	0	2	1	0
16/09/2021	0	5	1	3	6	1	2	3	2	2	0	1
17/09/2021	3	2	0	4	4	3	3	0	4	3	2	1
18/09/2021	2	5	3	1	2	1	3	3	2	0	4	0
19/09/2021	3	3	2	1	1	3	1	2	0	2	2	0
20/09/2021	4	2	3	2	3	5	3	1	0	3	5	1
21/09/2021	4	3	1	3	3	3	2	2	1	1	4	0
22/09/2021	2	2	6	3	1	1	2	1	2	1	2	1
23/09/2021	3	1	1	3	5	4	1	1	3	2	2	0
24/09/2021	3	2	1	3	3	3	2	1	2	3	2	0
25/09/2021	1	1	1	1	1	0	0	1	0	1	0	0
26/09/2021	2	3	2	1	0	0	2	0	1	1	2	0
27/09/2021	3	0	2	3	1	1	2	1	1	0	2	0
28/09/2021	4	3	5	3	4	4	3	3	1	3	4	0
29/09/2021	2	2	5	3	4	4	4	3	1	2	2	0
30/09/2021	4	1	4	2	4	0	1	0	3	2	2	1
1/10/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**71**	**55**	**65**	**78**	**70**	**67**	**49**	**33**	**35**	**51**	**56**	**10**

REPORTING PERIOD: October

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	10	7	21	20	18	15	10	16	14	15	16	11
Bay 2	9	3	16	11	16	15	11	9	12	11	14	13
Bay 3	22	22	25	23	31	25	23	23	30	23	18	27
Bay 4	17	12	18	11	21	22	15	12	15	10	16	14
Total	**58**	**44**	**80**	**65**	**86**	**77**	**59**	**60**	**71**	**59**	**64**	**65**

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	14	15	15	16	12	8	10	11	11	11	7	5
Bay 2	14	11	12	13	10	10	7	8	5	9	2	5
Bay 3	30	31	26	26	17	19	19	16	13	10	17	10
Bay 4	17	20	19	14	5	9	13	3	6	8	9	6
Total	**75**	**77**	**72**	**69**	**44**	**46**	**49**	**38**	**35**	**38**	**35**	**26**

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
1/10/2021	2	2	2	3	5	3	1	4	5	3	4	3
2/10/2021	3	1	4	1	0	4	3	2	4	1	2	1
3/10/2021	3	1	0	2	2	1	1	1	2	2	1	5
4/10/2021	3	2	3	2	2	2	4	1	5	1	0	2
5/10/2021	2	0	5	2	3	2	3	3	2	4	4	2
6/10/2021	6	2	4	4	1	5	5	4	2	2	3	2
7/10/2021	3	3	4	1	4	3	5	0	2	6	1	0
8/10/2021	2	1	0	4	1	8	2	0	2	4	4	0
9/10/2021	1	0	0	1	2	1	0	2	0	2	0	3
10/10/2021	0	1	1	1	2	0	0	0	1	1	1	1
11/10/2021	1	1	4	4	3	3	2	2	0	0	5	3
12/10/2021	2	0	3	0	4	5	0	2	2	0	5	3
13/10/2021	1	2	2	3	2	4	1	1	3	1	4	1
14/10/2021	0	2	3	3	3	2	2	1	1	0	3	1
15/10/2021	0	1	2	2	4	0	1	1	0	3	0	1
16/10/2021	4	2	0	1	3	0	3	2	4	0	2	3
17/10/2021	1	2	1	2	2	0	1	2	1	3	2	4
18/10/2021	2	1	5	1	5	0	4	3	2	3	1	1
19/10/2021	2	0	3	4	7	2	0	4	3	2	4	1
20/10/2021	3	3	3	1	3	4	2	2	3	3	1	3
21/10/2021	2	2	5	0	4	4	1	4	2	2	1	3
22/10/2021	2	4	3	4	5	3	2	1	2	3	2	1
23/10/2021	4	1	2	1	1	3	2	3	3	1	0	1
24/10/2021	5	1	3	0	1	4	2	2	2	0	1	3
25/10/2021	0	2	7	1	4	2	4	2	5	2	4	3
26/10/2021	0	1	4	5	3	4	2	3	1	3	1	5
27/10/2021	1	1	2	6	1	2	4	3	3	1	5	2
28/10/2021	1	3	3	2	2	1	1	3	3	2	0	3
29/10/2021	1	0	2	2	6	1	0	1	2	3	2	1
30/10/2021	0	1	0	0	1	3	0	0	3	0	0	2
31/10/2021	1	1	0	2	0	1	1	1	1	1	1	1
Total	**58**	**44**	**80**	**65**	**86**	**77**	**59**	**60**	**71**	**59**	**64**	**65**

	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
1/10/2021	1	4	3	2	3	2	3	0	1	3	1	2
2/10/2021	7	2	1	1	1	1	3	2	1	2	0	2
3/10/2021	2	3	1	1	0	2	1	3	0	1	1	1
4/10/2021	5	2	2	4	1	4	1	3	0	0	2	1
5/10/2021	2	2	2	2	1	1	2	0	2	0	0	0
6/10/2021	4	2	4	3	1	1	5	3	1	3	1	1
7/10/2021	5	1	4	3	4	3	3	1	2	3	0	2
8/10/2021	2	1	1	2	3	0	1	0	0	3	1	0
9/10/2021	3	2	1	2	1	0	1	0	2	1	1	0
10/10/2021	0	1	2	0	0	0	0	1	0	1	1	1
11/10/2021	1	3	5	2	0	0	1	0	0	1	0	0
12/10/2021	0	2	2	4	1	0	2	1	0	1	1	0
13/10/2021	3	2	0	3	3	1	1	1	0	0	1	0
14/10/2021	1	5	2	1	2	1	0	2	4	0	0	0
15/10/2021	1	1	3	1	1	1	0	0	1	0	2	0
16/10/2021	5	2	2	2	0	4	2	0	2	1	2	2
17/10/2021	0	2	2	1	1	2	1	2	2	1	4	1
18/10/2021	1	6	4	3	1	3	2	3	2	4	0	0
19/10/2021	5	3	2	4	0	3	3	3	1	2	1	2
20/10/2021	4	1	4	4	1	5	3	0	3	0	4	1
21/10/2021	4	3	3	5	1	2	2	2	3	1	0	3
22/10/2021	1	3	6	0	3	3	2	2	1	1	1	2
23/10/2021	3	3	0	2	2	3	0	1	1	0	0	0
24/10/2021	2	4	3	0	0	1	2	0	2	0	2	1
25/10/2021	4	6	4	2	5	1	1	2	1	2	0	2
26/10/2021	1	2	1	5	1	1	2	2	0	4	1	1
27/10/2021	1	2	1	4	2	0	2	0	1	1	2	0
28/10/2021	2	3	4	3	0	1	0	1	0	1	1	1
29/10/2021	0	3	0	1	4	0	0	1	1	0	1	0
30/10/2021	1	0	2	1	1	0	1	1	0	1	1	0
31/10/2021	4	1	1	1	0	0	2	1	1	0	3	0
Total	**75**	**77**	**72**	**69**	**44**	**46**	**49**	**38**	**35**	**38**	**35**	**26**

REPORTING PERIOD: November

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	7	6	15	14	19	10	8	6	13	10	11	7
Bay 2	7	5	13	14	22	16	9	8	14	13	9	13
Bay 3	13	14	24	14	29	27	13	18	19	22	23	19
Bay 4	4	6	16	10	24	16	15	8	15	10	17	12
Total	**31**	**31**	**68**	**52**	**94**	**69**	**45**	**40**	**61**	**55**	**60**	**51**

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	9	15	13	16	13	9	10	10	4	11	2	4
Bay 2	12	15	14	14	6	6	11	4	5	6	1	0
Bay 3	22	21	19	25	19	13	18	12	6	14	7	6
Bay 4	18	13	10	16	16	5	12	6	5	7	7	2
Total	**61**	**64**	**56**	**71**	**54**	**33**	**51**	**32**	**20**	**38**	**17**	**12**

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
1/11/2021	1	2	1	1	3	2	1	2	3	2	3	3
2/11/2021	0	0	3	1	3	3	1	3	0	2	3	2
3/11/2021	0	0	2	1	3	5	1	0	1	2	4	0
4/11/2021	1	2	2	2	5	2	1	0	6	1	6	2
5/11/2021	2	0	3	0	4	4	1	1	4	1	0	1
6/11/2021	1	0	0	0	3	3	0	1	0	1	2	1
7/11/2021	1	1	1	1	0	3	0	1	4	0	1	0
8/11/2021	1	2	2	2	4	1	1	1	5	3	1	0
9/11/2021	0	2	2	0	4	3	1	1	2	0	2	3
10/11/2021	3	1	2	3	2	2	3	1	3	3	3	5
11/11/2021	1	1	4	5	4	5	2	5	0	0	2	4
12/11/2021	4	3	0	2	1	2	6	2	2	3	4	0
13/11/2021	0	3	2	3	3	2	3	1	5	1	3	1
14/11/2021	0	0	0	0	0	2	2	2	1	0	4	3
15/11/2021	4	0	5	2	5	1	7	2	4	2	2	1
16/11/2021	2	0	5	4	5	4	3	1	0	5	1	4
17/11/2021	3	1	4	3	5	1	4	1	2	3	3	1
18/11/2021	0	1	4	3	7	5	2	1	3	5	4	3
19/11/2021	0	0	4	3	6	2	0	0	1	3	0	2
20/11/2021	0	0	0	0	2	2	0	1	1	3	0	0
21/11/2021	1	1	1	2	2	0	0	1	1	1	1	0
22/11/2021	0	2	2	2	5	1	1	0	2	2	2	2
23/11/2021	1	1	4	2	4	1	0	1	0	0	3	1
24/11/2021	0	1	2	0	2	3	0	3	1	2	2	1
25/11/2021	2	1	2	0	1	2	0	0	1	0	0	0
26/11/2021	1	1	3	3	2	3	2	1	2	3	1	1
27/11/2021	0	0	2	3	2	1	0	1	2	1	1	1
28/11/2021	0	0	0	0	1	1	0	0	0	1	0	2
29/11/2021	1	4	2	3	4	1	1	3	3	2	0	3
30/11/2021	1	1	4	1	2	2	2	3	2	3	2	4
1/12/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**31**	**31**	**68**	**52**	**94**	**69**	**45**	**40**	**61**	**55**	**60**	**51**

	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
1/11/2021	0	0	0	4	3	1	1	0	0	0	2	1
2/11/2021	2	2	1	1	3	1	0	1	0	1	1	1
3/11/2021	2	2	1	1	3	1	0	1	0	2	0	0
4/11/2021	2	3	4	2	1	0	4	0	0	1	0	0
5/11/2021	2	1	2	4	2	0	0	2	0	2	0	0
6/11/2021	0	2	0	0	0	0	1	0	1	0	1	0
7/11/2021	2	0	1	0	0	0	1	1	2	0	0	0
8/11/2021	1	2	2	1	1	0	1	3	1	0	1	0
9/11/2021	2	3	2	4	2	2	3	4	4	2	1	0
10/11/2021	4	3	5	5	2	0	3	2	1	1	2	0
11/11/2021	2	3	0	1	5	1	4	2	0	2	2	0
12/11/2021	5	5	2	1	2	1	3	1	2	2	1	1
13/11/2021	2	2	3	2	2	1	2	0	0	0	0	0
14/11/2021	3	3	0	1	1	1	2	2	1	0	1	0
15/11/2021	5	4	5	3	3	3	8	0	0	2	0	1
16/11/2021	4	3	2	6	4	6	2	1	2	3	3	0
17/11/2021	5	1	3	3	3	5	3	2	1	2	0	0
18/11/2021	2	1	4	8	4	2	3	1	0	5	0	1
19/11/2021	0	2	1	4	3	2	1	1	0	1	1	3
20/11/2021	3	1	1	1	0	0	1	0	2	1	0	1
21/11/2021	0	2	0	1	0	0	0	1	0	2	0	1
22/11/2021	0	2	6	4	3	0	0	0	0	1	1	0
23/11/2021	1	1	1	2	1	1	2	0	1	0	0	0
24/11/2021	0	2	2	1	1	0	1	1	0	1	0	0
25/11/2021	1	1	0	0	1	2	2	0	0	0	0	0
26/11/2021	0	3	1	4	1	0	0	0	1	1	0	0
27/11/2021	1	2	1	3	0	0	0	1	0	1	0	0
28/11/2021	4	2	1	1	0	2	1	1	0	1	0	0
29/11/2021	4	2	4	1	1	1	0	2	0	0	0	1
30/11/2021	2	4	1	2	2	0	2	2	1	4	0	1
1/12/2021	0	0	0	0	0	0	0	0	0	0	0	0
Total	**61**	**64**	**56**	**71**	**54**	**33**	**51**	**32**	**20**	**38**	**17**	**12**

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	7	7	20	10	15	6	10	7	7	8	7	9
Bay 2	13	8	19	12	21	15	18	14	16	14	12	16
Bay 3	21	15	28	19	31	21	21	28	23	18	26	24
Bay 4	15	10	19	13	21	14	18	18	17	11	15	18
Total	**56**	**40**	**86**	**54**	**88**	**56**	**67**	**67**	**63**	**51**	**60**	**67**

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	6	13	13	12	4	12	11	14	10	4	12	2
Bay 2	15	15	20	17	10	7	5	7	3	9	5	2
Bay 3	27	28	28	27	25	15	14	15	19	11	10	5
Bay 4	19	19	21	16	14	9	8	11	10	9	7	7
Total	**67**	**75**	**82**	**72**	**53**	**43**	**38**	**47**	**42**	**33**	**34**	**16**

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
1/12/2021	1	0	4	2	2	4	2	3	0	0	0	1
2/12/2021	2	0	2	2	3	2	2	4	4	0	2	2
3/12/2021	0	1	3	4	2	3	3	3	2	4	3	2
4/12/2021	0	1	4	1	3	0	2	2	1	0	2	1
5/12/2021	2	2	4	0	0	1	3	0	3	0	3	3
6/12/2021	2	3	3	4	5	1	4	3	2	2	2	3
7/12/2021	1	1	4	2	5	5	5	2	1	3	2	1
8/12/2021	1	1	4	2	1	4	2	4	2	0	3	5
9/12/2021	2	1	4	1	7	0	4	4	1	3	0	2
10/12/2021	3	2	1	3	4	4	3	2	2	2	5	5
11/12/2021	3	0	2	2	0	4	3	2	1	2	3	0
12/12/2021	1	1	0	1	1	3	1	1	3	3	1	3
13/12/2021	1	1	1	2	6	1	2	5	3	6	3	3
14/12/2021	1	2	6	1	5	4	3	3	2	3	2	1
15/12/2021	5	1	4	0	4	3	3	2	3	1	4	1
16/12/2021	3	4	2	2	4	3	5	3	4	0	5	4
17/12/2021	4	4	1	3	0	1	2	3	7	3	0	3
18/12/2021	3	1	3	0	4	2	4	3	2	2	3	2
19/12/2021	4	1	2	0	2	2	4	2	3	2	1	4
20/12/2021	3	2	3	1	7	4	3	2	1	0	3	3
21/12/2021	3	2	3	2	3	2	0	2	1	2	1	4
22/12/2021	1	1	1	2	3	0	2	3	2	2	2	2
23/12/2021	0	1	3	2	3	1	0	1	2	2	4	2
24/12/2021	2	2	4	0	3	0	0	3	1	1	3	1
25/12/2021	0	0	0	0	0	0	0	0	0	0	0	1
26/12/2021	0	0	0	0	1	0	1	0	0	0	1	1
27/12/2021	3	1	2	4	1	0	0	1	1	0	0	0
28/12/2021	1	2	3	3	2	0	0	1	3	0	0	0
29/12/2021	3	1	4	4	2	1	3	0	3	1	0	3
30/12/2021	0	1	4	2	1	0	0	2	1	4	1	3
31/12/2021	1	0	5	2	4	1	1	1	2	3	1	1
Total	**56**	**40**	**86**	**54**	**88**	**56**	**67**	**67**	**63**	**51**	**60**	**67**

	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
1/12/2021	2	0	3	4	2	0	2	1	1	2	0	0
2/12/2021	0	2	4	3	2	0	0	3	3	0	3	1
3/12/2021	2	3	3	1	3	0	0	2	0	2	1	1
4/12/2021	1	1	2	1	1	3	0	0	3	1	1	0
5/12/2021	2	5	2	0	1	3	1	1	0	0	1	1
6/12/2021	0	3	4	3	2	0	3	1	3	3	0	1
7/12/2021	2	1	4	4	5	0	1	6	1	1	4	1
8/12/2021	3	3	4	4	4	5	1	0	0	1	3	2
9/12/2021	3	3	5	3	2	2	2	1	1	3	2	1
10/12/2021	3	3	3	1	6	2	1	5	1	1	0	1
11/12/2021	3	1	4	0	2	1	4	2	1	1	2	2
12/12/2021	5	1	3	1	2	2	2	1	3	2	2	1
13/12/2021	3	4	2	3	3	4	0	1	3	3	1	0
14/12/2021	4	5	4	2	4	1	6	1	1	0	3	2
15/12/2021	4	2	1	6	1	4	4	2	1	2	3	0
16/12/2021	5	2	2	5	1	1	3	4	2	2	0	1
17/12/2021	4	5	5	6	0	0	2	3	3	2	1	0
18/12/2021	4	5	4	2	0	1	1	3	2	0	1	1
19/12/2021	2	2	3	1	1	2	1	2	2	1	1	0
20/12/2021	5	3	1	1	3	2	0	0	1	0	1	0
21/12/2021	1	3	3	3	3	1	0	1	0	2	0	0
22/12/2021	1	2	3	4	0	2	1	0	1	1	1	0
23/12/2021	2	2	1	4	0	1	1	0	0	2	0	0
24/12/2021	1	0	0	2	0	0	1	0	0	0	0	0
25/12/2021	0	1	0	0	0	0	0	0	0	0	0	0
26/12/2021	0	2	1	0	1	1	0	1	1	0	0	0
27/12/2021	1	2	1	1	1	0	1	1	1	0	0	0
28/12/2021	2	0	5	1	0	1	0	1	1	0	1	0
29/12/2021	0	4	0	2	0	1	0	1	2	1	0	0
30/12/2021	1	3	2	3	2	2	0	2	2	0	1	0
31/12/2021	1	2	3	1	1	1	0	1	2	0	1	0
Total	**67**	**75**	**82**	**72**	**53**	**43**	**38**	**47**	**42**	**33**	**34**	**16**

Appendix E

Incident Register

Date & Time of Event:	EcoPortal Unique ID	Specific Site Location:	Type of event:	Type of incident:	Severity of Event:	Reportable / Notifiable Event?	Incident Description
2021-01-08 17:10	EVN-00079	Office building	Incident	Damage / Malfunction	Minor	No	End of day checks noted AC#01 in main switchroom had failed. Traced to Distribution Board Section 2 RCD Q24-6 had tripped. No immediately obvious cause and external aircon unit appeared OK . Aircon #02 running normally and coping with load.
2021-01-14 14:20	EVN-00103	Truck bay	Incident	Damage / Malfunction	Minor	No	Whilst doing a shipping tank inspection / bund line walk a leak was observed from Pump #05 by acting operator (under supervision - work experience). Thermal leak of diesel through Pump #05 pump seal.
2021-01-28 13:55	EVN-00148	Other	Near Miss	Unsafe Condition		No	Terminal Fire Panel initiated intermittent general system fault. 8 way relay which is a card within the main fire panel.
2021-01-28 14:00	EVN-00149	Truck bay	Non-Conformance			No	On receipt of Viva temporary Diesel Filtration skids it was noted that one skid had incorrect alignment of outlet pipework for connecting filtration units in series.
2021-01-30 18:00	EVN-00171	Office building	Incident	Damage / Malfunction	Minor	No	Over the weekend of 30 Jan there was a localised extreme weather event. Water ingress noted to office via roof mounted ducting affecting reception area ceiling (staining) and causing general fault with smoke detector head #18.
2021-02-06 16:00	EVN-00196	Jetty	Near Miss	Stop Work		No	In the final stages of discharge of the vessel 'Barramundi' heavy rain started to fall within the Newcastle area. The Duty Wharf Attendant radioed the Duty Shore Officer to advise he was witnessing a 'black powder like substance' floating on the surface of the pooling rainwater. As the run off was coming from the direction of the Koppers Carbon and Chemical manifold he had concerns that something had leaked from their lines or spill trays. Wharf drain was already closed as per
2021-02-06T19:20:00.000	EVN-00197	Tank (primary containment)	Incident	Spill/Environmental Accident	Minor	No	During walk round checks at end of discharge \'Barramundi\' Shore Officer noticed light sheen in pooling rainwater in bund of tank NN5.Â Bund drain valves were closed and pooling rainwater showed signs of a light diesel sheen.Â A sheen was also visible coming from the top of tank NN5 near the sample point.Â Â
2021-02-08T16:15:00.000	EVN-00199	Traffic area|External Traffic Area	Incident	Damage /Malfunction	Minor	No	Truck breakdown at entry gate.Â Driver stopped truck at entry gate to scan in card but had issue with card requiring Terminal assistance.Â Switched off truck.Â On returning to truck it wouldn\'t start due fuel starvation to fuel filter.Â Load bays approach coned out to warnÂ drivers that Bay 2 lane was closed.Â Mechanic called to site to

2021-02-28T15:21:00.000	EVN-00267	Tank (primary containment)	Incident	Damage /Malfunction	Minor	No	During the testing of the site\'s independent High High Level (HHLA) alarms on each tank, activation failed to initiate a site Emergency Shut Down (ESD). It should be noted the testing still confirmed the closing of the respective tank inlet valve and alarm notifications. The site\'s HAZOP\'s require the additional activation of the ESD.
2021-02-26T17:40:00.000	EVN-00268	Truck bay	Non-Conformance				Alarm received from Fuels Manager of \"improper additization\"Â BOLÂ 228184. Oncall staff monitored until Driver could be contacted upon entry to drivers room.
2021-02-28T12:45:00.000	EVN-00269	Office building	Incident	Damage /Malfunction	Minor	No	Call from Driver, Aircon in drivers room leaking water with potential risk of further damage/harm (water exposure to electrics, defib, sundries).
2021-03-08T15:50:00.000	EVN-00331	Office building	Incident	Damage /Malfunction	Minor	No	During localised electrical storm event entry gate card reader failed.Â Issue traced to failed MOXA unit in the PLC
2021-03-16T14:10:00.000	EVN-00378	Truck bay	Incident	Damage /Malfunction	Minor	No	During loading of an additised diesel extra load in Bay 2 , load tripped out on an additisation dosing fault.Â Driver contacted control room for advice.Â A cursory check of the system showed that the additive pumps were no longer available via PLC indications and Additive Pump #01 (AP#01) was showing Protection Fault on main switchboard.Â AP #01 was
2021-03-18T05:40:00.000	EVN-00391	Office building	Incident	Damage /Malfunction	Minor	No	Extreme weather even eastern NSW.Â Localised flooding and ingress of water to Terminal offices at numerous locations, flooding into septic tank and switchroom.Â All controlled at this stage butÂ ingress noted through wall into Site Operations Manager Office and landscaped drainage at Septic system inundated and unable to cope with volume of water.Â
2021-03-08T07:00:00.000	EVN-00392	Jetty	Incident	Damage /Malfunction	Minor	No	Damage noted (on shoreside) to pilot ladder / wharf access ladder handhold rail near Bollard B05 (photo to follow).Â Appears to have been crushed into wharf concrete nib possibly by Frena moving hoses for Asphalt Transporter.Â No other equipment operates in that area.
2021-03-18T16:30:00.000	EVN-00395	Office building|Other	Incident	Damage /Malfunction	Minor	No	Local lightening strike / power surge tripped site ESD / Power Outage.Â Attend and reset site for reboot / restart.Â Power outage tripped ESD alarms, tripped out CCTV, Fuels Manager system (control room only), Exit Gate, Compressor #01 tripped, Air Dryer tripped, Aircons Switchroom tripped, VSD Pump #07 tripped, Beeper / Strobe unit RHS Entry Gate
2021-03-22T12:50:00.000	EVN-00427	Office building	Incident	Injury	Minor	No	Whilst pulling up carpet from office floor, staff hit head on floating wall cabinets.

2021-03-24T16:34:00.000	EVN-00441	Jetty	Incident	Other	Minor	No	During the discharge of the Asphalt Transporter at Mayfield 7 berth, the unloading hose ruptured resulting in an uncontrolled release of Soft Pitch product. Note, this operation is undertaken under Koppers management (EPL, MSP
2021-04-06T04:15:00.000	EVN-00497	Truck bay	Incident	Damage /Malfunction	Minor	No	Approx 04:15hrs driver reported issue with additised load using Bay 2 Arm 2.Â Load was able to be completed on other arms and then problem arm was isolated. Subsequent inspection found that a pin within the metering unit had
2021-04-05T19:35:00.000	EVN-00500	Truck bay	Incident	Other	Minor	No	Driver reported issues with vapour sensor in Bay 4 (via drivers fault book) but didn\'t call duty personnel to report.Â Next driver in bay 4 to load then couldn\'t clear the generic \'Check Vapour Scully\' message and thinking there was a vapour fault noting previous drivers comments coned out bay, again writing up fault in drivers book but did not phone
2021-04-09T08:30:00.000	EVN-00506	Truck bay	Incident	Damage /Malfunction	Minor	No	Customer had temporary diesel filtration skid installed at site.Â Part of daily operation is to monitor different pressures between filtration skids and the observed gantry flow rates.Â This data is collated daily (Mon - Fri) with customer recommendation that filters are swapped out at 350Kpa differential.Â Note -Â this unit is temporary and will be
2021-04-18 04:22	EVN-00528	Other	Incident	Spill / Environmental Accident	Moderately Serious	Yes	Bellow connection on Diesel filtration failed resulting in loss of containment.Due to spray effect the product was not contained to the bunded area and Diesel had run into the sites Storm water drain system.Detailed report to follow.
2021-04-20T19:20:00.000	EVN-00546	Tank bund (secondary containment)	Incident	Spill/Environmental Accident	Minor	No	19:20 20th April, CCTV was reviewed remotely and identified a leak at the newly commissioned Diesel filtration unit. Attended site and isolated pressure differential gauge which appeared to have a leak point internally. Spill was contained in bunded area.
2021-04-23T12:20:00.000	EVN-00547	Tank (primary containment)	Non-Conformance				Hazy Diesel received off vessel ST Prestige. All ships tanks de-bottomed into one shore tank until product cleared to meet specification. Approx 10.1 million litres quarantined into shore tank NN6 for further settlement and testing.Â
2021-04-28T15:30:00.000	EVN-00552	Truck bay	Incident	Damage /Malfunction	Minor	No	Approx 15:30hrs driver contacted Terminal staff to say he was having a scully issue in Bay 4.Â Checks were carried out on truck and moved to another bay where it was able to load without incident.Â A test of the scully plugÂ using the site scully test unit revealed an intermittent fault on pin No 5.Â On closer inspectionÂ by matching the old scully
2021-05-05T06:00:00.000	EVN-00573	Other	Incident	Injury|Damage /Malfunction	Minor	No	Whilst opening up valve for recirculation of First Flush Pit the valve handle snapped under tension and operator grazed wrist against broken edge as handle snapped off.Â Lacerration / graze of approx 30mm x 10mm.Â Basic first aid dressing only.Â

2021-05-18T10:35:00.000	EVN-00615	Office building	Non-Conformance				Fortinet supplier has advised of potential security exposure to Fortigate devices used for the site\'s Fuels Manager VPN (remote access) which is currently secured with a 3rd party SSL certificate. This exposure can lead to security breach of the systems firewall and data exposure.Â
2021-05-18T14:04:00.000	EVN-00616	Outside perimeter|Office building	Non-Conformance				Viva customer advised: *The latest May-21 security scan picks up another vulnerability associated with the same Fuels Manager System at Stolthaven Terminal.*
2021-06-15T09:55:00.000	EVN-00678	Truck bay	Near Miss	Unsafe Condition			Customer Isotainer with Nemo 2016 fuel additive arrived at site for unloading to stock.Â Outlet thread connection checked prior connection and was found to be badly cross threaded and assessed as being unable to make good / safe connection.
2021-06-17T08:19:00.000	EVN-00684	External Traffic Area	Non-Conformance				Informed by Security at the Ingall street control point that a driver had been seen using a mobile phone. He was stopped at the boom gate & asked to stop using it before access was granted.
2021-06-25T02:00:00.000	EVN-00705	Jetty	Incident	Damage /Malfunction	Minor	No	At start of discharge of the vessel **High Adventurer** (diesel only cargo), the shore hoses connecting ships manifold to the shore pipeline were being gravity fed from ships manifold post shore connection pressure test.Â The eastern side hose started to slide into the gap between the wharf and the ship. Wharf Attendant called for immediate
2021-06-30T02:25:00.000	EVN-00717	External Traffic Area	Incident	Damage /Malfunction	Minor	No	Infrabuild gatehouse security advised B-double truck impacted 2 pedestrian poles on route to Stolthaven. Appears the driver had underestimated the righthand turn (cut the corner) and impacted the poles with his rear trailer.
2021-07-08T15:00:00.000	EVN-00749	Workshop	Incident	Damage /Malfunction	Minor	No	Site compressed air system dryer failure noted during daily checks.Â Basic troubleshooting failed to identify issue although suspected electrical fault.Â Technician called to site and identified fault with fan controller unit causingÂ trip on over pressure.Â System reset and adjusted with replacement card (under warranty) ordered and expected to
2021-07-17T13:15:00.000	EVN-00762	Truck bay	Incident	Spill/Environmental Accident	Minor	No	Approx 13:15hrs Sat 17 July driver called On Call staff to report finding small leak (approx 200-300ml) on the floor of Bay 2.Â Duty staff travelled to site to assess source of leak.Â Upon arriving at site no leak point could be found on drip trays, no evidence of weeps from loading arms, nor on the drain dry system hose or connections.Â Area was
2021-07-19T18:15:00.000	EVN-00774	Tank (primary containment)	Incident	Damage /Malfunction	Minor	No	During discharge of STI Maverick tank guaging on tank NN7 failed on two occasions near SFL and tank guaging on tank NN9 became erratic near SFL.Â Â NN7Â - 19 July 18:15hrs API Error Code - loss of guaging causing tank

2021-07-24T13:00:00.000	EVN-00782	Jetty	Incident	Damage /Malfunction	Minor	No	Whilst attempting to land gangway from the LIAN SHAN HU the wharf hand winch failed under load and drive disconnected from main gear.Â No loss of tension but gear failed to re-engage and it was necessary to use the site hazardous area rated forklift to pull the gangway to shore.
2021-08-20T16:30:00.000	EVN-00833	Tank bund (secondary containment)	Incident	Damage /Malfunction	Minor	No	Following the fire system annual flow test, it was noted water pooling in the Mayfield 7 bunded area was not draining away. Puraceptor manual valve was in an open state. Water level was monitored over a few hours with no apparent release of water. The puraceptor lid was opened and found the auto close device (float) had sunk and had effectively closed
2021-08-18T08:00:00.000	EVN-00834	Tank (primary containment)|Tank bund (secondary	Non-Conformance				During permitting activity, it was noted the calibration gas used for gas detector bumping & calibration was out of date. New gas sourced urgently from local supplier.
2021-08-31T05:30:00.000	EVN-00860	Truck bay	Incident	Damage /Malfunction	Minor	No	Driver reported loss of suction to drain dry system in Bay 1 of loading gantry.Â No loss of suction in other bays but greatly rerduced suction in Bay 1.Â Removed hose connection and suction at NRV was normal indicating blockage in hose. Hose removed to workshop and large amount of swarf, mud and debris found blocking hose.
2021-09-01T03:50:00.000	EVN-00866	Truck bay	Incident	Damage /Malfunction	Minor	No	Whilst loading B Double in Bay 3 driver completed load on A trailer and pulled forward to load B trailer.Â Failing to notice he\'d not removed the drip trays he pulled forward over the top of two drip trays.
2021-09-05T08:30:00.000	EVN-00870	Truck bay	Incident	Damage /Malfunction	Minor	No	Whilst loading diesel in Bay 2 driver experiencedÂ a repeated \'High Temperature\' alarm from Arm 1.Â Product temp across other arms and Bays was consistent at 14.7 - 15.2 degrees.Â Remote reset failed and driver advised to close bay and complete loading in Bay 1.Â Remote manual load completion required.Â Duty terminal staff attended siteÂ but were unable
2021-09-17T07:45:00.000	EVN-00895	Jetty	Incident	Other	Minor	No	During the daily walkaround, Stolt operator found the Seta Flash unit (used for flash point testing) was left on following the STI Queens discharge. Seta was set to 73 degrees.Â
2021-09-22T09:00:00.000	EVN-00896	Other	Incident	Damage /Malfunction	Minor	No	During monthly Fire protection testing Fire Pump 2 would not start.
2021-10-13T04:00:00.000	EVN-00933	Truck bay	Incident	Damage /Malfunction	Minor	No	Driver advised of loading stoppage and alarms in bay 2 whilst loading filtered Diesel with additive. Upon inspection alarms could not be reset, with PI-AICBI auto detect failure error displayed at Accuload on all 3 arms. Driver was relocated to another bay to complete loading over two seperate BOL\'s.Â

2021-10-13T04:40:00.000	EVN-00934	Truck bay	Incident	Spill/Environmental Accident	Minor	No	During Slops pump out to truck a leak occurred at the air pump, spraying a small volume from one of the pumps manifold flanges. Operator in charge of operation shut down the pump and addressed the issue. Minor leak 100 ml.
2021-10-15T11:57:00.000	EVN-00937	Tank (primary containment)|Tank bund (secondary	Incident	Spill/Environmental Accident	Minor	No	Return to service checks were being undertaken on NN1 following the 10 yearly off-stream inspection. Tank skin valves are required to be pressure tested on air to prove the re-connection. During the pressure test on NN1 inlet pipework/valve, a leak was detected which lead to a blow out of residual Diesel and air from the valve/inlet pipe
2021-10-29T13:30:00.000	EVN-00992	Jetty	Near Miss	Unsafe Condition			Diesel cargo discharge of the \'Zaliv Amurskiy\' suspended due sustained high winds.Â Wind vector was from NW and blowing vessel onto berth but exceeded limits. Discharge stopped 13:30hrs and recommenced safely at 16:12hrs.Â Â
2021-11-13T18:45:00.000	EVN-01032	Office building	Incident	Other	Minor	No	At 18:45hrs 13 Nov On Call staff received multiple alarms indication from site.Â Check verified with driver that power had been lost to site and only UPS backup supplies were working.Â Local Ausgrid network dropped out due storm damage to power lines in local area.Â Loss of power to terminal from 18:45hrs 13 Nov \'21 until approx 05:05hrs 14 Nov
2021-12-02T04:34:00.000	EVN-01084	Jetty	Incident	Other	Minor	No	During the discharge of the SCF Provider (LR1), the vessel pulled off Mayfield 7 fenders by approx 300mm, caused by adjacent berthing activities (Tug wash) and high levels of fresh in the harbour.Â The Port was experiencing high levels of fresh water from heavy rain activity over many days & additional port and terminal controls had been
2021-12-01T09:56:00.000	EVN-01085	Truck bay	Incident	Spill/Environmental Accident	Minor	No	Whilst walking through loading bay 1, a leak was noticed under additive pipework (s/s 1\" fully welded joints.) Further inspection found a pin hole leak in the piping, allowing product to leak under pump pressure.
2021-12-08T17:00:00.000	EVN-01094	Jetty	Non-Conformance				Failed pre-discharge results on ships tanks 4S, 6W & Slops wings ex Zalvik Amurskiy. Samples failed on water droplets found. Commingling customers contacted and correctional plan created, agreed & implemented.
2021-12-13T07:47:00.000	EVN-01104	Tank (primary containment)	Incident			No	It was notedÂ that the vapour redirection outlet (approx 17.5m above ground level on the side of tank NN1) was showing evidence of staining the side of tank NN1 (from top vent down).Â The vapour line was checked and approx 5 litres of diesel like product was captured in a bucket.Â The top vapour flame/detonation arrestor was removed and found to have
2021-12-16T03:38:00.000	EVN-01106	Truck bay	Incident	Damage /Malfunction	Minor	No	Driver loading in Bay 3 failed to remove drip tray from under API\'s on completion of loading, pulled forward to load B trailer and cruched drip tray.Â Carrier being billed for replacement.

2021-12-21T10:31:00.000	EVN-01121	Tank (primary containment)	Incident	Damage /Malfunction	Minor	No	NN3 tank inlet auto valve failed to close during operation. Upon inspection, Diesel was found in the air system & actuator valve causing a hydraulic lock in the rotork.Â
2021-12-27T09:12:00.000	EVN-01130	Truck bay	Incident	Spill/Environmental Accident	Minor	No	During slops removal, a small leak was noted at the rear of the slopsÂ shut off valve. Loading was stopped and leak assessed. Leak was coming from the open/close valve shaft, rear side. Retaining clip/circlip was missing allowing rubber seal to dislodge.

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 102021**

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

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

Test Medium: Diesel	**Test Pressure:** 1500 kPa			
Test Duration: 1 hour	**Start**	10.15am	**Finish**	11.15am
Test Date: 11/10/21	**Testing Officer: Russell Hancock**			
ISO No.	**LINE No.**			
	Wharfline			

	Completed By	**Approved By**	**Accepted By**
Company	H&O	H&O	Stolthaven
Name	Russell Hancock	Tom Relf	Andrew McCormick
Signature			
Date	11/10/21	11/10/21	11/10/21

Appendix H

2021Waste Management

Environmental - Waste Management

Effluent

Date	Terminal Quantity	Mayfield 7 Quantity	Company
7/01/21	1,500	500	Cleanaway
14/01/21	2,500	500	Cleanaway
21/01/21	3,000	500	Cleanaway
28/01/21	3,000	1,000	Cleanaway
4/02/21	3,000	1,500	Cleanaway
11/02/21	3,000	1,000	Cleanaway
19/02/21	3,000	500	Cleanaway
25/02/21	3,000	0	Cleanaway
4/03/21	3,000	0	Cleanaway
11/03/21	3,000	2,000	Cleanaway
18/03/21	3,000	1,000	Cleanaway
25/03/21	3,000	3,000	Cleanaway
1/04/21	3,000	1,500	Cleanaway
8/04/21	3,000	500	Cleanaway
15/04/21	3,000	500	Cleanaway
23/04/21	3,000	1,000	Cleanaway
29/04/21	3,000	2,000	Cleanaway
6/05/21	3,000	1,000	Cleanaway
13/05/21	3,000	1,000	Cleanaway
20/05/21	3,000	1,000	Cleanaway
3/06/21	3,000	500	Cleanaway
10/06/21	3,000	2,500	Cleanaway
17/06/21	3,000	500	Cleanaway
24/06/21	3,000	500	Cleanaway
1/07/21	3,000	500	Cleanaway
8/07/21	2,500	0	Cleanaway
15/07/21	2,500	500	Cleanaway
22/07/21	3,000	500	Cleanaway
28/07/21	2,500	200	Cleanaway
6/08/21	3,000	1,000	Cleanaway
11/08/21	2,500	1,000	Cleanaway
18/08/21	2,500	500	Cleanaway
25/08/21	2,500	1,000	Cleanaway
1/09/21	2,500	500	Cleanaway
8/09/21	2,500	0	Cleanaway
14/09/21	2,500	1,000	Cleanaway
22/09/21	3,000	1,000	Cleanaway
30/09/21	3,000	500	Cleanaway
11/10/21	3,000	500	Cleanaway
20/10/21	2,500	0	Cleanaway
28/10/21	3,000	1,000	Cleanaway
4/11/21	3,000	500	Cleanaway
10/11/21	2,500	1,000	Cleanaway
17/11/21	2,500	0	Cleanaway
23/11/21	3,000	1,000	Cleanaway
2/12/21	2,500	1,000	Cleanaway
9/12/21	2,500	1,000	Cleanaway
15/12/21	2,500	1,000	Cleanaway
23/12/21	3,000	1,000	Cleanaway

Hazardous Waste (Liquid)

Date	Quantity	Transfers	Company
27/01/21	0	19,040	JLP Transfer
16/02/21	0	14,660	JLP Transfer
1/04/21	0	19,090	JLP Transfer
22/04/21	0	13,870	JLP Transfer
11/05/21	0	21,250	JLP Transfer
31/05/21	0	7,300	JLP Transfer
15/06/21	0	7,320	JLP Transfer
7/07/21	0	18,740	JLP Transfer
5/08/21	0	18,660	JLP Transfer
18/08/21	13,540	0	Veolia
19/08/21	0	13,000	JLP Transfer
9/09/21	0	19,660	JLP Transfer
7/10/21	0	7,530	JLP Transfer
13/10/21	0	13,790	JLP Transfer
25/10/21	0	14,660	JLP Transfer
16/11/21	0	14,660	JLP Transfer
24/11/21	2,880	0	**Cleanaway**
25/11/21	2,040	0	**Cleanaway**
8/12/21	0	17,000	JLP Transfer
27/12/21	0	23,602	JLP Transfer

2021

Hazardous Waste (Solid)

Date	Bin 1,100lt	Bin 660lt	Drums (Empty) 20lt	Drums (Empty) 200lt	Soil (Removed from Site - kg)	Other	Company
14/01/21	0	**1**	0	0	0	0	A.E.S
26/02/21	0	**1**	0	0	0	0	A.E.S
23/04/21	0	**1**	0	0	0	0	A.E.S
14/05/21	0	**1**	0	0	0	0	A.E.S
21/05/21	**1**	**1**	**20**	0	0	0	A.E.S
22/06/21	**1**	**1**	0	0	0	0	A.E.S
6/07/21	**1**	**1**	0	0	0	0	A.E.S
7/09/21	**1**	**1**	0	0	0	0	A.E.S
21/09/21	**1**	0	0	0	0	0	A.E.S
21/10/21	0	**1**	0	0	0	0	A.E.S
7/12/21	**1**	**1**	0	0	0	0	A.E.S
31/12/21	**1**	**1**	0	0	0	0	A.E.S

2021

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 (kg)	Company	Recycling Review Period - Annually
3/01/19	**1**	0	0	0	0	Cleanaway	
11/01/19	0	**1**	0	0	0	Cleanaway	
9/01/19	0	**1**	0	0	0	Cleanaway	
15/01/19	**2**	0	0	0	0	Cleanaway	
25/01/19	0	**1**	0	0	0	Cleanaway	
29/01/19	**2**	0	0	0	0	Cleanaway	
8/02/19	0	**1**	0	0	0	Cleanaway	
12/02/19	**2**	0	0	0	0	Cleanaway	
22/02/19	0	**1**	0	0	0	Cleanaway	
26/02/19	**1**	0	0	0	0	Cleanaway	
6/03/19	**1**	0	0	0	0	Cleanaway	
8/03/19	0	**1**	0	0	0	Cleanaway	
12/03/19	**1**	0	0	0	0	Cleanaway	
22/03/19	0	**1**	0	0	0	Cleanaway	
26/03/19	**1**	0	0	0	0	Cleanaway	
5/04/19	0	**1**	0	0	0	Cleanaway	
9/04/19	**1**	0	0	0	0	Cleanaway	
19/04/19	0	1	0	0	0	Cleanaway	
23/04/19	**1**	0	0	0	0	Cleanaway	
3/05/19	0	**1**	0	0	0	Cleanaway	
7/05/19	**1**	0	0	0	0	Cleanaway	
17/05/19	0	**1**	0	0	0	Cleanaway	
21/05/19	**1**	0	0	0	0	Cleanaway	
31/05/19	0	**1**	0	0	0	Cleanaway	
4/06/19	**1**	0	0	0	0	Cleanaway	
14/06/19	0	**1**	0	0	0	Cleanaway	
18/06/19	**1**	0	0	0	0	Cleanaway	
28/06/19	0	**1**	0	0	0	Cleanaway	
2/07/19	**1**	0	0	0	0	Cleanaway	
12/07/19	0	**1**	0	0	0	Cleanaway	
16/07/19	**1**	0	0	0	0	Cleanaway	
26/07/19	0	**1**	0	0	0	Cleanaway	
30/07/19	**1**	0	0	0	0	Cleanaway	
9/08/19	**0**	**1**	0	0	0	Cleanaway	
13/08/19	**1**	0	0	0	0	Cleanaway	
23/08/19	0	**1**	0	0	0	Cleanaway	
27/08/19	**1**	0	0	0	0	Cleanaway	
6/09/19	0	**1**	0	0	0	Cleanaway	
10/09/19	**1**	0	0	0	0	Cleanaway	
11/09/19	0	0	1	0	0	Planet Ark	Post Office
20/09/19	0	**1**	0	0	0	Cleanaway	
24/09/19	**1**	0	0	0	0	Cleanaway	
4/10/19	0	**1**	0	0	0	Cleanaway	
8/10/19	**1**	0	0	0	0	Cleanaway	
18/10/19	0	**1**	0	0	0	Cleanaway	
22/10/19	**1**	0	0	0	0	Cleanaway	
31/10/19	**1**	0	0	0	0	Cleanaway	
1/11/19	0	**1**	0	0	0	Cleanaway	
5/11/19	**1**	0	0	0	0	Cleanaway	
15/11/19	0	**1**	0	0	0	Cleanaway	
19/11/19	**1**	0	0	0	0	Cleanaway	
29/11/19	0	**1**	0	0	0	Cleanaway	
3/12/19	**1**	0	0	0	0	Cleanaway	
13/12/19	0	**1**	0	0	0	Cleanaway	
17/12/19	**1**	0	0	0	0	Cleanaway	
27/12/19	0	**1**	0	0	0	Cleanaway	
31/12/19	**1**	0	0	0	0	Cleanaway	RDK Reviewed - see comments
10/01/20	0	**1**	0	0	0	Cleanaway	
14/01/20	**1**	0	0	0	0	Cleanaway	
24/01/20	0	**1**	0	0	0	Cleanaway	
28/01/20	**1**	0	0	0	0	Cleanaway	
7/02/20	0	**1**	0	0	0	Cleanaway	
11/02/20	**1**	0	0	0	0	Cleanaway	
21/02/20	0	**1**	0	0	0	Cleanaway	
25/02/20	**1**	0	0	0	0	Cleanaway	
6/03/20	0	**1**	0	0	0	Cleanaway	
10/03/20	**1**	0	0	0	0	Cleanaway	
20/03/20	0	**1**	0	0	0	Cleanaway	
24/03/20	**1**	0	0	0	0	Cleanaway	
3/04/20	0	**1**	0	0	0	Cleanaway	
7/04/20	**1**	0	0	0	0	Cleanaway	
17/04/20	0	**1**	0	0	0	Cleanaway	
21/04/20	**1**	0	0	0	0	Cleanaway	
1/05/20	0	**1**	0	0	0	Cleanaway	
5/05/20	**1**	0	0	0	0	Cleanaway	
15/05/20	0	**1**	0	0	0	Cleanaway	
19/05/20	**1**	0	0	0	0	Cleanaway	
29/05/20	0	**1**	0	0	0	Cleanaway	
2/06/20	**1**	0	0	0	0	Cleanaway	
12/06/20	0	**1**	0	0	0	Cleanaway	
16/06/20	**1**	0	0	0	0	Cleanaway	
26/06/20	0	**1**	0	0	0	Cleanaway	
30/06/20	**1**	0	0	0	0	Cleanaway	
10/07/20	0	**1**	0	0	0	Cleanaway	
14/07/20	**1**	0	0	0	0	Cleanaway	
24/07/20	0	**1**	0	0	0	Cleanaway	
28/07/20	**1**	0	0	0	0	Cleanaway	
7/08/20	0	**1**	0	0	0	Cleanaway	
11/08/20	**1**	0	0	0	0	Cleanaway	
22/08/20	0	**1**	0	0	0	Cleanaway	
25/08/20	**1**	0	0	0	0	Cleanaway	
4/09/20	0	**1**	0	0	0	Cleanaway	
8/09/20	**1**	0	0	0	0	Cleanaway	
18/09/20	0	**1**	0	0	0	Cleanaway	
22/09/20	**1**	0	0	0	0	Cleanaway	
2/10/20	0	**1**	0	0	0	Cleanaway	
6/10/20	**1**	0	0	0	0	Cleanaway	
17/10/20	0	**1**	0	0	0	Cleanaway	
20/10/20	**1**	0	0	0	0	Cleanaway	
31/10/20	0	**1**	0	0	0	Cleanaway	
3/11/20	**1**	0	0	0	0	Cleanaway	
14/11/20	0	1	0	0	0	Cleanaway	
17/11/20	**1**	0	0	0	0	Cleanaway	
28/11/20	0	**1**	0	0	0	Cleanaway	
1/12/20	**1**	0	0	0	0	Cleanaway	
12/12/20	0	**1**	0	0	0	Cleanaway	
15/12/20	**1**	0	0	0	0	Cleanaway	
29/12/20	**1**	0	0	0	0	Cleanaway	RDK Reviewed - see comments
9/01/21	0	**1**	0	0	0	Cleanaway	
12/01/21	**1**	0	0	0	0	Cleanaway	
23/01/21	**0**	**1**	0	0	0	Cleanaway	
26/01/21	**1**	0	0	0	0	Cleanaway	

Last Updated: 21/02/2022

6/02/21	0	**1**	0	0	0	Cleanaway	
9/02/21	**1**	0	0	0	0	Cleanaway	
20/02/21	0	**1**	0	0	0	Cleanaway	
23/02/21	**1**	0	0	0	0	Cleanaway	
6/03/21	0	**1**	0	0	0	Cleanaway	
9/03/21	**1**	0	0	0	0	Cleanaway	
20/03/21	0	**1**	0	0	0	Cleanaway	
23/03/21	**1**	0	0	0	0	Cleanaway	
3/04/21	0	**1**	0	0	0	Cleanaway	
6/04/21	**1**	0	0	0	0	Cleanaway	
24/04/21	0	**1**	0	0	0	Cleanaway	
30/04/21	**1**	0	0	0	0	Cleanaway	
1/05/21	0	**1**	0	0	0	Cleanaway	
4/05/21	**1**	0	0	0	0	Cleanaway	
15/05/21	0	1	0	0	0	Cleanaway	
18/05/21	**1**	0	0	0	0	Cleanaway	
29/05/21	0	**1**	0	0	0	Cleanaway	
1/06/21	**1**	0	0	0	0	Cleanaway	
12/06/21	0	**1**	0	0	0	Cleanaway	
15/06/21	**1**	0	0	0	0	Cleanaway	
26/06/21	0	**1**	0	0	0	Cleanaway	
29/06/21	**1**	0	0	0	0	Cleanaway	
10/07/21	0	**1**	0	0	0	Cleanaway	
13/07/21	**1**	0	0	0	0	Cleanaway	
13/07/21	0	0	1	0	0	**Planet Ark**	**Post Office**
24/07/21	0	**1**	0	0	0	Cleanaway	
27/07/21	**1**	0	0	0	0	Cleanaway	
7/08/21	0	**1**	0	0	0	Cleanaway	
10/08/21	**1**	0	0	0	0	Cleanaway	
21/08/21	0	**1**	0	0	0	Cleanaway	
24/08/21	**1**	0	0	0	0	Cleanaway	
4/09/21	0	**1**	0	0	0	Cleanaway	
7/09/21	**1**	0	0	0	0	Cleanaway	
18/09/21	0	**1**	0	0	0	Cleanaway	
21/09/21	**1**	0	0	0	0	Cleanaway	
30/09/21	0	**1**	0	0	0	Cleanaway	
2/10/21	0	**1**	0	0	0	Cleanaway	
5/10/21	**1**	0	0	0	0	Cleanaway	
7/10/21	**1**	0	0	0	0	Cleanaway	
16/10/21	0	**1**	0	0	0	Cleanaway	
19/10/21	**1**	0	0	0	0	Cleanaway	
21.10.21	0	**0**	0	0	0	Cleanaway	
30/10/21	0	**1**	0	0	27.50	Cleanaway	**n, spent garnet from tank floor blast**
2/11/21	**1**	0	0	0	0	Cleanaway	
13/11/21	0	**1**	0	0	0	Cleanaway	
16/11/21	**1**	0	0	0	0	Cleanaway	
27/11/21	0	**1**	0	0	0	Cleanaway	
30/11/21	**1**	0	0	0	0	Cleanaway	
11/12/21	0	**1**	0	0	0	Cleanaway	
14/12/21	**1**	0	0	0	0	Cleanaway	
28/12/21	**1**	0	0	0	0	Cleanaway	RDK Reviewed - see comments

Appendix I

Incident notification and report

INCIDENT REPORT

Location – Newcastle Terminal

Diesel spill from filtration skid

EcoPortal reference #EVN-00528

20 April 2021

CONTENTS

INTRODUCTION

About the Site

The Stolthaven Newcastle Terminal offers industry services to receive, store and dispatch Diesel product. The Stolthaven terminal is located at Lot 2 Steelworks Road Mayfield, Newcastle NSW. The Terminal started operation in 2011 and is a major supply distribution point for customer-based operations in Newcastle and the greater Hunter Region.

The Terminal leases 7 storage tanks at the facility ranging from .5 – 17.0 Million litres with an approximate total site capacity of 131 million litres of storage. Diesel is receipted via ship using the Stolthaven owned Mayfield 7 berth. The load out consists of a four-bay road gantry that is open 24 hours seven days a week. Drivers self-load their vehicles following an induction, training, independent qualification and sign off process.

The site is manned during the hours of 07:00 – 15:30 Monday to Friday and throughout any shipping activity. Afterhours the site is unmanned with a 24 hour on call number for any site issues or emergencies.

The site has Closed Circuit Television (CCTV) available on site with 22 cameras within the Terminal & berth area.

During shipping operations, the site is continuously manned with a Shore Officer, a Wharf Attendant and Line Walker in attendance.

A Diesel filtration unit was installed at the site on 29th January 2021 for the supply of a cleaner grade Diesel for a Stolthaven customer. This unit was supplied by Stolthaven's customer as a temporary solution until a permanent unit could be supplied, with an expected arrival date on the permanent filter of April 1st.

INCIDENT DETAILS

Actual

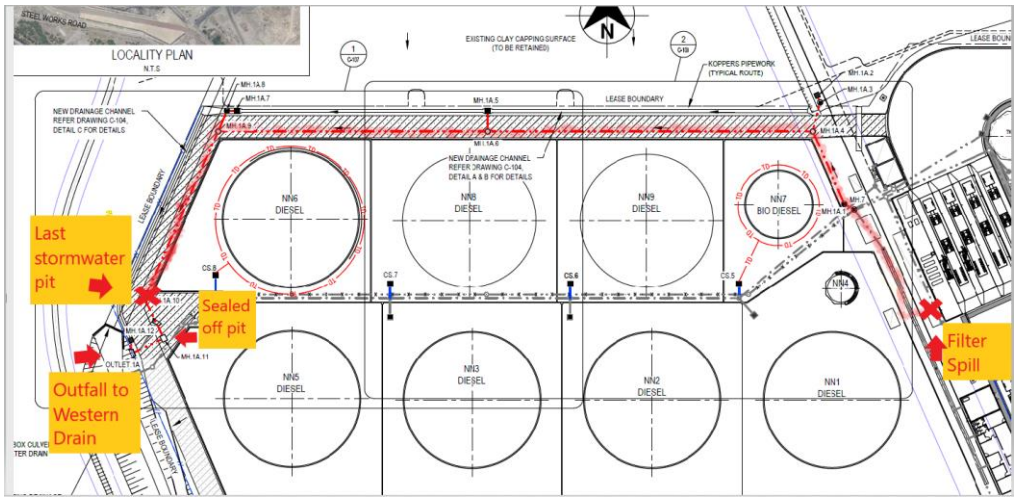
On the morning of Sunday the 18th of April at 04:16 Driver Malcom O'Reilly from JL Pierce carriers started loading Diesel in Bay 3 at Stolthaven Newcastle. During this loading at 04:22am a leak occurred at the Diesel filtration unit which resulted in Diesel spraying from a rubber bellow flanged joint. Due to the nature of the leak Diesel was sprayed inside and outside of the containment area. At approx. 04:44am the leak reduced when the truck loading had completed, and as the driver walked to the driver's room, past the filtration unit to obtain his paperwork, he detected the spill.

The driver contacted Stolthaven on call duty mobile. Brad Nichol (operator on call) received the call and asked the driver to describe to him the location and nature of the incident. Based on the information received Brad shut down the operation remotely from home, preventing further loadings. Further calls were made to Andy McCormick (Site Superintendent) and Ryan Duckmanton (Site Operations Manager) and all attended site.

First on scene, Brad Nichol assessed the area and isolated the filtration skid using the 4 gate valves on the inlet and outlet piping. Spill equipment was initiated. With the arrival of Andy then Ryan, the spill path was investigated further and found to have leaked into the site's underground Stormwater channel. The site's Emergency Response Plan, action card 2 – Loss of Contamination & Pollution Incident Response Management Plan was activated. Spill equipment was deployed at the western drain (sites outfall) as a precaution and the stormwater pits were opened to determine the distance of travel.

Diesel was found at the last Stormwater pit prior to the Western Drain channel outfall, refer Figure 1 – Site plan. Further spill equipment was deployed, and contractor Hancock & Owen was urgently requested to attend site & seal the pit off to prevent any further possible travel. Contractor - Russell Hancock & Chris Kent arrived onsite at approx. 08:40 and undertook the confined space work under site permits SWP 4782 & CSE 0321.

Figure1 – Site plan



INCIDENT DETAILS

No Diesel was released from the premises however as the incident had the potential to harm the Environment, Notifications were made to the following Agencies:

- EPA (09:39am) ref #117549
- NSW Fire & Rescue (09:46) ref #16459
- NSW Health (09:59)
- SafeWork NSW (09:55) Ref #2-167589
- Newcastle Council (10:01)
- Department of Planning (10:26)
- Port of Newcastle/VTIC (10:28)

Broader notifications were also made to Stolthaven Senior Management and customer base during the process.

In addition to the sealing of the stormwater channel onsite, a floating boom was deployed around the Stolthaven outlet at the western drain as a precaution to capture any seal breach or tidal movements which could have the potential to backflow into the premises and compromise the seal. Diesel was recovered from stormwater pits and low points using the site's air pumps and hoses. The weather forecast was reviewed for expected rain which was in favour of no rain predicted for a few days. Veolia (waste removal contractor) was booked to attend site the following day to flush stormwater pipework.

Once the spill was contained the leak area was inspected. One of the Nitrile bellows used to connect the two filtration skids had failed. Initial estimate of volume of Diesel released is 700 – 800 litres, based on quantity recovered. It is believed with rain events prior to the incident, residual rainwater in the stormwater system has aided the mobility of the Diesel through the system.

Product – Diesel (*SDS - Appendix 01*)

Volume released – estimated 700 to 800 litres.

Bellow – HoseFlex, Nitrile tube/Nitrile Cover, type NBR.

Driver – Malcom O'Reilly (Bill of Lading – Appendix 02)

Site Staff Response Attendees – Brad Nichol, Andy McCormick, Ryan Duckmanton

Contractor Response Attendees – Russel Hancock, Chris Kent

Liaison with external authorities – Ryan Duckmanton

INCIDENT DETAILS

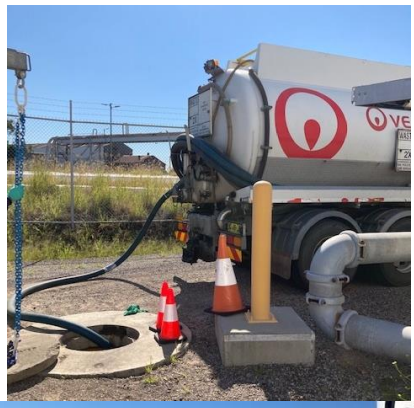
Photos:

Floating booms deployed at Western drain outlet

Sealing of Stormwater drain (Plywood/Sika seal) fuel absorbent material placed on inner side.

Bellow external

Clean up process following incident



ROOT CAUSE ANALYSIS – STOLTHAVEN OPERATIONS

Considerations for behavioural cause of the incident

Personnel

Nil behavioural causes identified for this incident.

No injuries or health impacts to date.

Considerations for physical cause of the incident

Physical

There are two rubber bellows used to connect identical filtration skids together, working in series. The bellows are marked as being of Nitrile material, which was verified prior to commissioning, *Appendix 03 – supplier confirmation & photo*. Nitrile is suitable for use in application with Diesel product.

Photo: Filter units after install 01/02/2021

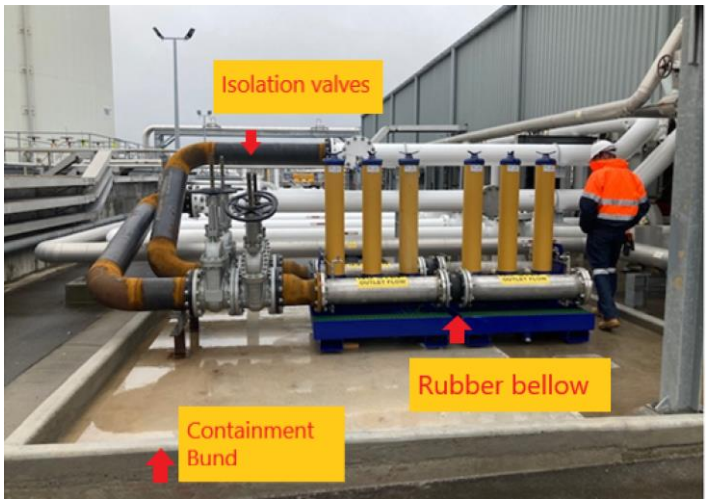


Photo: Bellow prior to install (rainwater)

Physical (cont'd)

Photo: Screen capture of CCTV footage during spill

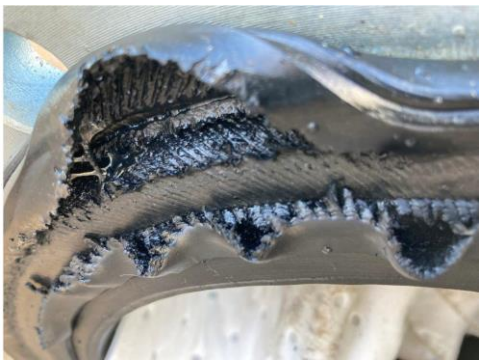
In the week prior to the failure, high pressures were noted across the filters indicating that the filter elements were nearing replacement. Filter elements were replaced on the 8th of April.

Following the incident, the bellows were removed from service and inspected on April 19th 2021.

Internal inspection indicates a chemical reaction and breakdown of the rubber material on both bellows in service.

Outlet flange

Physical (cont'd) Inlet flange



Internal splitting inlet flange

Considerations for process cause of the incident

Process

Management of Change (MoC) documents were created on 12th November 2020, NC044 Site Operational Modification Form & NC046 Proposal for Plant/Equipment Modification *Appendix 04 – MoC*. MoC documents address maintenance and procedural changes.

HAZOP report no 11088 was undertaken on the 22nd of December 2020 for the temporary unit design and operation *Appendix 05 – HAZOP*.

Equipment was installed in January / February 2021 under work permits:
SWP4751,4752, 4754,4757,4760,4763, 4766
TISP 1947, 1950
CSPE (working at heights) 0318, 0320.

No process causes have been identified for this incident. The material specified for use in the bellows was acceptable and required no additional maintenance whilst in the expected service period.

Conclusion

From the information gathered, the failure mode of the incident is understood to be from a failure of the Nitrile bellow supplied. The equipment was stamped and documented as of Nitrile construction (tube & cover) which is deemed suitable for Diesel use. Further investigation is required by the supplier to ascertain why the failure of material has occurred.

With the replacement of the temporary filtration skid to the permanent filtration unit, the use of the rubber bellows has been eliminated.

RECOMMENDATIONS / ACTIONS

ITEM	DESCRIPTION	ACTION PARTY	ACTION DATE
1	Highlight issue with supplier, response required.	Paul Hayward	19/04/2021 advice sent
2	Confirmed no other Nitrile bellows are in use in the Terminal.	Ryan Duckmanton	20/04/2021, no other bellows in service
3	Issue report to EPA, Department of Planning & Port of Newcastle	Ryan Duckmanton	TBA
4	Review incident response, Pollution Incident Response Management Plan & Emergency Response Plan following incident. Implement any improvements, findings to the documents.	Ryan Duckmanton Andy McCormick	TBA

APPENDICES

1	Diesel SDS	 Viva Diesel SDS.pdf
2	Driver Bill of Lading	 BOL 230345.pdf
3	Supplier Confirmation	 RE_ Bellow photos.msg
4	Management of Change NC044 & NC046	S:\SHVNAU\Operations\Newcastle\MOC\NC044 & NC046
5	HAZOP #11088	S:\SHVNAU\Operations\Newcastle\FSS and HAZOP\Diesel Filtration
6	EPA notification confirmation	 EPA notification.pdf
7	Safe work notification confirmation	 Safework NSW notification.pdf

NOTIFIABLE - Stolthaven Newcastle - Incident: Spill/Environmental Accident: Spill/Leakage Of Hazardous Substance

UID#: EVN-00528 Created Apr 18, 2021 Updated Sep 20, 2021 No upcoming events

Report — Assessment — **Investigation** — Close-Out

HIGH-SEVERITY NEWCASTLE NOTIFIABLE STOLTHAVEN TERMINALS

Investigation Details

Start date of the investigation:

Wed, 21st April 2021 (AEST)

Note that selecting users here will give them view & edit permission to this phase of the form!

Investigators:

Name /Email
Gaetan Amodeo (GAM) (gam@stolt.com)

Ben Serong (BAS) (bas@stolt.com)
Brent Metson (BGM) (bgm@stolt.com)
Ian Rice (IDR) (idr@stolt.com)
Ryan Duckmanton (RDK) (rdk@stolt.com)
Paul Hayward (PHY) (phy@stolt.com)
Brendan Biviano (BFB) (bfb@stolt.com)

Comments on investigation:

Close out comments from IDR following incident investigation and material analysis.

The following is a summary of the root cause and the contributing factors following review of the Incident Master Timeline comments, a report from the expansion joint (bellows) supplier Pacific Hoseflex, a further report from Radcoflex, HAZOP Report No. 11088 and incident report EVN00528 Diesel Spill from filtration skid 200421 (all as attached).

Incident No. 00528 - Newcastle Temporary Diesel Filter Loss of Containment – April 18, 2021

The root cause of the Loss of Containment was the design decision to link the two halves of the temporary filtration unit using a rubber expansion joint (bellows), instead of hard piping.

- The designer was concerned with the loads that could be transmitted to the cast filtration unit housings should hard piping and mis-alignment occur, possibly leading to failure of the housings.

- The temporary filtration unit could have been built as a two piece unit, and located on a single solid baseplate, thereby minimizing the possibility of mis-alignment between the filter units. The two filter units could then have been linked by hard piping. Further, accurate installation and alignment of the baseplate would minimize the stresses transmitted when the filtration units' inlet and outlet piping were also hard piped to the Terminal piping system.

- Whilst many items were considered during the HAZOP, scrutiny of the bellows was not specifically

- Whilst many items were considered during the HAZOP, scrutiny of the bellows was not specifically mentioned. Additional scrutiny may have resulted in a change in design.

Contributing factors to the rubber bellows failure may include:

- Pulsating service causing continual movement in the rubber bellows which may have contributed to early “fatiguing” of the rubber.
    - By design the bellows were a part of a common terminal load out piping network that experiences surging during any loading (both non-filtered and filtered product).

- Slight dimensional differences in the mating flanges which possibly resulted in “pinching” of the rubber surface of the bellows flange, creating stressed circular areas as depicted in post-incident photographs.

- Torque in excess of the bellows manufacturer’s specification was applied to the bellows flange bolts initially. Incorrect torque settings were provided by the filtration unit supplier to the terminal. This may have contributed to the “pinching” effect.

- Nitrile butadiene rubber was selected as the bellows material. This is a suitable material for diesel service. It appears that no chemical attack occurred. The quality of the nitrile rubber could be questioned, including quality differences between the inner and outer layers, the method of adhesion between the layers, whether any recycled nitrile rubber was used and any “fillers” were used. Manufacturers can sometimes use these techniques to reduce the cost of the bellows.

Other points of note:

- The joint decision taken by Stolthaven and Viva to use a hired temporary filtration unit before the installation of a permanent filter may have contributed to the occurrence of this incident.
    - The counter argument is that all due processes were followed, where time was allowed for an adequate challenge of the temporary filtration design.
- The temporary unit stayed in service longer than expected, due to delays with the permanent solution.

Regards IanIncident timeline, HAZOP and bellow analysis uploaded.

Immediate Actions

Describe what immediate actions were taken after the event was noticed. Please describe who was involved and what actions they took:

On call duty (BNH), Site Superintendent (ANW) & Site Manager (RDK) attended site. Loadings stopped until filter area was isolated, inspected & made safe. Staff activated the ERP (action card 2) and controlled and contained the spill. Product had travelled to the last underground junction pit before the outfall but had not left the site premises. Spill was isolated at last underground pit and sealed off using plywood, sikaflex (fuel grade) and concrete anchor screws. A boom was deployed in the western creek as a precautionary measure as tide level could back fill into the premises. Two pits along the storm water channel were pumped to slops as a further precautionary step until the stormwater channel can be cleaned.

As the spill had the potential to cause environmental harm the Site Manager contacted the 5 agencies + Port of Newcastle and Department of Planning.

Cleaning has been planned for the 19th April (following day.)
Filtration has been locked out and surrounding area cleaned. Permanent filtration install is planned for the 19th April (following day) which will replace the failed bellows with hard piping. Filtered Diesel will not be back online until the permanent filter has been installed.

Comments on Immediate Actions:

A review was undertaken to assess the Terminals response and look to identify any possible improvements. Review uploaded to Ecoportal - summary of actions below.

Actions following review conducted 07/05/2021:

Addition of spill kit required for Western Creek outfall c/w floating booms	15/06/21	UID#:00792
Review stormwater drain bunding required	30/06/21	UID#:00794
Update ERP (Action Card No.2) to reflect additional spill kit at Western drain	17/05/21	UID#:00795
Acquire portable air hose reels (40m)	15/06/21	UID#:00796
Contact list for agencies to be added in Duty Mobile (currently in RDK and ANW phones)	10/05/21	UID#:00797
Update PIRMP agencies contact list numbers and amend Action Cards in ERP to reflect these changes	17/05/21	UID#:00798

All actions captured in EcoPortal (Australasia)

Investigation Planning

Please describe the following items for the investigation

The purpose of the investigation is to:

Determine the root cause of the failure of the 'bellows' and subsequent loss of diesel containment

The requirements of all stakeholders (authorities, employees, legal representation) are:

7 key agencies already notified. No further notifications / reports are required to be provided to stakeholders at this stage

The requirements for legal privilege and confidentiality are:

The investigation is for internal purposes only and will remain confidential to Stolthaven. Portions or complete copies of the final report (or contributing information) may be provided to external parties subject to the

outcomes of the investigations and or further consideration by the incident investigators and or Stolthaven management.

The investigation boundaries have been set to include and exclude:

Incl - Design, manufacture, installation & operation of the temporary filter skid

Excl - Stolthaven emergency response

The expected date for completion of interim and final reports are:

No specific dates are required by internal or external parties. Updates will be provided to internal stakeholders as requested and or at key investigation milestones

Administration and resources that are required (meetings, interview rooms, digital resources, specialist support):

None

Please upload any additional documentation to support the investigation planning:

11085 Newcastle Diesel Filtration HAZOP Report Rev B.docx
104.29 KB - Last updated 23 August 2021, 01:28 PM

268 - Investigation Report - 145274.pdf
557.43 KB - Last updated 23 August 2021, 01:28 PM

Newcastle 18-04-2021 LoC Master Timeline - 210505 (VE edits).docx
52.09 KB - Last updated 23 August 2021, 01:29 PM

210714_Viva RJ final report.pdf
12.05 MB - Last updated 23 August 2021, 01:29 PM

SHVNAU NTL EVN00528 Diesel spill from filtration skid report 200421.docx
8.7 MB - Last updated 23 August 2021, 01:29 PM

SHVNAU ER Exercise Filtration Skid Leak 18 April 2021.doc
146 KB - Last updated 23 August 2021, 01:50 PM

Annual Emergency Exercise Review 18th April 2021.docx
3.43 MB - Last updated 23 August 2021, 01:50 PM

Data Collection

Please describe the findings & data collected for the items below (PEEPO - People, Environment, Equipment, Procedures and Organisation)

People: Person(s) who have been interviewed for investigation:

-

External interviews conducted?

No

Name & company of person(s) interviewed:

-

Interview outcomes/reports:

-

Environment:

-

Equipment:

-

Procedures:

-

Organisation:

-

Data Organisation

Please upload all documentation that you have used to determine the root causes and causes outside of the organisations

control for this event. This could be any type of method, such as 5-why, Event Tree Analysis, Fishbone diagrams, etc.

210510 - Newcastle 18-04-2021 LoC Master Timeline - 210505 (VE edits).docx
52.09 KB - Last updated 24 May 2021, 12:27 PM

210521 - Hoseflex - 268 - Investigation Report - 145274.pdf
557.43 KB - Last updated 24 May 2021, 12:27 PM

210427 - RDK - Bellow torque.msg
1.45 MB - Last updated 24 May 2021, 12:29 PM

210420 - SHVNAU NTL EVN00528 Diesel spill from filtration skid report.docx
8.7 MB - Last updated 24 May 2021, 12:29 PM

Please make sure to upload the updated file first before proceeding.

Root Cause Analysis

Classify the contributing factors and underlying causes

Select contributing factors (select all that apply):
Task/Environmental Conditions

Task/environmental conditions - Task conditions (select all that apply by holding down the CTRL key):
TC01: Task Planning or Scheduling / Insufficient Preparation

Task/environmental conditions - Ambient conditions (select all that apply by holding down the CTRL key):
Other

Other task/environmental conditions - Ambient conditions:
Issue with Ecoportal/had to select an Environmental condition.

Summary of apparent causes:
TC01: Task Planning or Scheduling / Insufficient Preparation

Investigation Follow-Up

Please record any Preventive & Corrective Actions in the task manager below and assign an owner and a due date. Also, list event follow-ups, i.e. the issue of the investigation report to management and local authorities or the due date for a revision of a procedure or document.

NOTE: Users who are added to this field will be given **edit permission** to this phase of the process, regardless of their permission level in ecoPortal!

Preventive & corrective actions:

Investigation Sign-Off

Person who conducted the investigation:

Name /Email
Ian Rice (IDR) (idr@stolt.com)
Paul Hayward (PHY) (phy@stolt.com)
Ryan Duckmanton (RDK) (rdk@stolt.com)
Brendan Biviano (BFB) (bfb@stolt.com)
Gaetan Amodeo (GAM) (gam@stolt.com)
Ben Serong (BAS) (bas@stolt.com)

Signature (please sign here):

Signed/witnessed by Ryan Duckmanton (RDK) on

23/08/2021, 01:58pm

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