Stolthaven Australia Pty Ltd

Stolthaven Bulk Fuel Storage Facility, Mayfield

Annual Review - 2019

April 2020

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
DPIE	Department of Planning, Industry 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
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

Abbreviation	Description
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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Appendices

1. Introduction

GHD Pty Ltd (GHD) was engaged by Stolthaven Australia Pty Ltd (Stolthaven) to prepare the 2019 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_6664 (as modified) issued on 16 April 2015 under Part 4 of the *Environmental Planning and Assessment Act* (EP&A Act). Development consent SSD_7065 was issued on 15 December 2016 to expand the existing operations under SSD_6664. The Site was originally approved under the now superseded Part 3A of the EP&A Act, under Project Approval MP08_130, which has now been relinquished.

This Annual Review has been prepared in accordance with Schedule 4 Condition 5 of SSD_664 (as modified) and the letter addressed to Stolthaven from Department of Planning, Industry and Environment (DPIE) dated 23 February 2017. The 2019 Annual Review includes the reporting period from 1 January to 31 December 2019.

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 DPIE to comply with Schedule 4 Condition 5 of SSD_664 (as modified) and present results in the 2019 Annual Review:

1.2 Scope of works

The scope of work comprised:

- An overview of the site
- A description of the operations undertaken throughout 2019 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 2019b, 2019c, 2019d and 2019e)
- 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 2018 Annual Environmental Management Report (AEMR) (AECOM, 2019a) and for consistency with previous year reporting we have maintained a similar format level of content for ease of DPIE review.

1.3 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	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
- 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 AECOM (2019a) 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.

Date	Ownership/operation
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 AECOM 2019a are as follows:

- The Site operates in accordance with SSD_6664 (issued on 16 April 2015 under Part 4 of the EP&A Act). The operation of the new Mayfield No.7 Berth pipeline is carried out in accordance with SSD_7065 (issued on 15 December 2016).
- 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
Current Development Consent SSD_6664	Section 2.6.2	NA
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 operates 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 current 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 18ML 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.

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

DPIE 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.

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 DPIE 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 DPIE 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 31 January 2020 (Variation number 1587230). This variation included the following changes:

- Removal of the now non-existent M4 pipeline from the premises. The M4 pipeline is no longer in existence and any associated infrastructure at Mayfield No. 4 Berth is no longer in control or operation of Stolthaven.
- Inclusion of the infrastructure within the “Koppers Pipeline Corridor” that is under the management and control of Stolthaven.

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.

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 Major operational changes in 2019

3.2.1 EPL

The most recent variation to EPL 20193 was issued on 31 January 2020 to remove reference to the now decommissioned M4 pipeline from the premises and removal of all references to Mayfield No. 4 Berth. The M4 pipeline has been decommissioned and any associated infrastructure at Mayfield No. 4 Berth is no longer in control or operation of Stolthaven. The variation also included the infrastructure within the "Koppers Pipeline Corridor" that is under the management and control of Stolthaven.

3.3 Site management plans and strategies

An Independent Environmental Audit (IEA) was undertaken was the facility during the reporting. A recommendation of the IEA was that Stolthaven review applicable management plans and strategies as required by their development consent and resubmit to DPIE for review. Email between R, Duckmanton (Stolthaven) and S, Munk (DPIE) provided DPIE with copies of Stolthaven's revised management plans and strategies. Copies of this correspondence can be provided on request. 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 2019a) 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. 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 2019a)	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.

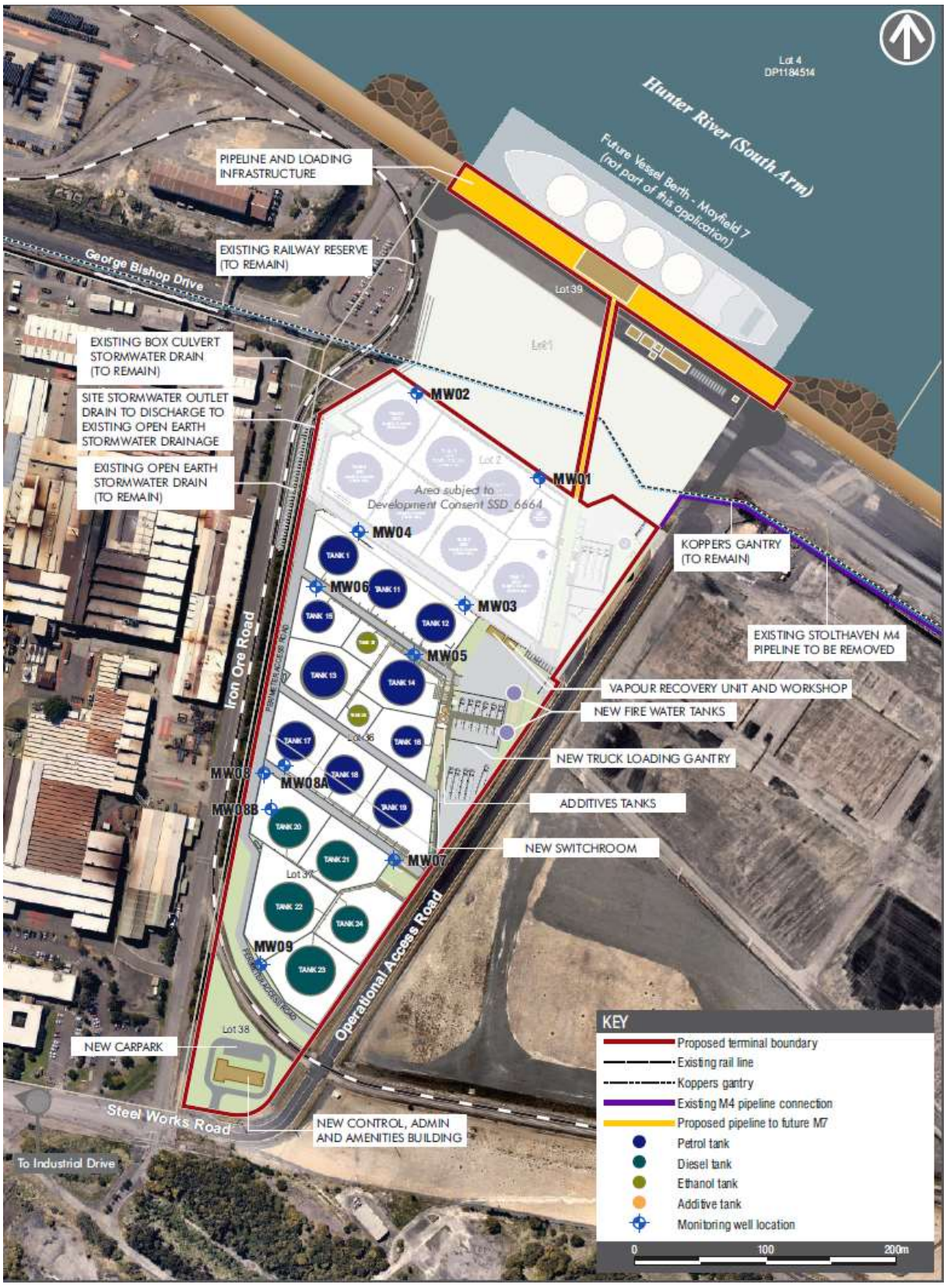

Figure 4-1 Groundwater monitoring well locations

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 ANZECC (2000) *Australia New Zealand Water Quality Guidelines for Fresh and Marine Waters,* 95% Species Protection for Marine Waters Criterion[1]. 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	ANZECC (2000) 95 % Low Reliability Values	ANZECC (2000) 95 % Trigger Values
BTEXN			
Benzene	(µg/L)	-	500
Ethylbenzene	(µg/L)	80	-
Toluene	(µg/L)	180	-
o-xylene	(µg/L)	350	-
p-xylene	(µg/L)	200	-
m-xylene	(µg/L)	80	-
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

[1] It is noted that the ANZAST (ANZG 2018) criteria were endorsed by NSW EPA under S105 of the CLM Act on 4 September 2018. At the same time the ANZECC (2000) water quality guidelines were revoked.

6. Results

Groundwater results for the 2019 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 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	9.22	9.18	8.91	8.83
BTEX (µg/L)							
Benzene	<1 to 5	500	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	80[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 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	7.43	7.45	7.14	7.36
BTEX (µg/L)							
Benzene	<1 to 5	500	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	80[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 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	7.80	7.92	7.81	7.76
BTEX (µg/L)							
Benzene	<1 to 5	500	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	80[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 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	7.81	8.11	7.82	8.08
BTEX (µg/L)							
Benzene	<1 to 5	500	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	80[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 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	8.59	8.53	8.70	8.76
BTEX (µg/L)							
Benzene	<1 to 5	500	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	80[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 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	8.25	8.10	8.56	8.61
BTEX (µg/L)							
Benzene	<1 to 5	500	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	80[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 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	8.80	8.91	9.57	9.21
BTEX (µg/L)							
Benzene	<1 to 5	500	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	80[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 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	6.66	6.92	6.87	6.76
BTEX (µg/L)							
Benzene	<1 to 5	500	1	**18,000**	**20,300**	**14,600**	**15,600**
Ethylbenzene	<2	80	2	<50	<50	<50	<50
Toluene	<2	180	2	**984**	**1140**	**724**	**862**
Xylene (o)	<2	350	2	101	128	76	115
Xylene (m & p)	<2	80[1]	2	**250**	**332**	**169**	**253**
Total Recoverable Hydrocarbons (µg/L)							
C6-C10 Fraction	<20	-	20	19,600	23,300	15,000	16,200
C6-C10 minus BTEX	<20	-	20	<1,000	1,400	<1,000	<1,000
>C10-C16 Fraction	<100	-	100	12,600	15,300	15,200	12,800
>C10-C16 Fraction minus naphthalene	<100 to 380	-	100	3,920	3,000	8,140	2,200
>C16-C34 Fraction	<100	-	100	4,000	7,470	6,300	5,920
>C34-C40 Fraction	<100	-	100	<100	<100	<100	<100

[1] Value for m- xylene adopted

BOLD denotes exceedance of GAC

Table 6-9 Groundwater monitoring results – MW09

Analyte	Background range	GAC	Laboratory limit of reporting	Q1 2019	Q2 2019	Q3 2019	Q4 2019
pH	7.0 - 9.79		0.01	7.12	7.50	7.80	7.33
BTEX (µg/L)							
Benzene	<1 to 5	500	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	80[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, 27 data points are available for trend analysis for MW01 – MW04, with monitoring having commenced in October 2013 and 10 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 8.83 to 9.22 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 2019 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

Total Recoverable Hydrocarbons (TRH) concentrations remained below the LOR throughout the 2019 monitoring period, consistent with previous concentrations. The exception to this was in the 2017 fourth quarter where TRH concentrations were detected. Statistical analysis reported a stable trend of TRH C_6-C_{10} and no trends for the remaining TRH fractions.

The statistical trend analyses for MW01 are presented in Figure 6-1 and Figure 6-2.

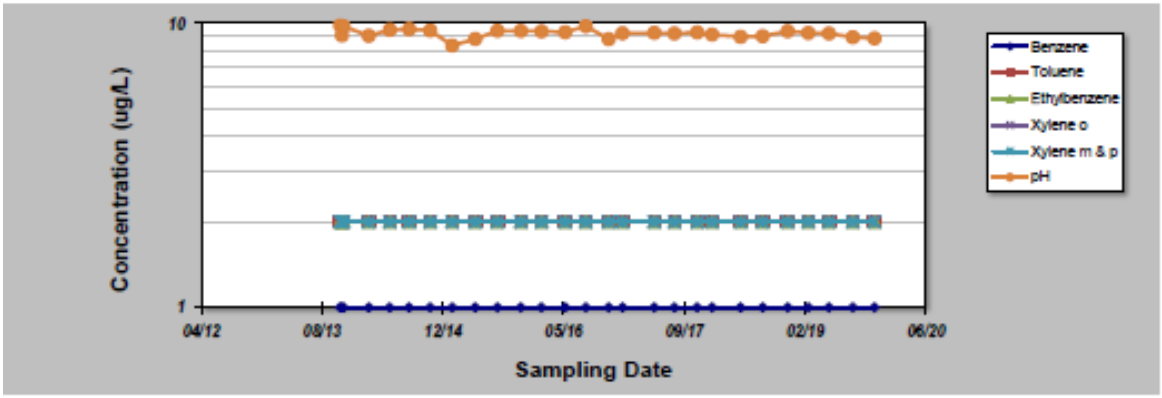

Figure 6-1 Statistical trend analysis of MW01 – BTEX and pH (reference AECOM 2019e)

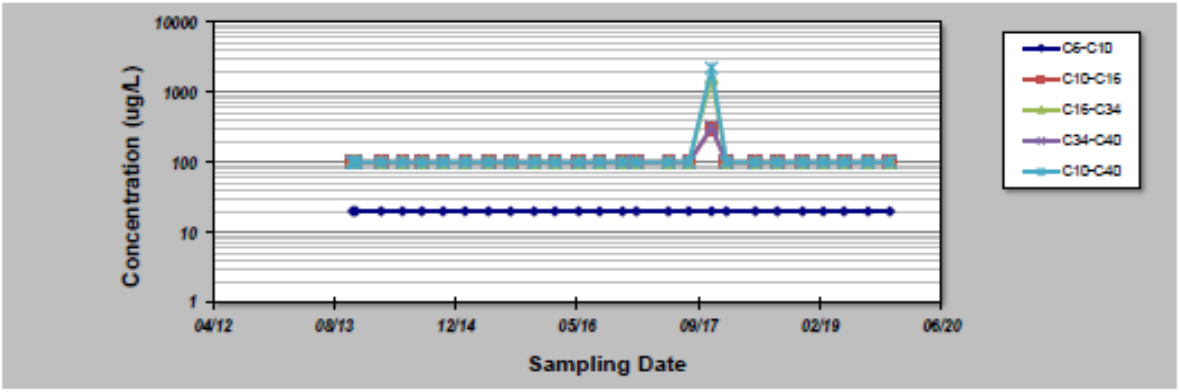

Figure 6-2 Statistical trend analysis of MW01 – TRH (reference AECOM 2019e)

6.1.2 MW02

Recorded pH levels at MW02 for this reporting period ranged from 7.14 to 7.45 and were within background concentrations. Mann Kendall trend analysis reported a statistically significant decreasing trend in pH levels. As pH levels remain within background concentrations, this is not considered to be an issue at this stage. If decreasing trends were to continue and pH results were below the background concentrations, further assessment may be required.

BTEX concentrations remained below the LOR throughout the 2019 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 supported a stable or decreasing trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2019 monitoring period, consistent with previous concentrations. 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.

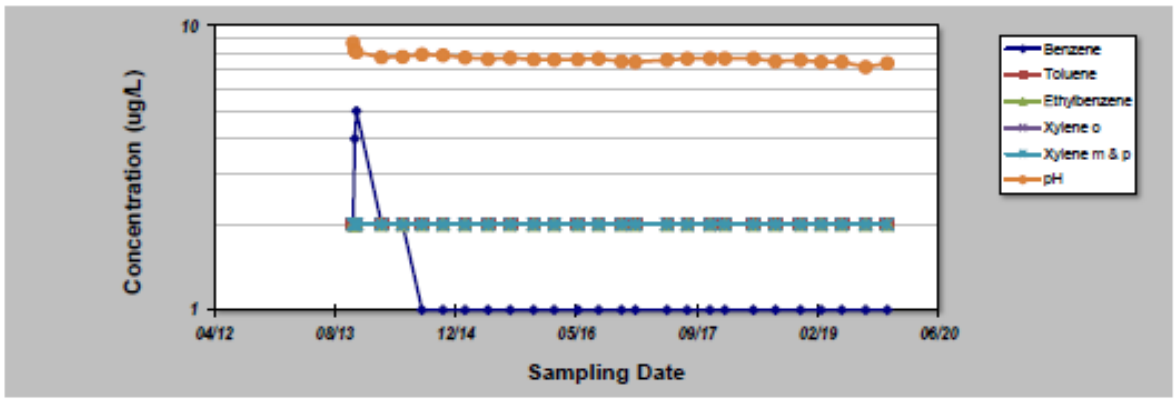

Figure 6-3 Statistical trend analysis of MW02 – BTEX and pH (reference AECOM 2019e)

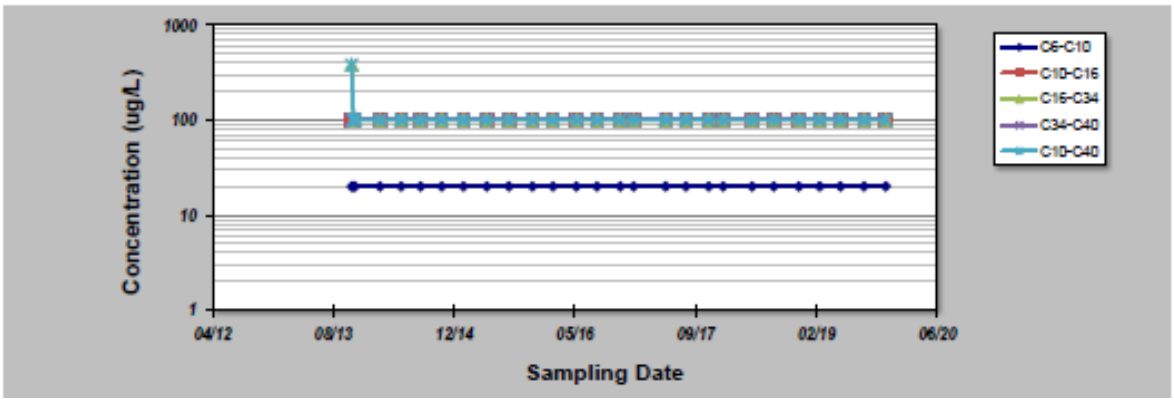

Figure 6-4 Statistical trend analysis of MW02 – TRH (reference AECOM 2019e)

6.1.3 MW03

Recorded pH levels at MW03 for this reporting period ranged from 7.76 to 7.92 and were within background concentrations. Mann Kendall trend analysis reported stable trends for in pH levels.

BTEX concentrations remained below the LOR throughout the 2019 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2019 monitoring period, consistent with previous concentrations. 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.

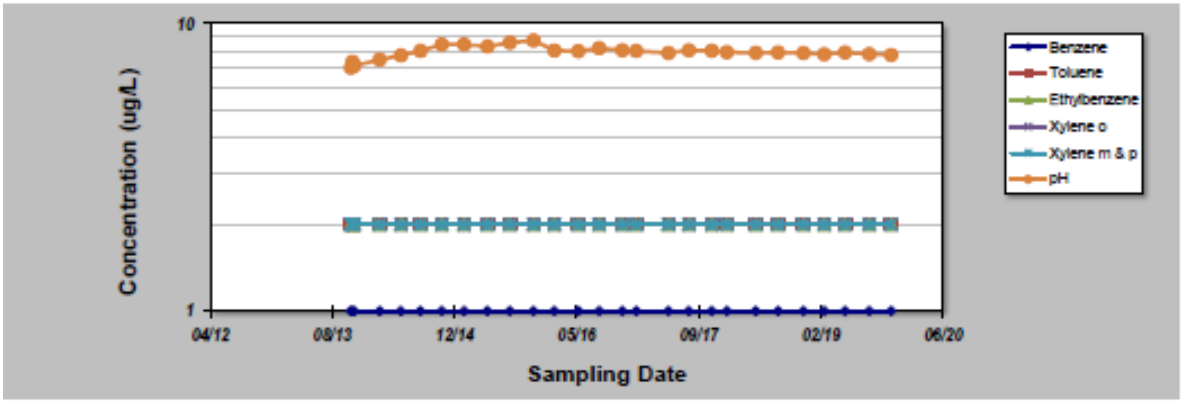

Figure 6-5 Statistical trend analysis of MW03 – BTEX and pH (reference AECOM 2019e)

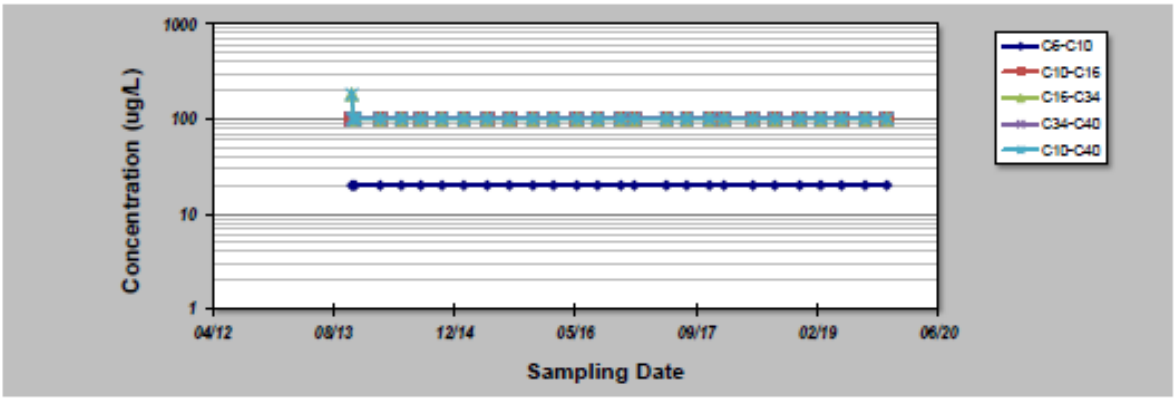

Figure 6-6 Statistical trend analysis of MW03 – TRH (reference AECOM 2019e)

6.1.4 MW04

Recorded pH levels at MW04 for this reporting period ranged from 7.81 to 8.11 and were within background concentrations. Mann Kendall trend analysis reported a statistically significant decreasing trend for 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 2019 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2019 monitoring period, consistent with all previous concentrations. 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.

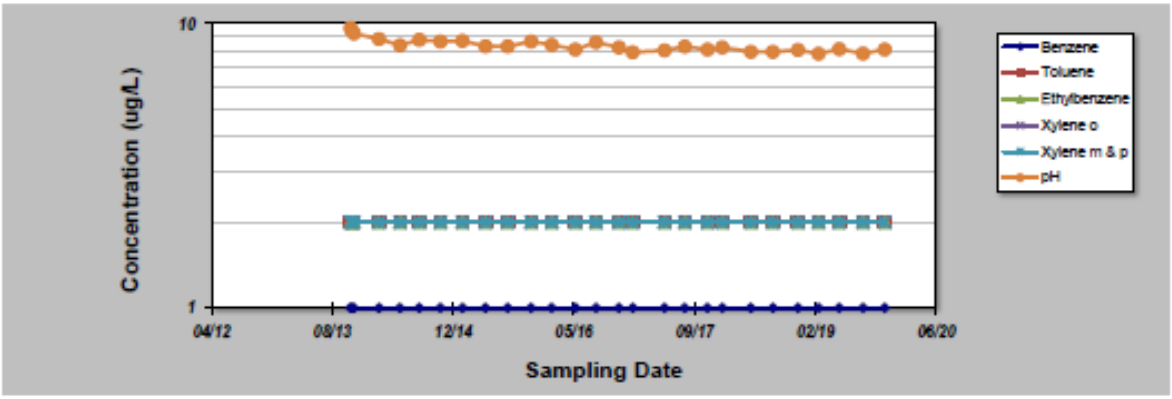

Figure 6-7 Statistical trend analysis of MW04 – BTEX and pH (reference AECOM 2019e)

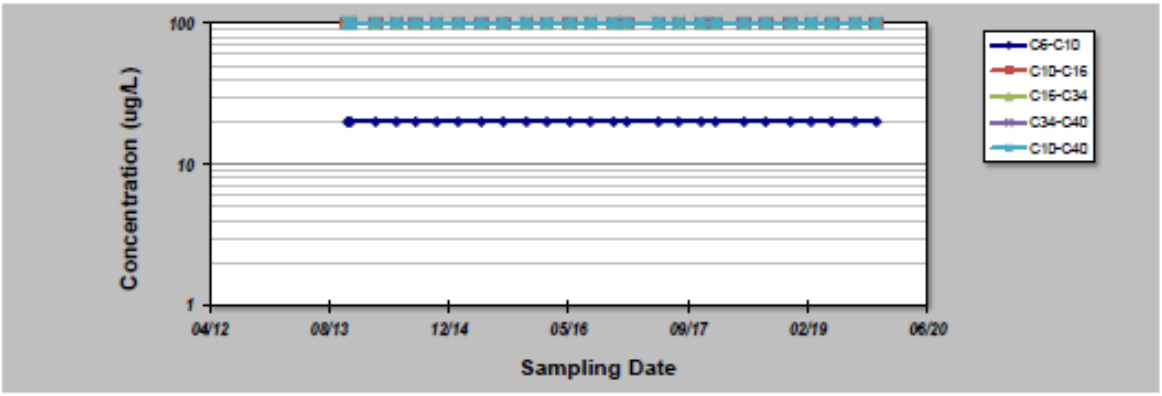

Figure 6-8 Statistical trend analysis of MW04 – TRH (reference AECOM 2019e)

6.1.5 MW05

Recorded pH levels at MW05 for this reporting period ranged from 8.53 to 8.76 and were within background concentrations. Mann Kendall trend analysis reported stable trends for pH levels.

BTEX concentrations remained below the LOR throughout the 2019 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2019 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.

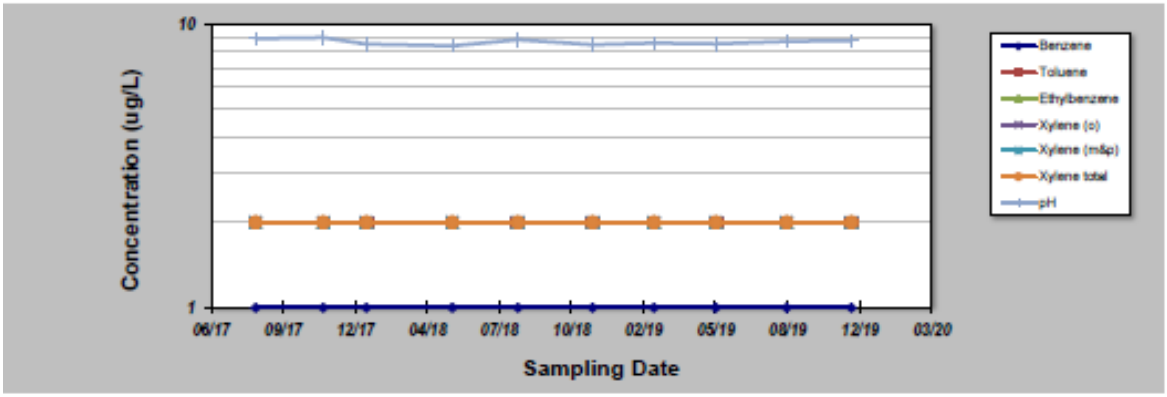

Figure 6-9 Statistical trend analysis of MW05 – BTEX and pH (reference AECOM 2019e)

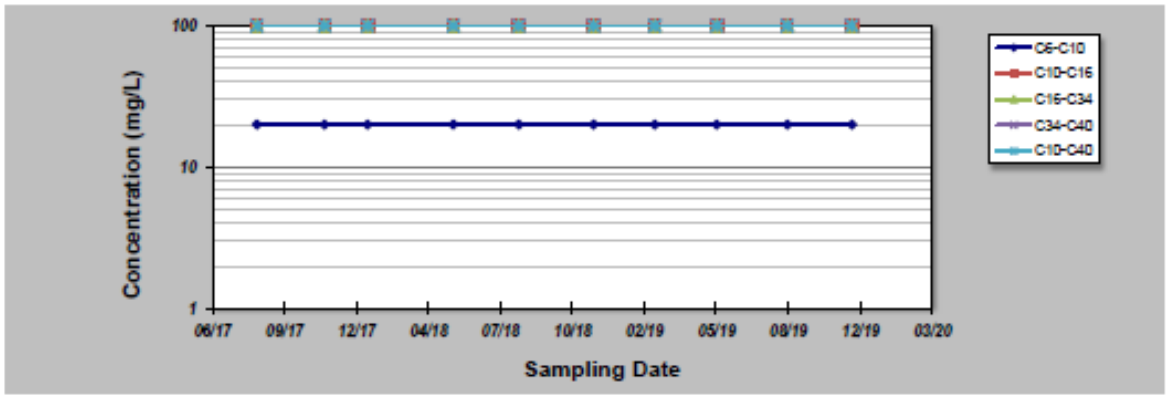

Figure 6-10 Statistical trend analysis of MW05 – TRH (reference AECOM 2019e)

6.1.6 MW06

Recorded pH levels at MW06 for this reporting period ranged from 8.10 to 8.61 and were within background concentrations. Mann Kendall trend analysis reported stable trends for pH levels.

BTEX concentrations remained below the LOR throughout the 2019 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2019 monitoring period, consistent with all previous concentrations. Statistical analysis reported a stable trend for all TRH fractions.

The statistical trend analyses for MW06 are presented in Figure 6-11 and Figure 6-12.

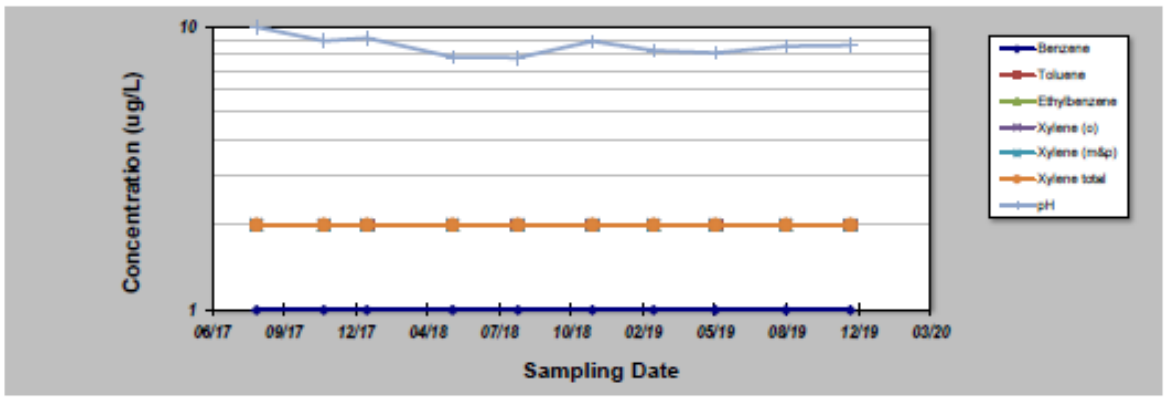

Figure 6-11 Statistical trend analysis of MW06 – BTEX and pH (reference AECOM 2019e)

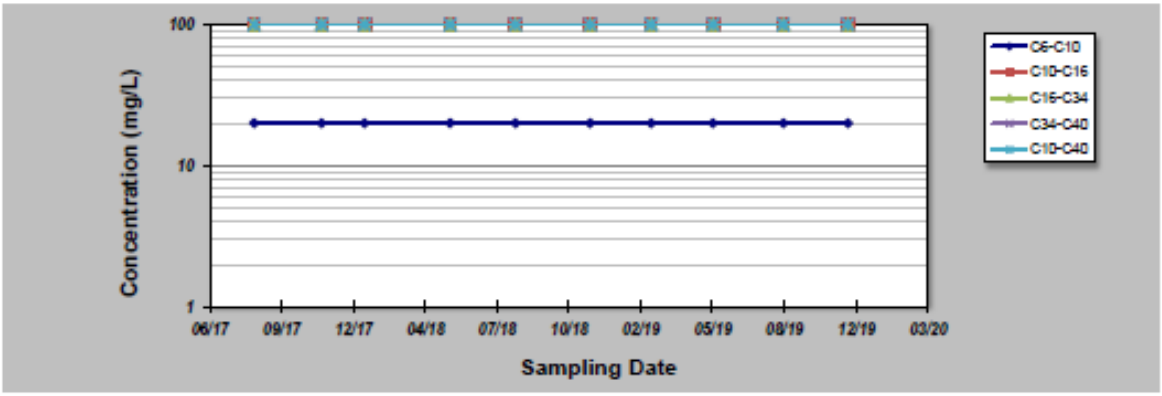

Figure 6-12 Statistical trend analysis of MW06 – TRH (reference AECOM 2019e)

6.1.7 MW07

Recorded pH levels at MW07 for this reporting period ranged from 8.80 to 9.57 and were within background concentrations. Mann Kendall trend analysis reported no trends for pH levels.

BTEX concentrations remained below the LOR throughout the 2019 monitoring period, consistent with previous concentrations. Statistical analysis reported a stable trend of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2019 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.

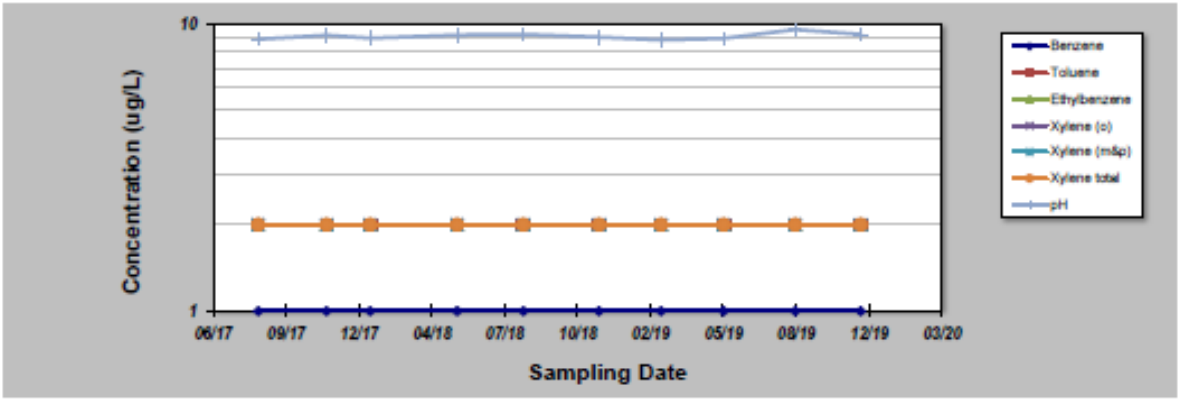

Figure 6-13 Statistical trend analysis of MW07 – BTEX and pH (reference AECOM 2019e)

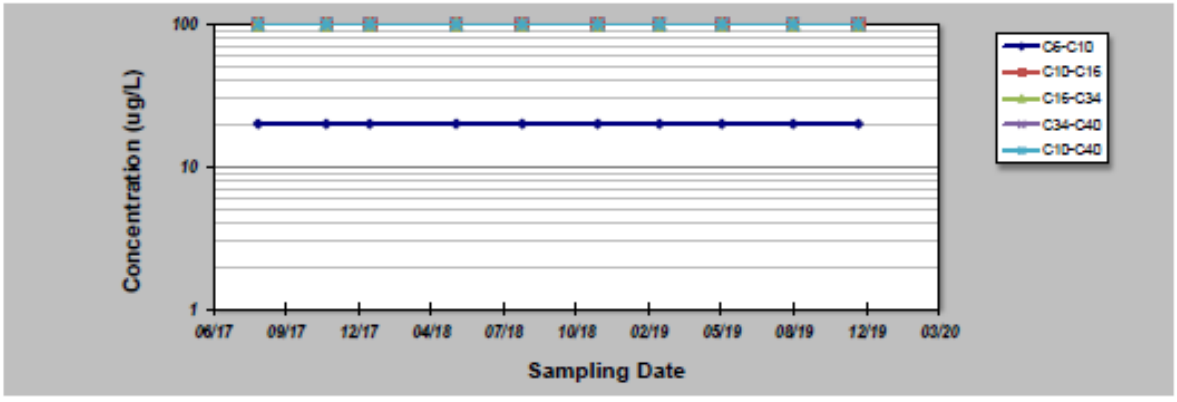

Figure 6-14 Statistical trend analysis of MW07 – TRH (reference AECOM 2019e)

6.1.8 MW08

Recorded pH levels at MW08 for this reporting period ranged from 6.66 to 6.92 and were below background concentrations. Mann Kendall trend analysis reported a stable trend for pH levels, however pH levels indicate groundwater quality uncharacteristic of background concentrations.

BTEX concentrations were all above the background concentrations at MW08 during the 2019 monitoring period with the following exceedances of the GAC recorded:

- Benzene in all four quarters ranging between 14,600 µg/L and 20,300 µg/L
- Toluene in all four quarters ranging between 724 µg/L and 1,140 µg/L
- Xylene (m & p) in all four quarters ranging between 169 µg/L and 332 µg/L

Increasing trends were reported for xylene (o) and xylene (m & p) while stable trends or no trends were reported for benzene, toluene and ethylbenzene.

TRH concentrations were all above the background concentrations at MW08 during the 2019 monitoring period with the exception of TRH C_{34}-C_{40} concentrations which were below the LOR. Concentrations were within the range of concentrations reported between 2017 and 2018 with the exception of TRH C_6-C_{10} (23,300 µg/L) and TRH C_{16}-C_{34} (7,470 µg/L) in May 2019 which were the highest concentrations reported to date. Mann Kendall trend analysis reported stable trends or no trends for TRH concentrations.

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 2019 monitoring period and are expected to be decommissioned during development of the Proposed Expansion Area. As increasing trends have been reported for xylene concentrations, further investigations may be required.

The statistical trend analyses for MW08 are presented in Figure 6-15 and Figure 6-16.

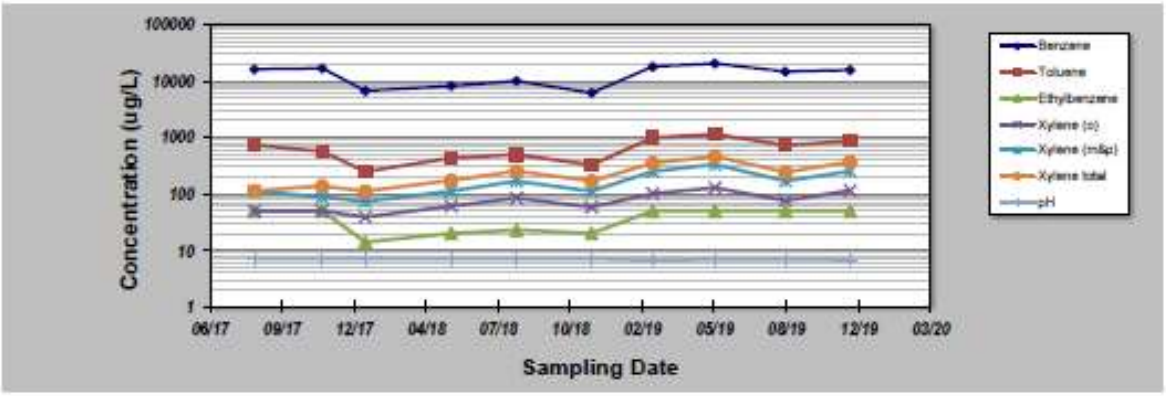

Figure 6-15 Statistical trend analysis of MW08 – BTEX and pH (reference AECOM 2019e)

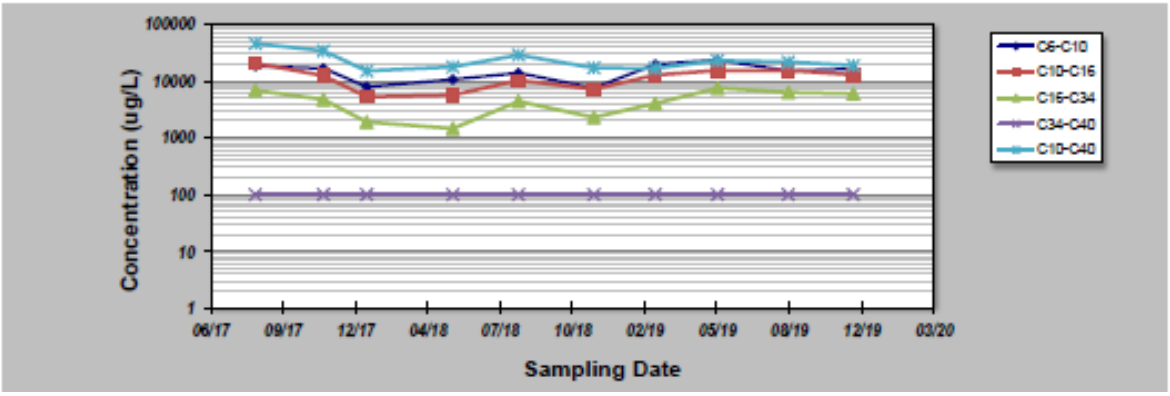

Figure 6-16 Statistical trend analysis of MW08 – TRH (reference AECOM 2019e)

6.1.9 MW09

Recorded pH levels at MW09 for this reporting period ranged from 7.12 to 7.80 and were within background concentrations. Mann Kendall trend analysis reported probably decreasing trends for pH levels, however this is potentially incorrect due to an outlier reported in January 2018 (9.11). As pH levels were within background concentrations, this is not considered to be an issue.

BTEX concentrations remained below the LOR throughout the 2019 monitoring period, with the exception of benzene with minor concentrations detected in February 2019, consistent with previous concentrations. Statistical analysis reported stable to decreasing trends of BTEX concentrations.

TRH concentrations remained below the LOR throughout the 2019 monitoring period, consistent with previous concentrations. Previously, TRH C_{16}-C_{34} concentrations have been reported in January and May 2018. 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.

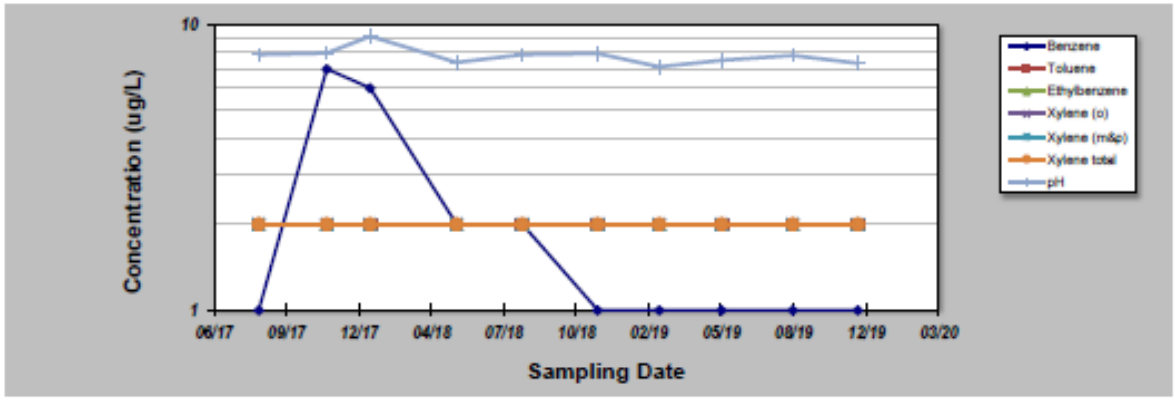

Figure 6-17 Statistical trend analysis of MW09 – BTEX and pH (reference AECOM 2019e)

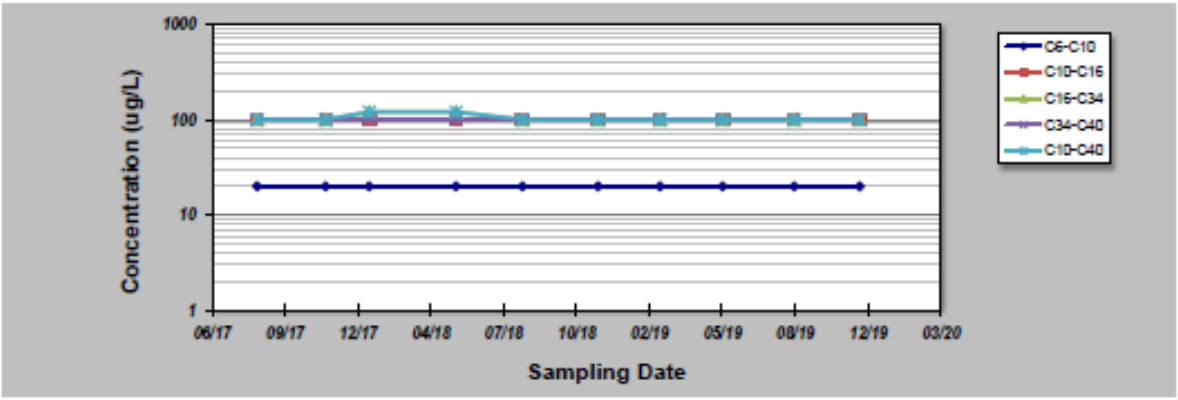

Figure 6-18 Statistical trend analysis of MW09 – TRH (reference AECOM 2019e)

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 2018 monitoring period, decreasing trends were reported for pH at MW01, MW02 and MW04 and no trend at MW03. pH levels remain within background concentrations at these locations so are not considered to be an issue at this stage. This will be reviewed in the 2020 Annual Report. Trends in BTEX and TRH concentrations were stable or decreasing at locations MW01 to MW04.

As at the Q4 2019 groundwater monitoring event (GME), ten 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 stable trends for pH in MW05, MW06, MW07 and MW08 and a probably decreasing trend at MW09. This decreasing trend is considered to be erroneous due to the outlier reported in January 2018. Future monitoring at this location will provide further accuracy with a greater dataset to confirm this trend.

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, 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.

AECOM 2019a reported that to date, 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 background ranges (separate to those developed at MW01-MW04) will be developed for wells MW05-MW09 in the proposed Expansion Area, and will be assessed separately from the current Site well network. These background ranges will be developed from analytical results collected in 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 eight 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 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 during the 2017, 2018 or 2019 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 2019 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)
2/01/2019	6.06	< 2	7.37	14	25,000
9/01/2019	5.30	< 2	7.94	14	15,000
20/02/2019	8.08	2	7.62	24	35,000
18/03/2019	8.38	< 2	7.30	10	20,000
25/03/2019	8.76	< 2	7.29	**40**[1]	_
27/03/2019	8.46	< 2	7.41	10	25,000
17/04/2019	8.28	< 2	7.36	19	30,000
3/06/2019	8.74	< 2	7.28	9	35,000
5/06/2019	8.15	< 2	7.35	7	35,000
18/06/2019	8.96	< 2	7.51	22	35,000
25/06/2019	9.85	< 2	7.45	12	38,500
3/07/2019	6.65	< 2	7.11	16	15,000
9/07/2019	8.70	< 2	7.45	19	35,000
1/08/2019	9.05	< 2	7.57	**40**[1]	_
2/08/2019	9.45	< 2	7.54	1	15,000
5/08/2019	9.16	< 2	7.61	12	25,000
2/09/2019	8.84	< 2	7.41	15	35,000
4/09/2019	7.86	< 2	7.54	8	25,000
10/09/2019	7.56	< 2	7.56	**34**	_
19/09/2019	8.48	< 2	7.52	18	38,500
14/10/2019	8.59	< 2	7.62	12	35,000
4/11/2019	7.29	< 2	7.44	26	30,000
5/12/2019	8.38	6	**8.63**[1]	12	0
9/12/2019	8.03	< 2	**8.60**	10	0
Minimum	**5.30**	**2**	**7.11**	**1**	
Maximum	**9.85**	**6**	**8.63**	**40**	
Average	**8.21**	**4**	**7.56**	**17**	

BOLD denotes an exceedance of the criteria

[1]Indicates a resample and retest was subsequently taken

Table 7-3 Bund water quality results

Parameter	Minimum	Maximum	Average
pH	6.14	9.12	8.07
Total dissolved solids (ppm)	20.8	83.2	55.55
Dissolved oxygen (mg/L)	47.7	86.9	68.58
Conductivity (µS/cm)	43.5	128.5	79.51

7.3 Analysis of results

7.3.1 Discharged water quality results

While the water sampling identified some exceedances of the EPA criteria, any water which exceeded EPA criteria was resampled and retested and generally met the allowable limits. The exceptions were TSS concentrations in September 2019 which marginally exceeded the EPA criteria and was not discharged. A further pH exceedance was reported in December 2019 and the retest also failed. Following discussion with EPA, water was dispersed/re-used on site and was not discharged from the site.

During the 2019 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 2019a.

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 2019 reporting year was 8.21 mg/L, with a minimum level of 5.30 mg/L and a maximum of 9.85 mg/L. AECOM 2019a presented a trend plot of dissolved oxygen data since 2014 which showed DO concentrations have been variable at Monitoring Point 5 with no obvious trend. Data reported during 2019 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 2019 reporting period. The average level of oil and grease recorded during the reporting period was 4 mg/L, with a maximum of 6 mg/L. AECOM 2019a presented a trend plot of oil and grease data since 2014 which showed concentrations generally below the LOR (2 mg/L), consistent with 2019 results.

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 the two exceedances reported in December 2019. As discussed above, due to the retest failing, water was dispersed/reused on site rather than being discharged from site. During the reporting period, the average pH level was 7.56 with a minimum of 7.11 and a maximum of 8.63. AECOM 2019a presented a trend plot of pH results since 2014 which, along with results from 2019, 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 three occurrences where TSS were recorded to be above the maximum criteria. Re-sampling confirmed that the TSS levels were within allowable levels and were released following the retest. No re-test was conducted following the exceedance in September 2019, however no release from site occurred following this result.

During the reporting period, the average level of total suspended solids was 16.83 mg/L, with a minimum of 1 mg/L and a maximum recording of 40 mg/L. AECOM 2019a presented a trend plot of TSS results since 2014 The historical 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 2019a. 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 6.14 to 9.12 with an average of 8.07. 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 upper and lower criteria exceedances. The pH of the bund water was lower than 6.5 on the following occasion:

- 30 August 2019 within Bund 8

The pH of the bund water was higher than 8.5 on the following occasions:

- 12 February 2019 within Bunds 8 and 9
- 6 March 2019 within Bunds 3, 5 and 6
- 18 March 2019 within Bunds 1-3
- 1 April 2019 within Bunds 1, 2, 5 and 9
- 9 April 2019 within Bund 2
- 5 June 2019 within Bunds 1 and 7
- 18 June 2019 within Bunds 3, 7 and 9
- 4 November 2019 within Bunds 8 and 9

AECOM 2019a included a trend plot since 2014 which showed pH trends at the site were stable. Results from 2019 were within historical concentrations and not indicative of any obvious trends.

Total Dissolved Solids (TDS)

TDS levels in bund water during the reporting period ranged from 20.8 to 83.2 ppm, with an average of 55.55 ppm. TDS levels at the Site during the reporting period were 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 2019a presented a trend analysis of TDS concentrations since 2014 indicating that there could be a decreasing trend. Results from 2019 confirm this observation.

Dissolved Oxygen (DO)

DO Concentrations ranged from 47.7 mg/L to 86.9 mg/L, with an average concentration of 68.58 mg/L. AECOM 2019a presented a DO trend plot since 2014 which showed an increasing linear trend throughout the 2018 period. DO concentrations during the 2019 monitoring period did not confirm this trend with concentrations appearing to be relatively stable.

Conductivity

Conductivity levels in bund water during the reporting period ranged from 43.5 to 128.5 µS/cm, with an average conductivity of 79.5 µS/cm. AECOM 2019a presented a conductivity trend plot since 2014 which indicated a decreasing linear trend was identified. Concentrations reported in 2019 confirm the possibility of a decreasing trend with concentrations generally lower during 2019 than those previously reported. 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 five exceedances of the EPL criteria (three exceedances of TSS and two exceedances of pH. The TSS exceedances may be attributed to rain events. The pH exceedance is thought to be attributed to the high dust/ash content in the atmosphere.

Other potential sources previously reported could be airborne material which have been blown onto the Stolthaven site, or tracked in from tyres of trucks moving through the site. Management measures implemented by Stolthaven, such as investing in a sweeper unit to manage materials on the sites driveway areas, appear to be successfully ensuring that all stormwater discharged from the Site is 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.

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 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. APE 2019 reported that 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 include 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 2019f 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, airbrake event
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 2019 also reported that Stolthaven received correspondence from NSW EPA, PON and DPIE 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 excluded from the 2019 and future years' 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. 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_6664 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. As part of the most recent update Minister for Planning's Project Approval (Application SSD 6664, dated 16 April 2015), two key conditions are relevant to this noise compliance assessment, these include Conditions 22 and 27, which specify:

- Condition 22: The Applicant shall, in consultation with the PON ensure that noise from operation of the Development:
    a. Fits within the Site Noise Model developed for the Mayfield Concept Plan.
    b. Does not exceed any noise quota provided by PON for the Development, in accordance with the Site Noise model for the Mayfield Concept Plan.
- Condition 27: The Applicant shall monitor noise from operation of the Development, to the satisfaction of the Secretary. The monitoring shall:
    a. Be undertaken annually, or to address genuine noise complaints that are related to the Development as determined by the Department or the EPA.
    b. Be undertaken in accordance with the NSW Industrial Noise Policy.
    c. Demonstrate compliance with the relevant noise goals constrained in the Mayfield Concept Plan, or any noise quota established by the PON for the Development.

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

8.2 Noise monitoring results

Attended noise measurements were undertaken between 6 and 7 December 2019 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 2019 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 quantify the noise contribution from the Facility from the 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 8-4.

Table 8-4 Attended measurements at Assessment Receiver Locations between 6 and 7 December 2019

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	6/12/19 22:00:01	56	45	38
R2	52 Arthur St, Mayfield	7/12/19 00:52:46	52	44	39
R3/B	2 Crebert St, Mayfield	6/12/19 22:43:12	71	61	44
R4/R5[1]	21 Crebert St, Mayfield	6/12/19 23:00:31	74	64	43
R6/R7[2]	30 Crebert St, Mayfield	6/12/19 22:24:10	52	46	44
R8	2 McNeil Cl, Mayfield	7/12/19 00:31:48	45	39	36
C	32 Elizabeth St, Carrington	7/12/19 00:03:26	49	41	37
D	186 Fullerton Rd, Stockton	6/12/19 23:30:56	73	60	45
-	Mayfield East Public School (west side, Ingall St)	6/12/19 13:26:14	76	65	54

[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 6 and 7 December 2019 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 8-5.

Table 8-5 On-site attended measurements at the Facility between 6 and 7 December

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	15.10 PM	78	77	77	77
Truck leaving site	15.11 PM	92	85	82	73
Pump operations (slow flow)	14.48 PM	84	83	82	80

Table 8-6 presents predicted noise level results for the reasonable worst case intrusiveness scenario (15 minute period) for neutral and adverse weather conditions.

Table 8-6 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	19	24
R2	35	19	24
R3	41	26	31
R4	40	26	31
R5	42	26	30
R6	41	25	29
R7	35	20	25
R8	35	19	24

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 8-6 indicate that under neutral and adverse weather conditions, the Facility complies with EPL 20193 and SSD7065 noise limits at all locations.

AECOM 2019 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 8-7.

Table 8-7 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	35	40	Yes
R2	48	34	39	Yes
R3	49	42	45	Yes
R4	47	42	46	Yes
R5	51	43	46	Yes
R6	50	42	45	Yes
R7	50	36	40	Yes
R8	48	35	40	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.

8.3 Analysis of results

The AECOM 2019f 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 615 ML of fuel (including additive) was received on site and 606 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 0.3% 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)	12,640,809	615,008,424	606,425,942	21,223,291
Biodiesel (L)	0	0	0	0
Additive (L)	21,056	11,670	9,860	22,866
Slops (L)	6,040	*	185,630	2,250
TOTAL (L)	**12,667,905**	**615,020,094**	**606,621,432**	**21,248,407**

**note that slops are not transported to Site but are generated onsite as a result of site activities.*

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 24,954 truck movements at an average of approximately 2,080 each month. This equates to approximately 68 truck movements per day. A breakdown of hourly truck movements is provided at Appendix D.

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 (March 2019), movements from Stolthaven averaged up to 68 movements per day which is within the Concept Plan's limits listed above. Truck movements have shown a general decline since 2015 which recorded the highest number of truck movements to date.

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 ToxFree/Cleanaway)

- Terminal quantity: 143,000 L
- Mayfield No. 7 Berth quantity: 59,150 L

Liquid Waste

- Quantity (ToxFree/Cleanaway): 6,304 L
- Transfers (JLP or IOR Transfer): 183,380 L

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.

No non-compliances or reportable incidents in relation to spills and site contamination occurred during the reporting period. All incidents relating to potential spills and site contamination were minor and effectively managed on the Site.

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 2019 monitoring period.

12. Community engagement and complaints

12.1 Community engagement

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

- 25 February
- 3 June
- 2 September
- 25 November

Stolthaven was not the subject of any issues from community engagement activities during 2019.

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_6664 (as modified) and SSD_7065 is presented in Appendix F. 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

13.3 Pipeline integrity

An Annual Pipeline Pressure Test was conducted at the Stolthaven Terminal on the wharf pipeline on 1 October 2019 by Synertec. The test confirmed the integrity of the pipeline. A copy of the test report is included in Appendix G.

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 reporting period. A summary of the outcomes and recommendation from the IEA are provided in Table 13-1.

Table 13-2 Complaints received

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.

Condition	Recommendation	Response	Update
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 DPIE.
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 DPIE.
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 DPIE.
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 is preparing SSD 6664 surrender and will issue at a suitable time to all parties.

14. Conclusion and recommendations

The Annual Report has shown that the data collected and reviewed for the 2019 monitoring period is acceptable and in accordance with the SSD_6664 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 six years of quarterly monitoring, however the dataset for the wells in the expansion area is still relatively small (2.5 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 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 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.

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 (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 significantly increasing trend of xylene concentrations. It should be noted that the elevated results in the proposed Expansion Area were not considered to be caused by Site operations, and are considered to be BHP legacy contamination. This was supported by the evidence of possible coal tar and DNAPL within MW08.

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. Results of groundwater monitoring at this location will continue to be analysed quarterly to assess the development of the trends.

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 reviewing LED lighting replacement in 2020, planned 42 x 400W flood lights to be replaced with 120W LED lightings reducing the Site demand on Electricity. Solar panels are under consideration in 2020/2021. These new measures would introduce additional energy efficiency measures to those already in place such as the use of variable speed drive (VSD) pumps.
- Capping integrity and erosion control - Stolthaven's vacant lease land (located to the immediate south of the terminal) is under constant monitoring with the long term aim to protect the land capping integrity. Further minor draining management is being planning in consultation with PON, for 2020 to prevent scoring of land during heavy rain fall events. The ongoing quarterly groundwater monitoring of wells in the vacant land would also continue over the next reporting period to monitoring any changes to background groundwater conditions.
- SSD-6664 surrender - The surrender of SSD-6664 was being prepared prior to the COVID_19 Pandemic. In order to ensure that Stolthaven can continue to provide fuels to support the NSW economy during COVID_19 internal resources have shifted focus to ensuring appropriate precautions are in place to manage staff, contractor, client and community safety. When the operation returns to business as usual Stolthaven intends to complete and submit its formal surrender request in consultation with DPIE.

15. References

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

AECOM (2019b), *Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q1 February 2019,* dated 5 March 2019

AECOM (2019c), *Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q2 May 2019,* dated 19 June 2019

AECOM (2019d), *Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q3 August 2019,* dated 29 August 2019

AECOM (2019e), *Quarterly Groundwater Monitoring Report, Mayfield Bulk Fuel Storage Facility, Q4 November 2019,* dated 10 December 2019

AECOM (2019f), *Stolthaven Bulk Liquids Fuel Storage Facility, Mayfield, Operational Noise Compliance Assessment (2019),* doc no. 60326869-RPNV-08_0, dated 19 December 2019

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*

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

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Kilometers

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

N

Stolthaven Australia Pty Ltd
Stolthaven Bulk Fuel Storage Facility
Annual Report 2019

Project No. **12524848**
Revision No. **0**
Date **08/04/2020**

Site location

FIGURE 1

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Print date: 08 Apr 2020 - 11:47

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

Paper Size ISO A4

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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 2019

Project No. **12524848**
Revision No. **0**
Date **08/04/2020**

Approved terminal layout

FIGURE 2

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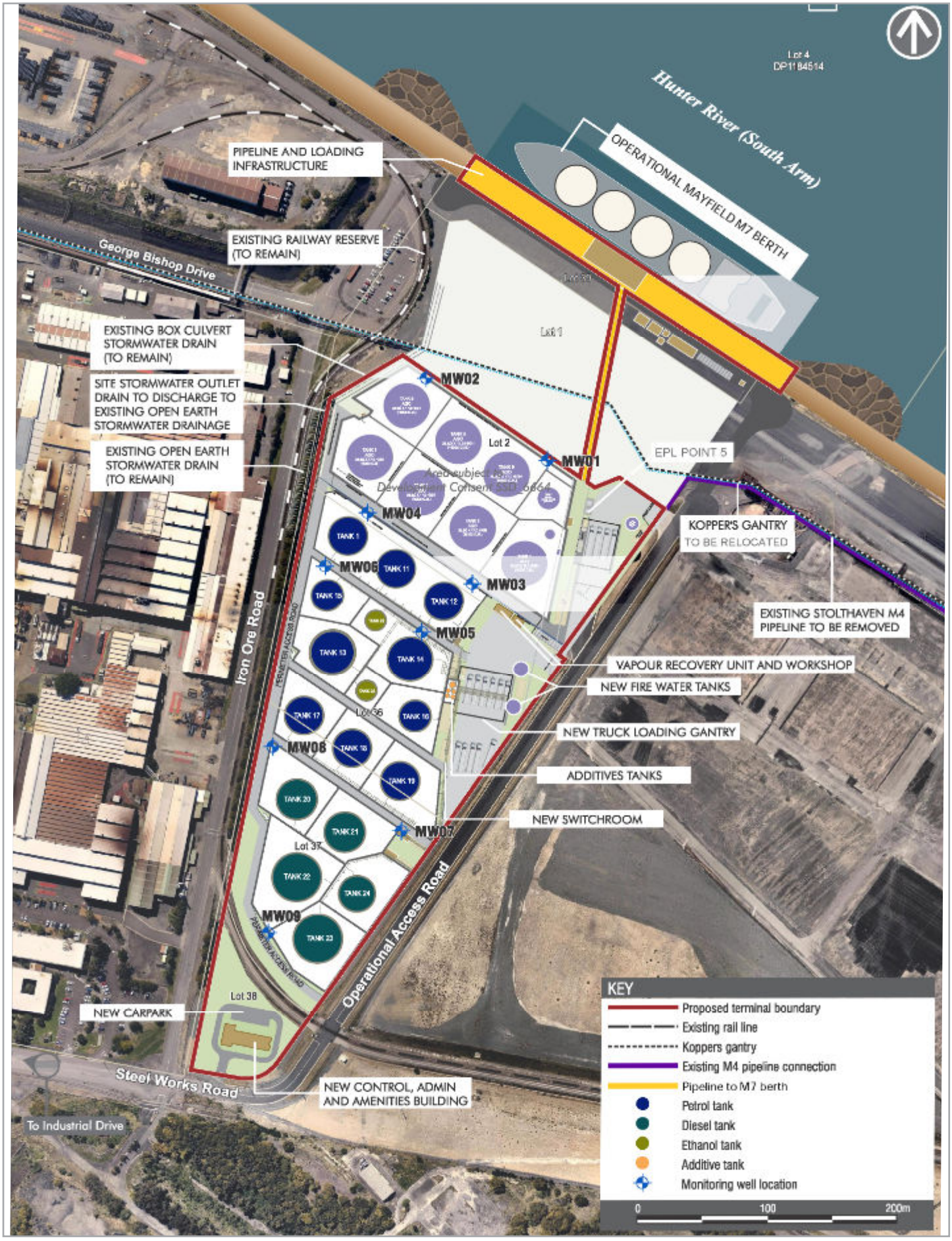
Print date: 08 Apr 2020 - 11:47

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



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

N

Stolthaven Australia Pty Ltd
Stolthaven Bulk Fuel Storage Facility
Annual Report 2019

Project No. **12524848**
Revision No. **0**
Date **08/04/2020**

Proposed terminal layout

FIGURE 3

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Print date: 08 Apr 2020 - 11:47

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

Appendix B – DPIE Correspondence Letters

NSW GOVERNMENT | Planning & Environment

Contact Name: Bruce Zhang
Number: 02 9274 6137
Email: bruce.zhang@planning.nsw.gov.au

Mr Simon Murphy
IAP Team Lead
AECOM
17 Warabrook Boulevard
WARABROOK NSW 2304

c/- Gordon Lasker, Stolt-Nielsen Australia Pty Ltd g.lasker@stolt.com
Paul Hayward, Stolt-Nielsen Australia Pty Ltd p.hayward@stolt.com

Dear Mr Murphy

Stolthaven Mayfield Terminal Stage 3
Approval of Progressive Submission of Environmental Management Strategy and Stage 1 Environmental Management Strategy
(SSD 7065)

I refer to your letter dated 17 October 2018, seeking approval for the progressive submission of Environmental Management Strategy (EMS) in accordance with Condition B22 of Schedule B of SSD 7065.

The Department reviewed the request and concludes adequate justification has been provided to stage the submission of EMS. It is understood that Stage 1 of the development includes:

- new ship hose connections (2 x 8" hoses) on Berth M7 including pumped draw down piping and pigging facilities (excluding marine loading arms installed under the initial scope)
- a new 400NB diesel fuel line from Berth M7 to the existing Lot 2 diesel facility to replace the existing 300NB diesel line from Berth M4
- a new berth fire protection system comprising of pumped firewater and self-oscillating foam monitors connected to IBC foam supply
- compressed air and potable water services at the berth
- operational shelters and huts on the berth.

I also refer to your submission on 17 October 2018 seeking approval for the EMS for Stage 1 operation as required by Condition D4 of Schedule D of SSD 7065.

In accordance with Condition D5 of Schedule D of SSD 7065, the EMS includes the following sub-plans:

- Air Quality Management Plan (Condition C19 of Schedule C)
- Noise Management Plan (Condition C34 of Schedule C)
- Stormwater Management Plan (Condition C44 of Schedule C)
- Water Management Plan (Condition C45 of Schedule C)
- Utilities and Services Plan (Condition C49 of Schedule C)
- Landscape Management Plan (Condition C50 of Schedule C).

The Department has reviewed the revised EMS and sub-plans and concludes the strategy and plans address the relevant conditions of the development consent. As such, the following plans are approved for Stage 1 construction only:

- Stolthaven Newcastle Mayfield Terminal Operational Environmental Management Plan, prepared by Stolthaven Australia Pty Ltd, dated 23 October 2018, Revision 8

- Air Quality Management Plan, prepared by AECOM, dated 2 May 2018, Revision E
- Traffic Management Plan, prepared by Stolthaven Newcastle Pty Ltd, dated August 2018, Issue 4
- Stolthaven Bulk Liquids Fuel Storage Facility, Mayfield – Operational Noise and Vibration Management Plan, prepared by AECOM, dated 10 May 2018, Revision 5
- Stolthaven Newcastle Stormwater Management Plan, prepared by Stolthaven Newcastle Pty Ltd, dated April 2018, Issue 4
- Water Management Plan, prepared by Stolthaven Newcastle Pty Ltd, dated June 2018, Issue 3
- Utilities and Services Management Plan, prepared by Stolthaven Newcastle Pty Ltd, dated June 2018, Issue 4
- Landscape Management Plan, prepared by Stolthaven Newcastle Pty Ltd, dated April 2018, Issue 3.

Pursuant to Condition D6 of Schedule D of SSD 7065, you must operate Stage 1 of the development in accordance with the above-mentioned EMP and sub-plans.

Please note that in accordance with Condition D6 of Schedule D of SSD 7065, you must resubmit the EMS and relevant sub-plans to the Department and obtain the approval of the Planning Secretary prior to any future operating stages.

Should you have any queries in relation to this matter, please contact Bruce Zhang, Environmental Assessment Officer on the above contact details.

Yours sincerely

C. Ritchie

Chris Ritchie 24/10/18.
Director
Industry Assessments
as delegate of the Planning Secretary

Appendix C – Stormwater Monitoring

2019 Bund Water Results

Samples Collected:	Samples Tested:	Location	Temp (°C)	pH	Total Dissolved Solids (ppm)	Dissolved Oxygen (mg/L)	Conductivity (uS/cm)	Appearance	Volume (L) Approx.	Comments
12/02/2019	12/02/2019	Bund 1	26.1	6.82	50.1	59.4	74	clear	20,000	
		Bund 2	25.8	6.72	40.2	64.4	56.4	clear	20,000	
		Bund 3	25.7	8.4	40.1	70	60.9	clear	20,000	
		Bund 5	24.8	8.22	40.5	72.7	61.7	clear	30,000	
		Bund 6	24.9	8.3	45.2	76.4	69.8	clear	30,000	
		Bund 7	24.8	8.29	52	70.3	78.9	clear	15,000	
		Bund 8	24.8	8.8	63	72	89.3	clear	15,000	
		Bund 9	24.6	8.85	64.5	65.7	90.1	clear	15,000	
6/03/2019	6/03/2019	Bund 1	20.2	7.85	60.9	67.9	92.6	clear	30,000	
		Bund 2	19.6	7.78	58.4	85.8	74.4	clear	30,000	
		Bund 3	20.7	8.52	60.6	78.2	89.6	clear	30,000	
		Bund 5	20.1	8.98	83.2	58.3	76.8	clear	30,000	
		Bund 6	20.6	8.91	74.6	85.6	82.8	clear	30,000	
		Bund 7	19.9	8.12	71.2	72.6	76.7	clear	30,000	
		Bund 8	19.7	7.96	59.7	64.6	95.5	clear	30,000	
		Bund 9	20.3	7.83	67.8	82.3	90.1	clear	30,000	
18/03/2019	18/03/2019	Bund 1	24.6	8.91	60.1	85.8	92.4	clear	20,000	
		Bund 2	24.3	8.98	47.9	78.2	73.3	clear	20,000	
		Bund 3	24.1	8.52	48.2	67.7	74.4	clear	20,000	
		Bund 5	24.2	8.39	58.4	58.8	89.5	clear	20,000	
		Bund 6	24.3	8.36	49.5	67.9	76.6	clear	20,000	
		Bund 7	24.3	8.12	60.6	58.8	90.1	clear	20,000	
		Bund 8	24.4	7.85	62.5	51.1	95.5	clear	20,000	
		Bund 9	24.3	7.78	83.2	53.6	128.5	clear	20,000	
26/03/2019	26/03/2019	Bund 1	22.6	7.1	20.8	58.2	65.4	clear	3,000	
		Bund 2	22.9	7.4	26.2	60.7	58.2	clear	3,000	
		Bund 3								
		Bund 5	23.1	7.8	21.4	59.3	61.3	clear	5,000	
		Bund 6								
		Bund 7	23	7.9	32.1	61..2	71.5	clear	5,000	
		Bund 8								
		Bund 9								
1/04/2019	1/04/2019	Bund 1	20.6	8.98	62.4	85.9	90.1	clear	50,000	High tide limitation for release
		Bund 2	20.9	8.91	81.5	80.2	92.7	clear	50,000	Continuation of release 02 April
		Bund 3	21.0	8.36	58.4	58.8	89.6	clear	50,000	
		Bund 5	20.2	8.52	56.7	53.4	76.4	clear	50,000	
		Bund 6	19.9	7.78	48.2	60.7	73.2	clear	50,000	
		Bund 7	20.6	8.36	62.5	59.2	91.3	clear	50,000	
		Bund 8	19.8	8.12	61.7	51.7	78.7	clear	50,000	
		Bund 9	20.7	8.73	70.4	60.4	89.1	clear	50,000	
9/04/2019	9/04/2019	Bund 1						clear		
		Bund 2	21.2	8.9	64.5	76.3	79.8	clear	5,000	NN2 bund tested only
		Bund 3						clear		After dewater line failure
		Bund 5						clear		
		Bund 6						clear		
		Bund 7						clear		
		Bund 8						clear		
		Bund 9						clear		
5/06/2019	6/05/2019	Bund 1	20.1	8.98	47.8	85.6	90.1	clear	15,000	
		Bund 2	21.3	7.85	60.1	81.2	74.9	clear	20,000	
		Bund 3	20.4	8.39	62.4	73.8	82.6	clear	30,000	

2019 Bund Water Results

Samples Collected:	Samples Tested:	Location	Temp (°C)	pH	Total Dissolved Solids (ppm)	Dissolved Oxygen (mg/L)	Conductivity (uS/cm)	Appearance	Volume (L) Approx.	Comments
		Bund 5	20.1	7.85	58.6	80.4	89.8	clear	40,000	
		Bund 6	19.8	7.78	72.3	71.3	81.7	clear	20,000	
		Bund 7	20.6	8.53	55.7	82.6	91.7	clear	20,000	
		Bund 8	20.2	8.21	75.3	76.8	71.2	clear	20,000	
		Bund 9	21.1	7.46	81.2	69.3	98.8	clear	20,000	
18/06/2019	18/06/2019	Bund 1	22.4	8.12	60.8	69.9	71.6	clear	20,000	
		Bund 2	22.9	7.85	68.7	53.1	90.1	clear	15,00	
		Bund 3	22.1	8.98	73.6	53.6	95.5	clear	10,000	
		Bund 5	21.8	8.36	70.7	69.2	73.3	clear	15,000	
		Bund 6	22.6	7.97	55.2	58.8	89.5	clear	5,000	
		Bund 7	22.6	9.12	61	61.7	95.1	clear	5,000	
		Bund 8	23	8.46	50.3	63.2	94.7	clear	5,000	
		Bund 9	21.9	8.79	48.2	67.4	87.6	clear	9,000	
24/06/19	24/06/19	Bund 1	12.6	7.81	58.2	56.7	79.8	clear	50,000	
		Bund 2	13.1	7.92	49.2	60.2	65.2	clear	40,000	
		Bund 3	13.0	8.4	48.4	59.3	71.9	clear	50,000	
		Bund 5	12.4	8.2	59.7	71.4	90.1	clear	80,000	
		Bund 6	12.9	7.93	49.5	58.8	84.8	clear	80,000	
		Bund 7	13.2	8.15	60.5	53.6	95.5	clear	20,000	
		Bund 8	13.0	8.1	61.9	85.8	73.6	clear	20,000	
		Bund 9	12.8	7.76	82.3	78.2	80.7	clear	20,000	
30/08/2019	30/08/2019	Bund 1	19.6	7.78	58.4	58.7	90.2	clear	50,000	Ongoing rain event forecast. Partial drain
		Bund 2	1904	8.12	62.6	67.4	95.6	clear	50,000	Ongoing rain event forecast. Partial drain
		Bund 3	20.2	8.36	49.4	60.6	76.7	clear	50,000	Ongoing rain event forecast. Partial drain
		Bund 5	19.7	6.75	61.7	71.2	87.2	clear	50,000	Ongoing rain event forecast. Partial drain
		Bund 6	20.0	7.1	68.3	78.4	81.3	clear	50,000	
		Bund 7	20.4	7.09	67.9	66.2	89.1	clear	50,000	
		Bund 8	19.8	6.14	46.8	51.9	78.9	clear	50,000	
		Bund 9	19.9	8.27	49.4	72.3	84.6	clear	50,000	
18/09/2019	18/09/2019	Bund 1	20.4	8.12	41.7	51.6	74.2	clear	30,000	Rain event ongoing through 19/09
		Bund 2	20.9	7.85	46.9	67.3	76.8	clear	30,000	Rain event ongoing through 19/09
		Bund 3	20.2	7.78	40.3	47.7	81.7	clear	30,000	Rain event ongoing through 19/09
		Bund 5	21.1	8.39	58.7	69.2	79.3	clear	30,000	Rain event ongoing through 19/09
		Bund 6	20.6	8.34	53.9	78.3	84.6	clear	30,000	Rain event ongoing through 19/09
		Bund 7	20.4	7.16	63.2	76.4	71.2	clear	30,000	Rain event ongoing through 19/09
		Bund 8	21.7	7.5	81.3	81.2	70.4	clear	30,000	Rain event ongoing through 19/09
		Bund 9	20.0	8.09	74.6	60.7	89.8	clear	30,000	Rain event ongoing through 19/09
14/10/2019	14/10/2019	Bund 1	22.8	6.78	43.9	56.6	66.2	clear	20,000	Rain event 12/10
		Bund 2	22.4	7.31	28.3	76.2	43.5	clear	20,000	Rain event 12/10
		Bund 3	22.3	7.58	28.5	86.2	45.9	clear	20,000	Rain event 12/10
		Bund 5	22.1	7.86	30.2	86.9	45.4	clear	30,000	Rain event 12/10
		Bund 6	22.7	7.9	37.3	79.5	58.7	clear	30,000	Rain event 12/10
		Bund 7	22.1	7.99	35.5	77.9	54.5	clear	15,000	Rain event 12/10
		Bund 8	22.7	8.17	45.4	76.2	72.2	clear	15,000	Rain event 12/10
		Bund 9	22.5	8.12	55.2	67.1	84.7	clear	15,000	Rain event 12/10
4/11/2019	4/11/2019	Bund 1	25.4	6.61	49.4	58.6	75.8	clear	30,000	Rain event 03/11
		Bund 2	24.9	6.64	39.1	69.5	59.4	clear	20,000	Rain event 03/11
		Bund 3	24.7	8.61	40	76.5	61.9	clear	20,000	Rain event 03/11
		Bund 5	24.7	8.44	40.3	76.7	61.7	clear	30,000	Rain event 03/11
		Bund 6	24.5	8.39	46.2	78.3	71.3	clear	30,000	Rain event 03/11
		Bund 7	24.7	8.3	53.2	70.4	81.5	clear	15,000	Rain event 03/11
		Bund 8	24.7	8.97	62.2	72.2	93.3	clear	15,000	Rain event 03/11
		Bund 9	24.6	8.89	65.4	67.1	90.2	clear	15,000	Rain event 03/11

2019 First Flush Results

Samples Collected:	Samples Tested:	Dissolved Oxygen (mg/L)	Oil and Grease (mg/L)	pH	Total Suspended Solids (TSS)	Volume (L)	Comments
9/01/2019	10/01/2019	5.30	< 2	7.94	14	15,000	
2/01/2019	2/04/2019	6.06	< 2	7.37	14	25,000	Dropped off on a Friday
2/08/2019	2/11/2019	9.45	< 2	7.54	1	15,000	
20.02.2019	21.02.2019	8.08	2	7.62	24	35,000	Release held over due tankship discharge / late issue Friday PM. Release started 25 Feb 08:30hrs
3/07/2019	3/08/2019	6.65	< 2	7.11	16	15,000	Release held over due late issue Friday PM. Release started 11 Mar 06:05hrs
18.03.2019	19.03.2019	8.38	< 2	7.30	10	20,000	
25.03.2019	26.03.2019	8.76	< 2	7.29	**40**	_	No release. Recirculated through filtration and resampled
27.03.2019	28.03.2019	8.46	< 2	7.41	10	25,000	Retest passed & released.
4/09/2019	4/10/2019	7.86	< 2	7.54	8	25,000	
17.04.2019	23.04.2019	8.28	< 2	7.36	19	30,000	Late issue due Easter Public Hols - final release 26/04
5/06/2019	5/07/2019	8.15	< 2	7.35	7	35,000	Late issue of results 08/05. Release planned 09/05.
3/06/2019	4/06/2019	8.74	< 2	7.28	9	35,000	
18/06/2019	19/06/2019	8.96	< 2	7.51	22	35,000	
25/06/2019	26/07/2019	9.85	< 2	7.45	12	38,500	
9/07/2019	10/07/2019	8.70	< 2	7.45	19	35,000	
1/08/2019	2/08/2019	9.05	< 2	7.57	**40**	_	No release. Rest.
5/08/2019	6/08/2019	9.16	< 2	7.61	12	25,000	Retest passed & released.
2/09/2019	3/09/2019	8.84	< 2	7.41	15	35,000	Late issue of results 03/09. Release planned 04/09.
19/09/2019	20/09/2019	8.48	< 2	7.52	18	38,500	Heavy rain event 16/09 - 18/09
10/09/2019	10/11/2019	7.56	< 2	7.56	**34**	_	No release. Rest. Pollen scum / large amount of moths noted
14/10/2019	15/10/2019	8.59	< 2	7.62	12	35,000	Late results PM 15 Oct. Late discharge due power outage 16/10 - completed A.M. 17/10
4/11/2019	6/11/2019	7.29	< 2	7.44	26	30,000	
5/12/2019	6/12/2019	8.38	6	**8.63**	12	0	No release - high dust / ash content. pH affected by ash? Recirc / resample. Test gear sampling for pH - all other results OK
9/12/2019	10/12/2019	8.03	< 2	**8.60**	10	0	Retest failed Following discussion with EPA, water was dispersed/reused onsite - see attached. To confirm this water was not discharged from the site
MINIMUM		**5.30**	**2.00**	**7.11**	**1.00**		
MAXIMUM		**9.85**	**6.00**	**8.63**	**40.00**		
AVERAGE		**8.21**	**4.00**	**7.56**	**16.83**		

Appendix D – Hourly Truck Movements

REPORTING PERIOD: January 2019

Bay Occupancy Data

Start	12:00:00 AM	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM
Finish	1:00:00 AM	2:00:00 AM	3:00:00 AM	4:00:00 AM	5:00:00 AM	6:00:00 AM	7:00:00 AM	8:00:00 AM	9:00:00 AM	10:00:00 AM	11:00:00 AM	12:00:00 PM
Bay 1	16	25	14	14	27	21	15	18	15	11	14	21
Bay 2	7	14	19	10	17	10	12	11	7	6	9	9
Bay 3	19	16	17	13	24	19	16	19	14	13	11	19
Bay 4	4	10	7	7	8	9	9	9	4	3	3	2
Total	**46**	**65**	**57**	**44**	**76**	**59**	**52**	**57**	**40**	**33**	**37**	**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	15	25	26	16	20	19	18	13	7	16	11	8
Bay 2	15	21	22	14	14	10	11	6	6	3	5	1
Bay 3	23	25	23	21	12	13	15	18	11	10	10	7
Bay 4	8	12	14	10	4	2	2	5	4	1	5	1
Total	**61**	**83**	**85**	**61**	**50**	**44**	**46**	**42**	**28**	**30**	**31**	**17**

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
1/01/2019	1	1	1	3	1	2	0	2	0	2	0	1
2/01/2019	1	4	4	1	0	0	2	3	0	0	0	1
3/01/2019	1	2	1	0	2	3	2	2	2	4	2	1
4/01/2019	1	2	4	0	3	2	3	1	1	2	2	0
5/01/2019	2	2	1	0	1	0	4	1	0	3	1	1
6/01/2019	2	2	1	1	1	3	2	1	0	0	1	2
7/01/2019	3	1	3	1	5	4	1	0	1	0	3	2
8/01/2019	3	4	3	4	2	3	4	2	1	1	1	3
9/01/2019	0	3	5	3	3	3	0	2	4	0	2	2
10/01/2019	2	2	4	2	6	2	1	1	1	2	1	2
11/01/2019	0	4	3	1	2	4	3	4	3	2	2	0
12/01/2019	2	1	0	4	1	2	1	1	3	2	1	1
13/01/2019	4	4	0	1	0	1	2	2	0	0	2	1
14/01/2019	3	4	2	2	3	4	2	3	2	2	2	2
15/01/2019	3	3	1	4	4	1	3	3	1	0	3	2
16/01/2019	0	5	2	2	3	3	1	6	1	2	2	1
17/01/2019	1	2	2	1	4	1	2	0	1	1	1	2
18/01/2019	1	1	2	1	4	2	3	1	1	2	0	2
19/01/2019	1	1	0	0	0	4	2	0	0	1	1	2
20/01/2019	0	1	0	0	2	1	1	1	1	0	1	3
21/01/2019	1	1	3	1	4	2	2	2	2	1	1	2
22/01/2019	0	3	2	2	3	0	1	3	0	2	0	2
23/01/2019	2	3	1	1	2	3	2	1	1	1	3	1
24/01/2019	1	1	0	2	3	0	2	1	1	0	1	2
25/01/2019	2	2	2	3	4	2	1	3	2	0	0	1
26/01/2019	1	1	0	0	3	0	0	3	1	0	1	3
27/01/2019	2	2	0	0	0	0	1	0	1	0	0	2
28/01/2019	2	1	2	1	1	2	0	2	3	0	0	3
29/01/2019	2	0	0	0	3	0	1	3	1	0	0	2
30/01/2019	1	0	5	1	3	3	1	0	3	2	1	1
31/01/2019	1	2	3	2	3	2	2	3	2	1	2	1
Total	**46**	**65**	**57**	**44**	**76**	**59**	**52**	**57**	**40**	**33**	**37**	**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
1/01/2019	1	5	3	2	0	0	2	1	0	2	1	0
2/01/2019	2	4	2	1	4	0	0	0	3	0	0	1
3/01/2019	2	4	2	5	1	0	2	0	3	0	0	1
4/01/2019	5	4	4	2	2	2	2	2	0	2	0	0
5/01/2019	4	1	2	1	0	1	1	1	1	1	1	1
6/01/2019	2	1	0	2	0	1	0	0	1	0	1	1
7/01/2019	3	4	4	0	3	3	3	2	1	1	2	0
8/01/2019	3	4	2	4	1	4	2	2	2	0	2	1
9/01/2019	3	5	5	1	3	1	3	2	2	1	1	1
10/01/2019	4	4	1	4	6	4	1	1	1	1	0	1
11/01/2019	2	0	5	4	3	1	4	2	0	2	0	0
12/01/2019	1	6	3	2	3	1	1	4	0	2	1	0
13/01/2019	1	4	3	0	0	3	0	5	1	3	2	0
14/01/2019	0	4	7	4	1	1	2	3	2	1	4	1
15/01/2019	3	1	4	1	3	2	0	2	1	2	3	0
16/01/2019	0	2	5	3	3	3	0	2	1	0	2	0
17/01/2019	0	2	5	2	1	1	1	0	1	2	2	0
18/01/2019	0	1	2	1	4	1	1	0	2	1	1	0
19/01/2019	3	2	1	0	2	1	0	1	0	0	1	0
20/01/2019	0	0	0	0	1	1	1	0	0	1	0	0
21/01/2019	4	3	4	2	0	2	3	1	1	0	0	2
22/01/2019	2	2	1	1	1	2	1	2	0	1	1	0
23/01/2019	3	2	0	3	0	1	2	2	0	1	0	1
24/01/2019	0	4	1	3	1	0	3	0	0	1	0	0
25/01/2019	2	3	3	2	1	1	2	1	1	1	1	1
26/01/2019	1	2	3	2	1	0	1	1	2	0	0	0
27/01/2019	3	0	2	1	0	0	3	0	0	0	0	2
28/01/2019	1	2	3	1	0	2	2	1	0	1	1	1
29/01/2019	3	3	4	1	1	2	0	1	1	1	2	0
30/01/2019	2	1	3	1	3	1	0	2	0	1	1	1
31/01/2019	1	3	1	5	1	2	3	1	1	1	1	1
Total	**61**	**83**	**85**	**61**	**50**	**44**	**46**	**42**	**28**	**30**	**31**	**17**

REPORTING PERIOD: February 2019

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	20	13	18	16	25	22	15	20	15	19	8	16
Bay 2	10	5	15	12	16	14	11	6	9	8	4	8
Bay 3	17	10	19	20	19	10	18	10	13	13	7	6
Bay 4	3	1	5	7	10	5	10	7	9	6	2	7
Total	**50**	**29**	**57**	**55**	**70**	**51**	**54**	**43**	**46**	**46**	**21**	**37**

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	26	20	21	14	19	16	16	13	7	11	7
Bay 2	11	14	13	11	8	10	7	5	3	0	4	1
Bay 3	20	24	15	18	15	10	9	10	4	6	7	4
Bay 4	12	6	8	11	4	2	3	4	1	1	0	1
Total	**60**	**70**	**56**	**61**	**41**	**41**	**35**	**35**	**21**	**14**	**22**	**13**

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
1/02/2019	1	0	3	2	5	3	1	2	6	3	0	0
2/02/2019	3	0	0	1	1	0	3	1	0	2	1	5
3/02/2019	2	0	1	0	2	1	3	1	1	2	1	3
4/02/2019	2	1	6	1	4	2	4	1	1	4	2	2
5/02/2019	3	1	2	5	0	3	3	2	0	0	3	0
6/02/2019	0	1	4	2	2	2	0	2	1	2	2	1
7/02/2019	1	2	4	3	3	1	1	2	1	3	0	1
8/02/2019	1	0	1	4	3	2	4	1	1	3	0	2
9/02/2019	2	1	1	2	3	1	0	1	2	0	0	2
10/02/2019	2	0	1	0	0	1	2	0	0	0	0	2
11/02/2019	4	1	2	2	3	5	3	1	1	5	1	2
12/02/2019	1	0	3	2	3	2	3	0	6	1	1	2
13/02/2019	1	3	6	4	4	1	4	3	3	2	1	2
14/02/2019	2	2	0	2	4	2	3	1	1	0	2	1
15/02/2019	3	1	0	3	5	3	3	1	2	5	0	0
16/02/2019	2	2	2	0	0	2	1	5	1	0	0	2
17/02/2019	0	2	0	0	0	1	1	2	0	1	0	0
18/02/2019	3	2	4	1	1	2	1	3	2	0	1	2
19/02/2019	1	2	2	3	3	2	2	1	2	2	2	0
20/02/2019	3	3	1	2	2	2	3	3	0	1	1	1
21/02/2019	3	0	1	3	2	1	1	1	1	1	1	1
22/02/2019	0	0	3	3	3	3	1	2	4	2	0	1
23/02/2019	3	1	1	1	1	2	0	2	2	0	0	1
24/02/2019	1	1	0	1	1	0	3	1	0	0	0	0
25/02/2019	2	1	4	0	2	2	0	2	2	2	1	1
26/02/2019	1	0	2	2	5	3	1	0	0	2	1	2
27/02/2019	2	1	1	3	5	1	0	2	3	2	0	0
28/02/2019	1	1	2	3	3	1	3	0	3	1	0	1
1/03/2019	0	0	0	0	0	0	0	0	0	0	0	0
2/03/2019	0	0	0	0	0	0	0	0	0	0	0	0
3/03/2019	0	0	0	0	0	0	0	0	0	0	0	0
Total	**50**	**29**	**57**	**55**	**70**	**51**	**54**	**43**	**46**	**46**	**21**	**37**

	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
1/02/2019	2	4	1	6	2	0	4	2	1	2	0	2
2/02/2019	3	3	1	2	1	5	2	0	0	1	2	0
3/02/2019	3	2	0	1	2	2	1	2	0	0	4	0
4/02/2019	2	3	1	6	1	2	1	1	2	1	1	0
5/02/2019	2	4	2	3	3	2	2	1	2	1	1	0
6/02/2019	1	2	1	3	4	1	1	1	0	2	2	0
7/02/2019	0	1	4	2	1	2	3	1	0	0	3	0
8/02/2019	2	1	2	2	4	1	1	1	2	1	0	0
9/02/2019	2	2	2	1	0	2	0	0	0	0	1	1
10/02/2019	3	1	0	0	1	3	0	0	1	0	0	1
11/02/2019	3	7	0	1	2	1	0	3	0	0	0	1
12/02/2019	3	4	1	2	1	3	1	1	1	1	2	0
13/02/2019	4	4	1	1	1	2	1	1	0	0	0	1
14/02/2019	1	2	4	2	1	1	2	1	0	1	0	0
15/02/2019	2	1	2	3	3	2	1	2	2	0	0	0
16/02/2019	1	3	2	0	0	0	1	2	0	0	0	1
17/02/2019	3	3	0	0	0	0	3	1	0	0	0	0
18/02/2019	3	1	2	2	3	3	0	0	1	1	1	0
19/02/2019	2	1	4	3	1	1	3	1	2	0	0	1
20/02/2019	1	4	3	0	2	2	2	1	0	0	0	1
21/02/2019	1	3	5	1	3	0	1	1	0	1	0	1
22/02/2019	0	3	1	5	0	0	2	2	0	0	0	0
23/02/2019	2	1	0	3	0	0	1	2	1	0	0	0
24/02/2019	3	2	0	0	0	1	0	2	0	0	1	0
25/02/2019	2	2	5	3	2	1	1	1	2	0	0	1
26/02/2019	3	3	2	6	1	0	1	2	1	0	0	0
27/02/2019	3	2	6	1	1	1	0	2	1	1	1	1
28/02/2019	3	1	4	2	1	3	0	1	2	1	3	1
1/03/2019	0	0	0	0	0	0	0	0	0	0	0	0
2/03/2019	0	0	0	0	0	0	0	0	0	0	0	0
3/03/2019	0	0	0	0	0	0	0	0	0	0	0	0
Total	**60**	**70**	**56**	**61**	**41**	**41**	**35**	**35**	**21**	**14**	**22**	**13**

REPORTING PERIOD: March 2019

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	20	15	21	12	28	23	17	20	20	18	14	20
Bay 2	5	11	27	11	21	12	9	14	9	10	4	13
Bay 3	18	15	27	15	18	18	23	13	19	13	15	16
Bay 4	1	4	10	5	11	5	11	8	6	12	5	7
Total	**44**	**45**	**85**	**43**	**78**	**58**	**60**	**55**	**54**	**53**	**38**	**56**

Start	12:00:00 PM	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM
Finish	1:00:00 PM	2:00:00 PM	3:00:00 PM	4:00:00 PM	5:00:00 PM	6:00:00 PM	7:00:00 PM	8:00:00 PM	9:00:00 PM	10:00:00 PM	11:00:00 PM	12:00:00 AM
Bay 1	26	21	25	19	21	23	19	18	15	11	7	6
Bay 2	14	15	18	14	12	5	9	7	2	3	5	3
Bay 3	26	23	19	25	16	10	16	15	10	5	6	6
Bay 4	14	11	10	14	7	7	6	6	3	2	2	1
Total	**80**	**70**	**72**	**72**	**56**	**45**	**50**	**46**	**30**	**21**	**20**	**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
1/03/2019	2	1	3	1	4	2	0	2	5	2	1	1
2/03/2019	0	1	1	1	1	1	2	1	1	2	0	0
3/03/2019	2	2	0	1	0	1	0	2	1	1	0	0
4/03/2019	2	2	2	0	5	2	3	2	2	1	2	1
5/03/2019	2	2	3	4	2	1	1	2	0	2	1	0
6/03/2019	2	2	3	2	2	2	2	3	2	5	1	1
7/03/2019	1	3	1	2	6	3	3	1	5	1	1	3
8/03/2019	1	0	5	2	4	2	2	4	1	2	1	4
9/03/2019	2	1	1	0	1	1	0	3	1	1	0	0
10/03/2019	1	0	1	0	0	0	3	1	0	1	0	2
11/03/2019	1	2	6	0	2	0	1	4	1	3	1	1
12/03/2019	1	1	7	1	2	1	0	5	2	1	0	1
13/03/2019	3	0	6	0	1	4	4	1	2	2	2	2
14/03/2019	2	2	1	3	2	5	0	2	4	2	3	3
15/03/2019	1	1	2	5	4	4	3	0	7	0	1	2
16/03/2019	1	2	2	0	1	0	2	1	0	0	0	3
17/03/2019	1	0	0	1	0	3	0	0	1	1	1	1
18/03/2019	1	4	3	1	1	2	3	1	5	0	0	0
19/03/2019	2	1	3	1	2	2	3	4	2	3	0	0
20/03/2019	0	3	2	2	4	2	2	2	1	4	3	0
21/03/2019	0	2	4	1	3	3	2	1	2	1	3	2
22/03/2019	3	1	2	0	5	1	2	1	1	1	0	3
23/03/2019	1	1	3	0	2	2	2	1	0	0	2	1
24/03/2019	2	1	1	0	1	1	3	1	0	0	4	1
25/03/2019	1	3	3	2	5	1	0	3	1	3	0	4
26/03/2019	2	2	5	1	4	3	2	1	2	4	2	3
27/03/2019	4	4	3	1	3	2	6	2	1	2	3	2
28/03/2019	1	1	4	1	5	2	3	1	1	4	3	3
29/03/2019	0	0	4	5	4	2	3	3	1	3	2	5
30/03/2019	2	0	2	3	1	2	2	0	1	1	1	2
31/03/2019	0	0	2	2	1	1	1	0	1	0	0	5
Total	**44**	**45**	**85**	**43**	**78**	**58**	**60**	**55**	**54**	**53**	**38**	**56**

	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
1/03/2019	2	2	4	6	4	0	1	3	2	0	0	1
2/03/2019	4	1	2	0	0	0	2	1	0	1	0	0
3/03/2019	5	1	0	1	0	1	1	0	0	0	0	0
4/03/2019	2	5	3	2	1	2	2	1	1	0	0	0
5/03/2019	5	1	3	3	3	1	1	2	2	0	0	1
6/03/2019	3	1	1	6	2	2	1	2	1	0	0	2
7/03/2019	2	1	4	5	3	1	2	0	1	1	1	1
8/03/2019	2	2	2	6	2	1	2	1	4	1	1	0
9/03/2019	2	3	3	1	0	0	2	2	0	1	0	1
10/03/2019	3	1	1	0	0	1	1	1	0	1	0	0
11/03/2019	1	6	2	2	2	4	1	4	0	2	0	0
12/03/2019	3	4	3	3	0	2	1	3	2	1	0	0
13/03/2019	3	3	1	2	6	3	2	1	1	2	0	0
14/03/2019	2	2	1	3	3	4	2	1	2	0	1	0
15/03/2019	1	2	6	2	3	1	2	3	2	0	0	1
16/03/2019	4	2	0	1	0	1	2	1	0	0	1	1
17/03/2019	2	1	0	1	1	1	0	1	0	0	2	0
18/03/2019	3	1	3	0	2	2	1	0	1	1	0	0
19/03/2019	4	3	3	4	0	2	1	1	2	0	0	1
20/03/2019	2	1	2	3	2	0	0	0	2	1	0	0
21/03/2019	1	3	2	5	1	0	1	2	1	0	0	1
22/03/2019	3	4	2	1	1	2	3	5	1	0	2	0
23/03/2019	2	2	3	1	1	1	1	1	0	0	2	0
24/03/2019	0	2	1	0	1	0	1	1	1	0	0	0
25/03/2019	2	2	6	1	2	0	2	1	2	1	0	0
26/03/2019	4	4	3	4	4	1	5	2	1	1	1	2
27/03/2019	2	4	3	2	5	1	3	1	1	3	3	1
28/03/2019	4	2	3	3	3	6	2	1	0	2	3	3
29/03/2019	2	1	2	2	4	3	3	1	0	2	2	0
30/03/2019	2	1	2	1	0	2	0	2	0	0	1	0
31/03/2019	3	2	1	1	0	0	2	1	0	0	0	0
Total	**80**	**70**	**72**	**72**	**56**	**45**	**50**	**46**	**30**	**21**	**20**	**16**

REPORTING PERIOD: April 2019

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	18	13	23	19	23	21	14	12	11	14	11	20
Bay 2	5	10	17	6	11	7	1	7	6	5	5	7
Bay 3	20	14	20	12	20	21	14	14	10	10	6	17
Bay 4	5	4	10	5	12	8	7	9	6	6	2	10
Total	**48**	**41**	**70**	**42**	**66**	**57**	**36**	**42**	**33**	**35**	**24**	**54**

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	21	17	18	16	16	21	14	15	8	6	12	8
Bay 2	9	5	12	11	5	10	5	4	2	0	3	0
Bay 3	21	20	19	17	12	11	12	10	6	3	6	6
Bay 4	8	9	11	12	5	4	4	2	2	1	1	1
Total	**59**	**51**	**60**	**56**	**38**	**46**	**35**	**31**	**18**	**10**	**22**	**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
1/04/2019	2	2	4	0	4	0	0	4	0	2	1	1
2/04/2019	1	4	3	0	3	0	0	2	1	1	1	1
3/04/2019	1	1	3	2	2	0	0	3	2	2	1	1
4/04/2019	1	1	4	3	2	3	0	3	1	3	2	3
5/04/2019	4	1	1	2	4	4	0	2	4	2	0	2
6/04/2019	2	1	0	1	1	2	1	1	0	1	1	1
7/04/2019	1	0	1	1	0	1	0	0	1	0	0	2
8/04/2019	3	2	3	1	2	2	0	3	1	2	0	2
9/04/2019	2	3	4	1	4	0	2	2	0	1	0	1
10/04/2019	3	1	2	1	2	0	3	0	1	1	1	0
11/04/2019	1	2	2	1	2	0	1	1	0	1	0	0
12/04/2019	3	0	4	2	4	1	2	2	0	0	0	3
13/04/2019	3	0	0	2	0	3	2	0	1	0	0	2
14/04/2019	1	1	0	0	0	1	2	1	0	0	1	2
15/04/2019	1	0	3	2	0	1	3	2	1	1	1	3
16/04/2019	0	0	4	1	2	1	3	1	1	2	1	0
17/04/2019	1	2	0	1	3	5	0	2	1	3	1	0
18/04/2019	2	2	1	2	4	4	1	0	3	2	2	2
19/04/2019	0	0	1	2	5	1	1	0	2	0	0	2
20/04/2019	2	1	0	0	2	3	2	1	0	0	2	2
21/04/2019	1	1	0	0	1	1	2	0	0	0	0	4
22/04/2019	2	1	3	1	6	1	2	3	0	0	2	3
23/04/2019	0	1	4	1	4	3	1	1	2	1	2	2
24/04/2019	3	3	3	2	3	3	1	0	3	1	1	2
25/04/2019	1	2	5	3	1	2	1	2	0	1	1	0
26/04/2019	0	0	4	0	2	3	0	1	1	1	0	4
27/04/2019	0	1	0	2	0	2	1	0	1	1	0	1
28/04/2019	1	2	1	0	0	0	2	0	1	0	0	2
29/04/2019	1	2	4	5	1	1	1	3	2	2	0	1
30/04/2019	3	3	4	1	0	5	2	0	2	2	1	3
1/05/2019	2	1	2	2	2	4	0	2	1	2	2	2
Total	**48**	**41**	**70**	**42**	**66**	**57**	**36**	**42**	**33**	**35**	**24**	**54**

	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
1/04/2019	1	1	1	5	1	1	2	1	1	1	1	0
2/04/2019	2	4	1	0	0	1	0	2	1	0	0	0
3/04/2019	1	1	6	2	3	2	0	1	0	1	0	0
4/04/2019	1	5	2	0	1	4	1	2	1	0	0	1
5/04/2019	0	2	1	5	1	3	2	2	1	0	0	1
6/04/2019	2	0	3	2	0	2	0	1	1	0	0	1
7/04/2019	1	0	3	0	1	1	0	1	0	0	1	0
8/04/2019	0	1	3	1	2	3	2	1	0	0	1	0
9/04/2019	3	3	0	2	2	3	0	1	1	1	0	0
10/04/2019	3	2	0	2	3	0	0	1	1	2	0	0
11/04/2019	4	0	1	3	0	1	3	0	0	0	0	1
12/04/2019	4	0	1	4	1	1	3	0	0	1	0	1
13/04/2019	4	0	2	0	0	2	0	0	1	0	0	1
14/04/2019	3	0	0	0	0	2	1	0	0	0	2	0
15/04/2019	0	3	1	1	3	0	0	0	0	0	2	1
16/04/2019	2	2	2	3	2	1	3	2	1	0	1	3
17/04/2019	3	3	2	2	2	1	1	3	0	0	1	0
18/04/2019	1	0	3	2	2	5	0	0	2	1	2	0
19/04/2019	1	1	2	3	0	2	2	1	0	0	1	1
20/04/2019	2	1	3	0	2	0	1	1	0	0	1	0
21/04/2019	1	1	0	0	2	2	0	1	0	1	1	1
22/04/2019	1	2	1	2	2	3	0	0	0	0	3	1
23/04/2019	4	1	4	2	1	0	2	1	1	1	0	0
24/04/2019	0	2	2	1	1	3	2	1	1	0	0	0
25/04/2019	4	0	0	4	1	0	1	2	1	0	2	0
26/04/2019	0	2	3	3	1	1	1	2	1	0	1	0
27/04/2019	3	2	2	1	1	0	0	1	2	0	0	0
28/04/2019	1	2	0	0	0	1	2	0	0	0	1	0
29/04/2019	4	3	4	1	1	1	2	2	0	0	0	1
30/04/2019	1	4	3	3	1	0	1	1	0	1	1	0
1/05/2019	2	3	4	2	1	0	3	0	1	0	0	1
Total	**59**	**51**	**60**	**56**	**38**	**46**	**35**	**31**	**18**	**10**	**22**	**15**

REPORTING PERIOD: May 2019

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	18	21	14	13	22	22	15	19	14	10	13	19
Bay 2	6	9	21	15	22	10	8	10	11	8	8	15
Bay 3	18	13	17	20	21	17	17	13	11	16	3	7
Bay 4	4	4	6	9	16	6	8	3	9	3	4	4
Total	**46**	**47**	**58**	**57**	**81**	**55**	**48**	**45**	**45**	**37**	**28**	**45**

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	25	17	24	13	15	11	19	15	7	13	8
Bay 2	13	14	19	18	13	5	7	8	4	2	3	1
Bay 3	16	16	20	19	15	9	16	12	6	4	8	2
Bay 4	10	7	5	14	3	5	3	2	1	0	2	0
Total	**54**	**62**	**61**	**75**	**44**	**34**	**37**	**41**	**26**	**13**	**26**	**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
1/05/2019	2	1	2	2	2	4	0	2	1	2	2	2
2/05/2019	1	1	5	2	3	1	2	1	1	3	2	0
3/05/2019	2	1	2	3	4	0	2	1	1	3	0	1
4/05/2019	3	1	1	3	1	0	2	2	1	0	1	2
5/05/2019	2	0	0	0	0	0	4	0	0	0	0	2
6/05/2019	0	4	3	0	4	2	1	1	2	1	2	1
7/05/2019	2	1	2	2	4	2	2	3	3	1	1	2
8/05/2019	0	1	5	2	2	4	0	3	1	1	1	1
9/05/2019	1	0	1	3	3	3	1	1	3	1	1	3
10/05/2019	3	0	1	3	3	2	4	3	2	1	0	1
11/05/2019	2	1	0	0	0	1	4	3	1	0	0	0
12/05/2019	1	1	0	0	0	1	0	2	0	0	0	0
13/05/2019	2	2	2	5	3	2	2	1	3	0	0	2
14/05/2019	0	0	5	2	3	1	0	3	1	2	3	1
15/05/2019	3	3	1	2	2	3	1	1	2	0	1	0
16/05/2019	4	2	1	3	5	1	2	1	4	1	1	3
17/05/2019	3	1	3	0	4	2	0	2	0	3	1	1
18/05/2019	1	0	2	0	3	0	1	0	1	1	0	2
19/05/2019	1	0	1	0	1	1	2	1	0	1	0	4
20/05/2019	1	3	3	3	1	5	1	0	2	0	3	1
21/05/2019	0	1	3	4	2	1	3	0	3	1	2	1
22/05/2019	3	2	2	3	4	1	3	2	2	2	1	2
23/05/2019	0	0	2	3	9	0	2	1	1	3	0	3
24/05/2019	0	0	2	3	1	1	1	1	0	1	0	3
25/05/2019	0	3	0	0	1	4	1	0	1	0	2	3
26/05/2019	1	3	1	0	0	1	1	2	0	0	0	1
27/05/2019	2	3	2	2	2	2	1	2	0	1	1	1
28/05/2019	2	5	1	1	3	3	2	2	1	4	0	1
29/05/2019	1	2	2	1	4	3	0	1	3	1	1	0
30/05/2019	1	2	1	2	5	2	2	1	4	1	1	0
31/05/2019	2	3	2	3	2	2	1	2	1	2	1	1
Total	**46**	**47**	**58**	**57**	**81**	**55**	**48**	**45**	**45**	**37**	**28**	**45**

	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
1/05/2019	2	3	4	2	1	0	3	0	1	0	0	1
2/05/2019	3	2	1	6	1	1	3	2	1	0	1	1
3/05/2019	1	3	3	2	0	1	2	2	1	0	0	0
4/05/2019	1	1	1	0	0	1	3	0	0	1	0	1
5/05/2019	1	1	0	1	0	2	0	0	0	0	1	0
6/05/2019	3	3	3	5	1	0	0	4	0	0	1	0
7/05/2019	1	1	1	2	2	2	0	1	3	1	1	0
8/05/2019	1	2	4	3	2	1	1	2	2	1	0	2
9/05/2019	1	5	3	1	3	2	0	3	0	0	0	0
10/05/2019	2	3	1	3	1	3	2	2	2	0	1	0
11/05/2019	4	2	1	0	1	1	1	2	0	1	1	1
12/05/2019	2	2	0	0	0	0	0	2	0	0	1	0
13/05/2019	3	4	3	1	2	1	3	0	1	1	1	1
14/05/2019	3	5	4	1	1	2	1	3	0	0	1	0
15/05/2019	6	1	3	5	0	1	2	1	1	1	0	0
16/05/2019	0	2	3	3	1	2	2	1	1	0	0	0
17/05/2019	2	2	3	3	1	0	2	0	2	0	0	1
18/05/2019	0	2	0	4	1	0	0	0	1	2	0	0
19/05/2019	0	0	1	0	0	0	0	1	0	0	1	0
20/05/2019	3	0	3	2	3	1	2	1	1	0	4	0
21/05/2019	2	2	1	4	2	1	3	0	1	1	1	0
22/05/2019	1	1	2	3	2	1	1	0	0	1	1	0
23/05/2019	0	2	2	1	0	3	0	0	1	0	3	1
24/05/2019	1	0	1	2	6	3	0	1	1	0	1	0
25/05/2019	0	1	0	3	0	0	0	1	0	0	2	0
26/05/2019	3	0	1	0	0	1	0	2	0	0	0	1
27/05/2019	2	3	5	1	2	0	2	3	2	0	0	0
28/05/2019	1	2	3	4	1	0	0	2	1	0	1	1
29/05/2019	2	3	0	7	3	1	2	1	1	0	1	0
30/05/2019	2	3	1	3	5	2	0	2	2	1	1	0
31/05/2019	1	1	3	3	2	1	2	2	0	2	1	0
Total	**54**	**62**	**61**	**75**	**44**	**34**	**37**	**41**	**26**	**13**	**26**	**11**

REPORTING PERIOD: June 2019

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	18	16	14	16	20	20	17	26	13	15	14	21
Bay 2	3	9	16	11	19	15	5	6	7	11	8	9
Bay 3	13	10	20	12	21	15	13	9	12	9	7	10
Bay 4	5	3	9	3	9	8	7	3	7	5	1	5
Total	**39**	**38**	**59**	**42**	**69**	**58**	**42**	**44**	**39**	**40**	**30**	**45**

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	15	19	20	15	19	20	13	12	8	15	5
Bay 2	13	9	14	15	11	13	8	4	5	3	4	1
Bay 3	16	20	17	17	14	11	14	9	8	4	6	3
Bay 4	5	6	9	12	5	1	3	1	1	0	0	0
Total	**49**	**50**	**59**	**64**	**45**	**44**	**45**	**27**	**26**	**15**	**25**	**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
1/06/2019	1	1	3	0	1	2	2	1	2	1	0	0
2/06/2019	1	1	1	0	0	0	2	0	2	0	2	0
3/06/2019	1	2	3	4	0	2	1	1	3	2	0	1
4/06/2019	0	1	4	1	4	3	2	1	2	3	1	2
5/06/2019	2	1	1	2	6	2	1	1	0	3	0	1
6/06/2019	2	1	1	2	2	7	1	2	3	2	1	2
7/06/2019	4	0	2	1	4	2	1	1	3	1	1	3
8/06/2019	2	2	0	1	2	1	2	2	1	1	0	2
9/06/2019	1	2	0	1	0	0	2	0	2	0	0	1
10/06/2019	2	2	4	2	2	2	1	2	1	0	0	1
11/06/2019	2	2	2	1	3	1	2	0	3	2	3	0
12/06/2019	1	1	4	1	3	3	1	4	1	2	1	2
13/06/2019	0	3	1	0	4	1	1	1	0	2	0	4
14/06/2019	1	1	2	2	2	1	1	4	1	0	0	2
15/06/2019	1	2	1	0	0	2	2	1	1	1	0	0
16/06/2019	1	0	0	0	0	0	1	2	0	0	1	0
17/06/2019	2	3	2	2	2	0	3	0	1	2	0	1
18/06/2019	3	0	3	1	1	1	3	1	2	1	2	2
19/06/2019	3	0	0	4	0	3	1	2	0	1	1	1
20/06/2019	0	2	5	1	6	2	3	1	0	5	0	0
21/06/2019	2	0	1	4	3	6	2	1	1	4	4	2
22/06/2019	1	0	0	2	0	2	0	1	2	1	0	1
23/06/2019	1	0	3	0	0	1	0	1	1	0	1	2
24/06/2019	1	2	3	2	3	2	1	3	1	2	2	1
25/06/2019	0	2	4	3	3	1	0	1	2	1	0	1
26/06/2019	0	3	5	0	5	4	3	3	2	0	3	1
27/06/2019	0	1	0	3	4	3	0	3	0	2	3	4
28/06/2019	1	2	3	0	7	3	1	1	1	1	3	3
29/06/2019	2	1	1	1	1	1	2	2	0	0	1	1
30/06/2019	1	0	0	1	1	0	0	1	1	0	0	4
1/07/2019	0	0	0	0	0	0	0	0	0	0	0	0
Total	**39**	**38**	**59**	**42**	**69**	**58**	**42**	**44**	**39**	**40**	**30**	**45**

	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
1/06/2019	3	4	0	1	0	1	1	1	0	0	1	0
2/06/2019	2	2	0	0	0	1	1	1	0	0	0	0
3/06/2019	1	3	2	4	4	2	2	0	2	2	1	1
4/06/2019	1	2	0	3	3	3	2	1	1	3	0	0
5/06/2019	2	1	2	5	3	2	4	2	1	1	2	1
6/06/2019	4	1	3	0	5	2	3	1	1	0	2	0
7/06/2019	0	0	1	5	2	3	1	1	2	1	0	0
8/06/2019	0	3	0	1	1	1	0	1	1	0	0	0
9/06/2019	1	1	1	0	0	2	0	1	0	1	0	0
10/06/2019	3	1	2	2	2	1	3	1	0	0	1	0
11/06/2019	0	2	0	3	2	0	2	1	1	0	1	0
12/06/2019	1	0	2	5	3	0	0	1	1	0	0	0
13/06/2019	0	2	2	4	0	4	1	1	0	1	1	0
14/06/2019	0	4	1	1	5	0	1	1	3	1	0	0
15/06/2019	2	1	2	2	0	2	2	0	0	0	0	1
16/06/2019	3	0	1	0	0	1	1	0	0	0	1	0
17/06/2019	3	3	4	1	0	1	1	3	0	0	0	0
18/06/2019	1	0	6	2	1	1	3	2	2	1	1	0
19/06/2019	1	0	2	0	0	0	0	0	2	0	0	0
20/06/2019	4	2	1	4	4	3	3	1	1	1	1	1
21/06/2019	3	1	4	2	4	2	1	1	1	0	3	1
22/06/2019	2	2	1	1	1	2	2	0	1	0	2	0
23/06/2019	1	1	1	0	0	1	1	1	0	0	1	0
24/06/2019	3	3	3	3	2	2	2	0	0	1	2	0
25/06/2019	1	4	1	4	2	2	2	2	0	1	1	2
26/06/2019	1	1	4	4	0	0	2	0	0	0	2	0
27/06/2019	1	3	5	4	0	2	0	0	3	0	1	0
28/06/2019	2	1	4	3	0	1	2	2	1	1	0	2
29/06/2019	2	1	4	0	0	2	1	0	1	0	1	0
30/06/2019	1	1	0	0	1	0	1	1	1	0	0	0
1/07/2019	0	0	0	0	0	0	0	0	0	0	0	0
Total	**49**	**50**	**59**	**64**	**45**	**44**	**45**	**27**	**26**	**15**	**25**	**9**

REPORTING PERIOD: July 2019

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	16	20	20	22	17	13	16	18	14	7	21
Bay 2	3	10	18	15	19	14	9	8	19	8	6	7
Bay 3	12	9	18	15	18	13	16	9	9	11	2	7
Bay 4	7	2	8	8	13	7	9	4	3	2	2	7
Total	**35**	**37**	**64**	**58**	**72**	**51**	**47**	**37**	**49**	**35**	**17**	**42**

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	16	19	24	23	14	16	16	13	7	10	11	4
Bay 2	11	13	11	25	8	11	7	4	9	5	5	2
Bay 3	16	14	19	22	15	17	12	9	8	5	3	10
Bay 4	3	7	8	12	8	0	4	1	3	1	0	0
Total	**46**	**53**	**62**	**82**	**45**	**44**	**39**	**27**	**27**	**21**	**19**	**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
1/07/2019	1	1	4	4	2	1	2	2	3	1	0	1
2/07/2019	1	1	5	2	1	2	1	1	0	2	2	1
3/07/2019	1	2	1	1	5	4	2	0	2	1	1	1
4/07/2019	2	1	2	2	5	3	0	2	1	1	1	2
5/07/2019	0	0	0	4	3	1	1	1	2	2	1	1
6/07/2019	0	2	0	0	1	2	4	0	1	1	1	1
7/07/2019	1	0	1	1	1	1	1	1	0	0	0	1
8/07/2019	2	3	3	1	5	1	1	1	2	2	2	0
9/07/2019	1	2	3	2	2	0	3	4	0	2	0	1
10/07/2019	1	2	1	1	0	1	2	0	3	1	1	2
11/07/2019	0	2	2	4	3	3	2	1	1	2	1	2
12/07/2019	1	0	4	4	2	2	2	2	2	3	0	1
13/07/2019	2	2	1	2	0	2	3	1	1	1	1	0
14/07/2019	2	0	1	0	0	1	3	0	0	0	0	2
15/07/2019	2	1	6	2	3	3	1	0	2	0	1	3
16/07/2019	1	0	0	5	3	3	1	2	2	2	1	2
17/07/2019	0	2	1	1	4	1	2	2	0	0	0	1
18/07/2019	1	0	2	4	2	0	1	2	1	1	1	2
19/07/2019	0	2	0	3	4	2	1	1	3	1	0	2
20/07/2019	1	1	1	1	1	2	0	0	2	0	0	0
21/07/2019	0	2	0	0	0	1	2	0	2	1	0	2
22/07/2019	2	3	3	1	3	3	3	0	5	1	0	1
23/07/2019	0	1	4	3	1	0	2	0	2	0	1	0
24/07/2019	0	1	4	1	2	2	1	1	0	3	0	1
25/07/2019	2	1	2	1	5	2	1	2	1	1	0	3
26/07/2019	1	2	3	2	1	3	0	2	3	2	0	2
27/07/2019	2	0	1	2	0	2	2	2	0	0	0	0
28/07/2019	2	0	0	0	0	0	3	0	0	0	0	1
29/07/2019	4	1	4	2	1	2	0	3	2	1	1	2
30/07/2019	1	0	3	1	6	0	0	2	3	2	1	1
31/07/2019	1	2	2	1	6	1	0	2	3	1	0	3
Total	**35**	**37**	**64**	**58**	**72**	**51**	**47**	**37**	**49**	**35**	**17**	**42**

	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
1/07/2019	4	5	2	2	2	0	2	2	1	0	0	2
2/07/2019	1	1	2	4	5	1	1	1	2	1	0	0
3/07/2019	3	1	2	3	6	1	2	2	0	3	0	0
4/07/2019	1	1	1	1	3	3	0	1	0	1	0	2
5/07/2019	1	1	3	3	2	3	1	0	2	2	1	1
6/07/2019	1	1	3	0	1	1	1	0	0	0	2	0
7/07/2019	4	0	0	0	0	1	2	0	0	0	0	1
8/07/2019	4	0	1	6	1	1	2	1	0	1	2	0
9/07/2019	1	4	1	0	1	1	3	1	0	1	1	0
10/07/2019	1	2	2	1	2	1	1	0	1	0	0	1
11/07/2019	1	1	5	2	1	1	1	0	0	0	1	0
12/07/2019	0	3	0	5	0	1	1	1	1	2	0	0
13/07/2019	4	1	0	1	0	0	1	2	0	0	0	0
14/07/2019	0	1	0	0	0	1	0	1	0	0	1	0
15/07/2019	2	0	2	6	1	3	2	1	1	0	0	1
16/07/2019	0	0	4	6	4	1	2	1	0	4	0	0
17/07/2019	0	1	4	3	0	3	2	0	2	0	1	1
18/07/2019	1	2	3	5	2	1	1	2	1	1	1	0
19/07/2019	1	3	4	1	1	3	0	0	2	2	1	0
20/07/2019	3	2	2	0	1	2	0	1	1	0	1	1
21/07/2019	1	4	0	0	1	2	0	1	1	0	1	0
22/07/2019	2	2	6	2	0	1	0	0	4	0	0	0
23/07/2019	1	3	2	6	0	0	1	1	1	2	0	0
24/07/2019	1	1	2	2	4	3	0	1	0	1	0	1
25/07/2019	0	1	0	5	0	1	2	1	1	0	0	1
26/07/2019	0	1	3	5	2	0	3	0	2	0	2	0
27/07/2019	2	2	2	1	0	1	2	1	1	0	1	0
28/07/2019	0	3	0	0	1	1	2	0	0	0	0	1
29/07/2019	2	4	2	4	1	1	2	0	1	0	0	1
30/07/2019	3	1	0	5	1	3	0	1	1	0	2	0
31/07/2019	1	1	4	3	2	2	2	4	1	0	1	2
Total	**46**	**53**	**62**	**82**	**45**	**44**	**39**	**27**	**27**	**21**	**19**	**16**

REPORTING PERIOD: August 2019

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	24	6	28	19	19	21	23	14	11	17	21	26
Bay 2	11	7	22	20	13	21	14	9	11	18	9	17
Bay 3	15	12	16	14	11	18	15	15	10	9	9	16
Bay 4	5	2	9	8	5	8	7	8	3	9	4	7
Total	**55**	**27**	**75**	**61**	**48**	**68**	**59**	**46**	**35**	**53**	**43**	**66**

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	23	19	27	25	17	10	14	11	15	10	5
Bay 2	13	14	14	18	19	5	8	6	3	0	1	1
Bay 3	20	13	13	17	17	9	14	7	9	3	5	5
Bay 4	6	10	9	8	5	5	2	2	1	1	3	0
Total	**59**	**60**	**55**	**70**	**66**	**36**	**34**	**29**	**24**	**19**	**19**	**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
1/08/2019	3	0	0	3	4	2	1	1	2	1	1	4
2/08/2019	1	1	3	3	5	3	1	1	1	2	0	1
3/08/2019	1	2	0	1	0	2	4	2	1	1	0	2
4/08/2019	1	1	1	1	2	1	5	1	2	2	4	1
5/08/2019	2	0	4	3	5	3	1	0	3	2	6	0
6/08/2019	2	0	4	3	1	4	1	0	0	3	2	0
7/08/2019	2	0	1	1	2	5	1	1	2	2	2	2
8/08/2019	0	0	4	2	0	2	2	2	1	1	2	1
9/08/2019	1	1	0	4	1	1	2	0	2	4	0	2
10/08/2019	4	1	1	1	1	1	2	1	0	2	1	1
11/08/2019	2	0	1	1	1	0	2	1	0	1	0	2
12/08/2019	2	4	3	3	1	1	2	1	4	1	3	3
13/08/2019	2	0	4	2	1	3	0	0	1	2	2	1
14/08/2019	0	1	3	0	1	0	3	2	0	3	0	1
15/08/2019	2	1	2	2	1	3	2	1	0	3	1	3
16/08/2019	1	0	2	1	3	2	2	1	3	2	0	4
17/08/2019	3	0	2	0	0	2	2	2	0	2	1	1
18/08/2019	3	0	2	0	0	1	4	1	0	1	1	3
19/08/2019	2	1	1	3	4	6	0	0	3	1	4	1
20/08/2019	2	0	2	2	2	1	1	1	0	1	0	1
21/08/2019	2	0	4	1	0	4	0	2	1	2	1	5
22/08/2019	2	0	4	2	1	3	0	5	1	3	0	3
23/08/2019	2	1	2	0	4	4	2	5	0	1	0	2
24/08/2019	1	1	3	1	0	2	2	1	0	0	2	0
25/08/2019	1	0	1	1	0	2	3	0	1	0	1	1
26/08/2019	1	3	3	2	1	2	3	3	1	1	1	2
27/08/2019	0	3	6	5	1	1	0	5	1	1	4	2
28/08/2019	2	1	4	6	2	2	3	1	2	2	1	4
29/08/2019	4	2	4	4	1	3	3	3	0	3	2	7
30/08/2019	3	1	4	3	3	0	3	2	1	3	1	5
31/08/2019	1	2	0	0	0	2	2	0	2	0	0	1
Total	**55**	**27**	**75**	**61**	**48**	**68**	**59**	**46**	**35**	**53**	**43**	**66**

	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
1/08/2019	1	0	3	2	3	3	2	1	1	0	1	1
2/08/2019	1	2	4	1	3	1	0	2	0	0	1	1
3/08/2019	3	3	2	1	0	3	0	0	0	2	1	1
4/08/2019	4	3	0	2	1	1	1	0	1	0	1	1
5/08/2019	3	1	2	2	1	1	2	0	0	0	1	0
6/08/2019	3	2	5	0	3	1	1	1	1	0	0	1
7/08/2019	1	1	2	2	2	0	0	1	1	1	0	2
8/08/2019	2	1	1	3	2	2	1	0	1	1	1	0
9/08/2019	1	1	0	3	3	1	0	1	2	0	0	0
10/08/2019	2	3	0	1	0	1	0	2	1	0	1	0
11/08/2019	3	1	2	1	1	1	0	2	0	0	1	0
12/08/2019	2	2	2	2	3	0	1	1	3	0	0	0
13/08/2019	2	3	0	1	3	0	0	2	1	0	0	0
14/08/2019	1	2	1	2	4	1	1	1	0	1	1	0
15/08/2019	2	2	1	4	1	0	1	1	1	1	0	1
16/08/2019	1	2	2	2	4	2	2	2	1	0	0	0
17/08/2019	1	4	1	1	0	0	1	1	0	0	0	0
18/08/2019	5	0	1	0	1	2	0	0	0	0	1	0
19/08/2019	0	1	2	5	2	1	2	1	0	1	1	0
20/08/2019	1	3	0	4	1	1	1	2	0	1	1	0
21/08/2019	1	2	2	3	2	1	2	2	1	1	0	1
22/08/2019	1	3	2	3	2	1	2	1	0	0	0	0
23/08/2019	2	1	4	3	0	2	1	0	0	1	0	0
24/08/2019	1	3	2	1	2	0	2	0	2	0	1	0
25/08/2019	3	3	0	1	2	1	2	0	1	0	0	1
26/08/2019	3	1	0	2	5	0	0	1	1	1	1	0
27/08/2019	2	3	6	5	2	2	3	1	1	2	2	0
28/08/2019	1	2	3	4	4	1	1	1	1	3	0	1
29/08/2019	1	1	2	3	5	3	2	0	2	1	1	0
30/08/2019	3	3	1	5	2	3	3	2	1	0	2	0
31/08/2019	2	1	2	1	2	0	0	0	0	2	0	0
Total	**59**	**60**	**55**	**70**	**66**	**36**	**34**	**29**	**24**	**19**	**19**	**11**

REPORTING PERIOD: September 2019

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	26	7	18	20	19	24	20	16	16	17	14	21
Bay 2	8	6	19	23	11	26	15	9	12	15	5	13
Bay 3	9	11	16	12	12	23	15	12	8	12	6	13
Bay 4	2	2	4	9	2	12	4	4	4	3	1	5
Total	**45**	**26**	**57**	**64**	**44**	**85**	**54**	**41**	**40**	**47**	**26**	**52**

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	25	24	21	21	19	17	21	15	11	8	16	4
Bay 2	15	13	20	13	12	9	7	3	3	3	6	1
Bay 3	11	14	12	16	8	9	12	7	1	4	7	1
Bay 4	9	8	6	9	5	1	3	3	2	0	2	0
Total	**60**	**59**	**59**	**59**	**44**	**36**	**43**	**28**	**17**	**15**	**31**	**6**

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
1/09/2019	2	0	1	1	2	2	3	1	1	2	2	2
2/09/2019	2	2	7	3	2	2	1	7	5	3	0	2
3/09/2019	3	1	3	2	2	4	5	3	3	3	1	2
4/09/2019	2	0	1	2	4	2	1	4	2	3	1	0
5/09/2019	0	1	3	1	4	0	3	1	2	2	2	0
6/09/2019	1	2	1	4	0	1	2	0	1	1	1	2
7/09/2019	2	1	1	1	1	3	4	1	0	1	0	3
8/09/2019	0	0	1	0	0	2	2	2	0	0	2	3
9/09/2019	2	2	3	6	1	2	0	1	3	0	1	1
10/09/2019	0	2	3	1	1	3	0	0	3	1	0	3
11/09/2019	1	1	2	2	1	6	4	1	0	3	0	3
12/09/2019	3	1	1	3	0	3	1	1	1	4	1	0
13/09/2019	1	0	2	1	5	2	2	0	1	3	1	0
14/09/2019	1	0	1	1	1	3	2	1	2	1	0	0
15/09/2019	2	0	0	0	1	1	1	1	1	0	0	1
16/09/2019	0	2	3	3	1	3	0	1	1	2	0	2
17/09/2019	2	4	3	4	3	6	7	0	1	3	2	2
18/09/2019	4	2	2	1	3	4	2	2	2	1	1	5
19/09/2019	3	1	0	2	2	5	3	2	1	1	2	2
20/09/2019	1	0	2	2	2	2	2	1	0	2	1	2
21/09/2019	3	1	0	1	1	2	1	0	0	0	0	3
22/09/2019	0	0	1	1	1	2	1	2	1	1	2	3
23/09/2019	2	1	1	6	0	5	1	1	0	3	0	2
24/09/2019	1	0	2	4	1	4	1	2	0	2	1	1
25/09/2019	0	1	4	3	1	3	1	1	2	0	0	1
26/09/2019	3	0	3	1	0	1	1	1	1	0	0	0
27/09/2019	1	0	1	3	0	4	2	3	1	2	0	1
28/09/2019	1	0	1	0	1	3	0	0	1	1	0	4
29/09/2019	1	0	1	1	0	2	1	1	2	0	2	1
30/09/2019	1	1	3	4	3	3	0	0	2	2	3	1
1/10/2019	0	0	0	0	0	0	0	0	0	0	0	0
Total	**45**	**26**	**57**	**64**	**44**	**85**	**54**	**41**	**40**	**47**	**26**	**52**

	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
1/09/2019	4	2	0	0	1	3	0	2	1	0	3	0
2/09/2019	1	4	4	5	1	2	1	3	1	3	1	0
3/09/2019	2	2	1	4	3	1	0	0	1	1	0	0
4/09/2019	2	1	3	1	1	2	2	0	0	2	0	0
5/09/2019	2	4	3	1	1	1	0	2	1	0	0	0
6/09/2019	1	2	1	2	0	0	1	1	0	0	0	1
7/09/2019	4	2	0	1	0	1	0	1	0	0	2	0
8/09/2019	0	0	0	1	0	0	1	1	0	1	0	0
9/09/2019	3	1	3	2	0	2	1	0	1	0	2	0
10/09/2019	1	1	3	2	6	0	1	2	1	0	2	0
11/09/2019	2	2	4	1	3	1	2	1	1	0	1	0
12/09/2019	1	3	3	1	1	1	2	3	0	0	1	1
13/09/2019	1	2	2	6	1	2	1	0	0	0	2	0
14/09/2019	2	2	1	1	0	0	0	1	0	0	0	0
15/09/2019	4	0	1	1	1	1	2	0	0	0	2	0
16/09/2019	4	5	1	3	2	1	4	2	0	0	1	0
17/09/2019	4	5	3	3	2	1	7	1	2	1	2	0
18/09/2019	2	1	5	1	2	3	3	2	1	0	2	0
19/09/2019	2	0	3	3	2	3	1	0	1	1	1	0
20/09/2019	1	0	2	2	1	2	2	0	1	1	2	0
21/09/2019	4	1	0	1	0	1	1	1	0	0	4	0
22/09/2019	2	1	1	0	0	0	1	0	0	1	0	0
23/09/2019	4	1	1	3	5	0	1	0	2	0	1	0
24/09/2019	1	2	2	2	1	1	2	1	0	0	0	2
25/09/2019	0	3	3	2	2	0	1	2	1	0	0	0
26/09/2019	1	3	2	2	1	2	1	0	0	0	1	0
27/09/2019	1	1	3	3	1	1	1	1	1	0	0	1
28/09/2019	1	1	0	3	1	1	1	0	0	1	1	0
29/09/2019	1	4	1	1	2	1	3	0	0	1	0	1
30/09/2019	2	3	3	1	3	2	0	1	1	2	0	0
1/10/2019	0	0	0	0	0	0	0	0	0	0	0	0
Total	**60**	**59**	**59**	**59**	**44**	**36**	**43**	**28**	**17**	**15**	**31**	**6**

REPORTING PERIOD: October 2019

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	25	16	24	21	25	26	23	17	22	17	18	17
Bay 2	15	8	30	19	14	23	13	11	16	7	12	7
Bay 3	6	5	15	15	17	18	11	3	6	12	12	14
Bay 4	3	2	2	7	3	8	7	3	1	2	8	9
Total	**49**	**31**	**71**	**62**	**59**	**75**	**54**	**34**	**45**	**38**	**50**	**47**

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	22	30	23	22	22	20	16	17	16	13	17	6
Bay 2	18	15	17	17	7	11	7	6	3	7	5	2
Bay 3	12	20	14	19	13	12	11	7	5	3	6	4
Bay 4	6	3	8	9	3	7	0	1	1	1	3	0
Total	**58**	**68**	**62**	**67**	**45**	**50**	**34**	**31**	**25**	**24**	**31**	**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
1/10/2019	0	2	1	4	1	0	2	0	1	1	0	4
2/10/2019	0	0	0	2	1	5	2	0	1	2	2	2
3/10/2019	2	0	3	0	2	5	1	0	2	1	1	2
4/10/2019	1	0	3	1	1	2	3	2	1	2	1	1
5/10/2019	2	1	3	1	0	1	3	0	1	0	0	1
6/10/2019	1	1	0	0	2	1	3	1	0	2	1	1
7/10/2019	1	2	2	2	2	2	1	2	2	1	0	0
8/10/2019	2	0	2	1	3	4	3	1	0	1	3	1
9/10/2019	1	1	2	3	2	2	2	1	2	2	1	2
10/10/2019	1	0	3	1	2	4	0	0	2	2	4	1
11/10/2019	0	0	3	3	2	2	1	1	3	1	0	1
12/10/2019	2	1	0	1	0	4	1	1	0	1	0	2
13/10/2019	2	0	0	0	2	2	2	0	1	0	1	3
14/10/2019	4	2	3	4	1	4	0	0	3	0	1	1
15/10/2019	2	1	3	2	2	2	2	3	1	0	1	1
16/10/2019	2	0	5	2	2	1	0	3	3	2	1	1
17/10/2019	1	0	3	4	2	3	2	0	2	1	3	0
18/10/2019	1	0	2	3	3	2	1	2	1	4	1	4
19/10/2019	0	0	3	0	1	3	0	1	0	1	1	2
20/10/2019	1	1	1	1	1	0	4	1	1	1	1	1
21/10/2019	2	4	3	4	2	2	3	1	2	1	1	1
22/10/2019	4	1	3	1	3	0	1	2	2	0	3	0
23/10/2019	1	1	4	2	4	2	0	2	2	1	1	1
24/10/2019	4	1	2	2	1	3	3	1	0	1	2	5
25/10/2019	2	2	2	2	3	3	1	0	1	1	4	1
26/10/2019	0	1	0	1	2	2	1	0	2	1	2	3
27/10/2019	1	3	0	0	1	0	1	4	0	1	1	0
28/10/2019	1	3	5	5	2	3	3	2	2	3	3	1
29/10/2019	4	1	3	1	4	1	6	1	2	2	5	1
30/10/2019	2	1	6	3	2	3	2	2	3	1	2	3
31/10/2019	2	1	1	6	3	7	0	0	2	1	3	0
Total	**49**	**31**	**71**	**62**	**59**	**75**	**54**	**34**	**45**	**38**	**50**	**47**

	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
1/10/2019	3	1	4	3	1	5	0	0	1	1	1	1
2/10/2019	0	2	3	5	0	2	2	0	0	0	1	1
3/10/2019	2	1	2	5	0	3	1	1	0	1	3	0
4/10/2019	3	1	3	1	1	4	2	0	1	2	0	0
5/10/2019	2	3	1	1	0	1	2	1	0	0	3	0
6/10/2019	3	3	1	0	2	1	2	1	1	1	0	0
7/10/2019	4	1	2	3	1	2	1	2	1	1	2	0
8/10/2019	0	4	2	0	0	1	0	2	1	1	1	0
9/10/2019	1	1	0	2	1	3	1	0	1	0	0	1
10/10/2019	1	2	1	5	2	2	1	0	1	1	2	1
11/10/2019	3	5	1	2	0	1	3	0	1	0	1	0
12/10/2019	2	0	1	1	1	0	0	2	0	0	1	1
13/10/2019	2	2	0	1	1	1	0	3	0	0	1	0
14/10/2019	3	0	4	1	2	3	0	2	1	0	2	0
15/10/2019	1	6	0	3	0	3	1	0	1	0	0	2
16/10/2019	1	4	4	1	4	0	1	2	1	1	0	1
17/10/2019	2	1	2	1	4	0	1	1	3	0	2	0
18/10/2019	0	2	4	0	4	4	1	1	0	3	1	0
19/10/2019	1	4	0	0	0	2	1	0	2	0	0	0
20/10/2019	1	3	1	1	1	1	1	0	0	0	1	0
21/10/2019	1	4	3	2	2	0	2	1	0	0	1	0
22/10/2019	1	3	5	2	1	1	1	2	1	1	0	1
23/10/2019	2	1	3	1	1	0	1	3	0	1	0	0
24/10/2019	2	3	3	2	3	1	0	0	0	0	0	0
25/10/2019	0	2	0	4	2	1	2	0	2	2	1	1
26/10/2019	1	1	4	2	2	0	1	2	1	1	1	0
27/10/2019	3	2	0	1	0	1	1	0	3	1	3	0
28/10/2019	6	2	2	3	3	2	2	1	1	2	3	0
29/10/2019	3	1	4	6	0	2	2	3	0	2	0	2
30/10/2019	1	1	2	2	2	2	0	1	1	2	0	0
31/10/2019	3	2	0	6	4	1	1	0	0	0	0	0
Total	**58**	**68**	**62**	**67**	**45**	**50**	**34**	**31**	**25**	**24**	**31**	**12**

REPORTING PERIOD: November 2019

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	12	10	26	21	21	21	17	22	15	18	13	19
Bay 2	7	9	17	20	17	16	9	12	6	12	15	14
Bay 3	10	7	19	15	10	23	9	14	16	19	17	11
Bay 4	4	6	6	7	9	7	11	6	5	8	8	4
Total	**33**	**32**	**68**	**63**	**57**	**67**	**46**	**54**	**42**	**57**	**53**	**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	20	22	21	23	14	9	10	10	6	6	5	0
Bay 2	12	11	17	17	11	5	5	3	1	2	2	0
Bay 3	12	13	15	17	10	3	5	4	6	2	6	2
Bay 4	5	4	8	11	2	4	4	3	2	2	2	0
Total	**49**	**50**	**61**	**68**	**37**	**21**	**24**	**20**	**15**	**12**	**15**	**2**

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
1/11/2019	0	2	2	1	4	1	1	2	1	0	2	1
2/11/2019	0	0	1	1	2	1	1	1	0	0	0	1
3/11/2019	0	0	1	0	1	0	2	1	0	1	0	2
4/11/2019	0	1	4	3	1	3	2	0	1	1	1	0
5/11/2019	0	1	2	3	4	2	0	0	2	3	1	2
6/11/2019	2	0	3	0	3	1	1	2	0	1	2	1
7/11/2019	2	0	1	4	2	4	0	1	2	4	4	1
8/11/2019	2	3	3	1	8	3	2	2	3	3	1	4
9/11/2019	0	1	0	2	0	1	4	1	0	2	2	1
10/11/2019	2	0	0	2	0	3	3	0	1	3	1	2
11/11/2019	3	1	4	3	2	3	1	0	3	4	3	2
12/11/2019	1	0	3	4	2	2	2	1	2	2	2	4
13/11/2019	0	3	1	3	2	1	0	1	2	1	1	1
14/11/2019	1	1	2	3	2	1	0	2	1	0	2	1
15/11/2019	0	1	3	1	0	2	2	4	0	2	2	0
16/11/2019	0	0	1	1	0	2	0	0	2	2	1	2
17/11/2019	2	1	1	2	1	4	1	4	1	0	2	2
18/11/2019	2	3	3	4	2	0	2	7	2	2	2	1
19/11/2019	0	4	4	4	5	2	4	2	2	2	1	2
20/11/2019	2	5	5	2	0	4	2	4	0	2	2	1
21/11/2019	2	1	4	1	3	3	3	5	1	1	4	3
22/11/2019	3	0	5	1	2	5	1	1	3	2	4	2
23/11/2019	2	0	0	3	2	3	2	1	1	1	2	2
24/11/2019	2	0	1	0	1	2	1	1	1	1	2	3
25/11/2019	4	2	3	3	2	2	4	1	4	5	3	3
26/11/2019	0	0	3	2	1	1	2	3	3	0	0	2
27/11/2019	0	0	3	2	0	5	0	4	0	4	2	2
28/11/2019	0	1	3	1	2	1	1	1	3	2	3	0
29/11/2019	1	0	1	2	3	3	2	2	1	4	1	0
30/11/2019	0	1	1	4	0	2	0	0	0	2	0	0
1/12/2019	0	0	0	0	0	0	0	0	0	0	0	0
Total	**33**	**32**	**68**	**63**	**57**	**67**	**46**	**54**	**42**	**57**	**53**	**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
1/11/2019	1	0	1	1	2	0	0	1	0	0	0	0
2/11/2019	0	1	3	1	0	1	0	0	0	0	0	0
3/11/2019	1	1	1	0	1	0	0	1	0	0	0	0
4/11/2019	1	1	2	2	0	0	1	0	0	1	0	0
5/11/2019	1	3	2	0	2	0	0	0	0	0	0	0
6/11/2019	1	0	4	2	0	0	0	0	0	0	0	0
7/11/2019	1	0	6	7	2	0	0	0	1	1	1	1
8/11/2019	0	2	3	6	1	2	0	1	1	1	3	0
9/11/2019	3	2	0	3	1	1	0	0	1	0	2	0
10/11/2019	1	3	1	1	3	2	0	1	0	0	1	0
11/11/2019	4	2	4	5	1	1	3	1	3	1	1	0
12/11/2019	2	1	2	0	0	1	0	0	1	1	0	0
13/11/2019	0	2	3	1	0	2	0	0	0	1	0	0
14/11/2019	0	2	1	2	2	1	1	1	0	0	1	0
15/11/2019	0	0	2	4	3	0	0	1	0	0	0	0
16/11/2019	2	2	4	4	1	0	0	0	0	2	0	0
17/11/2019	3	2	2	4	3	1	1	3	0	1	0	0
18/11/2019	6	5	1	3	1	0	4	3	1	1	1	0
19/11/2019	5	3	3	2	0	2	2	3	2	0	1	0
20/11/2019	1	2	2	3	0	2	3	1	0	0	1	0
21/11/2019	0	2	4	2	1	0	2	1	3	0	1	0
22/11/2019	3	2	0	3	2	0	2	0	0	0	1	0
23/11/2019	2	2	1	2	1	1	2	0	1	0	0	1
24/11/2019	3	1	1	4	1	0	2	1	0	1	1	0
25/11/2019	2	1	1	2	0	2	0	0	0	1	0	0
26/11/2019	1	1	4	1	0	0	1	0	0	0	0	0
27/11/2019	0	2	0	1	4	0	0	1	1	0	0	0
28/11/2019	1	1	3	1	4	0	0	0	0	0	0	0
29/11/2019	1	2	0	1	1	1	0	0	0	0	0	0
30/11/2019	3	2	0	0	0	1	0	0	0	0	0	0
1/12/2019	0	0	0	0	0	0	0	0	0	0	0	0
Total	**49**	**50**	**61**	**68**	**37**	**21**	**24**	**20**	**15**	**12**	**15**	**2**

REPORTING PERIOD: December 2019

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	15	16	22	13	22	12	3	14	15	4	13	11
Bay 2	6	9	19	15	18	11	13	6	12	10	8	7
Bay 3	1	2	11	9	8	9	3	4	4	4	5	6
Bay 4	0	0	4	5	2	5	0	4	1	1	1	2
Total	**22**	**27**	**56**	**42**	**50**	**37**	**19**	**28**	**32**	**19**	**27**	**26**

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	18	18	19	22	13	12	7	4	8	2	3	1
Bay 2	7	12	14	12	9	7	3	2	1	2	1	0
Bay 3	6	8	9	8	3	2	1	0	0	1	1	0
Bay 4	2	3	4	5	2	1	1	1	1	1	0	0
Total	**33**	**41**	**46**	**47**	**27**	**22**	**12**	**7**	**10**	**6**	**5**	**1**

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
1/12/2019	0	0	0	0	1	1	1	0	0	1	0	0
2/12/2019	2	1	2	4	2	1	1	2	2	2	0	0
3/12/2019	1	1	1	3	3	0	1	3	0	2	1	1
4/12/2019	0	0	3	0	2	3	1	0	3	2	1	0
5/12/2019	2	0	1	1	3	4	1	1	0	1	1	2
6/12/2019	1	1	3	0	6	0	1	3	1	1	1	0
7/12/2019	0	0	2	2	1	0	0	0	1	0	0	1
8/12/2019	0	0	0	0	0	3	1	0	1	0	1	1
9/12/2019	1	1	2	4	2	1	1	1	1	0	2	0
10/12/2019	1	0	6	1	1	1	1	2	0	1	1	1
11/12/2019	0	0	3	0	4	0	1	1	3	2	1	0
12/12/2019	1	1	3	2	1	1	0	0	2	0	1	0
13/12/2019	1	2	2	3	2	0	0	3	2	1	1	1
14/12/2019	1	0	1	1	0	1	0	1	2	0	0	0
15/12/2019	0	0	0	0	1	0	1	0	0	0	0	2
16/12/2019	0	2	4	0	2	2	0	0	3	0	2	1
17/12/2019	2	0	3	4	1	2	3	0	1	0	0	0
18/12/2019	1	1	2	1	2	2	0	2	2	1	1	4
19/12/2019	3	2	3	2	2	5	0	3	2	2	4	1
20/12/2019	0	1	3	4	4	1	1	1	0	1	1	0
21/12/2019	1	0	0	0	2	1	0	0	2	0	0	1
22/12/2019	0	1	1	1	0	0	0	0	0	1	2	1
23/12/2019	1	3	2	1	2	1	2	0	1	0	1	3
24/12/2019	0	2	1	2	2	2	0	2	0	0	1	1
25/12/2019	0	0	0	0	0	0	0	0	0	0	0	0
26/12/2019	0	0	0	0	0	0	0	0	1	0	0	2
27/12/2019	0	4	2	2	0	4	0	1	0	0	2	1
28/12/2019	1	0	2	0	0	0	0	0	1	0	0	0
29/12/2019	0	0	1	0	0	1	1	1	0	0	0	2
30/12/2019	2	2	1	2	3	0	1	0	1	1	1	0
31/12/2019	0	2	2	2	1	0	0	1	0	0	1	0
Total	**22**	**27**	**56**	**42**	**50**	**37**	**19**	**28**	**32**	**19**	**27**	**26**

	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
1/12/2019	3	2	0	1	0	1	0	1	1	0	0	0
2/12/2019	2	2	1	4	1	0	0	0	0	1	0	0
3/12/2019	0	1	2	3	0	1	0	0	0	0	1	0
4/12/2019	0	2	0	1	1	1	0	0	0	0	0	0
5/12/2019	1	2	1	1	1	2	0	0	0	1	0	0
6/12/2019	1	0	4	1	1	0	0	0	0	0	0	0
7/12/2019	0	1	2	2	0	0	0	1	0	1	0	0
8/12/2019	1	0	1	1	0	0	0	0	0	0	0	0
9/12/2019	0	3	4	2	1	1	0	0	1	0	0	0
10/12/2019	1	2	1	2	1	1	1	0	0	0	1	0
11/12/2019	0	1	1	4	1	0	1	1	1	0	0	0
12/12/2019	1	1	0	4	3	0	0	0	1	0	0	0
13/12/2019	0	0	3	3	1	2	1	0	0	0	1	0
14/12/2019	2	2	0	0	0	0	1	0	0	0	0	0
15/12/2019	0	2	1	0	0	1	1	0	1	0	0	0
16/12/2019	2	4	3	3	0	0	1	0	0	0	0	0
17/12/2019	2	1	2	0	2	2	0	0	1	0	0	0
18/12/2019	1	1	3	1	3	2	1	0	0	2	1	0
19/12/2019	6	1	4	1	1	2	3	0	2	0	0	0
20/12/2019	1	0	2	2	3	0	1	1	0	1	0	0
21/12/2019	2	1	0	0	0	0	0	0	0	0	0	0
22/12/2019	1	1	0	2	0	0	0	1	0	0	0	0
23/12/2019	1	2	0	3	2	0	0	1	0	0	0	1
24/12/2019	0	0	1	0	1	1	1	0	0	0	0	0
25/12/2019	0	0	0	0	0	0	0	0	0	0	0	0
26/12/2019	0	1	2	0	1	1	0	0	0	0	0	0
27/12/2019	2	2	0	2	0	1	0	0	0	0	1	0
28/12/2019	0	3	1	0	0	1	0	0	1	0	0	0
29/12/2019	2	0	1	0	0	1	0	0	1	0	0	0
30/12/2019	1	3	3	1	2	0	0	1	0	0	0	0
31/12/2019	0	0	3	3	1	1	0	0	0	0	0	0
Total	**33**	**41**	**46**	**47**	**27**	**22**	**12**	**7**	**10**	**6**	**5**	**1**

Appendix E – Incident Register

Incidents

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01279 Australia, Newcastle - Near miss - Not significant - High VoC reading in confined space AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 5, 2019	 0	Near miss	Setting up for tank cleaning NN8 (diesel) 5 stage gas monitor picked up increasing VoC levels which peaked at 117 ppm - unsafe for work without BA	Dec 31, 2019
	01282 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - CCTV Failure AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 16, 2019	 0	Plant & Equipment Damage/Failure	Loss of power to CCTV	Dec 31, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01283 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Quick Release Hook Capstan Thermal Trip AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 12, 2019	 0	Plant & Equipment Damage/Failure	QRH No.5 capstan winch repeatedly tripping out on thermal overload	Dec 31, 2019
	01280 Australia, Newcastle - Deviation/Non-Conformance - Not significant - First Flush Pit high pH AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 11, 2019	0	Deviation/Non-Conformance	Testing of First Flush Pit prior release to stormwater (EPA requirement) failed on two occasions on high pH	Dec 31, 2019
	01272 Australia, Newcastle - Plant & Equipment Damage/Failure - Fender Damage M7 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 17, 2019		Plant & Equipment Damage/Failure	During Fender Inspection noted corner pad missing from F1.	Dec 5, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01257 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Gate Damage M7 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 8, 2019	0	Plant & Equipment Damage/Failure	Approx 05:45hrs discovered damage to gate at M7	Dec 5, 2019
	01261 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Gate damage Mayfield 7 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 11, 2019	0	Plant & Equipment Damage/Failure	Another gate was discovered damaged when locking up site late PM 11 Nov in area accessed by contractor working for Koppers	Dec 5, 2019
	01270 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Extreme Weather Event Trips ESD AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 25, 2019	0	Plant & Equipment Damage/Failure	At 18:38hrs ESD text alert received during local weather event	Dec 5, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01277 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Over The Wire comms lost AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Dec 3, 2019	0	Plant & Equipment Damage/Failure	Connectivity lost for the Viva networked / owned printer in Drivers Room - no paperwork for their loads. .	Dec 5, 2019
	01267 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Watercooler leak floods M7 gatehouse AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 20, 2019	0	Plant & Equipment Damage/Failure	Water cooler unit developed leak and discharged complete water bottle over Gatehouse floor overnight	Nov 20, 2019
	01265 Australia, Newcastle - Deviation/Non-Conformance - Not significant - Multiple Bay Loading Issue AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 18, 2019	0	Deviation/Non-Conformance	Drivers experience loading issues	Nov 18, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01254 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Mayfield 7 (M7) gate damage AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Nov 5, 2019	0	Plant & Equipment Damage/Failure	M7 vehicle entrance gate (closed) damaged during roadworks on BLB road extension	Nov 6, 2019
	01250 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Quick Release Hook damaged AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 11, 2019	0	Plant & Equipment Damage/Failure	QRH no2, hook 2 has damage to the swing stopper, indicating operation outside of range.	Oct 25, 2019
	01248 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Pump 5 & 6 VSD fault AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 22, 2019	0	Plant & Equipment Damage/Failure	Pump 5 & 6 not working, VSD error	Oct 24, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01239 Australia, Newcastle - Near miss, Safety, Plant & Equipment Damage/Failure - Not significant - Capstan Thermal Trip QRH05 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 11, 2019	 0	Near miss Safety Plant & Equipment Damage/Failure	Linesman reported loss of power to capstan pulling in springer wires	Oct 24, 2019
	01242 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Port supplied generator for power outage failed AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 16, 2019	0	Near miss Plant & Equipment Damage/Failure	Port supplied site with 20Kva generator for planned localised power outage. Generator tripped out on overheat within first hour of outage.	Oct 24, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01243 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - ESD Trip - False Alarm AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Oct 19, 2019	 0	Plant & Equipment Damage/Failure	Approx 18:30hrs auto text alert ESD received along with call from driver who was parked outside terminal that alarms had acitivated.ivate	Oct 24, 2019
	01228 Australia, Newcastle - Near miss - Not significant - Drivers Room Wall Panel Fail AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 25, 2019	 0	Near miss	Laminated wall panel separated from wall and fell to floor	Oct 9, 2019
	01232 Australia, Newcastle - Near miss, Safety, Plant & Equipment Damage/Failure - Not significant - Fire Alarm Callpoint Failure AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 24, 2019	0	Near miss Safety Plant & Equipment Damage/Failure	Monthly testing identified Bay 1, Bay 2 and Bay 3 exit side fire alarm callpoints sticking	Oct 9, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01233 Australia, Newcastle - Safety - Not significant - Bay Stop Button Shroud Issues AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 30, 2019	0	Safety	During monthly testing of the Deadman / Local Bay Stop buttons in each load bay it was found the protective shroud was creating issuestted as precautionary measure) was impeding the button activation / release	Oct 9, 2019
	01234 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - CCTV Motherboard Fan Fail AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 30, 2019	0	Plant & Equipment Damage/Failure	Error message on CCTV whilst rebooting to fix camera issues	Oct 9, 2019
	01214 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Site Low Air Pressure Text Alert AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 12, 2019	0	Near miss Plant & Equipment Damage/Failure	At 18:40hrs text alert was received indicating low pressure alarm, duty staff checked online and verified alarms.	Sep 16, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01194 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Bio Diesel Pump terminal block failure AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 19, 2019	 0	Near miss Plant & Equipment Damage/Failure	During Haz Area inspection by approved electrician terminal block found to have suffered failure of connector	Sep 16, 2019
	01203 Australia, Newcastle - Near miss, Safety - Not significant - Suction hose fail AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 4, 2019	 0	Near miss Safety	Wire loom on suction hose - outer continuity (Bay 2 Drain Dry) was reported as broken by driver	Sep 5, 2019
	01204 Australia, Newcastle - Near miss, Safety - Not significant - Customer Delays Slops Collection AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 2, 2019	 0	Near miss Safety	Customer notified approx 8 days in advance of need for slops collection by 2nd Sept. Standing arrangement for them to truck to Sydney for processing. Delayed response from customer (due slops handling issue at their facility) resulted in terminal ha...	Sep 5, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01205 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Floodlights East Side M7 Outage - Eletrical fault AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 3, 2019	0	Near miss Plant & Equipment Damage/Failure	Floods on eastern side failed. Electrician found loose connection in the lighting junction box	Sep 5, 2019
	01206 Australia, Newcastle - Near miss, Environmental - Not significant - Truck Compartment API Seal Fail AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Sep 4, 2019	0	Near miss Environmental	On completing compartment driver attempted to remove load arm but suspected API seal hadn't seated correctly	Sep 5, 2019
	01202 Australia, Newcastle - Quality - Not significant - PQ concern - Driver AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 30, 2019	0	Quality	Driver advised of concerns with Product Quality	Aug 30, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01193 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Seta FBT Failure / Error Messages AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 18, 2019	0	Plant & Equipment Damage/Failure	Testing diesel samples for discharge of the Stena Concert the FBT unit started showing 'high pressure' error messages.	Aug 29, 2019
	01192 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Air Leak at High Level - Bay 1 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 15, 2019	0	Near miss Plant & Equipment Damage/Failure	Terminal Operator discovered high level air leak - sourced to high level elbow connection on galv pipe	Aug 29, 2019
	01199 Australia, Newcastle - Near miss, Environmental - Not significant - Third party leaks diesel onto roadway AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 26, 2019	0	Near miss Environmental	Hire company tilt tray leaked diesel onto Steelworks Road, cleaned by Terminal staff	Aug 29, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01195 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Weeping hot oil line - Koppers AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 20, 2019	0	Near miss Plant & Equipment Damage/Failure	Whilst inspecting main wharfline site staff noted oil spots on wharfline. Investigation revealed it was being blown from a high level weep on the Koppers heating oil line expansion loop and permeating down through or over the insulation cladding	Aug 29, 2019
	01201 Australia, Newcastle - Quality - Not significant - Product Quality Issues Sebarok Spirit AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 26, 2019	 0	Quality	LR class vessel discharging diesel at Newcastle - product quality concerns at various stages of the discharge resulting in stoppages and mutilpe tank swaps (ship side) to isolate source of issue.	Aug 29, 2019
	01190 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - IFV Solenoid failure Bay 3 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 15, 2019	0	Plant & Equipment Damage/Failure	Driver reported problems starting load in bay 3 and that he'd noted a possible air leak. Investigation traced issue to XVF-4607 which appeared to be leaking air through the exhaust port and not cycling	Aug 15, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01174 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Loss of network access and networked printers AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 8, 2019	0	Plant & Equipment Damage/Failure	During setup for discharge of Stena Provence noted we couldn't access logs / printers	Aug 15, 2019
	01176 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Truck scully issue AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 12, 2019	0	Plant & Equipment Damage/Failure	Intermittent truck scully issues delayed tuck loading time.	Aug 15, 2019
	01191 Australia, Newcastle - Near miss - Not significant - Unauthorised bluetooth attempt to access CCTV screens AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 15, 2019	0	Near miss	Noticed a brief message come up on CCTV for a bluetooth request for 'Dan S9'	Aug 15, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01186 Australia, Newcastle - Near miss, Safety - Not significant - Abnormal weather event - site damage AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Aug 9, 2019	0	Near miss Safety	Boundary fence signage, cable tray lids and temporary fencing damaged by high winds	Aug 12, 2019
	01156 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Air Filter Casing Drain Valve Failure AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 15, 2019	0	Plant & Equipment Damage/Failure	Air pressure being lost through filter casing drain valve	Jul 30, 2019
	01166 Australia, Newcastle - Safety - Not significant - Decommissioned pipelines refilling AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 30, 2019	0	Safety	NN8 & NN9 outlet lines found to have pressure/product	Jul 30, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01165 Australia, Newcastle - Quality - Not significant - RDK account disabled AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 30, 2019	0	Quality	RDK BT account disabled instead of RKS	Jul 30, 2019
	01161 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Driver self reports overfill warning AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 21, 2019	0	Plant & Equipment Damage/Failure	Whilst loading compartment #5 driver got a red light indicating overfill but volume was below SFL. Compartment overfill probe found to have slipped down.	Jul 22, 2019
	01155 Australia, Newcastle - Near miss - Not significant - Scully Issue Bay 2 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 12, 2019	0	Near miss	Driver called Duty Mobile to report scully issue, determined issue was with driver and equipment. Loading exceeded 40mins	Jul 12, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01152 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Bay 1 Arm 2 Weeping Drop Hose AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jul 10, 2019	0	Near miss Plant & Equipment Damage/Failure	Driver noted weep from B1A2 loading arm	Jul 11, 2019
	01109 Australia, Newcastle - Quality - Not significant - Weather station fault AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 3, 2019	0	Quality	Weather station issuing false high speed wind alarms	Jul 8, 2019
	01141 Australia, Newcastle - Quality - Not significant - Low conductivity results AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 20, 2019	0	Quality	Failed test results on Shore Tanks following Glenda Megan	Jun 21, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01140 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Valve close during pigging AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jun 21, 2019	 0	Plant & Equipment Damage/Failure	Tank auto inlet shut during pigging operation	Jun 21, 2019
	01115 Australia, Newcastle - Near miss - Not significant - Driver exceeded 60min load time AUSTRALIA NEWCASTLE NOT NOTIFIABLE	May 13, 2019	0	Near miss	Driver failed to finish the load off correctly in Accuload system, leaving the load timer ticking.	Jun 5, 2019
	01110 Australia, Newcastle - Quality - Not significant - PQ enquiry AUSTRALIA NEWCASTLE NOT NOTIFIABLE	May 31, 2019	0	Quality	Driver questioned Diesel PQ	Jun 3, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01078 Australia, Newcastle - Near miss - Not significant - Demolition works stop work AUSTRALIA NEWCASTLE NOT NOTIFIABLE	May 6, 2019	 0	Near miss	During mobilisation of demolition crew Koppers representative advised subsurface issue which Stolhaven were not advised of prior	Jun 3, 2019
	01081 Australia, Newcastle - Near miss - Not significant - Wharf hose fails 6 monthly continuity test AUSTRALIA NEWCASTLE NOT NOTIFIABLE	May 7, 2019	0	Near miss	As part of 6 monthly wharf hose testing regime contractor identified repeated ohms exceedance of 4m 200Nb composite wharf hose	Jun 3, 2019
	01083 Australia, Newcastle - Near miss - Not significant - Wheeled Extinguishers fail inspection AUSTRALIA NEWCASTLE NOT NOTIFIABLE	May 10, 2019	0	Near miss	During site 6 monthly fire equipment inspections (hydrants, extinguishers, lighting etc) it was found 2 x newly refurbished and 1 x new 70Kg DPE wheeled fire extinguishers on the wharf had dropped pressure.	May 24, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01060 Australia, Newcastle - Near miss - Not significant - Bay 4 Arm2 Solenoid Control Valve failure AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 26, 2019	 0	Near miss	After carrying out preventative maintenance on leaking solenoid new air actuator failed	May 1, 2019
	01062 Australia, Newcastle - Quality, Plant & Equipment Damage/Failure - Not significant - Loading issues AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 30, 2019	0	Quality Plant & Equipment Damage/Failure	Comms dropped out to gantry bays/ Driver delayed 103 minutes	May 1, 2019
	01050 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Impact to Kopper pipeline AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 16, 2019	0	Plant & Equipment Damage/Failure	Contractors skid steerloader impacted Koppers pipework during M4 pipeline removal.	Apr 23, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01057 Australia, Newcastle - Quality - Not significant - Bay 1 solenoid failure AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 19, 2019	0	Quality	Bay 1 solenoid failure	Apr 19, 2019
	01053 Australia, Newcastle - Safety, Plant & Equipment Damage/Failure - Not significant - Bay Stop button failed AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 15, 2019	0	Safety Plant & Equipment Damage/Failure	Bay 2 Stop button failed	Apr 17, 2019
	01051 Australia, Newcastle - Near miss - Not significant - Thermal relief closed AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 16, 2019	0	Near miss	Thermal relief closed off	Apr 16, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01048 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Fire Alarm Fault Zone 26 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 14, 2019	 0	Plant & Equipment Damage/Failure	Autotext alert received at 04:09hrs indicating fault on Fire Alarm System	Apr 15, 2019
	01046 Australia, Newcastle - Quality - Not significant - Unplanned gantry outage AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 12, 2019	 0	Quality	Windows update caused server issues and delays to loadings	Apr 12, 2019
	01045 Australia, Newcastle - Deviation/Non-Conformance - Not significant - Driver loads over curfew locks up FM system AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 12, 2019	 0	Deviation/Non-Conformance	Driver attempted to complete load prior curfew and failed to complete load causing lock up of all Bays	Apr 12, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01041 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Driver delayed loading > 40mins AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 8, 2019	0	Plant & Equipment Damage/Failure	Bay 2 loading delayed by additive comms and Resync errors. Closed out load and completed load in Bay 3	Apr 11, 2019
	01044 Australia, Newcastle - Deviation/Non-Conformance - Not significant - Load time >40mins - reason unknown AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Mar 29, 2019	0	Deviation/Non-Conformance	Driver enters site at 07:15hrs, starts loading 07:46 hrs, complete 08:11hrs	Apr 11, 2019
	01043 Australia, Newcastle - Deviation/Non-Conformance - Not significant - Load time >40mins - Customer Scheduling Issue AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Mar 17, 2019	0	Deviation/Non-Conformance	Driver delayed loading due reschedule requirement by customer	Apr 11, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01042 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Load time > 40mins - review of March load times AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Mar 1, 2019	0	Plant & Equipment Damage/Failure	Whilst loading Bay 1 driver experienced issues with error messages (Add Comms) and closed out Bay to complete in Bay 3	Apr 11, 2019
	01022 Australia, Newcastle - Near miss - Not significant - Driver scullys out on Compartment 1 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Mar 8, 2019	 0	Near miss	Whilst loading two compartment truck driver failed to move loading arm from Comp #1 to Comp #2 on completion and attempted to load	Apr 9, 2019
	01017 Australia, Newcastle - Deviation/Non-Conformance - Not significant - Contractor carrying out work without induction AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Mar 5, 2019	0	Deviation/Non-Conformance	Whilst carrying out daily white level inspection of wharf area spotted unfamiliar contractor inspecting fender. Not inducted or signed in.	Apr 9, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01036 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Fractured slops line AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Apr 1, 2019	0	Plant & Equipment Damage/Failure	Whilst dewatering tank NN2 (Diesel) slops line fractured at mid point through a 90 degree elbow at distance approx 50m downstream of the tank being dewatered.	Apr 5, 2019
	01030 Australia, Newcastle - Quality - Not significant - Diesel Hazy during discharge AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Mar 18, 2019	0	Quality	Hazy Diesel discharged from Pro Alliance	Mar 20, 2019
	00988 Australia, Newcastle - Environmental, Safety, Deviation/Non-Conformance - Not significant - Pig Chamber Press Relief Leak AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 23, 2019	0	Environmental Safety Deviation/Non-Conformance	During inspection / replacement of O'Ring on the pig reciever locking bolt was removed from the housing for seal replacment. A check of wharf line pressure showed negligible pressure in the line and this was relieved. The open apperture was left un...	Mar 5, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	01000 Australia, Newcastle - Near miss - Not significant - Data Breach AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Feb 19, 2019	0	Near miss	Supplier of equipment who had been paid with personal credit card (no account - claimed on expenses) reported that they had been hacked and credit card details were compromised	Mar 5, 2019
	01001 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Electrical Failure at Mayfield 7 AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Feb 19, 2019	0	Near miss Plant & Equipment Damage/Failure	Loss of power to Koppers wharf hut and valve automation systems on the Koppers manifold	Feb 20, 2019
	00976 Australia, Newcastle - Plant & Equipment Damage/Failure - Not significant - Damage to Terminal gate AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 1, 2019	0	Plant & Equipment Damage/Failure	Driver hit Terminal Entry gate	Feb 8, 2019

State	Name	Date and time of the incident:	Severity gauge	Type of incident:	What happened (please, explain briefly):	Last Update
	00975 Australia, Newcastle - Near miss, Plant & Equipment Damage/Failure - Not significant - Contractor damaged exit gate AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 12, 2019	0	Near miss Plant & Equipment Damage/Failure	Contractors struck exit gate breaking magnetic latch with cherry picker whilst working outside terminal fenceline - failed to notice the painted yellow line and 2 x Keep Clear signs displayed prominently on gates	Jan 15, 2019
	00971 Australia, Newcastle - Quality - Not significant - Site shut down due to low air pressure AUSTRALIA NEWCASTLE NOT NOTIFIABLE	Jan 9, 2019	0	Quality	Site shut down due to low air pressure	Jan 9, 2019

Appendix F – Conditions of Consent SSD_6664 and SSD_7065

Schedule 2 – General Administrative Conditions – Compliance Requirements		
No	Description	Statement of Compliance
1	**Obligation to Minimise Harm to the Environment** The Proponent must implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or decommissioning of the Development	Noted
2	**Terms of Consent** The Applicant must carry out the Development generally in accordance with the: a) EIS and RTS; b) development layout plans and drawings in the EIS (see Appendix 1); c) Applicant's Management and Mitigation Measures (see Appendix 2); d) MOD 1; and **e)** conditions of this consent.	Noted
3	If there is any inconsistency between the above documents, 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
4	The Applicant must comply with all reasonable requirements of the Secretary arising from the Department's assessment of: a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with this consent; and b) the implementation of any actions or measures contained in these documents.	Noted
5	**Limits of Consent** The Applicant shall not receive, store and dispatch more than 500 million litres of diesel and biodiesel fuel per year, until the Applicant has received an amended EPL for the Development. The Applicant shall provide a copy of the amended EPL to the Secretary prior to increasing throughput above 500 million litres a year.	A copy of the Sites EPL has previously been provided to the Secretary of the DPIE as part of previous reporting periods prior to throughput increasing beyond 500 M litres per year.
6	Following the receipt of an amended EPL for the Development, the Applicant shall not receive, store and dispatch more than 1,300 million litres of diesel and biodiesel fuel per year.	No exceedance of annual throughput limits (refer to **Section 9** of this Annual Review)
6A	The storage capacity of the tank farm must not exceed 131 million litres at any one time.	Noted (refer to **Table 2-2** of this Annual Review)
6B	With the exception of the following tanks, the proponent must not store flammable liquids, as classified under the *Australian Code for the Transport of Dangerous Goods by Road or Rail*, in bulk at the premises: (i) The 30,000 litre Slops Tank (UN 1203) identified on site as 'SL1'; and (ii) The 50,000 litre Additive Tank (UN 3082) identified on site as 'AT1'	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 2 – General Administrative Conditions – Compliance Requirements		
No	Description	Statement of Compliance
7	**Surrender of Existing Development Consents** Following the receipt of an amended EPL for the Development, or as otherwise agreed to in writing by the Secretary, the Applicant shall surrender Project Approval MP 08_0130 for the site in accordance with Clause 97 of 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 or consent should not be understood as implying that works legally constructed under a valid consent or consent can no longer be legally maintained or used.	MP 08_0130 has been surrendered.
8	**Statutory Requirements** The Applicant must 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.	EPL last updated 31 January 2020
9	**Other Consents and Approvals** Nothing in this consent will impact on the following consents/approvals: a) PA 12/001 issued under Section 111 of the EP&A Act dated 20 February 2012; b) DA 293-08-00 as modified issued under Section 80 of the EP&A Act dated 6 April 2001; and c) any other consents or consents issued under the EP&A Act.	Noted
10	**Structural Adequacy** The Applicant must ensure that any new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. Notes: • Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for any building works. • Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of a Development.	A new workshop has been built as complying development under the Ports SEPP. Newcastle Council has issued an occupation certificate for this structure. A copy can be provided upon request.
11	**Protection of Public Infrastructure** The Applicant must: a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the Development; and b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the Development.	Noted
12	**Utilities** Prior to the construction of any utility works, the Applicant must obtain relevant approvals from service providers.	A new workshop has been built as complying development under the Ports SEPP with power connections. Newcastle Council has issued an occupation certificate for this structure. A copy can be provided upon request.

Schedule 2 – General Administrative Conditions – Compliance Requirements		
No	Description	Statement of Compliance
13	**Operation of Plant and Equipment** The Applicant must ensure that any plant and equipment used on site, or in connection with the Development is: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	Noted
14	**Staged Submission of Strategies, Plans or Programs** With the written consent of the Secretary, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis.	Consent previously received
15	With the written consent of the Secretary, the Applicant may use the strategies, plans or programs approved under MP 08_0130 to address the requirements of this consent.	Consent previously received.
16	**Development Contribution** Prior to the commencement of operation of the Development, the Applicant shall pay Council $11,058.00 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.	Stolthaven has paid all development contributions under this approval.
17	**Dispute Resolution** In the event that a dispute arises between the Applicant and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter must be referred by either party to the Secretary, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding to all parties. For the purpose of this condition, 'public authority' has the same meaning as provided under Section 4 of the EP&A Act.	Noted
17A	A Hazard Analysis shall be undertaken twelve months after the commencement of operations and every three years thereafter, or at such intervals as the Secretary may agree, in accordance with the requirements for projects associated with the Mayfield Concept Plan Approval No. 09_0096 Condition No. 2.28 that involve the transport, handling or storage of hazardous or dangerous materials. The audits shall be carried out by a qualified person or team, independent of the project, and shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory No. 5 'Hazard Audit Guidelines'. Each audit shall be submitted to the Secretary within one month of the audit being undertaken. An electronic copy of each audit must be provided to PON at the same time as submission to the Secretary.	Hazard audit was not required during the reporting period.

Schedule 3 – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
1	**Statutory Requirements** The Applicant shall carry out the Development in accordance with the requirements of the: a) VRA; b) RAP; and c) CSMP.	Copy of site auditor correspondence previously provided.
2	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 meets the requirements of the documents listed in Condition 1 above.	No construction works as approved under SSD_6664 were undertaken during the reporting period.
3	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 1 above.	No construction works took place during the reporting period.
4	**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.
5	**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 Department upon request.	No soil imported during the reporting period.
6	**SOIL AND WATER** **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.*
7	**Discharge Limits** The Applicant shall ensure that all water discharges from the site comply with the: a) discharge limits (both volume and quality) set for the Development in any EPL; or b) the relevant provisions of the POEO Act.	All water discharged from the Site complied with the relevant EPL conditions (refer to **Section 7.3** of this Annual Review)
8	**Bunding and Storage of Liquids** The Applicant shall store all chemicals, fuels and oils used on-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.	Refer Aurecon Design Compliance Statement previously provided to DPIE.

Schedule 3 – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
9	**Stormwater and Drainage System** The Applicant shall maintain the stormwater and drainage system for the Development to the satisfaction of PON.	No changes occurred to the stormwater management system previously approved by PON.
10	**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 the commencement of construction; b) be prepared in accordance with OEH's Managing Urban Stormwater and any other relevant guidelines; c) show what stormwater, treatment and control infrastructure will be installed as part of the stormwater and drainage system for the Development and how it will integrate with other stormwater and drainage systems in the area; d) describe the measures that will be implemented to maintain this infrastructure over time; e) include a program to monitor stormwater quality and quantity; and f) include a strategy to integrate the stormwater management system with the broader system to be provided by PON for the Mayfield Concept Plan area. Note: The intent of condition 10(e) is to ensure coordinated delivery of infrastructure across the Mayfield Concept Plan area.	No changes occurred to the stormwater and drainage management plan previously approved by PON and DPIE during the reporting period.
11	**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 the commencement of operation; b) include procedures for the prevention and management of spills and leaks from the Development, including the M4 berth, pipeline and fuel storage facility; c) include a surface and groundwater monitoring program to measure the quality and quantity of water discharges from the site; and d) include a surface and groundwater response plan, including remedial actions and procedures that will be followed in the event of an incident.	This plan was reviewed and updated to be consistent with SSD_7065 during the 2018 reporting period. DPIE subsequently approved the updated plan.
12	**Traffic Movements** The Applicant shall: a) keep accurate records of: • the number of truck movements to and from the site; and • the volume of diesel and biodiesel that is received, stored and dispatched. b) make these records available in its Annual Review; and c) provide these records to PON on a bimonthly basis	Records are maintained and reported in accordance with this condition (refer to **Section 9.2**, **Section 9.2.1**, and **Appendix D** of this Annual Review).

Schedule 3 – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
13	**Traffic Management Plan** The Applicant shall update the existing Traffic Management Plan for the site to include the Development, to the satisfaction of the Secretary. The plan shall: a) be approved by the Secretary prior to the commencement of construction; b) be prepared in consultation with PON, HDC, Council, RMS adjoining land owners and the local community; c) detail construction and operational 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 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 f) be consistent with the Traffic Management Plan required under the Mayfield Concept Plan.	No changes occurred to the traffic management plan previously approved by PON and DPIE during the reporting period.
14	**Access and Parking** The Applicant must ensure that 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, and AUSTROADS for heavy vehicle usage.	No new parking or roads built.
15	**HAZARDS** The Applicant shall update the Fire Safety Study for the site to incorporate the changes due to the Development, prior to the commencement of construction. This plan must: a) be approved by the Secretary, prior to the commencement of construction b) cover the relevant aspects of the Department's *Hazardous Industry Planning Advisory Paper No. 2 – Fire Safety Study Guidelines and the Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*; b) be prepared in consultation with adjacent landowners, including OneSteel; and c) meet the requirements of NSW Fire and Rescue. Note: Construction, other than of preliminary works that are outside the scope of the Fire Safety Study, shall not commence until the study recommendations have been considered, and where appropriate, acted upon.	Fire Safety Study was approved prior to construction of the Site.

Schedule 3 – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
16	The Applicant shall update the Emergency Plan for the site to incorporate any changes due to the Development, prior to the commencement of operation. The updated plan shall: a) be prepared in consultation with PON; b) be consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 1 – Emergency Planning*; and c) detail the emergency procedures for the Development.	Emergency Plan previously supplied to and approved by PON and DPIE.
17	The Applicant shall contribute to, in so far as it relates to the Development, preparation of the following plans and audits for the Mayfield Concept Plan, in consultation with PON: a) a Port Emergency Response Plan, 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 PON, to the satisfaction of the Secretary.	The Sites safety and emergency operational plans have been prepared in consultation with PON and are consistent with the listed documents.
18	**UTILITIES AND SERVICES** The Applicant shall update and implement the existing Utilities and Services Plan for the site to include the Development, to the satisfaction of the Secretary. The plan must: a) be updated prior to the commencement of operation; 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. Note: The intent of condition 18(d) is to ensure coordinated delivery of infrastructure across the Mayfield Concept Plan area.	DPIE previously approved the updated plan. No changes occurred during the reporting period.

Schedule 3 – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
19	**Construction Noise** The Applicant must ensure that all reasonable and feasible management and mitigation measures are employed so that construction noise generated by the Development meets the construction noise goals in Table 1 (refer to Table 1 'Construction Noise Goals' in Development Consent)	Construction complete
20	**Operational Noise** Prior to the commencement of construction, the Applicant shall provide the Noise and Vibration Impact Assessment for the Development prepared by AECOM, dated 8 December 2014 including all modelling data, to the PON for the purposes of updating the Site Noise Model for the Mayfield Concept Plan.	Previously provided
21	Prior to the commencement of operation, the Applicant shall provide written evidence to the Secretary demonstrating that the PON is satisfied that the methodology and outcomes of the Noise and Vibration Impact Assessment for the Development, dated 8 December 2014 are consistent with the Site Noise Model for the Mayfield Concept Plan.	Previously provided to DPIE.
22	The Applicant shall, in consultation with the PON ensure that noise from the Development: a) fits within the Site Noise Model developed for the Mayfield Concept Plan; and b) does not exceed any noise quota or levels provided by PON for the Development, in accordance with the Site Noise Model for the Mayfield Concept Plan.	Evidence of consultation previously provided to DPIE. (Refer to **Section 8** of this Annual Review)
23	The Applicant shall comply with the directions of the PON in relation to the management of noise from the Development.	Noted
24	**Construction and Operation Hours** The Applicant must comply with the hours of construction and operation in Table 2, unless otherwise agreed to in writing by the Secretary (refer to Table 2 'Hours of Work' in Development Consent).	Noted
25	**Operating Conditions** The Applicant shall implement best practice noise and vibration management, including all reasonable and feasible measures to minimise the noise and vibration emissions of the Development.	Noted

Schedule 3 – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
26	**Noise Management Plan** The Applicant shall update the existing Noise Management Plan for the site to include the Development, to the satisfaction of the Secretary. The plan must: a) be prepared by a suitably qualified expert, in accordance with EPA Guidelines; b) be approved by the Secretary prior to the commencement of construction; c) describe the measures that would be implemented to ensure compliance with the relevant noise goals included in the Mayfield Concept Plan or noise quota established by the PON; d) include a procedure for implementing noise mitigation measures, should the Applicant be directed to by the PON, or should non-compliances be detected; and e) include procedures to receive, record and respond to complaints.	The noise management plan has been previously updated
27	**Noise Monitoring** The Applicant shall monitor noise from operation of the Development, to the satisfaction of the Secretary. The monitoring shall: a) be undertaken annually or to address genuine noise complaints that are related to the Development as determined by the Department or the EPA; b) be undertaken in accordance with the *Industrial Noise Policy*; c) demonstrate compliance with the relevant noise goals contained in the Mayfield Concept Plan, or any noise quota established by the PON for the Development.	Noise monitoring is undertaken in accordance with this condition (refer to **Section 8.0** of this Annual Review)
28	**AIR QUALITY AND GREENHOUSE GAS** **Dust Minimisation** The Applicant shall carry out all reasonable and feasible measures to minimise dust generated by the Development.	Noted
29	**Offensive Odour** The Applicant must not cause or permit the emission of offensive odours from the site, as defined under Section 129 of the POEO Act.	Noted
30	**Energy Efficiency and Greenhouse Gas Emissions** The Applicant shall implement all reasonable and feasible measures to minimise energy use and greenhouse gas emissions from the Development.	Noted
31	**Air Quality Discharges** The Applicant must comply with all load limits, air quality criteria and air quality monitoring requirements as specified in the amended EPL for the site.	Noted

Schedule 3 – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
32	**Dust Mitigation Measures** The Applicant must design, construct, operate and maintain the Development in a manner that minimises or prevents the emission of dust from the site and complies with any monitoring requirements in the EPL.	Noted
33	**Air Quality and Greenhouse Gas Management Plan** The Applicant shall update the existing Air Quality and Greenhouse Gas Management Plan for the site to include the Development, to the satisfaction of the Secretary. This plan must: a) be approved by the Secretary prior to the commencement of construction; b) describe the measures that would be implemented to ensure compliance with the relevant conditions of this consent; c) include an air monitoring program to measure the performance of the Development against the relevant conditions of this consent; d) describe a protocol that has been agreed with PON for the provision of input to the broader Site Air Quality Model required under the Mayfield Concept Plan. Note: The monitoring requirements of condition 31(c) could be satisfied by the monitoring network required for the Mayfield Concept Plan, if sufficient justification is provided.	Plan has been previously updated
34	**Energy Efficiency Plan** The Applicant shall update the existing Energy Efficiency Plan for the site to include the Development, to the satisfaction of the Secretary. The plan shall: a) be updated prior to the commencement of operation; b) describe the measures to be implemented to minimise energy use on the site including energy consumption levels, predicted energy savings and options for alternative energy sources including solar power generation, potential for third party access to roofs for solar generation, and co-generation; and c) include a program for monitoring the effectiveness of these measures, and a protocol for the periodic review of the plan.	Plan has been previously updated
35	**VISUAL AMENITY** **Design and Landscaping** The Applicant shall update the existing design and 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; b) be updated prior to the commencement of construction; c) demonstrate the building treatments are of sufficient design quality to minimise the visual impacts of the Development, 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	Plan has been previously updated

Schedule 3 – Specific Environmental Conditions Conditions – Compliance Requirements		
No	Description	Statement of Compliance
	f) illustrate how the design of the buildings would integrate with the landscaping proposed, ensuring landscaping is used to minimise views of the site.	
36	**Construction Materials** Where possible the Applicant must utilise building materials that will minimise the potential visibility of the Development (ie. use of non-reflective materials).	Noted
37	**Lighting** The Applicant shall ensure that any lighting associated with the Development: a) complies with the latest version of Australian Standard AS *4282(INT)-Control of Obtrusive Effects of Outdoor Lighting*; 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.
38	**Signage** The Applicant must not install any advertising signs on the site without the written consent of the Secretary.	Noted
39	**SITE SECURITY** The Applicant shall: a) install and maintain a perimeter fence and security gates on the site; and b) ensure that the security gates on site are locked whenever the site is unattended.	Noted
40	**WASTE** The Applicant shall ensure that all waste generated on the site during construction and operation of the Development is stored, handled and disposed of in accordance with the EPA's Waste Classification Guidelines.	Noted
41	**AVIATION SAFETY** Prior to the commencement of construction, the Applicant must obtain 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 4 – Environmental Management Reporting – Compliance Requirements		
No	Description	Statement of Compliance
1	**Environmental Management Strategy** The Applicant shall update the existing Environmental Management Strategy for the site to include the Development. This strategy must be approved by the Secretary prior to the commencement of construction and shall: a) provide the strategic context for environmental management of construction and operation of the Development; b) identify the statutory requirements that apply to the Development; c) describe in general how the environmental performance of the Development would be monitored and managed; d) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the Development; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise in relation to operations at the Development; • respond to any non-compliance; • manage cumulative impacts; • respond to emergencies; and e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the Development.	Updated
2	**Management Plan Requirements** The Applicant must ensure that 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 Development 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 Development; 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 Development 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.	Complete

Schedule 4 – Environmental Management Reporting – Compliance Requirements		
No	Description	Statement of Compliance
3	**Construction Environmental Management Plan** The Applicant shall update the existing Construction Environmental Management Plan for the site to include the Development. The Plan must: a) be approved by the Secretary prior to commencement of construction; b) include: • a soil and water management plan; • a traffic management plan; • a noise and vibration management plan; • an air quality (dust) management plan; • a utilities and services provision plan; and • a waste management plan.	Noted
4	**Revisions to Strategies, Plans and Programs** Within 3 months of the submission of an: a) audit under condition 8 of schedule 5; b) incident report under conditions 6 and 7 of schedule 5; c) annual review under condition 5 of schedule 5; and/or d) a modification to this consent, the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary. *Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Development.*	Noted
5	**REPORTING** **Annual Review** By the end of December each year, and annually thereafter, the Applicant shall review the environmental performance of the Development, to the satisfaction of the Secretary. This review must: a) describe the operations that were carried out in the past year; b) analyse the monitoring results and complaints records of the Development over the past year, which includes a comparison of these results against the • relevant statutory requirements, limits or performance measures/criteria; • monitoring results of previous years; and • relevant predictions in the EIS; c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance; d) identify any trends in the monitoring data over the life of the Development; and e) describe what measure will be implemented over the next year to improve the environmental performance of the Development. f) describe what measure will be implemented over the next year to improve the environmental performance of the Development.	This Annual Review is prepared in accordance with this condition.
6	**Incident Reporting** Within 24 hours of the occurrence of an incident that causes (or may cause) harm to the environment, the	Noted

Schedule 4 – Environmental Management Reporting – Compliance Requirements		
No	Description	Statement of Compliance
	Applicant shall notify the Secretary and any other relevant agencies of the incident.	
7	Within 7 days of the detection of the incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident.	Noted
8	**INDEPENDENT ENVIRONMENTAL AUDIT** Within 1 year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the Development. This 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 EPA and PON; c) assess the environmental performance of the Development, and its effects on the surrounding environment; d) determine whether the Development is complying with the relevant standards, performance measures and statutory requirements; e) review the adequacy of the Environmental Management Strategy for the Development, compliance with the requirements of this consent, and any other licences and consents; and, if necessary; f) recommend measures or actions to improve the environmental performance of the Development, and/or any plan/program required under this consent.	Independent Environment Audit was undertaken by Ramboll ustralia Pty Ltd during June 2019. Outcome of the audit have previously been communicated to DPIE's compliance team.
9	Within 3 months of commissioning the audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to both the EPA and the Secretary with a response to any recommendations contained in the audit report.	Noted
10	**ACCESS TO INFORMATION** From the commencement of the construction of the Development, the Applicant must make the following information publicly available on its website as it is progressively required by the consent: a) a copy of all current statutory consents; b) a copy of the current plans and programs required under this consent; c) a summary of the monitoring results of the Development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; d) a complaints register, which is to be updated on a monthly basis; e) a copy of the Annual Reviews (over the last 5 years); f) a copy of any Independent Environmental Audit, and the Applicant's response to the recommendations in any audit; and g) any other matter required by the Secretary.	This information is available on Stolthaven's website: https://www.stolt-nielsen.com/en/our-businesses/stolthaven-terminals/terminal-network/stolthaven-newcastle
11	**COMMUNITY CONSULTATION STRATEGY** The Applicant shall contribute to the Community Communication Strategy required for the Mayfield Concept Plan. The level and timing of this contribution by the Applicant and timing shall be determined in consultation with PON.	Community consultation has been undertaken as described in **Section 12.0** of this Annual Review.

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 111019**

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**	3.00 pm	**Finish** 4.00 pm
Test Date: 11/10/19	**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	R. DUCKWORTH
Signature			
Date	11/10/19	11/10/19	11/10/19

Appendix H – 2019 Waste Management

Effluent

Date	Terminal Quantity	Mayfield 7 Quantity	Company
3/01/19	2,000	200	Toxfree
11/01/19	3,000	150	Toxfree
17/01/19	3,000	100	Toxfree
24/01/19	3,000	500	Toxfree
31/01/19	3,000	500	Toxfree
7/02/19	2,500	1,200	Toxfree
14/02/19	3,000	1,000	Toxfree
21/02/19	3,000	1,500	Toxfree
28/02/19	3,000	1,000	Toxfree
7/03/19	3,000	1,000	Toxfree
14/03/19	3,000	1,000	Toxfree
21/03/19	3,000	3,000	Toxfree
28/03/19	3,000	1,500	Toxfree
31/03/19	0	5,000	Toxfree
4/04/19	500	3,000	Toxfree
5/04/19	2,500	0	Toxfree
11/04/19	0	1,500	Toxfree
12/04/19	3,000	0	Toxfree
18/04/19	3,000	1,500	Toxfree
25/04/19	2,500	0	Toxfree
2/05/19	3,000	1,000	Toxfree
7/05/19	0	3,000	Cleanaway
9/05/19	3,000	500	Cleanaway
16/05/19	3,000	300	Cleanaway
23/05/19	3,000	500	Cleanaway
30/05/19	3,000	1,500	Cleanaway
4/06/19	0	6,000	Cleanaway
6/06/19	3,000	1,500	Cleanaway
13/06/19	3,000	1,500	Cleanaway
19/06/19	3,000	1,000	Cleanaway
27/06/19	3,000	1,500	Cleanaway
4/07/19	3,000	1,000	Cleanaway
11/07/19	3,500	500	Cleanaway
25/07/19	3,000	500	Cleanaway
1/08/19	3,000	500	Cleanaway
8/08/19	2,000	0	Cleanaway
13/08/19	0	500	Cleanaway
16/08/19	3,000	500	Cleanaway
21/08/19	3,000	1,000	Cleanaway
29/08/19	3,000	1,000	Cleanaway
5/09/19	3,000	1,000	Cleanaway
12/09/19	3,000	500	Cleanaway
19/09/19	3,000	1,000	Cleanaway
26/09/19	3,000	500	Cleanaway
3/10/19	3,000	1,000	Cleanaway
10/10/19	1,500	500	Cleanaway
17/10/19	3,000	1,000	Cleanaway
24/10/19	3,000	1,000	Cleanaway
31/10/19	2,000	200	Cleanaway
7/11/19	3,000	0	Cleanaway
14/11/19	2,000	1,000	Cleanaway
21/11/19	3,000	1,500	Cleanaway
28/11/19	3,000	500	Cleanaway
5/12/19	3,000	500	Cleanaway
12/12/19	2,000	1,000	Cleanaway
19/12/19	3,000	500	Cleanaway

Hazardous Waste
(Liquid)

Date	Quantity	Transfers	Company
23/01/19	1,244	0	Toxfree
7/02/19	0	23,360	JLP Transfer
2/04/19	0	29,340	JLP Transfer
28/05/19	0	21,950	JLP Transfer
18/07/19	0	26,470	JLP Transfer
11/09/19	0	27,380	IOR Transfer
11/09/19	2,060	0	Cleanaway
8/10/19	0	22,160	JLP Transfer
13/10/19	0	16,360	JLP Transfer
5/12/19	3,000	0	Cleanaway
10/12/19	0	16,360	JLP Transfer

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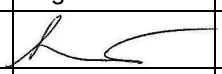
Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	R. Madden	S. Murphy		A. Monkley		08/04/2020

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