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# Annual Environmental Report 2021 – Rail Terminal Yard Operating Licence (L8948/2016/1)

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## Environment

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## 1 Introduction

### 1.1 Overview

Roy Hill includes an iron ore mine at the Roy Hill deposit, a mine process plant, a heavy haul railway system to the port and port facilities at Port Hedland.

Roy Hill situated approximately 115 kilometres (km) north of Newman, on the flat plains at the eastern end of the Chichester Range, in the Pilbara region of Western Australia.

With a defined mineralisation of more than 2.4 billion tonnes of +55% Fe iron ore, enough to sustain a mine life of more than 20 years, the Roy Hill Project will produce 60 million tonnes per annum (Mtpa) of direct ship ore as Lump and Fines Hematite.

Roy Hill comprises the construction and operation of state-of-the-art facilities including:

- Conventional open pit, bulk mining operation from multiple production benches;
- 65 Mtpa mine, process plant, airport and permanent accommodation village;
- 344 km single line heavy haul railway linking the mine and port;
- Purpose built, dedicated two berth iron ore facility at Port Hedland, capable of receiving, stockpiling, screening and exporting 70 Mtpa (wet) of iron ore as lump and fines; and
- Integrated Corporate Headquarters and Remote Operations Centre based in Perth.

Roy Hill Infrastructure Pty Ltd (RHI) is the proponent for the Roy Hill port (the port) that was approved for development in the Pilbara region of Western Australia.

### 1.2 Purpose and Scope

**Purpose:** The purpose of this Annual Environment Report (AER) is to outline compliance with conditions of the Operating Licence applicable to the Rail Terminal Yard (L8948/2016/1) (the Licence).

The AER has been prepared to meet Conditions 4.1.2, 4.2.1 and 4.2.2 of the Licence.

This AER addresses the requirements stipulated in Condition 4.2.1 of the Licence.

Table 1 outlines where each item in these conditions has been addressed in the report.

**Scope:** This AER covers the period 1 January 2021 to 31 December 2021 (“reporting period”) and is required to be submitted to the Department of Water and Environmental Regulation (DWER) by 31 March 2022 (being 90 days after the end of the reporting period).

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Table 1 – AER parameters (Operating Licence Table 4.2.1)

Condition or Table (if relevant)	Parameter	Format of Form	Relevant Section of this Report
-	Summary of any failure or any malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual report and any action taken.	None specified	Section 5.1
Table 3.2.1	Monthly records and cumulative volume for the WWTP.	None specified	Section 4.1
	Biochemical Oxygen Demand, Total Suspended Solids, pH, Total Nitrogen, Total Phosphorus, <i>E.coli</i> and Total Recoverable Hydrocarbons.	LR1	Appendix 3
4.1.2	Compliance	None specified	Section 3
4.1.4	Complaints summary	None specified	Section 5.2

### 1.3 Current Operations

To support the operation of the heavy haul railway system, RHI operate the Rail Terminal Yard (RTY) which includes the:

- Rolling Stock Maintenance Workshop (RSM);
- Bulk Fuel Storage and Handling Facility (BFSF) capable of storing 3,200 cubic metres (m<sup>3</sup>) of C1 combustible liquid (diesel);
- Oily Water Separators (OWSs); and
- Wastewater Treatment Plant (WWTP) with a maximum design capacity of 25 m<sup>3</sup> per day.

The RTY including the BFSF and WWTP is located approximately 16 kilometres (km) south of Port Hedland, within Boodarie Industrial Estate.

Throughout the reporting period, the activities undertaken at the RTY include the operation of the:

- Bulk fuel storage with two self-bunded diesel buffer tanks and a self-bunded bowser tank at the RSM;
- WWTP treated wastewater generated from staff onsite at the RTY and spray irrigation field;
- RSM including OWS; and
- BSFS including OWS.

## 2 Approval Overview

RHI is the proponent for the RTY located on the Special Rail Licence (SRL) Miscellaneous Licence 4SA issued in accordance with the requirements of the *Railway (Roy Hill Infrastructure Pty Ltd) Agreement Act 2010*. The SRL was granted under the *Mining Act 1978* on 5 July 2011 and provides approval for the Licensee to construct a railway from Port Hedland to the Roy Hill Iron Ore Mine.

RHI received approval under Part IV of the EP Act in November 2011 under the declaration of Ministerial Statement 847. Under Part V of the EP Act various Works Approvals for construction were approved following which the facility was approved to operate under Operating Licence L8948/2016/1.

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Operating Licence L8948/2016/1 was issued on 31 March 2016 and commenced on 4 April 2016. As of 31 December 2021, there have been no amendments made to the Licence.

### 3 Licence Compliance

An assessment of all Licence conditions has been undertaken in a Compliance Assessment Audit Table provided in Appendix 1

During the reporting period, there were two non-compliances against conditions (2.2.2 and 4.3.1 ) of the Operating Licence as outlined in the Audit Table in Appendix 1. An Annual Audit Compliance Report (AACR) is provided in Appendix 2.

### 4 Monitoring

#### 4.1 Wastewater Treatment Plant (WWTP) Monitoring

Table 2 outlines the sample results for the quarterly sampling of the RTY WWTP during the reporting period.

These results are also provided in the LR1 forms in Appendix 3.

Table 2 – RTY WWTP sampling dates and results – RHI Rail

Parameter	Units	Results Range 2019-2020	Quarter 1	Quarter 2	Quarter 3	Quarter 4
			19/01/2021	20/04/2021	29/07/2021	25/10/2021
Number of days between sampling events			69*	91	100	88
Biochemical Oxygen Demand (BOD) (filtered)	mg/L	<5	<5	<5	3	<2
Total Suspended Solids (TSS)	mg/L	9-44	8	<5	<5	8
Field pH	pH units	4.3-9.6	7.2	8.9	8.81	8.12
Total Nitrogen (TN)	mg/L	13-47	13	19	19.1	<b>42.4</b>
Total Phosphorus (TP)	mg/L	0.95-3.3	2.7	4.3	1.97	1.08
<i>E.coli</i>	MPN/100ml	<1	<1	<1	<1	<b>19</b>

\*The quarter 1 2021 previous sample was from 22/10/20.

Table 3 shows the monthly cumulative wastewater inflow meter readings, along with the calculated daily average inflow volume each month.

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Table 3 – RTY WWTP cumulative wastewater inflow volume m<sup>3</sup> per day – RHI Rail

Date of meter reading	Cumulative Inflow Meter Reading (m <sup>3</sup> )	Monthly Inflow Volume (m <sup>3</sup> )	Average Daily Inflow Volume (m <sup>3</sup> ) per month
31/01/2021	9539.17	135.89	4.4
29/02/2021	9811.25	272.08	9.5
31/03/2021	9971.6	160.31	5.3
30/04/2021	10184.8	213.24	7.1
31/05/2021	10386.3	201.5	6.5
30/06/2021	10682.5	296.2	9.9
31/07/2021	10931	248	7.9
31/08/2021	11197.3	266.3	8.8
30/09/2021	11366.3	169	5.5
31/10/2021	11467	100.7	3.3
30/11/2021	11617.1	150.1	5.0
31/12/2021	11830	213	7.2
Total inflow to the WWTP during the reporting period was 2426.82 m <sup>3</sup>			
The overall average daily inflow volume to the WWTP was 6.7 m <sup>3</sup>			

The overall average daily inflow volume to the WWTP was 6.7 m<sup>3</sup>, as shown in Table 4, which was well below the licenced daily throughput limit of 25m<sup>3</sup> per day.

Table 4 shows the monthly cumulative treated wastewater flow meter readings for discharge to the spray irrigation field. The total wastewater discharged during the reporting period was 1227.43 m<sup>3</sup>.

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Table 4 – RTY WWTP cumulative volume of discharge to spray field irrigation area – RHI Rail

Date of meter reading	Cumulative Outflow Meter Reading (m <sup>3</sup> )	Monthly Outflow Volume (m <sup>3</sup> )	Average Daily Outflow Volume (m <sup>3</sup> ) per month
31/01/2021	4973	68	2.19
29/02/2021	5089.6	116.5	4.16
31/03/2021	5155.87	66.3	2.14
30/04/2021	5263.08	107.2	3.57
31/05/2021	5355.61	92.5	2.98
30/06/2021	5499.4	143.8	4.79
31/07/2021	5588.58	89.1	2.87
31/08/2021	5678.8	90.2	2.91
30/09/2021	5809.2	130.4	4.35
31/10/2021	5894.8	85.7	2.76
30/11/2021	6039.4	144.5	4.82
31/12/2021	6132.57	93.2	3.00
Total discharge from the WWTP during the reporting period was 1227.4 m <sup>3</sup>			
The overall average daily discharge volume to the sprayfield was 3.4 m <sup>3</sup>			

## 4.2 Bulk Fuel Storage and Handling Facility OWS Discharge Point

Table 5 outlines the sample results for Total Recoverable Hydrocarbons (TRH) undertaken quarterly for the BFSF OWS discharge chamber. These results are also provided in the LR1 form in Appendix 3.

Table 5 – BFSF OWS discharge chamber TRH C6-40 results – RHI Rail

Parameter	Units	Licence Limit	Results Range 2019-2020	Quarter 1	Quarter 2	Quarter 3	Quarter 4
				17/02/2021	18/05/2021	17/08/2021	22/11/2021
Number of days between sampling events		>45		100*	90	91	97
BFSF OWS	mg/L	15	1.3-13	17	9.3	7.01	2.59

\*The quarter 1 2021 last sample period was taken on 9/11/20

The licenced limit for TRH (15 mg/L) was exceeded quarter 1 during the reporting period.

Due to the design configuration, it is possible this OWS discharged to the environment during quarter 1. However, since the water level inside the tank was very low during sampling event in February it is also likely that the TRH levels of water discharged during the wet season was much lower than the recorded 17mg/L and potentially below the licence limit due to any dilution. Although the OWS was not immediately resampled following the exceedance, TRH soil sampling was conducted at the discharge point (10/3/21) did not indicate any hydrocarbon contamination.

All samples were conducted on a quarterly basis, and greater than 45 days apart.

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### 4.3 Rolling Stock Maintenance Workshop OWS Discharge Point

Table 6 outlines the sample results for TRH undertaken quarterly for the RSM OWS discharge chamber. These results are also provided in the LR1 form in Appendix 3.

Table 6 – RSM OWS discharge chamber TRH C6-40 results – RHI Rail

Parameter	Units	Licence Limit	Quarter 1	Quarter 2	Quarter 3	Quarter 4
			17/02/2021	18/05/2021	17/08/2021*	22/11/2021
Number of days between sampling events		>45	100*	90	91	N/A*
RSM OWS	mg/L	15	1.6	.77	1.66	N/A

\*The quarter 1 2021 last sample was taken on 9/11/2020

\* Quarter 4 2021 sampling was attempted on 22/11/2021 but the OWS was dry and cleaned out prior to event

All samples were conducted on a quarterly basis, and greater than 45 days apart. No exceedances of the licence limit were recorded during the reporting period.

## 5 Records and Reporting

### 5.1 Failure or Malfunction of Pollution Control Equipment

There was a malfunction of the BFSF OWS during the reporting period.

Exceedances of TRH were recorded during the sampling of the discharge chambers of the BFSF OWS as outlined in Table 5. Where exceedances were recorded, investigations into the cause of the exceedances were conducted and rectification works were carried out where necessary.

An N1 form was lodged on 09/03/2021 for exceedance at BFSF on 17/02/2021.

### 5.2 Complaints Summary

No complaints have been received concerning the environmental impact of the activities undertaken at the Premises during the reporting period. Should any complaints be received, RHI will record these in the Roy Hill Incident Management System and address them in accordance with the Roy Hill's Incident, Non-Conformance and Action Management Procedure (OP-PRO-00702).

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### 6 Abbreviations

Table 7 – Abbreviations

Abbreviation	Definition
AACR	Annual Audit Compliance Report
AER	Annual Environmental Report
BFSF	Bulk Fuel Storage and Handling Facility
BOD	Biochemical Oxygen Demand
CEO	Chief Executive Officer of DWER
DER	Department of Environment Regulation
DWER	Department of Water and Environmental Regulation – formerly DER
ha	Hectare
L	Litre
m	Metre
m <sup>3</sup>	Cubic Metre
Mg/L	Milligrams per litre
MPN	Most Probable Number
mtpa	Million tonnes per annum
NATA	National Association of Testing Authorities, Australia
OWS	Oily Water Separator
RHI	Roy Hill Infrastructure
RSM	Rolling Stock Maintenance Workshop
RTY	Rail Terminal Yard
SRL	Special Rail Licence
TDS	Total Dissolved Solids
TN	Total Nitrogen
TP	Total Phosphorus
TRH	Total Recoverable Hydrocarbons
TSS	Total Suspended Solids
WWTP	Wastewater Treatment Plant
yr	Year

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## 7 Definitions

Table 8 – Definitions

Term	Definition
Annual period	Inclusive period from 1 January until 31 December of that year
<i>E.coli</i>	<i>Escherichia coli</i>
Operating Licence	Operating Licence for Prescribed Premises number L8948/2016/1
Prescribed Premises	Prescribed premises as per Schedule 1 of the <i>Environmental Protection Act 1986</i>
Reporting Period	1 January 2020 to 31 December 2020
Roy Hill	Roy Hill Infrastructure Pty Ltd
Spot Sample	Discrete sample representative at the time and place at which the sample is taken.

## 8 References

Table 9 – References

Document number	Title
	<i>Mining Act 1978</i>
	<i>Railway (Roy Hill Infrastructure Pty Ltd) Agreement Act 2010</i>
AS/NZS 5667.1	Australian Standard AS/NZS 5667.1 Water Quality – Sampling – <i>Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples.</i>
ASNZS 5667.10	Australian Standard AS/NZS 5667.10 Water Quality – Sampling – <i>Guidance on sampling waste waters</i>
Department of Water and Environmental Regulation	Licence, <i>Environmental Protection Act 1986</i> , Part V, Roy Hill Iron Ore Pty Ltd, L8948/2016/1

## 9 Appendices

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Appendix 1 – 2021 Rail Terminal Yard Operating Licence Audit Table

Item No.	Condition No.	Condition	Comments	Actions Required/Recommended	Compliant (Yes/No)												
<b>PRESCRIBED PREMISES CAPACITY</b>																	
1	NA	<p>Approved premises capacity</p> <table border="1"> <thead> <tr> <th>Category number</th> <th>Category description</th> <th>Category production or design capacity</th> <th>Approved Premises production or design capacity</th> </tr> </thead> <tbody> <tr> <td>73</td> <td>Bulk storage of chemicals, etc. premises on which acids, alkalis or chemicals that – (a) contain at least one carbon to carbon bond; and (b) are liquid at STP (standard temperature and pressure)</td> <td>1,000 cubic metres in aggregate</td> <td>3,450 cubic metres in aggregate</td> </tr> <tr> <td>85</td> <td>Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters</td> <td>More than 20 but less than 100 cubic metres per day</td> <td>25 cubic metres per day</td> </tr> </tbody> </table>	Category number	Category description	Category production or design capacity	Approved Premises production or design capacity	73	Bulk storage of chemicals, etc. premises on which acids, alkalis or chemicals that – (a) contain at least one carbon to carbon bond; and (b) are liquid at STP (standard temperature and pressure)	1,000 cubic metres in aggregate	3,450 cubic metres in aggregate	85	Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters	More than 20 but less than 100 cubic metres per day	25 cubic metres per day	<p><b>Category 73</b> The sum of the maximum fuel tank capacities for the Rail Terminal Yard (RTY) Bulk Fuel Storage Facility (BFSF) (1,505m<sup>3</sup>), Rolling Stock Maintenance (RSM) Buffer Tanks (203m<sup>3</sup>) and RSM total is 1,708m<sup>3</sup>. This is below the limit stipulated in the Operating Licence of 3,450m<sup>3</sup>. No modifications have occurred to increase capacity.</p> <p><b>Category 85</b> Meter readings from the RTY WWTP are recorded in Roy Hill's Environmental Data Management System (Envirosys). The inflow meter reading is recorded monthly and a daily average calculated. The maximum daily average inflow for the audit period was 6.9 m<sup>3</sup>/day. This is below the Licence limit of 25m<sup>3</sup>/day.</p>		Yes
Category number	Category description	Category production or design capacity	Approved Premises production or design capacity														
73	Bulk storage of chemicals, etc. premises on which acids, alkalis or chemicals that – (a) contain at least one carbon to carbon bond; and (b) are liquid at STP (standard temperature and pressure)	1,000 cubic metres in aggregate	3,450 cubic metres in aggregate														
85	Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters	More than 20 but less than 100 cubic metres per day	25 cubic metres per day														
<b>1.2 PREMISES OPERATION</b>																	
2	1.2.1	The Licensee shall record and investigate the exceedance of any descriptive or numerical limit in this section.	There have been no exceedances of the limits stipulated in Section 1.2 The maximum daily average inflow for the audit period was 4.5 m <sup>3</sup> /day.		Yes												
3	1.2.2	<p>The Licence shall ensure that where waste produced on the Premises are not taken off-site for lawful use or disposal, they are managed according to the requirements in Table 1.2.1.</p> <table border="1"> <caption>Table 1.2.1 Management of waste</caption> <thead> <tr> <th>Facility as depicted in Schedule 1</th> <th>Waste type</th> <th>Management Strategy</th> <th>Requirements<sup>1</sup></th> </tr> </thead> <tbody> <tr> <td>WWTP</td> <td>Sewage</td> <td>Biological, physical and chemical treatment</td> <td>Accepted at the WWTP through sewer inflow(s) only. Treatment of sewage waste shall be at or below 25 m<sup>3</sup>/day</td> </tr> </tbody> </table> <p><small>Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the Environmental Protection (Controlled Waste) Regulations 2004.</small></p>	Facility as depicted in Schedule 1	Waste type	Management Strategy	Requirements <sup>1</sup>	WWTP	Sewage	Biological, physical and chemical treatment	Accepted at the WWTP through sewer inflow(s) only. Treatment of sewage waste shall be at or below 25 m <sup>3</sup> /day	As per audit item 1		Yes				
Facility as depicted in Schedule 1	Waste type	Management Strategy	Requirements <sup>1</sup>														
WWTP	Sewage	Biological, physical and chemical treatment	Accepted at the WWTP through sewer inflow(s) only. Treatment of sewage waste shall be at or below 25 m <sup>3</sup> /day														
4	1.2.3	<p>The Licensee shall ensure that the irrigation of treated wastewater meets the following:</p> <p>(a) no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the defined irrigation area;                      (b) treated wastewater is evenly distributed over the irrigation area;                      (c) soil erosion is prevented from occurring;                      (d) irrigation does not occur on land that is waterlogged; and                      (e) a vegetation cover is maintained over the irrigation area.</p>	<p>A site inspection confirmed the spray field shows no sign of run-off, spray drift or discharge beyond the facility boundary.</p> <p>There was no soil erosion within the boundary of the facility. Slight vegetation cover was evident over the irrigation area.</p>		Yes												

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5	1.2.4	<p>The Licensee shall ensure that hydrocarbons are only stored and/or treated within the vessels or compounds provided with the infrastructure detailed in Table 1.2.2.</p> <table border="1" data-bbox="439 310 1219 611"> <thead> <tr> <th colspan="3">Table 1.2.2: Containment infrastructure</th> </tr> <tr> <th>Containment cell as depicted in Schedule 1</th> <th>Material</th> <th>Infrastructure requirements</th> </tr> </thead> <tbody> <tr> <td>Bulk Fuel Yard</td> <td rowspan="3">C1 combustible liquid (diesel)</td> <td>2 x category 6 storage tanks with a capacity of 1,600 m<sup>3</sup> each, located within a concrete and high density polyethylene lined bund with a bund wall greater than 500 mm in height.</td> </tr> <tr> <td>Rolling Stock Workshop Buffer Tanks</td> <td>Fitted with audible high level alarms and a high level mechanical float switch.</td> </tr> <tr> <td>Rolling Stock Workshop Bowser Tank</td> <td>2 x 110 m<sup>3</sup> self banded diesel fuel storage tanks. 1 x 30 m<sup>3</sup> self banded diesel tank</td> </tr> </tbody> </table>	Table 1.2.2: Containment infrastructure			Containment cell as depicted in Schedule 1	Material	Infrastructure requirements	Bulk Fuel Yard	C1 combustible liquid (diesel)	2 x category 6 storage tanks with a capacity of 1,600 m <sup>3</sup> each, located within a concrete and high density polyethylene lined bund with a bund wall greater than 500 mm in height.	Rolling Stock Workshop Buffer Tanks	Fitted with audible high level alarms and a high level mechanical float switch.	Rolling Stock Workshop Bowser Tank	2 x 110 m <sup>3</sup> self banded diesel fuel storage tanks. 1 x 30 m <sup>3</sup> self banded diesel tank	<p>The BFSF, RSM buffer tanks and bowser tanks were constructed as designed and therefore the facility meets the requirements stipulated in condition 1.3.4.</p>		Yes		
Table 1.2.2: Containment infrastructure																				
Containment cell as depicted in Schedule 1	Material	Infrastructure requirements																		
Bulk Fuel Yard	C1 combustible liquid (diesel)	2 x category 6 storage tanks with a capacity of 1,600 m <sup>3</sup> each, located within a concrete and high density polyethylene lined bund with a bund wall greater than 500 mm in height.																		
Rolling Stock Workshop Buffer Tanks		Fitted with audible high level alarms and a high level mechanical float switch.																		
Rolling Stock Workshop Bowser Tank		2 x 110 m <sup>3</sup> self banded diesel fuel storage tanks. 1 x 30 m <sup>3</sup> self banded diesel tank																		
6	1.2.5	<p>The Licensee shall ensure the limits specified in Table 1.2.3 are not exceeded.</p> <table border="1" data-bbox="439 758 1219 863"> <thead> <tr> <th colspan="3">Table 1.2.3: Production or design capacity limits</th> </tr> <tr> <th>Category<sup>1</sup></th> <th>Category description<sup>1</sup></th> <th>Premises production or design capacity limit</th> </tr> </thead> <tbody> <tr> <td>73</td> <td>Bulk storage of chemicals, etc.</td> <td>3,450 cubic metres in aggregate as per containment cell specified in Table 1.2.2</td> </tr> </tbody> </table> <p>Note 1: Environmental Protection Regulations 1987, Schedule 1.</p>	Table 1.2.3: Production or design capacity limits			Category <sup>1</sup>	Category description <sup>1</sup>	Premises production or design capacity limit	73	Bulk storage of chemicals, etc.	3,450 cubic metres in aggregate as per containment cell specified in Table 1.2.2	<p>As per audit item 1</p>		Yes						
Table 1.2.3: Production or design capacity limits																				
Category <sup>1</sup>	Category description <sup>1</sup>	Premises production or design capacity limit																		
73	Bulk storage of chemicals, etc.	3,450 cubic metres in aggregate as per containment cell specified in Table 1.2.2																		
<b>2.1 General</b>																				
7	2.1.1	<p>The Licensee shall record and investigate the exceedance of any descriptive or numerical limit or target specified in any part of section 2 of this Licence.</p>	<p>As per Item 9 there has been an exceedance of the TRH limit for the Bulk Fuel Facility OWS. The exceedance at the Bulk Fuel Facility was investigated and reported to the CEO. Details of the actions taken as a result of the investigation were provided via N1 Form.</p>		Yes															
8	2.2.1	<p>The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.2.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.</p> <table border="1" data-bbox="439 1423 1219 1759"> <thead> <tr> <th colspan="3">Table 2.2.1: Emissions to land</th> </tr> <tr> <th>Emission point reference and location on Map of emission points</th> <th>Description</th> <th>Source including abatement</th> </tr> </thead> <tbody> <tr> <td>Spray Irrigation Field</td> <td>Discharge from the WWTP to the on-site 4,988 square metre irrigation area</td> <td>Treated wastewater</td> </tr> <tr> <td>Bulk Fuel Facility OWS Discharge Point</td> <td>Discharge of treated water from the OWS at the Bulk Fuel Facility to the environment</td> <td>Water that has been treated through the OWS prior to discharge to the environment via a headwall with rock protection</td> </tr> <tr> <td>Rolling Stock Workshop OWS Discharge Point</td> <td>Discharge of treated water from the OWS at the Rolling Stock Workshop to the environment</td> <td>Water that has been treated through the OWS prior to discharge to the environment via a headwall with rock protection</td> </tr> </tbody> </table>	Table 2.2.1: Emissions to land			Emission point reference and location on Map of emission points	Description	Source including abatement	Spray Irrigation Field	Discharge from the WWTP to the on-site 4,988 square metre irrigation area	Treated wastewater	Bulk Fuel Facility OWS Discharge Point	Discharge of treated water from the OWS at the Bulk Fuel Facility to the environment	Water that has been treated through the OWS prior to discharge to the environment via a headwall with rock protection	Rolling Stock Workshop OWS Discharge Point	Discharge of treated water from the OWS at the Rolling Stock Workshop to the environment	Water that has been treated through the OWS prior to discharge to the environment via a headwall with rock protection	<p>WWTP discharge is directed to the WWTP Spryfield, the area of the irrigation spray field has been confirmed as 4,988m<sup>2</sup> by GIS (Hill View).</p> <p>The BFSF OWS system treats any potentially contaminated water from the BFSF prior to discharge into a storm water drain with a headwall and protection.</p> <p>The RSM OWS is viewed on site as being a recirculating unit and therefore there is no discharge to the environment. Periodically when required, the oily water is pumped and removed offsite by a licenced contractor.</p>		Yes
Table 2.2.1: Emissions to land																				
Emission point reference and location on Map of emission points	Description	Source including abatement																		
Spray Irrigation Field	Discharge from the WWTP to the on-site 4,988 square metre irrigation area	Treated wastewater																		
Bulk Fuel Facility OWS Discharge Point	Discharge of treated water from the OWS at the Bulk Fuel Facility to the environment	Water that has been treated through the OWS prior to discharge to the environment via a headwall with rock protection																		
Rolling Stock Workshop OWS Discharge Point	Discharge of treated water from the OWS at the Rolling Stock Workshop to the environment	Water that has been treated through the OWS prior to discharge to the environment via a headwall with rock protection																		

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# Annual Environmental Report 2021 – Rail Terminal Yard Operating Licence (L8948/2016/1)

## Environment

9	2.2.2	<p>The Licensee shall not cause or allow emissions to land greater than the limits listed in Table 2.2.2.</p> <table border="1" data-bbox="448 260 1213 432"> <caption>Table 2.2.2: Emission limits to land</caption> <thead> <tr> <th>Emission point reference</th> <th>Parameter</th> <th>Limit (including units)</th> <th>Averaging period</th> </tr> </thead> <tbody> <tr> <td>Bulk Fuel Facility OWS Discharge Point</td> <td rowspan="2">Total Recoverable Hydrocarbons</td> <td rowspan="2">15 mg/L</td> <td rowspan="2">Spot sample</td> </tr> <tr> <td>Rolling Stock Workshop OWS Discharge Point</td> </tr> </tbody> </table>	Emission point reference	Parameter	Limit (including units)	Averaging period	Bulk Fuel Facility OWS Discharge Point	Total Recoverable Hydrocarbons	15 mg/L	Spot sample	Rolling Stock Workshop OWS Discharge Point	<p>The licence limit for TRH (15mg/L) was exceeded at the BFSF on 17/02/2021. Actions arising from this event included undertaking all required actions/maintenance/repair to the BFSF OWS to ensure all wastewater is discharged below the Operating Licence requirements and resampling the BFSF OWS following corrective works.</p>	<p>No further action required as OWS has been maintained and water quality is now compliant according to latest sampling.</p>	No
Emission point reference	Parameter	Limit (including units)	Averaging period											
Bulk Fuel Facility OWS Discharge Point	Total Recoverable Hydrocarbons	15 mg/L	Spot sample											
Rolling Stock Workshop OWS Discharge Point														

### 3 MONITORING

#### 3.1 General monitoring

10	3.1.1	<p>The licensee shall ensure that:</p> <p>(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;</p> <p>(b) all wastewater sampling is collected in accordance with AS/NZS 5667.10; and</p> <p>(c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters to be measured unless otherwise indicated in the relevant table.</p>	<p>Sampling has been undertaken in accordance with the AS/NZ standards and is incorporated into the following work instructions:</p> <ul style="list-style-type: none"> <li>OEMP Wastewater Sampling for Port and Rail Work Instruction (OP-WIN-03667)</li> <li>Taking a QA/QC Water Sample Work Instruction (OP-WIN-06054)</li> <li>Oily Water Separator Sampling for Port &amp; Rail Work Instruction (OP-WIN-06859)</li> </ul> <p>Samples are submitted to the SGS laboratory which has a NATA Accreditation #2562 (as stated on the lab reports).</p>		Yes
11	3.1.2	<p>The Licensee shall ensure that quarterly monitoring of treated wastewater from the WWTP is undertaken at least 45 days apart.</p>	<p>Sampling for the WWTP was undertaken at least 45 days apart for all quarters. Sampling was undertaken on 19/01/2021, 20/04/2021, 13/09/2021, 23/11/2021.</p>		Yes
12	3.1.3	<p>The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.</p>	<p>Manufacturer's guidelines do not have any calibration recommendation for the WWTP flowmeters. The ph meter used in the WWTP has been calibrated at least monthly ahead of monitoring events.</p>		Yes
13	3.1.4	<p>The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.</p>	<p>This is not applicable as all calibration is being conducted as per condition 3.1.3</p>		Yes

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## Environment

14	3.2.1	<p>The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.</p> <table border="1" data-bbox="439 254 1222 611"> <thead> <tr> <th colspan="4">Table 3.2.1: Monitoring of emissions to land</th> </tr> <tr> <th>Emission point reference</th> <th>Parameter</th> <th>Units</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td rowspan="6">WWTP – prior to discharge to spray irrigation field</td> <td>Cumulative volume</td> <td>m<sup>3</sup>/day</td> <td>Monthly</td> </tr> <tr> <td>Biochemical Oxygen Demand</td> <td>mg/L</td> <td rowspan="5">Quarterly</td> </tr> <tr> <td>Total Suspended Solids</td> <td>mg/L</td> </tr> <tr> <td>pH<sup>1</sup></td> <td>pH units</td> </tr> <tr> <td>Total Nitrogen</td> <td>mg/L</td> </tr> <tr> <td>Total Phosphorus</td> <td>mg/L</td> </tr> <tr> <td><i>E.coli</i></td> <td>MPN/100mL</td> <td></td> </tr> <tr> <td>Bulk Fuel Facility OWS Discharge Point</td> <td rowspan="2">Total Recoverable Hydrocarbons</td> <td rowspan="2">mg/L</td> <td rowspan="2">Quarterly (unless there is no discharge during the quarter)</td> </tr> <tr> <td>Rolling Stock Workshop OWS Discharge Point</td> </tr> </tbody> </table> <p>Note 1: In field on-NATA accredited analysis permitted.</p>	Table 3.2.1: Monitoring of emissions to land				Emission point reference	Parameter	Units	Frequency	WWTP – prior to discharge to spray irrigation field	Cumulative volume	m <sup>3</sup> /day	Monthly	Biochemical Oxygen Demand	mg/L	Quarterly	Total Suspended Solids	mg/L	pH <sup>1</sup>	pH units	Total Nitrogen	mg/L	Total Phosphorus	mg/L	<i>E.coli</i>	MPN/100mL		Bulk Fuel Facility OWS Discharge Point	Total Recoverable Hydrocarbons	mg/L	Quarterly (unless there is no discharge during the quarter)	Rolling Stock Workshop OWS Discharge Point	<p>All sampling required by condition 3.2.1 has been completed for the audit period and the data is available in EnviroSys.</p> <p>WWTP lab sampling was undertaken on 19/01/2021, 20/04/2021, 13/09/2021, 23/11/2021.</p> <p>Field reading (field free chlorine and field pH) was undertaken 31/01/2021, 30/04/2021, 31/07/2021, 31/08/2021, 30/09/2021 and 31/10/2021.</p> <p>Monitoring of the BFSF OWS was undertaken on the 17/2/21, 18/5/21, 17/8/21 and the 22/11/21 during the audit period.</p> <p>Monitoring of the RSM OWS was undertaken only on 17/02/ 2021, 18/05/2021 and 17/08/2021. No monitoring was undertaken in Q4 as the chamber was dry.</p>	Yes
Table 3.2.1: Monitoring of emissions to land																																			
Emission point reference	Parameter	Units	Frequency																																
WWTP – prior to discharge to spray irrigation field	Cumulative volume	m <sup>3</sup> /day	Monthly																																
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Rolling Stock Workshop OWS Discharge Point																																			

### 4. INFORMATION

#### 4.1 Records

15	4.1.1	<p>All information and records required by this Licence shall:</p> <ul style="list-style-type: none"> <li>(a) be legible;</li> <li>(b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;</li> <li>(c) except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and</li> <li>(d) for those following records, be retained until the expiry of the Licence or any subsequent licence: <ul style="list-style-type: none"> <li>(i) off-site environmental effects; or</li> <li>(ii) matters which affect condition of the land or waters.</li> </ul> </li> </ul>	<p>All information and records covered by this audit were legible and retained in DMS or EnviroSys.</p>	Yes
16	4.1.2	<p>The Licensee must submit to the CEO within 90 calendar days after the end of the annual period, an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions in this Licence for the Annual Period.</p>	<p>The Annual Audit Compliance Report (AACR) for 2020 was submitted with the Annual Environmental Report (AER) on 30/03/2021 within the 90 calendar days after the annual period. This document is stored in DMS.</p>	Yes
17	4.1.3	<p>The Licensee shall implement a complaints management system that as a minimum, records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.</p>	<p>There were no complaints recorded during the audit period.</p>	Yes

#### 4.2 Reporting

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18	4.2.1	<p>The Licensee shall submit to the CEO an Annual Environmental Report within 90 calendar days after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.</p> <table border="1" data-bbox="439 327 1210 506"> <caption>Table 4.2.2: Non-annual reporting requirements</caption> <thead> <tr> <th>Condition or table (if relevant)</th> <th>Parameter</th> <th>Reporting period</th> <th>Reporting date (after end of the reporting period)</th> <th>Format or form</th> </tr> </thead> <tbody> <tr> <td>-</td> <td>Copies of original monitoring reports submitted to the Licensee by third parties</td> <td>Not Applicable</td> <td>Within 30 days of the CEOs request</td> <td>As received by the Licensee from third parties</td> </tr> </tbody> </table> <table border="1" data-bbox="439 527 1210 831"> <caption>Table 4.2.1: Annual Environmental Report</caption> <thead> <tr> <th>Condition or table (if relevant)</th> <th>Parameter</th> <th>Format or form<sup>1</sup></th> </tr> </thead> <tbody> <tr> <td>-</td> <td>Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken</td> <td>None specified</td> </tr> <tr> <td>Table 3.2.1</td> <td>Monthly records and cumulative volume for the WWTP Biochemical Oxygen Demand, Total Suspended Solids, pH, Total Nitrogen, Total Phosphorus, <i>E.coli</i> and Total Recoverable Hydrocarbons</td> <td>None specified LR1</td> </tr> <tr> <td>4.1.2</td> <td>Compliance</td> <td>None specified</td> </tr> <tr> <td>4.1.3</td> <td>Complaints summary</td> <td>None specified</td> </tr> </tbody> </table> <p>Note 1: Forms are in Schedule 2</p>	Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form	-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 30 days of the CEOs request	As received by the Licensee from third parties	Condition or table (if relevant)	Parameter	Format or form <sup>1</sup>	-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified	Table 3.2.1	Monthly records and cumulative volume for the WWTP Biochemical Oxygen Demand, Total Suspended Solids, pH, Total Nitrogen, Total Phosphorus, <i>E.coli</i> and Total Recoverable Hydrocarbons	None specified LR1	4.1.2	Compliance	None specified	4.1.3	Complaints summary	None specified	<p>The Annual Environmental Report (AER) was submitted on 30/03/2021 within the 90 calendar days after the annual period containing information as per table 4.2.1. This document is stored in Roy Hill's Document Management System</p>		Yes
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form																										
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 30 days of the CEOs request	As received by the Licensee from third parties																										
Condition or table (if relevant)	Parameter	Format or form <sup>1</sup>																												
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4.1.2	Compliance	None specified																												
4.1.3	Complaints summary	None specified																												
19	4.2.2	<p>The Licensee shall ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results and Licence limits.</p>	<p>Result tables included in the AER include a "previous results" range.</p>		Yes																									
20	4.2.3	<p>The Licensee shall submit the information in Table 4.2.2 to the CEO according to the specifications in that table.</p>	<p>There have been no requests during the audit period.</p>		Yes																									
<b>4.3 Notification</b>																														
21	4.3.1	<p>The Licensee shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO and in accordance with the notification requirements of the table.</p> <table border="1" data-bbox="439 1213 1210 1472"> <caption>Table 4.3.1: Notification requirements</caption> <thead> <tr> <th>Condition or table (if relevant)</th> <th>Parameter</th> <th>Notification requirement<sup>1</sup></th> <th>Format or form<sup>2</sup></th> </tr> </thead> <tbody> <tr> <td>1.2.1</td> <td>Breach of any limit specified in the Licence</td> <td>Part A: As soon as practicable but no later than 5pm of the next usual working day.  Part B: As soon as practicable</td> <td>N1</td> </tr> <tr> <td>3.1.3</td> <td>Calibration report</td> <td>As soon as practicable.</td> <td>None specified</td> </tr> </tbody> </table> <p>Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act Note 2: Forms are in Schedule 2</p>	Condition or table (if relevant)	Parameter	Notification requirement <sup>1</sup>	Format or form <sup>2</sup>	1.2.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day.  Part B: As soon as practicable	N1	3.1.3	Calibration report	As soon as practicable.	None specified	<p>N1 form was submitted on 11/03/2021 for the exceedance of the Bulk Fuel Facility OWS licence limit detected on 17/02/2021. BFSF OWS quarterly monitoring of treated wastewater confirmed TRH level above the parameter outlined in operating licence L8948/2016/1 returning a result of 17mg/L.</p>		No													
Condition or table (if relevant)	Parameter	Notification requirement <sup>1</sup>	Format or form <sup>2</sup>																											
1.2.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day.  Part B: As soon as practicable	N1																											
3.1.3	Calibration report	As soon as practicable.	None specified																											

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# Annual Environmental Report 2021 – Rail Terminal Yard Operating Licence (L8948/2016/1)

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## Appendix 2 – Annual Audit Compliance Report

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## Annual Audit Compliance Report Form

Environmental Protection Act 1986, Part V

Section A – Licence Details			
Licence number:	L8948/2016/1	Licence file number:	DER2016/000017
Licence holder:	Roy Hill Infrastructure Pty Ltd		
Trading as:	Roy Hill Infrastructure Pty Ltd		
ACN:	130 249 633		
Registered address:	28-42 Ventnor Ave, WEST PERTH WA 6005		
Reporting period:	1 January 2021 to 31 December 2021		

Section B – Statement of Compliance with Licence Conditions
Did you comply with all of your licence conditions during the reporting period? (please tick the appropriate box)
<input type="checkbox"/> Yes – please complete: <ul style="list-style-type: none"><li>• section C;</li><li>• section D if required; and</li><li>• sign the declaration in Section F.</li></ul>
<input checked="" type="checkbox"/> No – please complete: <ul style="list-style-type: none"><li>• section C;</li><li>• section D if required;</li><li>• section E; and</li><li>• sign the declaration at Section F.</li></ul>

Section C – Statement of Actual Production	
Provide the actual production quantity for this reporting period. Supporting documentation is to be attached.	
Prescribed Premises Category	Actual Production Quantity
73	3,256 cubic metres in capacity

Section D – Statement of Actual Part 2 Waste Discharge Quantity	
Provide the actual Part 2 waste discharge quantity for this reporting period. Supporting documentation is to be attached.	
Prescribed Premises Category	Actual Part 2 Waste Discharge Quantity
85	6.7 cubic metres overall daily average during annual period


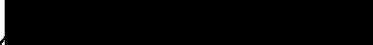
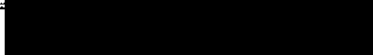
Section E – Details of Non-Compliance with Licence Condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	2.2.2	Date(s) of non-compliance:	17/02/2021
Details of non-compliance:			
The BFSF Oily Water Separator exceeded the licence limit (15mg/l) for TRH on 17/02/2021 with a result of 17 mg/l.			
What was the actual (or suspected) environmental impact of the non-compliance?			
<b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.			
No environmental impact occurred due to the non-compliance as soil sampling results undertaken on 10/03/2021 confirmed low levels of TRH to environment were below the limit of reporting and therefore below commercial and industrial limits outlined in the National Environment Protection (Assessment of Site Contamination) Measure 1999 (As amended May 2013).			
Cause (or suspected cause) of non-compliance:			
Sample was taken from the bottom of the tank as there was no other sample to collect due from a recent maintenance service on the BFSF OWS.			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
BFSF OWS has a weekly service schedule which includes identifying faults/repairs. If the OWS is seen to be faulty, then the OWS will be emptied by a licensed contractor.			
Was this non-compliance previously reported to DER?			
<input checked="" type="checkbox"/> Yes, and			
<input type="checkbox"/> Reported to DER verbally		Date: / /	
<input checked="" type="checkbox"/> Reported to DER in writing		Date: 11/03/2021	



Section E – Details of Non-Compliance with Licence Condition			
Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.			
Condition no:	4.3.1	Date(s) of non-compliance:	17/02/2021
Details of non-compliance:			
N1 form was not submitted by 5 pm 11/03/2021 after the breach on 17/02/2021 of the licence limit at the BFSF OWS.			
What was the actual (or suspected) environmental impact of the non-compliance?			
<p><b>NOTE</b> – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.</p>			
No environmental impact due to non-compliance of this condition.			
Cause (or suspected cause) of non-compliance:			
N1 form was submitted as soon as practicable. Reporting no later than 5pm of the next usual working day was not possible as lab results were not received until 4 March 2021. The Port and Rail site Environmental team was not back at work until 8 March 2021. Following identification of the non-compliance on 9 March, Roy Hill required two days to collate the information required under Part A of the N1 form.			
Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:			
No action is necessary as N1 notification was submitted as soon as practicable.			
Was this non-compliance previously reported to DER?			
<input type="checkbox"/> Yes, and			
<input type="checkbox"/> Reported to DER verbally		Date: / /	
<input type="checkbox"/> Reported to DER in writing		Date: / /	

**Section F – Declaration**

I/We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular<sup>1</sup>. I/We consent to the Annual Audit Compliance Report being published on the Department of Environment Regulation's (DER) website.

Signature <sup>2</sup> :		Signature:	
Name: (printed)		Name: (printed)	
Position:		Position:	
Date:	17/03/2022	Date:	
Seal (if signing under seal):			

<sup>1</sup> It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular.

<sup>2</sup> AACRs can only be signed by the licence holder or an authorised person with the legal authority to sign on behalf of the licence holder.

# Annual Environmental Report 2021 – Rail Terminal Yard Operating Licence (L8948/2016/1)

Environment

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## Appendix 3 – LR1 Form

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Licence: L8948/2016/1

Licensee: Roy Hill Infrastructure Pty Ltd

Form: LR1

Period: 1 January 2021 to 31 December 2021

Name: Monitoring of emissions to land

Form LR1: Monitoring of emissions to land					
Emission point	Parameter	Result	Averaging period	Method	Sample date & times
WWTP- prior to discharge to spray irrigation field	Biochemical Oxygen Demand	mg/L	Spot sample	Laboratory	<b>Sample dates &amp; times</b>
		<5			Quarter 1 – 19/01/21 (08:00)
		<5			Quarter 2 – 20/04/21 (08:20)
		3			Quarter 3 – 29/7/21 (09:30)
	<2	Quarter 4 – 25/10/21 (09:05)			
	Total Suspended Solids	mg/L			<b>Sample date &amp; times</b>
		8			Quarter 1 – 19/01/21 (08:00)
		<5			Quarter 2 – 20/04/21 (08:20)
		<5			Quarter 3 – 29/7/21 (09:30)
	pH	8			Quarter 4 – 25/10/21 (09:05)
		pH units			<b>Sample date &amp; times</b>
		7.2			Quarter 1 – 19/01/21 (08:00)
		8.9			Quarter 2 – 20/04/21 (08:20)
		8.8			Quarter 3 – 29/7/21 (09:30)



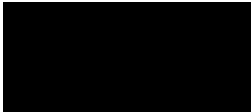
	Total Nitrogen	8.4			Quarter 4 – 25/10/21 (09:05)
		mg/L			<b>Sample date &amp; times</b>
		13			Quarter 1 – 19/01/21 (08:00)
		19			Quarter 2 – 20/04/21 (08:20)
		19.1			Quarter 3 – 29/7/21 (09:30)
		42.4			Quarter 4 – 25/10/21 (09:05)
	Total Phosphorus	mg/L			<b>Sample date &amp; times</b>
		2.7			Quarter 1 – 19/01/21 (08:00)
		4.3			Quarter 2 – 20/04/21 (08:20)
		1.97			Quarter 3 – 29/7/21 (09:30)
		1.08			Quarter 4 – 25/10/21 (09:05)
	<i>E.coli</i>	cfu/100 mL			<b>Sample date &amp; times</b>
		<1			Quarter 1 – 19/01/21 (08:00)
		<1			Quarter 2 – 20/04/21 (08:20)
		<1			Quarter 3 – 29/7/21 (09:30)
19		Quarter 4 – 25/10/21 (09:05)			
<b>Bulk Fuel Facility OWS Discharge Point</b>	Total Recoverable Hydrocarbons	mg/L	<b>Sample date &amp; times</b>		
		17	Quarter 1 – 17/02/21 (07:05)		
		9.3	Quarter 2 – 18/05/21 (09:30)		
		7.01	Quarter 3 – 17/08/21 (10:00)		





		2.59			Quarter 4 – 22/11/21 (09:44)
<b>Rolling Stock Maintenance Workshop OWS Discharge Point</b>	Total Recoverable Hydrocarbons	mg/L			<b>Sample date &amp; times</b>
		1.6			Quarter 1-17/2/21 (07:00)
		0.77			Quarter 2-18/5/21 (09:15)
		1.66			Quarter 3-17/8/21 (09:50)
		-			Quarter 4-22/11/21 (no sample)

Signed on behalf of Roy Hill Infrastructure Pty Ltd



Date: .....18/03/2022.....