



Licence

Environmental Protection Act 1986, Part V

Licensee: Roy Hill Infrastructure Pty Ltd

Licence: L8948/2016/1

Registered office: Hancock House
28-42 Ventnor Avenue
WEST PERTH WA 6005

ACN: 130 249 633

Premises address: Roy Hill Rail Terminal Yard
Part of Special Rail Licence Miscellaneous Licence 4SA within
coordinates: E656560.3 N7740752.7; E656561.1 N7739667.5;
E656327.8 N7739668.3; and E656325.2 N7740752.4
SOUTH HEDLAND WA 6722
as depicted in Schedule 1

Issue date: Thursday, 31 March 2016

Commencement date: Monday, 4 April 2016

Expiry date: Thursday, 3 April 2036

Prescribed premises category

Schedule 1 of the *Environmental Protection Regulations 1987*

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

Conditions

This Licence is subject to the conditions set out in the attached pages.

Date signed: 13 January 2017

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Alana Kidd
Manager Licensing – Resource Industries
Officer delegated under section 20
of the *Environmental Protection Act 1986*



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Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.



Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

Roy Hill Infrastructure Pty Ltd (the Licensee) operates a Bulk Fuel Storage and Handling Facility (Bulk Fuel Yard) and wastewater treatment plant (WWTP) at the Roy Hill Rail Terminal Yard (RTY) to support mining related activities within Special Rail Licence (SRL) Miscellaneous Licence 4SA. The Roy Hill Railway holds tenure via the 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 Roy Hill Iron Ore Mine.

The RTY is located approximately 16 kilometres (km) south of Port Hedland, within Boodarie Industrial Estate. The nearest residence is the Boodarie Station Homestead located around 4 km from the RTY.

The BFS is capable of storing 3,200 cubic metres (m³) of C1 combustible liquid (diesel). There are also two self-bunded diesel buffer tanks (110 m³ each) and a self bunded bowser tank (30 m³) at the Rolling Stock Workshop.

The WWTP has a maximum design capacity of 25 m³ per day and treats wastewater generated from staff onsite at the terminal and discharges treated wastewater to land via a 4,988 square metre (m²) spray irrigation field.

This Licence is the result of an amendment sought by the Licensee to change the *E.coli* reporting units from cfu/100 mL to MPN/100 mL; the unit applicable to the Colilert Method of analysis. The Colilert Method is accredited by the National Association of Testing Authorities (NATA) and is accepted by the Western Australian Department of Health, as detailed in the *Guidelines for the Non-Potable Uses of Recycled Water in Western Australia* (Department of Health, August 2011)..

At the time of this amendment, conditions which are not valid, enforceable and/or risk-based have been removed from the Licence in accordance with the Guidance Statement *Setting conditions* (DER, October 2015). The definitions specified under condition 1.1.2 have also been updated in accordance with recent administrative changes implemented within the Department and the Annual Audit Compliance Report template has been removed from the Licence.

The licences and works approvals issued for the Premises since 31/07/2014 are:

Instrument log		
Instrument	Issued	Description
W5639/2014/1	31/07/2014	New works approval application for the BFS and WWTP
W5639/2014/1	2/07/2015	Works approval amendment to extend the commissioning period for the WWTP
L8948/2016/1	7/04/2016	New licence application for the RTY
L8948/2016/1	13/01/2017	Amendment to replace <i>E.coli</i> reporting units CFU/100mL with MPN/100mL, remove conditions that are not valid, enforceable and/or risk based, update definitions and remove AACR template from Schedule 2.



Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION



Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'Annual Audit Compliance Report' means a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO from time to time and published on the Department's website;

'annual period' means a 12 month period commencing from 1 January until 31 December in that year;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*;

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of notification means;

Chief Executive Officer
Department Division 3, Part V of the Act
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au;

'Department' means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Division 3 Part V of the *Environmental Protection Act 1986*;

'Licence' means this Licence numbered L8948/2016/1 and issued under the Act;

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'MPN/100mL' means most probable number per 100 millilitres;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'OWS' means oily water separator;



'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'quarterly' means the 4 inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October to 31 December in that year,

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken; and

'WWTP' means wastewater treatment plant.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 Premises operation

1.2.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit in this section.

1.2.2 The Licensee 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.

Table 1.2.1 Management of waste			
Facility as depicted in Schedule 1	Waste type	Management Strategy	Requirements¹
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 ³ /day

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*.

1.2.3 The Licensee shall ensure that the irrigation of treated wastewater meets the following:

- (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.

1.2.4 The Licensee shall ensure that hydrocarbons are only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.2.2.



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 ³ 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 ³ self bunded diesel fuel storage tanks.
		1 x 30 m ³ self bunded diesel tank

1.2.5 The Licensee shall ensure the limits specified in Table 1.2.3 are not exceeded.

Table 1.2.3: Production or design capacity limits		
Category ¹	Category description ¹	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

Note 1: *Environmental Protection Regulations 1987, Schedule 1.*

2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of section 2 of this Licence.

2.2 Emissions to land

2.2.1 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.

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

2.2.2 The Licensee shall not cause or allow emissions to land greater than the limits listed in Table 2.2.2.



Table 2.2.2: Emission limits to land			
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

3.1.1 The licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10; and
- (c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

3.1.2 The Licensee shall ensure that quarterly monitoring of treated wastewater from the WWTP is undertaken at least 45 days apart.

3.1.3 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.

3.1.4 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.

3.2 Monitoring of emissions to land

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

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 ³ /day	Monthly
	Biochemical Oxygen Demand	mg/L	Quarterly
	Total Suspended Solids	mg/L	
	pH ¹	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			

Note 1: In field on-NATA accredited analysis permitted.



4 Information

4.1 Records

- 4.1.1 All information and records required by the Licence shall:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - (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
 - (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters.
- 4.1.2 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.
- 4.1.3 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.

4.2 Reporting

- 4.2.1 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.

Table 4.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form¹
-	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	None specified
	Biochemical Oxygen Demand, Total Suspended Solids, pH, Total Nitrogen, Total Phosphorus, <i>E.coli</i> and Total Recoverable Hydrocarbons	LR1
4.1.2	Compliance	None specified
4.1.3	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 4.2.2 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.
- 4.2.3 The Licensee shall submit the information in Table 4.2.2 to the CEO according to the specifications in that table.



Table 4.2.2: Non-annual reporting requirements				
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

4.3 Notification

4.3.1 The Licensee shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 4.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement¹	Format or form²
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

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



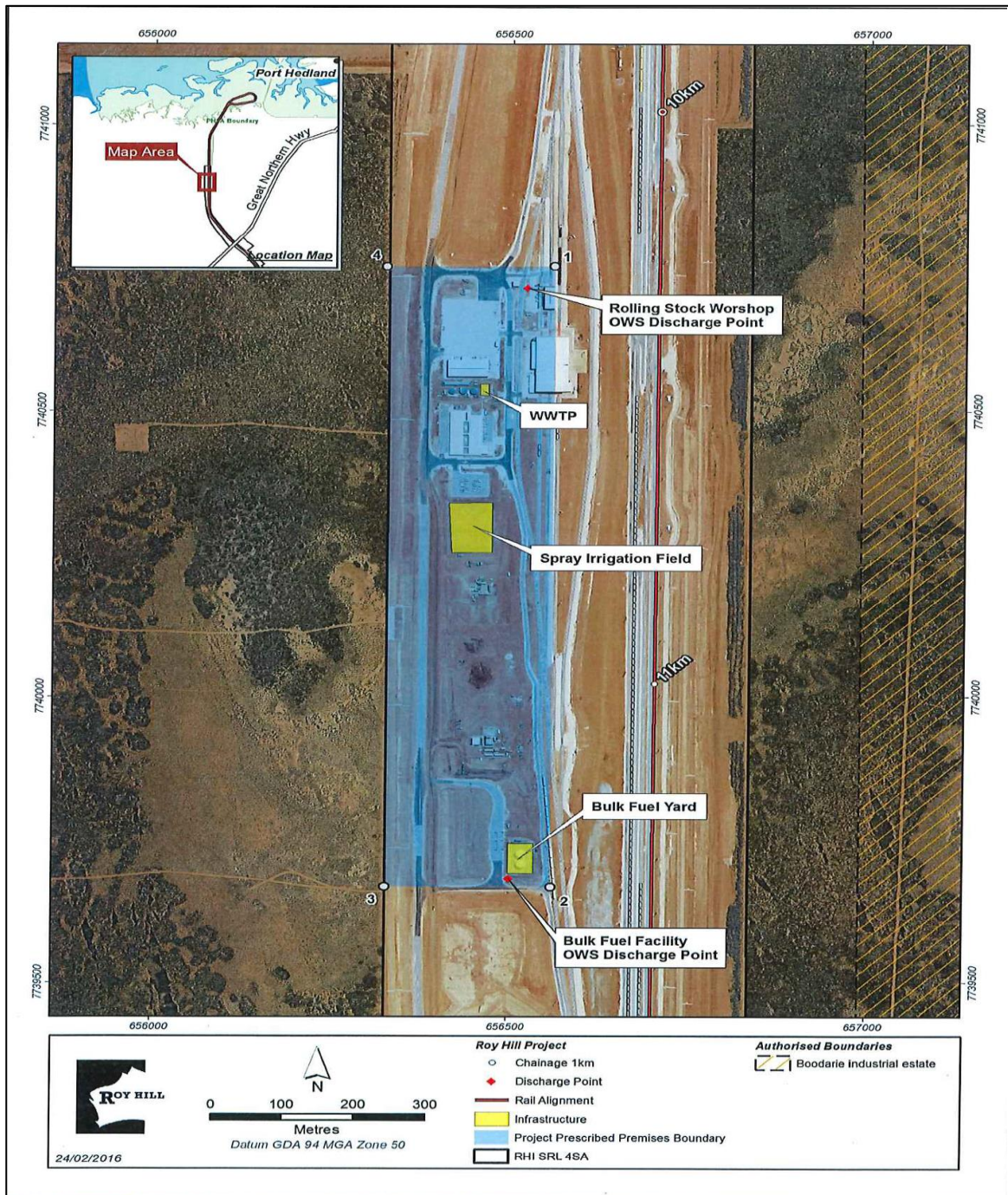
Schedule 1: Maps

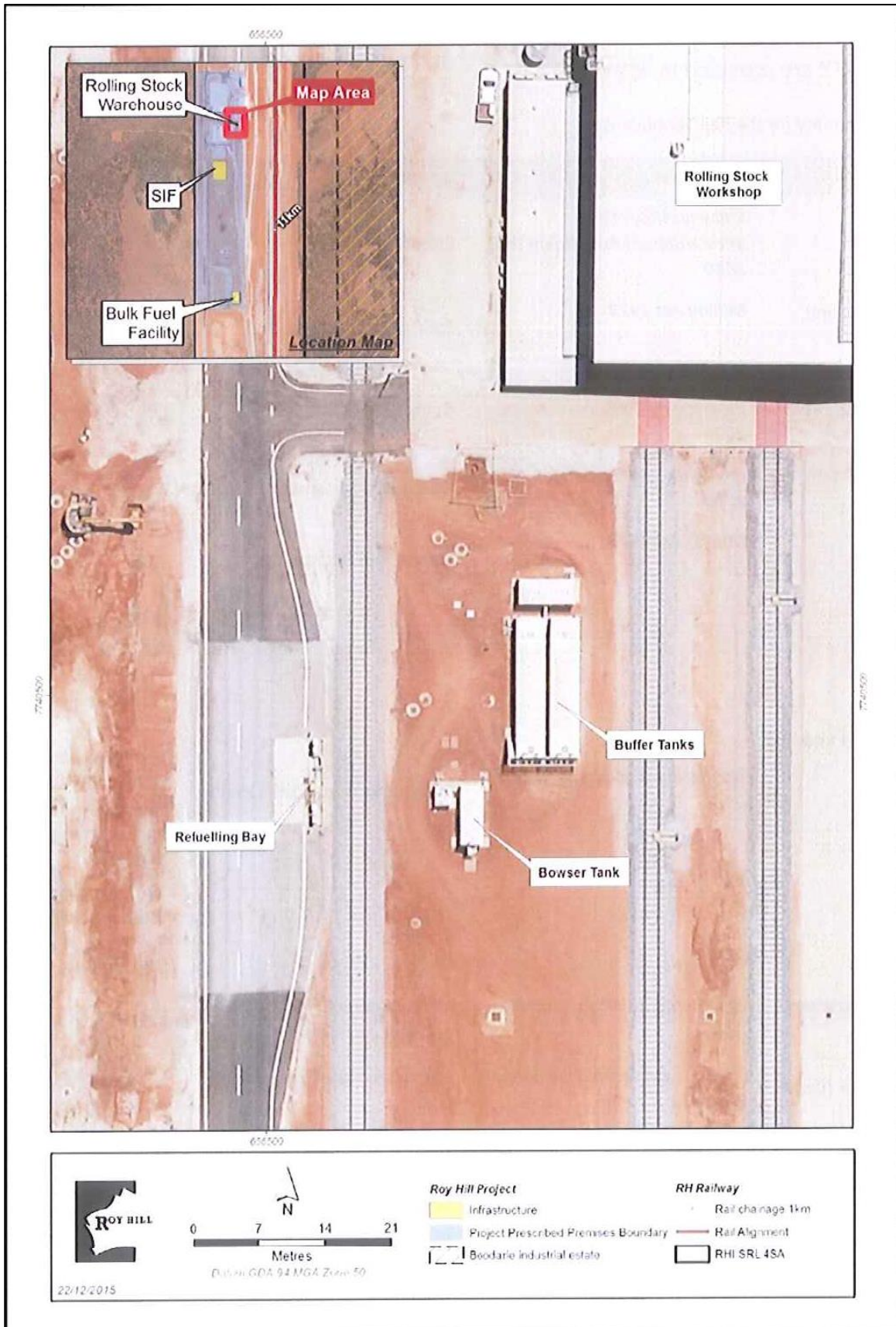
Premises map, map of waste facility, containment infrastructure and emission points

The Premises is shown in the map below. The blue shaded area depicts the Premises boundary.

The location of the waste facility and containment infrastructure defined in Tables 1.2.1 and 1.2.2 are shown below.

The locations of the emission points defined in Table 2.2.1 are shown below.







Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

Licence: L8948/2016/1 Licensee: Roy Hill Infrastructure Pty Ltd
 Form: LR1 Period:
 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	Cumulative volume	m ³ /day	Monthly		
	Biochemical Oxygen Demand	mg/L	Spot sample		
	Total Suspended Solids	mg/L			
	pH	pH units			
	Total Nitrogen	mg/L			
	Total Phosphorus	mg/L			
	<i>E.coli</i>	MPN/ mL			
Bulk Fuel Facility OWS Discharge Point	Total Recoverable Hydrocarbons	mg/L			
Rolling Stock Workshop OWS Discharge Point	Total Recoverable Hydrocarbons	mg/L			

Signed on behalf of Roy Hill Infrastructure Pty Ltd: Date:



Licence: L8948/2016/1
 Form: N1

Licensee: Roy Hill Infrastructure Pty Ltd
 Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.
 Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	



Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Roy Hill Infrastructure Pty Ltd	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Proponent: Roy Hill Infrastructure Pty Ltd

Licence: L8948/2016/1

Registered office: Hancock House
28-42 Ventnor Avenue
WEST PERTH WA 6005

ACN: 130 249 633

Premises address: Roy Hill Rail Terminal Yard
Part of Special Rail Licence Miscellaneous Licence 4SA within coordinates
E656560.3 N7740752.7; E656561.1 N7739667.5; E656327.8 N7739668.3;
and E656325.2 N7740752.4
SOUTH HEDLAND WA 6722

Issue date: Thursday, 31 March 2016

Commencement date: Monday, 4 April 2016

Expiry date: Thursday, 3 April 2036

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Sonya Poor
Licensing Officer

Decision Document updated by: Haley Brunel
Licensing Officer

Decision Document authorised by: Alana Kidd
Delegated Officer



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/>	
	New Licence <input checked="" type="checkbox"/>	
	Licence amendment <input type="checkbox"/>	
	Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	73	3,200 cubic metres in aggregate
	85	25 cubic metres per day
Application verified	Date: 12/01/2016	
Application fee paid	Date: 17/02/2016	
Works Approval has been complied with	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/> N/A <input type="checkbox"/>
Compliance Certificate received	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/> N/A <input type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/> Referral decision No: Managed under Part V <input type="checkbox"/>



		Assessed under Part IV <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: 847 EPA Report No: 1370
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		

3 Executive summary of proposal and assessment

Roy Hill Infrastructure Pty Ltd (the Licensee) operates a Bulk Fuel Storage and Handling Facility (BFS) and wastewater treatment plant (WWTP) at the Roy Hill Rail Terminal Yard (RTY) under W5639/2014/1 to support mining related activities within Special Rail Licence (SRL) Miscellaneous Licence 4SA. The Roy Hill Railway holds tenure via the 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 Roy Hill Iron Ore Mine.

The RTY is located approximately 16 kilometres (km) south of Port Hedland, within Boodarie Industrial Estate. The nearest residence is the Boodarie Station Homestead located around 4 km from the RTY.

The BFS is capable of storing 3,200 cubic metres (m³) of C1 combustible liquid (diesel). There are also two self-bunded diesel buffer tanks (110 m³ each) and a self bunded bowser tank (30 m³) at the Rolling Stock Workshop.

The WWTP has a maximum design capacity of 25 m³ per day and treats wastewater generated from staff onsite at the terminal and discharges treated wastewater to land via a 4,988 square metre (m²) spray irrigation field.

Compliance documentation required under W5639/2014/1 for the WWTP and BFS were received by DER on 28 April 2015 and 27 July 2015 respectively and a commissioning report for both facilities was received on 24 December 2015.

The main emission of significance associated with the operation of the BFS and WWTP is emissions to land. Due to the design and the Licensee's management commitments, the environmental risk of emissions and discharges from this premises is considered low.

On 20 October 2016 the Licensee submitted an application to DER for an amendment to the RTY Licence (L8948/2016/1) to allow for an alternative method for the analysis of *Escherichia coli* (*E.coli*) in treated wastewater from the Category 85 wastewater treatment plant (WWTP) operated at the premises.



Monitoring requirements for the WWTP treated wastewater are specified under condition 3.2.1. Condition 3.2.1 requires *E.coli* to be monitored quarterly with results reported in colony-forming units per 100 millilitres (CFU/100 mL); the unit applicable to the Membrane Filtration method of analysis.

The Membrane Filtration method is recommended for use for samples where the turbidity of the water is low, as this method can be affected by sediment and the presence of a high number of non-targeted organisms on the filter. The Licensee has advised that a high number of non-target organism have been identified using the Membrane Filtration method of analysing samples in waste water collected from the Rail Terminal Yard WWTP.

To eliminate non-target organisms and therefore obtain more accurate *E.coli* results, the Licence is seeking approval to use the Colilert Method for the analysis of *E.coli*, with results reported in Most Probable Number per 100 millilitres (MPN/100mL).

The Colilert Method is accredited by the National Association of Testing Authorities (NATA) and is accepted by the Western Australian Department of Health, as detailed in the *Guidelines for the Non-Potable Uses of Recycled Water in Western Australia* (Department of Health, August 2011).

At the time of this amendment, conditions which are not valid, enforceable and/or risk-based have been removed from the Licence in accordance with the Guidance Statement *Setting conditions* (DER, October 2015). The definitions specified under condition 1.1.2 have also been updated in accordance with recent administrative changes implemented within the Department and the Annual Audit Compliance Report template has been removed from the Licence.

This licence was issued in July 2016 and the existing conditions are considered adequate, hence these have not been reassessed.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.1.5 (removed)	<p>Previous condition 1.1.5 specified:</p> <p><i>“Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:</i></p> <p>(a) <i>pollution;</i></p> <p>(b) <i>unreasonable emission;</i></p> <p>(c) <i>discharge of waste in circumstances likely to cause pollution; or</i></p> <p>(d) <i>being contrary to any written law.”</i></p> <p>This condition is not valid, enforceable or risk based as it is an explanatory statement, not a condition. In accordance with the Guidance Statement <i>Setting conditions</i> (DER, October 2015), which requires conditions to be valid, enforceable and risk based, this condition has been removed from the Licence.</p>	<p>Licence application supporting documentation.</p> <p><i>Dangerous Goods Safety Act 2004.</i></p> <p>Guidance Statement <i>Setting conditions</i> (DER, October 2015)</p>
	Previous L1.2.1 – L1.2.2 (removed).	<p>Previous condition 1.2.1 specified:</p> <p><i>“The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer’s specification or any relevant and effective internal management system.”</i></p> <p>This condition is not enforceable as it is not sufficiently clear or certain what the requirements are for compliance to be achieved. In accordance with the Guidance Statement <i>Setting conditions</i> (DER, October 2015), which requires conditions to be enforceable, this condition has been removed from the Licence.</p> <p>Previous condition 1.2.2 specified:</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>"The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system."</i></p> <p>This condition is not valid as it inconsistently regulates activities below prescribed category thresholds. In accordance with the Guidance Statement <i>Setting conditions</i> (DER, October 2015), which requires conditions to be valid, this condition has been removed from the Licence.</p> <p>DER's assessment and decision making with respect to spills and leaks of hydrocarbons and sewage are detailed in Appendix A.</p>	
Premises operation	L1.2.1 - L1.2.5.	DER's assessment and decision making are detailed in Appendix B.	<p>Licence application supporting documentation.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004.</i></p>
Emissions general	L2.1.1.	A numerical limit has been set through condition L2.2.2 and therefore condition L2.1.1 regarding the recording and investigation of exceedances of limits has been included.	N/A.
Point source emissions to air including monitoring	N/A.	There are no point source emissions to air during the operation of the BFS and WWTP. No conditions relating to point source emissions to air or the monitoring of these emissions are required to be added to the licence.	General provisions of the <i>Environmental Protection Act 1986.</i>
Point source	N/A.	There are no point source emissions to surface water during the operation of the BFS	General



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
emissions to surface water including monitoring		<p>and WWTP.</p> <p>The RTY is located within the Turner Creek Catchment Area which is an area subject to flooding from the Turner River during extreme rainfall events. The RTY is protected via two drains that divert surface water from the facility. There are no watercourses or drainage lines within the vicinity of the BFS or WWTP.</p> <p>No conditions relating to point source emissions to surface water or the monitoring of these emissions are required to be added to the licence.</p>	provisions of the <i>Environmental Protection Act 1986</i> .
Point source emissions to groundwater including monitoring	N/A.	<p>There are no point source emissions to groundwater during the operation of the BFS and WWTP. Water quality is potable to brackish 230 – 7,600 mg/L and the depth to groundwater has been measured at around 8 m below ground level at the RTY.</p> <p>No conditions relating to point source emissions to groundwater or the monitoring of these emissions are required to be added to the licence.</p>	General provisions of the <i>Environmental Protection Act 1986</i> .
Emissions to land including monitoring	L2.2.1, L2.2.2 and L3.2.1.	<p>DER's assessment and decision making are detailed in Appendix C.</p> <p>The monitoring requirements specified in condition 3.2.1 have been amended to allow <i>E.coli</i> to be reported in the units MPN/100 mL as the Licensee will be analysing treated wastewater using the Colilert Method, as opposed to the Membrane Filtration Method of analysis. Form LR1 in Schedule 2 of the Licence has also been updated to reflect the change in the <i>E.coli</i> reporting units.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Controlled Waste) Regulations 2004</i>.</p>
Fugitive	N/A.	Fugitive emissions of dust should not be significant during operation of the BFS and	General



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
emissions		WWTP. Fugitive emissions of dust can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i> . No conditions relating to fugitive emissions are required to be added to the licence.	provisions of the <i>Environmental Protection Act 1986</i> .
Odour	N/A.	The operation of the WWTP is unlikely to result in unacceptable odour emissions being emitted. The Licensee has committed to maintaining the WWTP in accordance with manufacturer's specifications to prevent nutrient overloading and excessive odour emissions. No conditions relating to odour are required to be added to the licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
Noise	N/A.	The operation of the BFS and WWTP are not expected to generate unacceptable levels of noise. The Licensee has a statutory responsibility to comply with the <i>Environmental Protection (Noise) Regulations 1997</i> . No conditions relating to noise are required to be added to the licence.	<i>Environmental Protection (Noise) Regulations 1997</i> .
Monitoring general	L3.1.1 – L3.1.4.	Conditions L3.1.1 to L3.1.4 ensures the Australian Standards are complied with when performing monitoring activities, samples are tested by a laboratory with NATA accreditation (if applicable) and that any monitoring equipment is calibrated to ensure accurate results.	N/A.
Monitoring of inputs and outputs	N/A.	No conditions relating to the monitoring of inputs and outputs are required to be added to the licence.	N/A.
Process monitoring	N/A.	No conditions relating to process monitoring are required to be added to the licence.	N/A.
Ambient quality	N/A.	No conditions relating to ambient quality monitoring are required to be added to the licence.	N/A.



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
monitoring			
Meteorological monitoring	N/A.	No conditions relating to meteorological monitoring are required to be added to the licence.	N/A.
Improvements	N/A.	No conditions relating to improvements are required to be added to the licence.	N/A.
Information	L4.1.1 – L4.1.3, L4.2.1. – L4.2.3 and L4.3.1. Previous L4.1.2 (removed)	<p>Conditions on licence in relation to records, reporting, non-annual reporting and notification requirements.</p> <p>Previous condition 4.1.2 specified: <i>“The Licensee shall ensure that:</i> (a) <i>any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and</i> (b) <i>any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.”</i></p> <p>This condition is not enforceable as the requirements for compliance are not clear. In accordance with the Guidance Statement <i>Setting conditions</i> (DER, October 2015), which requires conditions to be enforceable, this condition has been removed from the Licence.</p>	Guidance Statement <i>Setting conditions</i> (DER, October 2015)
Licence Duration	N/A.	The licence is to be granted for a 20 year period. SRL Miscellaneous Area 4SA was granted under the <i>Mining Act 1978</i> on 5 July 2011 for the term of 30 years. The environmental risk of emissions and discharges from this premises is low and under the <i>Environmental Protection Act 1986</i> DER is able to amend the licence at any time to remove redundant conditions or impose new conditions and requirements where necessary.	N/A.



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
22/02/2016	Application advertised in West Australian (or other relevant newspaper)	No comments received	N/A
2/03/2016	Proponent sent a copy of draft instrument	<p>Comments received on 23/03/2016.</p> <ul style="list-style-type: none"> Condition 1.3.4: Reference to 'waste material' to be removed as diesel is not a waste material. Condition 1.3.5: Does this mean that additional fuel can't be stored at the site? Table 3.2.1: Request for the frequency of the Bulk Fuel Facility and Rolling Stock Workshop OWS Discharge Points to be quarterly (unless there is no discharge during the quarter). Table 4.2.1 – Table 3.2.1: The Licensee is not required to monitor Total Dissolved Solids in Table 3.2.1, request for this to be removed. Table 4.2.2: Request for a 30 day period rather than 14 day. Form LR1: WWTP parameters are quarterly in Table 3.2.1. 	<ul style="list-style-type: none"> Condition 1.3.4: Updated to read 'hydrocarbons' rather than waste material. Condition 1.3.5: Updated to refer to the containment cells as specified in Table 1.3.2. Additional fuel can be stored onsite, but the capacities stipulated for the BFS and Rolling Stock Workshop aren't to be exceeded. Table 3.2.1: Bulk Fuel Facility and Rolling Stock Workshop OWS Discharge Points changed as per request. Table 4.2.1 – Table 3.2.1: Total Dissolved Solids removed. Table 4.2.2: Changed to 30 days to be consistent with L8903/2015/1 for the Roy Hill Temporary Power Station. Form LR1: The frequency for monitoring the WWTP parameters is quarterly. The averaging period is 'spot sample', so this will be retained.
22/12/2016	Proponent sent correspondence advising of 21 day consultation period and provided with a copy of the draft	The Licensee submitted the signed waiver form to DER on 11 January 2017. At the same time the Licensee has requested that	The Delegated Officer has considered the Licensee's request and determined to implement the change as requested.



Date	Event	Comments received/Notes	How comments were taken into consideration
	amended Licence.	the requirement for quarterly monitoring to be 45 days apart only apply to the wastewater treatment plant. On occasion discharges from the oily water separator may only occur once during a quarter, possibly within 45 days of a discharge which occurs in the following quarter.	



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 2: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High



Appendix A

General conditions

Emission Description

Emission: Spills or leaks of hydrocarbons from tanks and flow lines at the BFS. Spills or leaks of hydrocarbons during transfers. Potential spills or leaks of sewage waste or chemicals from WWTP treatment tanks. Stormwater potentially contaminated with hydrocarbons or sewage.

Impact: Potential contamination of surrounding land and surface water drainage systems is likely to be localised with limited impact on ecology of surface water from the addition of nutrients and hydrocarbons.

Controls:

- Uncontaminated stormwater is diverted away from the BFS and WWTP by bunds and drainage infrastructure;
- The BFS storage tanks are located in a high density polyethylene (HDPE) lined bund with a design capacity to accommodate 110% of the largest tank volume, plus 20 minutes of fire fighting water applied at the rate specified in Australian Standard 1940-2004, plus a 1 in 20 year rainfall event;
- Bund permeability is less than 10^{-9} metres per second;
- All storage and transfer points are located over a spill containment system;
- Any hydrocarbon contaminated waste is removed by a licensed contractor;
- Spill kits are available for clean-up of minor spills and leaks;
- The tanks located at the Rolling Stock Workshop are self-bunded; and
- Liquid Sodium Hypochlorite (2 x 20L drums) is stored in a bunded storage area within the WWTP.

Risk Assessment

Consequence: Minor

Likelihood: Possible

Risk Rating: Moderate

Regulatory Controls

No conditions relating to stormwater management are required on the licence. The general provisions of the *Environmental Protection Act 1986* apply and the *Environmental Protection (Unauthorised Discharges) Regulations 2004* prohibit discharges of hydrocarbons and/or sewage to the environment.

A condition regarding the containment of hydrocarbons at the BFS and Rolling Stock Workshop has been added to the licence (refer to Appendix B BFS). The storage of environmentally hazardous materials is also regulated by the *Dangerous Goods Safety Act 2004* and associated Regulations.

Residual Risk

Consequence: Minor

Likelihood: Rare

Residual Risk Rating: Low



Appendix B

Premises operation

Descriptive or numerical limits are set through conditions L1.2.1, L1.2.3 and L2.2.2 and therefore condition L1.3.1 regarding the recording and investigation of exceedances of limits has been included.

BFS

The BFS consists of two separate category 6 storage tanks with a capacity of 1,600 m³ each. Each tank has a diameter of around 13 metres (m) and is 12 m high. The tanks are located within a concrete and HDPE lined bund on an engineered concrete ring beam foundation suitably sized and supported to meet the requirements of relevant standards and life cycle duty. The ring beam has under tank floor leak detection indicators.

Each tank functions independently; one is used for receiving fuel from the delivering fuel train or road train while the other is used for fuel distribution around the mine site. A valving system prevents flow from one tank to the other.

The BFS transfers fuel to the Rolling Stock Workshop buffer tanks via an underground pipeline, while the bowser tank is an independent tank filled by road train.

Regulatory controls

A containment infrastructure requirement condition L1.2.4 has been added to the licence for the BFS and the Rolling Stock Workshop buffer tanks and bowser tank.

WWTP

The WWTP is a modular system consisting of two primary tanks, an aeration tank, a clarifier tank, a filter feed tank, a chlorine contact tank and a plant control room housed in a sea container.

Emission Description

Emission: Untreated sewage gaining access to the environment.

Impact: Contamination of surrounding land and potential impacts on the ecology of land from the addition of nutrients.

Controls:

- All WWTP tanks are industrial grade polyethylene, and pipes and fittings are electrofusion welded to prevent any leaks or spills;
- A surge control design is included with overflow weirs to prevent overflows due to sudden flows;
- A large irrigation/chlorine contact tank ensures surges in flow of treated wastewater can be accommodated to prevent overloading of the spray irrigation area;
- All sludge and other solid materials removed from the WWTP are transported offsite by a licensed contractor for disposal to an appropriately licensed facility;
- The WWTP is fenced;
- The WWTP is regularly serviced in accordance with the manufacturer's specifications; and
- Regular inspection and maintenance is undertaken and maintenance records kept to ensure the WWTP is operating effectively.



Risk Assessment

Consequence: Insignificant

Likelihood: Rare

Risk Rating: Low

Regulatory Controls

Conditions have been added to the licence via conditions L1.2.2 and L1.2.3 for the management of waste and irrigation requirements. Conditions have also been added to the licence requiring the WWTP treated effluent to be monitored for Biochemical Oxygen Demand, Total Suspended Solids, pH, Total Nitrogen, Total Phosphorus and *E.coli* on a quarterly basis (refer to Appendix C emissions to land including monitoring for the WWTP).

Residual Risk

Consequence: Insignificant

Likelihood: Rare

Residual Risk Rating: Low

Process limits

The recording and the establishment of limits for process throughputs has been included in the licence through condition L1.2.5 – Production or design capacity limits. This has been included to ensure the Licensee does not exceed the approved throughput for category 73, which includes the BFS and three tanks at the Rolling Stock Workshop.



Appendix C

Emissions to land including monitoring

BFS

Emission Description

Emission: Contaminated water from within the BFS bund.

Impact: Contamination of surrounding land and potential impacts on the ecology of land from the addition of hydrocarbons and heavy metals.

Controls:

- A soak well has been installed within the BFS bund that feeds to the SPEL Purceptor oily water separator (OWS) located outside of the bund wall;
- The soak well contains a grate over the tank, which allows for pump out of fluids if required. Otherwise the tank feeds to the nearby OWS;
- Treated water from the OWS at the BFS will be less than 15 mg/L Total Recoverable Hydrocarbons prior to any re-use or discharge to the environment;
- OWS equipment is maintained as per manufacturer's instruction or more regularly as required to ensure efficient operation; and
- Sediment and waste removed from the OWS to a licensed facility for disposal to maintain the capacity of the facility.

Risk Assessment

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low

Regulatory Controls

Condition L2.2.1 includes the emission point to land for the OWS discharge point at the BFS. An emission limit to land of 15 mg/L Total Recoverable Hydrocarbons has been added to the licence through condition L2.2.2 and condition L3.2.1 requires the Licensee to monitor Total Recoverable Hydrocarbons from the OWS discharge point on a quarterly basis (unless there is no discharge during the quarter).

Rolling Stock Workshop OWS

An OWS at the light vehicle wash down facility collects potentially contaminated water from the wash down bay, locomotive wash down area and the Rolling Stock Workshop. Treated water from the OWS is then stored in a tank (30 m³) for re-use in the light vehicle and locomotive wash down facilities. Overflow from the tank is directed to stormwater drains.

Regulatory Controls

Condition L2.2.1 includes the emission point to land for the OWS discharge point at the Rolling Stock Workshop. An emission limit to land of 15 mg/L Total Recoverable Hydrocarbons has been added to the licence through condition L2.2.2 and condition L3.2.1 requires the Licensee to monitor Total Recoverable Hydrocarbons from the OWS discharge point on a quarterly basis (unless there is no discharge during the quarter).

WWTP

Emission Description

Emission: Treated wastewater discharged to the 4,988 m² spray irrigation field, which comprises native vegetation.



Impact: Contamination of surrounding land and surface water drainage systems. Potential impacts on ecology of surface water from the addition of nutrients and pathogens.

Controls:

- The spray irrigation field is fenced with signs erected to deter human entry;
- The WWTP and spray irrigation field is located to minimise ponding and flooding within the facilities; and
- The irrigation area is located approximately 100 m from the Rail Terminal Yard administration buildings and includes six rows of four low angle, large droplet wobbler sprayers.

A comparison of the concentration of treated wastewater from the WWTP against the Department of Health (DoH) *Guidelines for the Non-potable Uses of Recycled Water in Western Australia*, August 2011 (medium exposure risk level) and *National Water Quality Management Strategy, Australian Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)*, 1997 can be seen in Table 1 below:

Table 1: Comparison of the concentration of treated wastewater from the WWTP against the DoH Guideline and ARMCANZ/ANZECC 1997

Parameter	Treated Wastewater Concentration	Australian Guidelines for Sewage Systems: Effluent Management	Guidelines for the Non-potable Uses of Recycled Water in WA
Total Nitrogen	25 mg/L	20 -50 mg/L	
Total Phosphorus	7 mg/L	6-12 mg/L	
Biological Oxygen Demand	20 mg/L	20-30 mg/L	<20mg/L
Total Suspended Solids	30 mg/L	25 – 40 mg/L	<30mg/L
E. Coli	<100 cfu/100mL	10 ⁵ -10 ⁶ organisms/100mL	<10 cfu/100mL

Risk Assessment

Consequence: Insignificant

Likelihood: Possible

Risk Rating: Low

Regulatory Controls

Condition L3.2.1 has been added to the licence for the spray irrigation field emission point to land. The Licensee is required to monitor the treated effluent WWTP (prior to discharge to the spray irrigation field) for Biochemical Oxygen Demand, Total Suspended Solids, pH, Total Nitrogen, Total Phosphorus and *E.coli* on a quarterly basis. The cumulative volume discharged must also be recorded (refer also to Appendix B premises operation for the WWTP under Regulatory Controls).

Residual Risk

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low