Government of Western Australia
Department of Environment Regulation

# Licence

## *Environmental Protection Act 1986,* Part V

## Licensee: M-I Australia Pty Ltd

## Licence: L8901/2014/1

**Registered office:** Level 5
The Capital Centre
256 St. Georges Terrace
PERTH WA 6000

**ACN:** 009 214 162

**Premises address:** Broome Mud Plant Facility
Lot E3 Port Drive
BROOME WA 6725
Being a Portion of Lot 621 on Plan 70861 and a Portion of Lot 698 on Plan 209491 as depicted in Schedule 1

**Issue date:** Thursday, 20 August 2015

**Commencement date:** Monday, 24 August 2015

**Expiry date:** Sunday, 23 August 2020

**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 |
|---|---|---|---|
| 33 | Chemical blending or mixing: premises on which chemicals or chemical products are mixed, blended or packaged in a manner that causes or is likely to cause a discharge of waste into the environment. | 500 tonnes or more per year | 39 682 tonnes per year |
| 73 | Bulk storage of chemicals etc.: premises on which acids, alkalis or chemicals that —<br>a) contain at least one carbon to carbon bond; and<br>b) are liquid at STP (standard temperature and pressure), are stored. | 1 000 cubic metres in aggregate | 5 570 cubic metres in aggregate |

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

.....
Jonathan Bailes
Officer delegated under section 20
of the *Environmental Protection Act 1986*

# Contents



# 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**
M-I Australia Pty Ltd (M-I Australia) has applied to DER for a licence to operate a drilling fluids facility at the Port of Broome, on an allotment commonly known as Lot E3 on Port Drive, which comprises an area of around 1.2 hectares. Lot E3 is around 15km south-west of the Broome town site and is located within the boundaries of the Broome Port Authority.

The drilling fluids facility, known as the 'Broome Mud Plant Facility', will service offshore oil and gas operations in the nearby Browse Basin. The Broome Mud Plant Facility will batch, store, and transfer various drilling fluids, including synthetic and water based fluids, saline solutions, and bentonite and barite in order to supply customer requirements for deep-water oil and gas drilling operations. These fluids are commonly referred to as 'drilling muds' due to their mud-like appearance and their basic ingredients being ground stone and clays. These are mixed with other additives such as viscosity modifiers and fluid loss control agents and added to a base fluid of water to make water based muds (WBMs), or to synthetic fluids such as linear alpha olefins to make synthetic based muds (SBMs). The plant will also process reclaimed fluids via a centrifuging process, in order that they can be re-used in subsequent drilling operations.

The Broome Mud Plant Facility consists of a bunded tank farm including:

- 6 x 175 cubic metre ($m^3$) synthetic base fluid (SBF) storage tanks that will store class C1 combustible liquids;
- 16 x 175$m^3$ liquid mud storage tanks;
- 4 x 80$m^3$ mixing tanks;
- 8 x 175$m^3$ brine storage tanks;
- A covered dangerous goods storage area;
- A stormwater treatment system including oil-water separator and two stormwater retention sumps with a combined storage capacity of 472 $m^3$; and
- Support buildings (offices and welfare).

This Licence is for the operation of a new facility established under Works Approval W5637/2014/1. The licences and works approvals issued for the Premises since 16/06/2015 are:

| Instrument log | | |
|---|---|---|
| **Instrument** | **Issued** | **Description** |
| W5637/2014/1 | 16/06/2014 | New application for works approval to construct Broome Mud Plant Facility |
| L8901/2015/1 | 20/08/2015 | New application for licence to allow operation of Broome Mud Plant Facility |

**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 period'** means the inclusive period from 1 January to 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;*

**'AS/NZS 5667.11'** means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters;*

**'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 correspondence means;

Manager - Licensing (Process Industries)

At the following address:

Department of Environment Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850
Telephone: (08) 9333 7510
Facsimile: (08) 9333 7550
Email: industry.regulation@der.wa.gov.au;

**'Licence'** means this Licence numbered L8901/2015/1 and issued under the Act;

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

**'mbgl'** means meters below ground level;

**'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;

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

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

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

**'six monthly'** means the 2 inclusive periods from 1 January to 30 June and 1 July to 31 December in the same year;

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

**'usual working day'** means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia;

**'µS/cm'** means microsiemens per centimetre.

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.

1.1.5 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:
(a) pollution;
(b) unreasonable emission;
(c) discharge of waste in circumstances likely to cause pollution; or
(d) being contrary to any written law.

### 1.2 General conditions

1.2.1 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.

1.2.2 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.

1.2.3 The Licensee shall:
(a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and
(b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.[1]

Note1: *The Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.

# 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 and monitoring locations** | **Description** | **Source including abatement** |
| L1 | Premises stormwater drainage Sump 1 | Potentially contaminated stormwater treated via the Premises Oil-water Separator |
| L2 | Premises stormwater drainage Sump 2 | Potentially contaminated stormwater treated via the Premises Oil-water Separator |

2.2.2 The Licensee shall not cause or allow emissions to land that do not meet 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** |
| L1 and L2 | pH | 6.5 to 7.5 | Spot sample |
| | Total Recoverable Hydrocarbons | 10mg/L | |
| | Total Suspended Solids | 80mg/L | |
| | Electrical Conductivity | 1,800µS/cm | |

# 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;
(c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
(d) 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 six monthly monitoring is undertaken at least 5 months apart.

3.1.3 The Licensee shall record production or throughput data and any other process parameters relevant to any non-continuous or CEMS monitoring undertaken.

3.1.4 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.

3.1.5 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** |
| L1 and L2 | Volumetric flow rate | L/s | Continuous |
| | pH[1] | | Prior to discharge to the environment |
| | Total Recoverable Hydrocarbons | mg/L | |
| | Total Dissolved Solids | mg/L | |
| | Total Suspended Solids | mg/L | |
| | Electrical Conductivity | µS/cm | |
| | Chloride | mg/L | |
| | Hardness | mg/L | |
| | Metals - aluminium, arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium and zinc | mg/L | |

Note 1: In-field non-NATA accredited analysis permitted

### 3.3 Ambient environmental quality monitoring

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 and identified on the map of monitoring points in Schedule 1 according to the specifications in that table.

| Table 3.3.1: Monitoring of ambient groundwater quality | | | | |
|---|---|---|---|---|
| **Monitoring point reference and location** | **Parameter** | **Units** | **Averaging period** | **Frequency** |
| GQ1 | Standing water level[1] | mbgl | Spot sample | Six monthly |
| | pH[1] | | | |
| | Electrical conductivity | µS/cm | | |
| | Chloride | mg/L | | |
| | Total Recoverable Hydrocarbons | mg/L | | |
| | Total Dissolved Solids | mg/L | | |
| | Metals - aluminium, arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium and zinc | mg/L | | |

Note 1: In-field non-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 shall ensure that:
- (a) 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
- (b) 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.

4.1.3 The Licensee shall complete an Annual Audit Compliance Report (AACR) indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.

4.1.4 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 28 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 form[1] |
|---|---|---|
| - | 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 |
| - | Throughput in tonnes per year | Tabular format |
| Table 3.2.1 | Volumetric flow rate, pH, Total Recoverable Hydrocarbons, Total Dissolved Solids, Total Suspended Solids, Turbidity, Electrical Conductivity, aluminium, arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium and zinc | None specified |
| Table 3.3.1 | Standing water level, pH, electrical conductivity, Total Recoverable Hydrocarbons, Total Dissolved Solids, Total Suspended Solids, Turbidity, Electrical Conductivity, aluminium, arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium and zinc | None specified |
| 4.1.3 | Compliance | AACR |
| 4.1.4 | 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:
(a) any relevant process, production or operational data recorded under Condition 3.1.3; and
(b) 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[1] |
|---|---|---|---|---|
| - | Copies of original monitoring reports submitted to the Licensee by third parties | Not Applicable | Within 14 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**

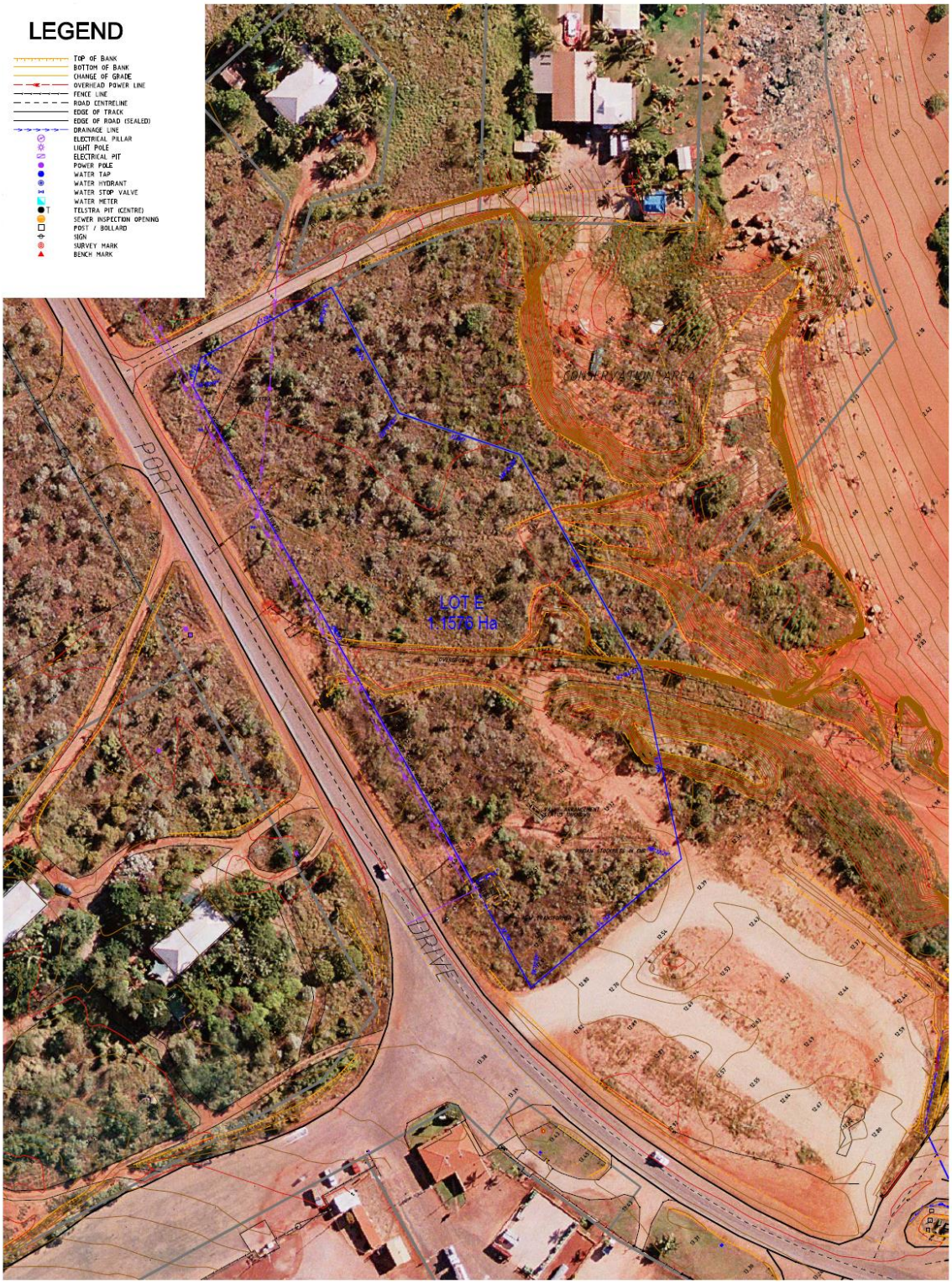
| Condition or table (if relevant) | Parameter | Notification requirement[1] | Format or form[2] |
|---|---|---|---|
| 2.1.1 | Breach of any limit specified in the Licence | Part A: As soon as practicable but no later than 5pm of the next usual working day.<br><br>Part B: As soon as practicable | N1 |
| 3.1.5 | 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

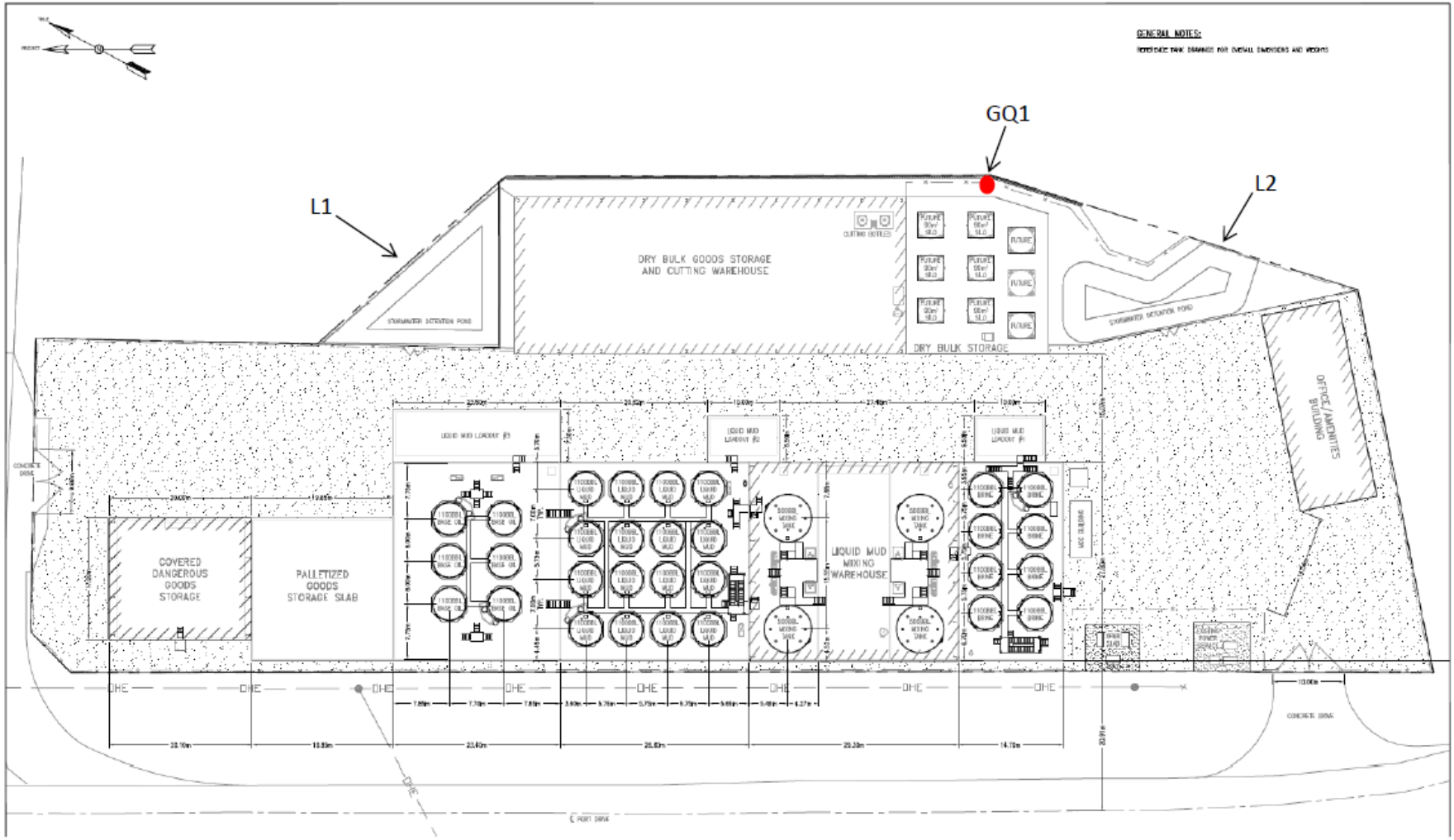
### Premises map

The Premises is shown in the maps below. The blue line depicts the Premises boundary.



**Map of emission points and monitoring locations**

The location of the emission points defined in Table 2.2.1 and monitoring point defined in Tables 3.2.1 and 3.3.1 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.

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## ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

## SECTION A

**LICENCE DETAILS**

| | |
|---|---|
| Licence Number: | Licence File Number: |
| Company Name:<br><br>Trading as: | ABN: |
| Reporting period:<br><br>_____ to _____ | |

**STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS**

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes ☐ Please proceed to Section C

No ☐ Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:

# SECTION B

## DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

| a) Licence condition not complied with: | |
|---|---|
| | |
| b) Date(s) when the non compliance occurred, if applicable: | |
| | |
| c) Was this non compliance reported to DER?: | |
| ☐ Yes ☐ Reported to DER verbally<br>Date _____<br>☐ Reported to DER in writing<br>Date _____ | ☐ No |
| d) Has DER taken, or finalised any action in relation to the non compliance?: | |
| | |
| e) Summary of particulars of the non compliance, and what was the environmental impact: | |
| | |
| f) If relevant, the precise location where the non compliance occurred (attach map or diagram): | |
| | |
| g) Cause of non compliance: | |
| | |
| h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance: | |
| | |
| i) Action taken or that will be taken to prevent recurrence of the non compliance: | |
| | |

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:

# SECTION C

## SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

| If the licence holder is | | The Annual Audit Compliance Report must be signed and certified: |
|---|---|---|
| An individual | □ | by the individual licence holder, or |
| | □ | by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf. |
| A firm or other unincorporated company | □ | by the principal executive officer of the licensee; or |
| | □ | by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation. |
| A corporation | □ | by affixing the common seal of the licensee in accordance with the *Corporations Act 2001*; or |
| | □ | by two directors of the licensee; or |
| | □ | by a director and a company secretary of the licensee, or |
| | □ | if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or |
| | □ | by the principal executive officer of the licensee; or |
| | □ | by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation. |
| A public authority (other than a local government) | □ | by the principal executive officer of the licensee; or |
| | □ | by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation. |
| a local government | □ | by the chief executive officer of the licensee; or |
| | □ | by affixing the seal of the local government. |

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. There is a maximum penalty of $50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: _____/_____/_____

SEAL (if signing under seal)

Licence: L8901/2015/1 Licensee: M-I Australia Pty Ltd
Form: N1 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 M-I Australia Pty Ltd | |
| Date | |

Government of Western Australia
Department of Environment Regulation

# Decision Document

## *Environmental Protection Act 1986,* Part V

## Proponent: M-I Australia Pty Ltd

## Licence: L8901/2015/1

| | |
|---|---|
| **Registered office:** | Level 5<br>The Capital Centre<br>256 St. Georges Terrace<br>PERTH WA 6000 |
| **ACN:** | 009 214 162 |
| **Premises address:** | Broome Mud Plant Facility<br>Lot E3 Port Drive<br>Being a Portion of Lot 621 on Plan 70861 and a Portion of Lot 698 on Plan 209491<br>BROOME WA 6725 |
| **Issue date:** | Thursday, 20 August 2015 |
| **Commencement date:** | Monday, 24 August 2015 |
| **Expiry date:** | Sunday, 23 August 2020 |

**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 and legal requirements and that the Licence and its conditions will ensure that an appropriate level of environmental protection is provided.

| | |
|---|---|
| Decision Document prepared by: | Carmen Standring<br>Licensing Officer |
| Decision Document authorised by: | Jonathan Bailes<br>Delegated Officer |

# Contents



# 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 ☐<br>New Licence ☒<br>Licence amendment ☐<br>Works Approval amendment ☐ | |
| Activities that cause the premises to become prescribed premises | **Category number(s)** | **Assessed design capacity** |
| | 33 | 39,682 tonnes per year |
| | 73 | 5,570 cubic metres in aggregate |
| Application verified<br>Application fee paid | Date: 02/07/2015<br>Date: 09/07/2015 | |
| Works Approval has been complied with<br>Compliance Certificate received | Yes☒ No☐ N/A☐<br>Yes☒ No☐ N/A☐ | |
| Commercial-in-confidence claim | Yes☐ No☒ | |
| Commercial-in-confidence claim outcome | N/A | |
| Is the proposal a Major Resource Project? | Yes☐ No☒ | |
| Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*? | Yes☐ No☒ | Referral decision No:<br>Managed under Part V ☐<br>Assessed under Part IV ☐ |
| Is the proposal subject to Ministerial Conditions? | Yes☐ No☒ | Ministerial statement No:<br>EPA Report No: |
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the *Environmental Protection Act 1986*)? | Yes☐ No☒<br>Department of Water consulted Yes ☐ No ☒ | |
| Is the Premises within an Environmental Protection Policy (EPP) Area Yes☐ No☒ | | |
| Is the Premises subject to any EPP requirements? Yes☐ No☒ | | |

# 3 Executive summary of proposal and assessment

M-I Australia Pty Ltd (M-I Australia) has applied to DER for a licence to operate a drilling fluids facility at the Port of Broome, on an allotment commonly known as Lot E3 on Port Drive, which comprises an area of around 1.2 hectares. Lot E3 is around 15km south-west of the Broome town site and is located within the boundaries of the Broome Port Authority.

The drilling fluids facility, known as the 'Broome Mud Plant Facility', will service offshore oil and gas operations in the nearby Browse Basin. The Broome Mud Plant Facility will batch, store, and transfer various drilling fluids, including synthetic and water based fluids, saline solutions, and bentonite and barite in order to supply customer requirements for deep-water oil and gas drilling operations. These fluids are commonly referred to as 'drilling muds' due to their mud-like appearance and their basic ingredients being ground stone and clays. These are mixed with other additives such as viscosity modifiers and fluid loss control agents and added to a base fluid of water to make water based muds (WBMs), or to synthetic fluids such as linear alpha olefins to make synthetic based muds (SBMs). The plant will also process reclaimed fluids via a centrifuging process, in order that they can be re-used in subsequent drilling operations.

The Broome Mud Plant Facility consists of a bunded tank farm including:

- 6 x 175 cubic metre ($m^3$) synthetic base fluid (SBF) storage tanks that will store class C1 combustible liquids;
- 16 x 175$m^3$ liquid mud storage tanks;
- 4 x 80$m^3$ mixing tanks;
- 8 x 175$m^3$ brine storage tanks;
- A covered dangerous goods storage area;
- A stormwater treatment system including oil-water separator and two stormwater retention sumps with a combined storage capacity of 472 $m^3$; and
- Support buildings (offices and welfare).

The nearest sensitive receptor to Lot E3 is a conservation area directly to the east of the site, which extends approximately 120m through to Roebuck Bay. From the closest point of Lot E3, Roebuck Bay itself is around 65m to the east. All other surrounding land-uses are related to port operations including bulk fuel storage facilities, marine supply bases, marine vessel slipway, port administration buildings, laydown yards, and road train depots / turning areas.

A site vegetation and environmental survey conducted for Lot E3 determined no presence of Monsoon Vine Thicket or any other endangered flora species. Evidence of kangaroo / animal tracks suggest local wildlife use the area as a thoroughfare, but there is no evidence of any population of kangaroos or any endangered fauna living directly on the site.

M-I Australia has developed an Operational Environment Management Plan (OEMP) that details all on-site operations, roles and responsibilities, and environmental management controls to be implemented at the Broome Mud Plant. Environmental management controls are in place to manage emergencies, spills, cyclones, noise, insects / vermin, air quality, bush fires, and contractors and waste carriers. In addition, M-I Australia also have specific management plans for management of dust, waste, and wastewater emissions from the premises.

Potential emissions from operation of this proposal have been identified as fugitive dust, discharges of potentially contaminated stormwater to land and spills and leaks from hydrocarbon and chemical storage, handling and mixing. Due to the facility design and management controls the environmental risk of emissions and discharges from this premises has been assessed as low as indicated in the Decision Table below (section 4).

# 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** | L1.2.1 - L1.2.3 | Refer to risk assessment documented under Emissions to land including monitoring. | N/A |
| **Premises operation** | N/A | No specific premises operation conditions are required. | N/A |
| **Emissions general** | L2.1.1 | Descriptive limits will be set through condition 2.2.2 of the licence and therefore condition 2.1.1 regarding recording and investigation of exceedances of limits has been included. | N/A |
| **Point source emissions to air including monitoring** | N/A | **Operation**<br>No significant point source air emissions are expected from the operation of the Broome Mud Plant. No specific conditions relating to point source emissions to air or the monitoring of these emissions are required to be added to the licence. | N/A |
| **Point source emissions to surface water including monitoring** | N/A | **Operation**<br>There will be no point source emissions to surface water during operation of the Broome Mud Plant. The nearest surface water body, Roebuck Bay is approximately 65m east of the project site. No specific conditions relating to point source emissions to water or the monitoring of such emissions are required to be added to the licence. | N/A |
| **Point source emissions to groundwater including monitoring** | N/A | **Operation**<br>There will be no point source emissions to groundwater during operation of the Broome Mud Plant. Depth to groundwater is approximately 11m below ground level. There are no specific conditions required on the licence to manage emissions to groundwater. | 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** |
| **Emissions to land including monitoring** | L2.2.1 and L2.2.2 | **Operation**<br>*Emission:* The Broome Mud Plant will batch, blend, and store bulk volumes of drilling fluids, including synthetic and water based fluids, saline solutions, bentonite and barite, and fuels. Some hazardous materials will be used in the blending process. Activities associated with chemical blending have the potential to contaminate stormwater should it mix with process wastewater, stored chemicals or run-off from areas likely to be subject to chemical spills. Larger spills of chemicals have the potential to impact the environment by direct runoff or infiltration into the ground.<br><br>*Impact:* Contamination and / or erosion of surrounding land and surface water drainage systems. Potential impacts on ecology of soils and the adjacent marine environment (Roebuck Bay 65m east) from the addition of chemicals and sediment.<br><br>*Controls:* Discharges of environmentally hazardous materials will be prevented by ensuring the design of all storage facilities comply with relevant legislation, standards and codes of practice. The site is entirely sealed with either concrete bunds or bitumen seal. One third of the site consists of concrete bunds associated with secondary containment for the fluids stored in tanks. All stormwater collected in bunded areas will be recycled in the making of brine waters onsite (potassium chloride and sodium chloride solutions).<br><br>All tanks and chemical storage areas will comply with the requirements of the *Dangerous Goods Storage Safety Act 2004* and subsidiary regulations, as well as relevant Australian Standards including AS 1940:2004 - The storage and handling of flammable and combustible liquids. All batching of fluids onsite will be conducted within a mixing shed. All bulk powder cutting operations are to be conducted within a large warehouse. These buildings will be self bunded such that any spills of materials will be contained within the bunded areas enabling complete recovery. The liquid tank storage facilities will be located on the Port Drive side of Lot E3 to allow for emergency vehicle access from all sides in the event of a fire or similar emergency event. | General provisions of the *Environmental Protection Act 1986*<br><br>*Environmental Protection (Unauthorised Discharges) Regulations 2004*<br><br>Application supporting documentation<br><br>M-I Australia Pty Ltd "*Broome Operational Environmental Management Plan*" March 2014<br><br>*Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007* |

| DECISION TABLE | | | |
|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| | | The remaining two thirds of stormwater falling onsite will report to one of two retention ponds at the rear (north and south) of the premises (see risk assessment below). The Licensee has committed to conducting monitoring of groundwater from a bore located on the eastern boundary of the premises, which is down-gradient of groundwater flow underneath the site. Baseline groundwater monitoring has already commenced. Six monthly monitoring will detect if there have been discharges from the facility, which may accumulate over time and seep to groundwater.<br><br>Risk Assessment<br>*Consequence*: Moderate<br>*Likelihood:* Possible<br>*Risk Rating:* Moderate<br><br>Regulatory Controls<br>Licence condition 1.2.1 will require the Licensee to operate and maintain all pollution control and monitoring equipment (such as the oily water separator) to the manufacturer's specification or any relevant and effective internal management system. Condition 1.2.2 will require any spills to be immediately recovered and condition 1.2.3 will require the Licensee to implement measures to prevent stormwater run-off becoming contaminated by the activities on site. Further conditions to manage stormwater will be required under section 2.2 (Emissions to land) and section 3 (Monitoring) of the licence. Condition 3.3.1 will be included in the operating licence requiring monitoring of the groundwater quality.<br><br>Residual Risk<br>*Consequence*: Moderate<br>*Likelihood:* Unlikely<br>*Risk Rating:* Moderate | Australian Standard (AS) 1940:2004 The storage and handling of flammable and combustible liquids.<br><br>AS3780:2008 The storage and handling of corrosive substances.<br><br>Storage and handling of dangerous goods: Code of Practice (Department of Mines and Petroleum) |

| DECISION TABLE | | | |
|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| | | *Emission:* Discharge of treated stormwater from two stormwater sumps. Stormwater may need to be discharged during periods of high rainfall which may be potentially contaminated with hydrocarbons, chemicals, or sediment from site operations. Under normal conditions the majority of stormwater will be recycled in the making of fluids (e.g. brine waters). The Northern Stormwater Sump discharges to a conservation area that is jointly managed by Yawuru Native Title Holders Aboriginal Corporation and the Shire of Broome. The Southern Stormwater Sump discharges to vacant land managed by the Broome Port Authority.<br><br>*Impact:* Contamination of surrounding land (including a conservation area) and surface water systems, including Roebuck Bay 65m to the east.<br><br>*Controls:* Two stormwater sumps have been constructed on site at the rear of the premises (north and south) with a combined capacity of 472m$^3$, which is sufficient to retain flows from a critical 50 year Average Recurrent Interval storm. M-I Australia will ensure stormwater is treated to appropriate levels as discussed in the site Operations Environmental Management Plan prior to either re-using on site or (as contingency) discharge to the environment. An oil-water separator system will treat stormwater to contain less than 10mg/L Total Recoverable Hydrocarbons. Stormwater that meets discharge criteria will be pumped via a spray bar over stone pitched weirs and released to the environment along existing drain lines. Should stormwater not meet the approved water quality criteria, it will be processed through the site oil water separator again and then re-tested. Should the water quality fail the approved criteria a second time it will be disposed of via a licensed contractor to an approved waste disposal site.<br><br><u>Risk Assessment</u><br>*Consequence*: Moderate<br>*Likelihood:* Possible<br>*Risk Rating:* Moderate | |

| DECISION TABLE | | | |
|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| | | Regulatory Controls<br>Condition 2.2.1 approves the two discharge points from north and south drainage sumps. Condition 2.2.2 applies limits to the quality of stormwater that can be discharged from the drainage sumps for parameters pH, Total Recoverable Hydrocarbons, Total Suspended Solids and Electrical Conductivity. This will ensure the stormwater is treated to an appropriate level should there be a requirement to discharge to the environment from the sumps.<br><br>Residual Risk<br>*Consequence*: Moderate<br>*Likelihood:* Unlikely<br>*Risk Rating:* Moderate | |
| **Fugitive emissions** | N/A | **Operation**<br>*Emission:* There is the potential for dust emissions during operation of the Broome Mud Plant. Emission sources may include operations at the warehouse and mixing shed when breaking bulk bags of dry chemicals for mixing and transferring to various vessels and moving dry chemicals around site.<br><br>*Impact:* Reduced local air quality. Dust emissions can be harmful to human health and the environment. Elevated total suspended particulates can impact ambient environmental quality resulting in amenity impacts and can smother vegetation or cause sedimentation of the marine environment. There are no sensitive human receptors in the vicinity of the site; the surrounding land-uses are related to port operations including bulk fuel storage facilities, marine supply bases, marine vessel slipway, port administration buildings, laydown yards, and road train depots / turning areas.<br><br>*Controls:* M-I Australia have implemented a Dust Management Plan and an Operations Environmental Management Plan that details measures that will be taken to reduce potential for dust to be generated onsite. Dust emissions are controlled during transfer | General provisions of the *Environmental Protection Act 1986* |

| DECISION TABLE | | | |
|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| | | of powders by way of pneumatic transfer with vent lines in the receiving vessel (silo / truck / ship). All vent lines are connected to a dust collector which is an air filtration system capable of processing air volumes of up to 1,164 cubic feet per minute. The dust collection systems are self-cleaning via reverse pulse compressed air, which clears material from filters. The built up product is released through the bottom of the system into a bulker bag for removal and disposal by an approved waste contractor. This eliminates any discharges of powdered particulates during mixing and transferring processes. The majority of site is comprised of a concrete hardstand area, so dust is not expected to be generated in trafficable areas.<br><br>Risk Assessment<br>*Consequence:* Minor<br>*Likelihood:* Rare<br>*Risk Rating:* Low<br><br>Regulatory Controls<br>The risk of fugitive dust impacts has been assessed as low and therefore can be sufficiently regulated under section 49 of the *Environmental Protection Act 1986.* No specific conditions for dust emissions have been included on this licence.<br><br>Residual Risk<br>*Consequence:* Minor<br>*Likelihood:* Rare<br>*Risk Rating:* Low | |
| **Odour** | N/A | **Operation**<br>It is not anticipated that there will be any odour emissions during operation of the Broome Mud Plant. There are no specific conditions included on the licence for the management of odour emissions. | General provisions of the *Environmental Protection Act 1986* |

| DECISION TABLE | | | |
|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| **Noise** | N/A | **Operation**<br>Noise emissions from operation of the Broome Mud Plant are not expected to be significant. The licensee has a statutory responsibility to comply with the *Environmental Protection (Noise) Regulations 1997*. No specific conditions relating to noise emissions are required to be added to the licence for the Broome Mud Plant. | General provisions of the *Environmental Protection Act 1986*<br><br>*Environmental Protection (Noise) Regulations 1997* |
| **Monitoring general** | | Licence condition 3.1.1 will be incorporated on the licence to ensure sampling and analysis is performed in accordance with current Australian Standards and samples are analysed by a NATA Accredited laboratory. Condition 3.1.2 will ensure appropriate sampling timeframes and condition 3.1.3 requires recording of production / throughput data relevant to the monitoring events. Condition 3.1.4 requires appropriate calibration of monitoring equipment. Where this cannot occur, condition 3.1.5 requires the licensee to notify DER of any discrepancy in calibration methods. | General provisions of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |
| **Monitoring of inputs and outputs** | N/A | There are no requirements to monitor inputs and outputs during operation of the Broome Mud Plant. No specified conditions relating to monitoring inputs and outputs are required to be added to the licence. | N/A |
| **Process monitoring** | N/A | There will be no process monitoring required during operation of the Broome Mud Plant. No conditions are required to be added to the licence. | N/A |
| **Ambient quality monitoring** | L3.3.1 | **Operation**<br>Refer to risk assessment documented under Emissions to land including monitoring. | |

| DECISION TABLE | | | |
|---|---|---|---|
| **Works Approval / Licence section** | **Condition number W = Works Approval L= Licence** | **Justification (including risk description & decision methodology where relevant)** | **Reference documents** |
| **Meteorological monitoring** | N/A | No significant emissions that are impacted by meteorological conditions are expected during operation of the Broome Mud Plant. As such, there will be no Meteorological monitoring required during operation of the Broome Mud Plant. | N/A |
| **Improvements** | N/A | This application is for a newly constructed premises. As such, there are no Improvements required for operation of the Broome Mud Plant. | N/A |
| **Information** | L4.1.1 – 4.1.4<br>L4.2.1 – 4.2.3<br>L4.3.1 | Conditions 4.1.1 to 4.1.4 are standard conditions relating to record keeping requirements, including complaints. Condition 4.2.1 outlines the requirement to submit to DER an annual environmental report detailing incidents that may have occurred onsite, process throughputs, monitoring data, and a summary of complaints. Condition 4.3.1 requires the Licensee to notify DER should any incident or malfunction occur that has the potential to cause pollution and submit a calibration report in accordance with condition 3.1.5 if required. | General provisions of the *Environmental Protection Act 1986*<br><br>Application supporting documentation |
| **Licence Duration** | N/A | Due to facility design and management commitments the environmental risk of emissions and discharges from this premises has been assessed as low to moderate. The licence will be issued for a period of five years. | N/A |

# 5 Advertisement and consultation table

| Date | Event | Comments received / Notes | How comments were taken into consideration |
|---|---|---|---|
| 13/07/2015 | Application advertised in West Australian (or other relevant newspaper) | No comments received | N/A |
| 13/07/2015 | Application referred to interested parties listed:<br>• Shire of Broome<br>• Kimberley Ports Authority | No comments received | N/A |
| 19/08/2015 | Proponent sent a copy of draft instrument | Comments received, proponent requested no changes to draft licence and assessment | N/A |

# 6 Risk Assessment

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

### Table 1: 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 |