



Licence

Environmental Protection Act 1986, Part V

Licensee: Key Petroleum (Australia) Pty Ltd
Licence: L6785/1995/11

Registered office: Suite 3, Churchill Court
331-335 Hay Street
SUBIACO WA 6008

ACN: 127 011 161

Premises address: Mt Horner Oilfield Project
Department of Mines and Petroleum Production Licence 7
DONGARA WA 6525
Being Lot 2 on Plan 6473 as depicted in Schedule 1.

Issue date: 5 December 2013

Commencement date: 20 December 2013

Expiry date: 19 December 2025

Transfer date: 28 September 2018

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
10	Oil or gas production from wells: premises, whether on land or offshore, on which crude oil, natural gas or condensate is extracted from below the surface of the land or the seabed, as the case requires, and is treated or separated to produce stabilised crude oil, purified natural gas or liquified hydrocarbon gases.	5, 000 tonnes or more per year	250,000 tonnes per annual period

Conditions

Subject to this Licence and the conditions set out in the attached pages.

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Caron Goodbourn
A/Manager, Process 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.

DWER's industry licensing role

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

DWER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DWER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER 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 owner or occupier of the premises the intention is not to replicate them in the licence. 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 may 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.

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

Licence 6785/1995/11 was granted on 12 Decemeber 2013 for the operation of the Mt Horner Oilfield, oil and gas production facility, located approximately 380 km north of Perth and 25 km northeast of Dongara, Western Australia.

The key activities when Mt Horner Oilfield is operating include:

- Production of crude oil
- Export of crude oil via tanker to BP Kwinana
- Product separation
- Produced Formation Water (PFW) management
- Chemical handling
- Routine inspection and maintenance

The premise remains under care and maintenance since December 2013.

Table 1 presents the current status and record of all wells in the Mt Horner Oilfield (2012/13).

Table 1 Wells in the Mt Horner Oilfield & Status

Well Name	Operating	Status
Mt Horner-04	No	Shut-in Oil Well
Mt Horner-04A	No	Suspended Oil Well
Mt Horner-05A	No	Shut-in Oil Well
Mt Horner-07	No	Suspended Oil Well
Mt Horner-08	No	P&A Oil Well
Mt Horner-09	No	Shut-in Oil Well
Mt Horner-12	No	Shut-in Oil Well
Mt Horner-13	No	Suspended Oil Well
Mt Horner-14	No	Shut-in Oil Well



Amendment notice 1, issued 20 October 2016, included amendment to condition 3.4.1 (Table 3.4.1) to update groundwater monitoring requirements.

An application to transfer this licence L6785/1995/8, from AWE Perth Pty Ltd to Key Petroleum (Australia) Pty Ltd, was received on 26 July 2018. On 28/09/2018 the Department transferred the Licence to Key Petroleum (Australia) Pty Ltd, incorporating minor administrative changes with the transfer, including:

- consolidation of amendment notice 1;
- updating the Licensee, Registered Office and ACN on the Licence; and
- removing references to the previous licensee and replacing them with a generic term of Key Petroleum (Australia) Pty Ltd.

As part of this transfer, DWER has not reassessed the acceptability or impacts of emissions and discharges from the premises or re-visited any existing emission control levels.

The licences and works approvals issued for the Premises, since 22 December 2003, are:

Instrument log		
Instrument	Issued	Description
L6785/1995/8	22/12/2003	Licence re-issue
L6785/1995/8	17/08/2004	Licence amendment
L6785/1995/9	29/11/2007	Licence re-issue
L6785/1995/10	02/12/2010	Licence re-issue
L6785/1995/10	13/06/2013	Licence amendment
L6785/1995/11	05/12/2013	Licence re-issue and amendment to REFIRE format
L6785/1995/8	20/10/2016	Amendment Notice 1- amendment to update groundwater monitoring requirements including removing dry monitoring bores
L6785/1995/8	28/09/2018	Licence transferred from AWE Perth Pty Ltd to Key Petroleum (Australia) Pty Ltd

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:

'AACR' means Annual Audit Compliance Report – available at:
<https://www.der.wa.gov.au/our-work/licences-and-works-approvals/publications#aacr>

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

'amendment notice' means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.

'annual period' means the inclusive period from 1 July until 30 June in the following year;

'approved form' means the AACR Form template approved by the CEO for use and available via DWER's external website;

'AS/NZS 1940:2004' means the Australian Standard AS/NZS 1940:2004 as amended, *The storage and handling of flammable and combustible liquids*;

'AS/ ANZ 3833:2007' means the Australian Standard AS/ ANZ 3833:2007, *The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers*;

'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 5667.11' 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 or target is measured or a monitoring result is obtained;

'controlled waste' has the definition in Environmental Protection (Controlled Waste) Regulations 2004;

'CEO' means Chief Executive Officer;

'CEO' for the purpose of correspondence means;

Director General
Department Administering the *Environmental Protection Act 1986*
Locked Bag 33 Cloisters Square
PERTH WA 6850
Email: info@dwer.wa.gov.au



‘DWER’ means Department of Water and Environmental Regulation;

‘environmentally hazardous material’ means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

‘hardstand’ means a surface with a permeability of 10^{-9} metres/second or less;

‘Licence’ means this Licence numbered L6785/1995/11 and issued under the *Environmental Protection Act 1986*;

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

‘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;

‘normal operating conditions’ means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

‘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 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March and 1 April to 30 June;

‘Schedule 1’ means Schedule 1 of this Licence unless otherwise stated;

‘Schedule 2’ means Schedule 2 of this Licence unless otherwise stated;

‘shut-down’ means the period when plant or equipment is brought from normal operating conditions to inactivity;

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

‘start-up’ means the period when plant or equipment is brought from inactivity to normal operating conditions;

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

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the 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 General conditions

- 1.2.1 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.
- 1.2.2 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.
- 1.2.3 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.
- 1.2.4 The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials are stored in accordance with the code of practice for the storage and handling of dangerous goods.
- 1.2.5 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.
- 1.2.6 The licensee shall store environmentally hazardous chemicals including fuel, oil or other hydrocarbons (where the total volume of each substance stored on the premises exceeds 250 litres) within low permeability (10^{-9} metres per second or less) compound(s) designed to contain not less than 110% of the volume of the largest storage vessel or inter-connected system, and at least 25% of the total volume of substances stored in the compound.
- 1.2.7 The compound(s) described in condition 1.2.5 shall:
- (a) be graded or include a sump to allow recovery of liquid;
 - (b) be chemically resistant to the substances stored;
 - (c) include valves, pumps and meters associated with transfer operations wherever practical. Otherwise the equipment shall be adequately protected (eg. bollards) and contained in an area designed to permit recovery of spilled chemicals;
 - (d) be designed such that jetting from any storage vessel or fitting will be captured within the bunded area as per Australian Standard 1940 and AS/ NZS 3833;
 - (e) be designed such that chemicals which may react dangerously if they come into contact, are in separate bunds in the same compound or in different compounds; and
 - (f) be controlled such that the capacity of the bund is properly maintained (eg. regular inspection and pumping of trapped uncontaminated rain water).
- 1.2.8 All water samples shall be submitted to a laboratory with current NATA accreditation for the analysis specified, and analysed in accordance with the current "Standard Methods for Examination of Water and Wastewater-APHA-AWWA-WEF.

1.3 Premises operation

- 1.3.1 The Licensee shall ensure that produced formation water is not discharged to the environment.



- 1.3.2 The licensee shall record on a monthly basis, the discharge volume produced and report that quantity in accordance with condition 2.1.
- 1.3.3 The licensee shall report all details pertaining to the disposal and management of Produced Formation Water in accordance with 2.1.
- 1.3.4 The Licensee shall submit a report to the CEO pertaining to the disposal and management of Produced Formation Water. The report will contain but not limited to the following:
 - (a) An outline of the Produced Formation Water management plan proposal;
 - (b) Process description including inputs and outputs;
 - (c) A detailed map of the premises;
 - (d) Treatment processes and recycling methods including waste generation, waste minimisation, waste collection and storage;
 - (e) Contingency procedures to avoid emissions and discharges resulting from disposal process failure, operational procedures and maintenance procedures;
 - (f) Storage and handling methods (where applicable).
- 1.3.5 The licensee shall record and maintain a monthly list of consumption, by quantity, of treatment chemicals added to the Mount Horner production system.
- 1.3.6 The licensee shall forward the information required in condition 1.3.5 to the CEO along with any available toxicity data where any new treatment chemicals are introduced into the production system.
- 1.3.7 The licensee shall maintain a record of all flowline leaks that are detected. Each record shall identify the leaking flowline and outline the location and extent of the area affected by the flowline leak. This record shall be reported in accordance with condition 2.1.
- 1.3.8 The licensee shall ensure that all non-putrescible solid waste, excluding toxic and hazardous substances are disposed of to an approved landfill.
- 1.3.9 The licensee shall ensure toxic and hazardous solids shall be made available for disposal offsite to an approved landfill by a licenced controlled waste carrier.

2 Monitoring

2.1 General monitoring

- 2.1.1 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 surface water sampling is conducted in accordance with AS/NZS 5667.4, AS/NZS 5667.6 or AS/NZS 5667.9 as relevant;
 - (d) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;
 - (e) all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured [unless indicated otherwise in the relevant table].
- 2.1.2 The Licensee shall ensure that:
 - (a) monthly monitoring is undertaken at least 15 days apart;
 - (b) quarterly monitoring is undertaken at least 45 days apart;
 - (c) six monthly monitoring is undertaken at least 5 months apart; and
 - (d) annual monitoring is undertaken at least 9 months apart.



- 2.1.3 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, and the requirements of the Licence.

2.2 Monitoring of point source emissions to groundwater

- 2.2.1 The Licensee shall undertake the monitoring in Table 2.2.1 according to the specifications in that table.

Table 2.2.1: Monitoring of point source emissions to groundwater			
Emission point reference	Parameter	Units ¹	Frequency
Camp Water Bore (MTH CWB).	(i) arsenic (As);	mg/L	Six monthly
	(ii) barium (Ba);		
	(iii) cadmium (Cd);		
	(iv) chromium (Cr);		
	(v) copper (Cu);		
	(vi) iron (Fe);		
	(vii) lead (Pb);		
	(viii) strontium (Sr);		
	(ix) zinc (Zn);		
	(x) chemical oxygen demand (COD);		
	(xi) Total Petroleum Hydrocarbons (TPH);		
	(xii) light fraction organic compounds (eg. BTEX – Benzene, Ethylbenzene, Toluene and Xylene compounds);		
	(xiii) Total Dissolved Solids (TDS); and		
	(xiv) pH	N/A	

Note 1: Milligrams per Litre - mg/L; Metres - m

3 Information

3.1 Records

- 3.1.1 All information and records required by the Licence shall:
- be legible;
 - if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - except for records listed in 3.1.1(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
 - for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - off-site environmental effects; or
 - matters which affect the condition of the land or waters.



- 3.1.2 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.
- 3.1.3 The Licensee shall complete an Annual Audit Compliance Report 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.
- 3.1.4 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.

3.2 Reporting

- 3.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 84 calendar days after the end of the annual period (30 September). The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.

Table 3.2.1: 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
1.3.2	Monthly volumes of Produced Formation Water (PFW)	
1.3.3	Disposal and Management Report of Produced Formation Water (PFW).	
1.3.5	Monthly consumption volumes of chemical treatment agents utilised in the Mt Horner production system.	
1.3.7	Annual reporting of flowline leaks, their location, extent of area affected by the flowline leak and action undertaken to remediate the issue.	
Table 2.2.1	Monitoring of point source emissions to groundwater.	GR1
3.1.3	Compliance	Approved Form
3.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 3.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under Condition 2.1.3;
 - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits, and/or targets; and
 - (c) a list of any original monitoring reports submitted to the Licensee from third parties for the annual period and make these reports available on request.



3.3 Notification

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 3.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format or form ²
-	Site brought out of Care and Maintenance	Notification three (3) months prior to the proposed 'start-up' date of the premises.	None specified
-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1

Note 1: Notification requirements in the licence shall not negate the requirement to comply with s72 of the Act

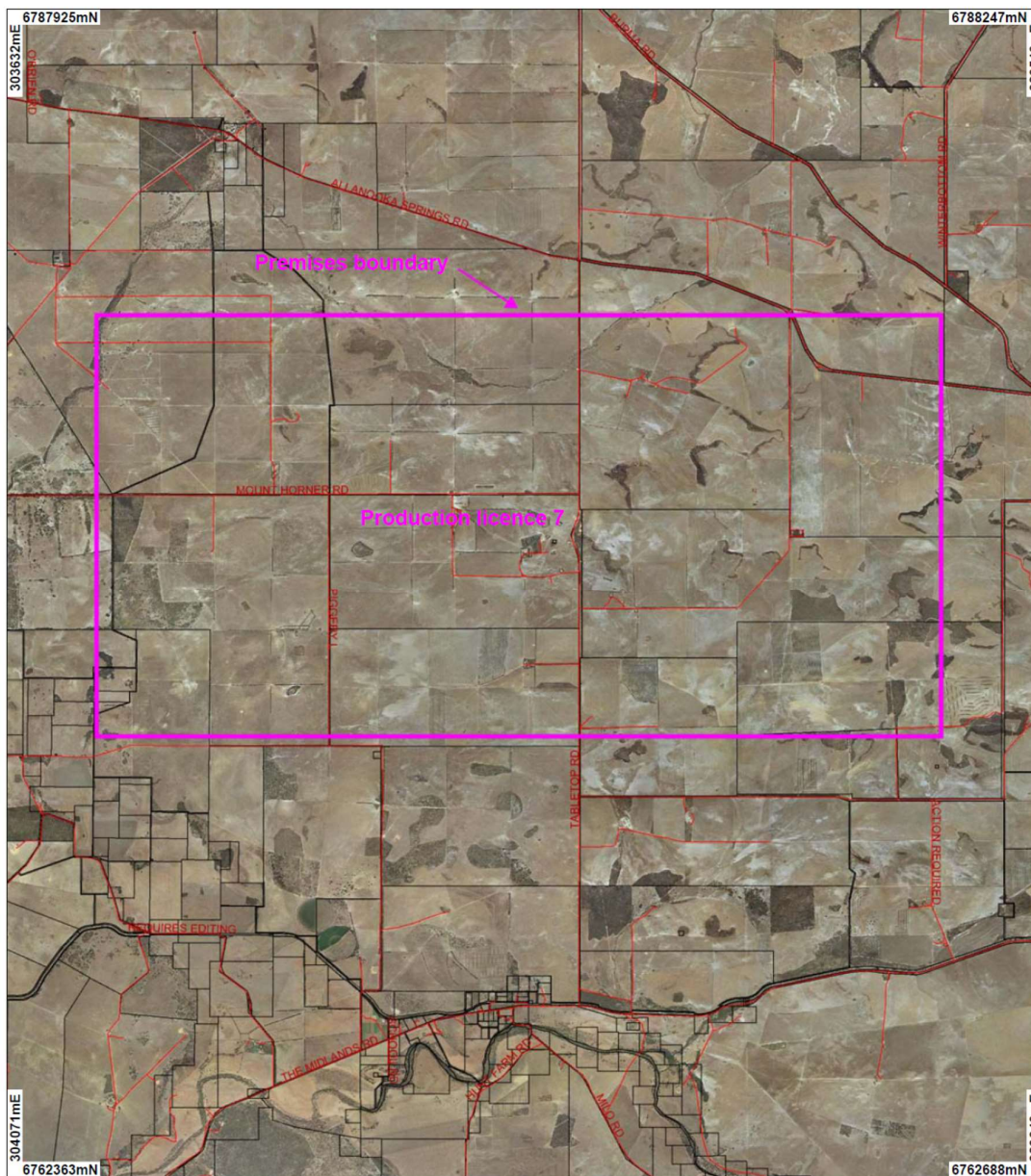
Note 2: Forms are in Schedule 2

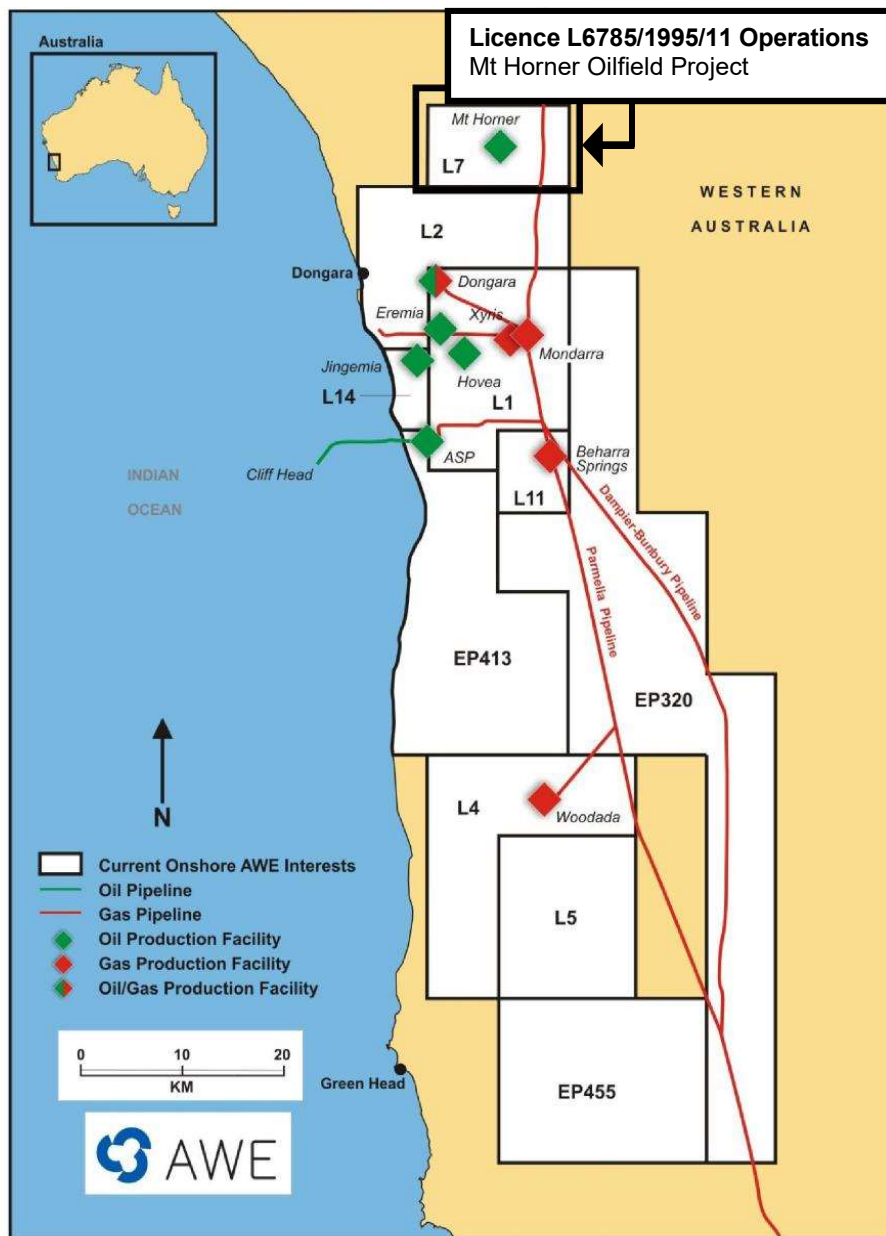


Schedule 1: Maps

Premises map

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

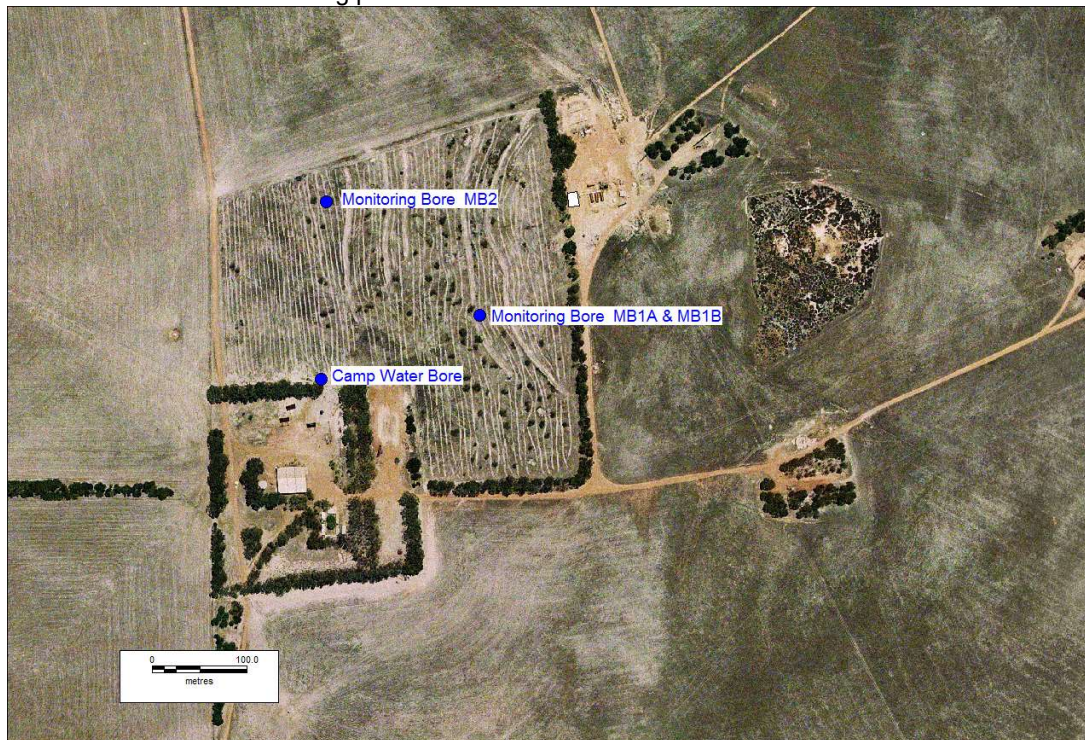






Map of monitoring locations

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



Note 1: reference to monitoring bores MB1A, MB1B and MB2 are excluded.



Schedule 2: Reporting & notification forms

Licence: L6785/1995/11

Form: GR1

Name: Monitoring of point source emissions to groundwater

Licensee: Key Petroleum (Australia) Pty Ltd

Period :

Form GR1: Monitoring of point source emissions to groundwater

Emission point	Parameter	Result	Averaging period	Method	Sample date & times
Camp Water Bore (MTH CWB)	Arsenic (As)	mg/L	Six Monthly	Spot Sample	
	Barium (Ba)				
	Cadmium (Cd)				
	Chromium (Cr)				
	Copper (Cu)				
	Iron (Fe)				
	Lead (Pb)				
	Strontium (Sr)				
	Zinc (Zn);				
	Chemical oxygen demand (COD)				
	Total Petroleum Hydrocarbons (TPH)				
	Light fraction organic compounds (eg. BTEX compounds)				
	Total Dissolved Solids (TDS)				
	pH	N/A			

Signed on behalf of Key Petroleum (Australia) Pty Ltd:

Date:



Licence: L6785/1995/11
Form: N1

Licensee: Key Petroleum (Australia) Pty Ltd
Date of breach:

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

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	

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution

Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident	



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 Key Petroleum (Australia) Pty Ltd	
Date	