



Mr Roger Boyle
Station Manager
ATCO Power Australia (Karratha) Pty Ltd
PO Box 1823
KARRATHA WA 6714

Dear Mr Boyle

ENVIRONMENTAL PROTECTION ACT 1986 – LICENCE

Licence: L8386/2009/1

Premises: Karratha Power Station

Please find enclosed your *Environmental Protection Act 1986* Licence.

If you have any questions or objections relating to the works approval, please do not hesitate to contact the enquiries officer above on 9168 4218 for clarification or discussion of any grievances you have.

If you are concerned about, or object to any aspect of the amendment, you may lodge an appeal with the Minister for the Environment within 21 days from the date on which this works approval is received. The Office of the Appeals Convenor can be contacted on 6467 5190 to find out the procedure and fee.

Members of the public may also appeal the amendments. The Appeals Registrar at the Office of the Appeals Convenor can be contacted after the closing date of appeals to check whether any appeals were received.

Yours sincerely

Ed Schuller
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

18 December 2014

enc: Copy of licence L8386/2009/2
copy to: Local Government Authority: City of Karratha



Licence

Environmental Protection Act 1986, Part V

Licensee: ATCO Power Australia (Karratha) Pty Ltd

Licence: L8386/2009/2

Registered office: Level 12
2 Mill Street
PERTH WA 6000

ACN: 132 830 043

Premises address: Karratha Power Station
Lot 1996 on Plan 183890 Stove Hill Road
STOVE HILL WA 6714
as depicted in Schedule 1.

Issue date: Thursday, 18 December 2014

Commencement date: Thursday, 8 January 2015

Expiry date: Tuesday, 7 January 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
52	Electric power generation	≥ 20 MWe in aggregate (using natural gas)	96 MWe per annual period

Conditions

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

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



Contents

Licence	1
Contents	2
Introduction	2
Licence conditions	4
1 General	4
2 Emissions	7
3 Monitoring	8
4 Improvements	9
5 Information	9
Schedule 1: Maps	11
Schedule 2: Reporting & notification forms	13

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 works with the business owners, community, consultants, industry and other representatives 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

The Karratha Power Station (KPS) is located on Lot 1996 on Plan 183890, on land leased from Horizon Power, adjacent to a small range of hills situated between the Karratha township and the Karratha Industrial Estate. Karratha Terminal, which is a substation managed and operated by Horizon Power is located on the south-west corner of Lot 1996. The nearest sensitive receptors include the Karratha Caravan Park and the town of Karratha, which are located 2 kilometres from the premises.

KPS utilises open cycle power generation and has two 48 megawatt (MW) sprint gas turbine generators designed by General Electric and auxiliary infrastructure. Combined output from the power station is 96MW under a loading of 18 840 kilograms per hour (kg/hour) of natural gas. The turbines have Dry Low nitrogen oxide (NOx) combustion control technology. Air quality modelling and potential for impacts resulting from operation of KPS have previously been assessed by DEC. The only significant emission identified was nitrogen dioxide (NO₂). Air emissions from KPS are considered to be low risk and not likely to cause significant environmental impact. Process wastewater is discharged to the High Density Polyethylene (HDPE) lined evaporation ponds on the premises.

This Licence is the successor to licence L8386/2009/1.

The licences and works approvals issued for the Premises 20/11/2008 are:

Instrument log		
Instrument	Issued	Description
W4458/2008/1	20/11/2008	Works Approval issued
L8386/2009/1	4/1/2010	Licence issued
L8386/2009/1	14/04/2012	Licence amendment to reflect change in premises boundary
L8386/2009/1	6/06/2013	Licence amendment to REFIRE licence
L8386/2009/2	18/12/2014	Licence re-issue

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 July until 30 June in the following year;

'AS 4323.1' means the Australian Standard AS4323.1 *Stationary Source Emissions Method 1: Selection of sampling positions*;

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

'CEMS' means continuous emissions monitoring system;

'CEMS Code' means the current version of the Continuous Emission Monitoring System (CEMS) Code for Stationary Source Air Emissions, Department of Environment & Conservation, Government of Western Australia;

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

'CEO' for the purpose of correspondence means;

Manager Licensing (North West)
Department of Environment Regulation
PO Box 835
KARRATHA WA 6714
Telephone: (08) 9182 2000
Facsimile: (08) 9144 1118
Email: northwest@der.wa.gov.au;

'code of practice for the storage and handling of dangerous goods' means document titled "Storage and handling of dangerous goods: Code of Practice" published by the Department of Mines and Petroleum, as amended from time to time;

'dangerous goods' has the meaning defined in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007*;

'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;

'fugitive emissions' means all emissions not arising from point sources identified in Sections 2.2;



- 'Licence' means this Licence numbered L8386/2009/2 and issued under the Act;
- 'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;
- 'MWe' means power output (electricity generated) in megawatts;
- 'mg/Nm³' means milligrams per normal cubic metre, i.e. corrected to STP dry;
- 'MWth' means power input (thermal) in megawatts;
- '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;
- 'NOx' means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide;
- 'O₂' means oxygen gas;
- '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;
- '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;
- 'stack test' means a discrete set of samples taken over a representative period at normal operating conditions;
- 'start-up' means the period when plant or equipment is brought from inactivity to normal operating conditions;
- 'STP dry' means standard temperature and pressure (0°Celsius and 101.325 kilopascals respectively), dry;
- 'Turbine' means General Electric LM6000PD sprint Gas Turbine Generators located on the Premises;
- 'USEPA' means United States (of America) Environmental Protection Agency;
- 'USEPA Method 7E' means the *Test Method 7 – Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyser Procedure)*;
- 'USEPA Method 10' means the *Test Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources*;
- '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 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 current version of the 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, 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.
- 1.2.4 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.
- 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.



1.3 Premises operation

1.3.1 The Licensee shall ensure that process water is only discharged into containment cells with the relevant infrastructure requirements and at the locations specified in Table 1.3.2 and identified in Schedule 1.

Table 1.3.2: Containment infrastructure			
Containment point reference	Vessel or compound	Material	Requirements
E1	Evaporation Ponds	Wastewater (up to 22 ML/year) from water treatment regeneration, back-wash and evaporative cooling system blowdown will be discharged into two HDPE lined evaporation ponds.	1.5mm HDPE liner to achieve a permeability of $<10^{-9}$ m/s or equivalent. The ponds to accommodate significant rainfall events including freeboard contingency for a 1:100 year storm event.

2 Emissions

2.1 General

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

2.2 Point source emissions to air

2.2.1 The Licensee shall ensure that where waste is emitted to air 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: Emission points to air			
Emission point reference [and location on Map of emission points]	Emission Point [and source]	Emission point height (m)	Source, including any abatement
A1	Flume Stack 1 for Turbine 1	18.2	GE LM6000PD sprint gas turbine generators, including dry low NOx combustion control technology
A2	Flume Stack 2 for Turbine 2	18.2	GE LM6000PD sprint gas turbine generators, including dry low NOx combustion control technology



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

Table 2.2.2: Point source emission limits to air			
Emission point Reference	Parameter	Target (including units)^{1,2}	Averaging period
A1-A2	NO _x	51 mg/m ³	Stack test (minimum 30 minute average)

Note 1: All units are referenced to STP dry

Note 2: Concentration units for A1-A2 are referenced to 15% O₂.

2.3-2.8 Point source emissions to surface water, groundwater, Emissions to land, Fugitive emissions, Odour or Noise

There are no specified conditions relating to point source emissions to surface water, groundwater, Emissions to land, Fugitive emissions, Odour or Noise in this section.

3 Monitoring

3.1 General monitoring

3.1.1 The Licensee shall ensure that :

(a) annual monitoring is undertaken at least 9 months apart.

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

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 and any relevant Australian standard.

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 point source emissions to air

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 point source emissions to air					
Emission point reference	Parameter	Units^{1,3}	Averaging period	Frequency²	Method
A1 – A2	Nitrogen oxides	mg/m ³	Stack test (minimum 30 minute average)	Annually	USEPA Method 7E
	Carbon monoxide				USEPA Method 10

Note 1: All units are referenced to STP dry

Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

Note 3: Concentration units for A1-A2 are referenced to 15% O₂.



- 3.2.2 The Licensee shall ensure that sampling required under Condition 3.2.1 of the Licence is undertaken at sampling locations in compliance with the AS 4323.1 or relevant part of the CEMS Code.
- 3.2.3 The Licensee shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 3.2.1 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

3.3-3.9 Monitoring of point source emissions to surface water, groundwater, land, Monitoring of inputs and output, Process monitoring, Ambient environmental quality monitoring and Meteorological monitoring,

There are no specified conditions relating to monitoring of point source emissions to surface water groundwater, Emissions to land, Monitoring of inputs and output, Process monitoring, Ambient environmental quality monitoring and Meteorological monitoring in this section.

4 Improvements

There are no specified improvement conditions in this section.

5 Information

5.1 Records

- 5.1.1 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 5.1.1(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.
- 5.1.2 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.
- 5.1.3 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.
- 5.1.4 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.



5.2 Reporting

5.2.1 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 5.2.1 in the format or form specified in that table.

Table 5.2.1: 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
Table 2.2.2	Limit exceedances	N1
Table 3.2.1	nitrogen oxides, carbon monoxide	AR1
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:

- any relevant process, production or operational data recorded under Condition 3.1.3; and
- an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets.

5.3 Notification

5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format or form ²
-	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
2.2.2	Breach of any limit specified in the Licence		
3.1.4	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

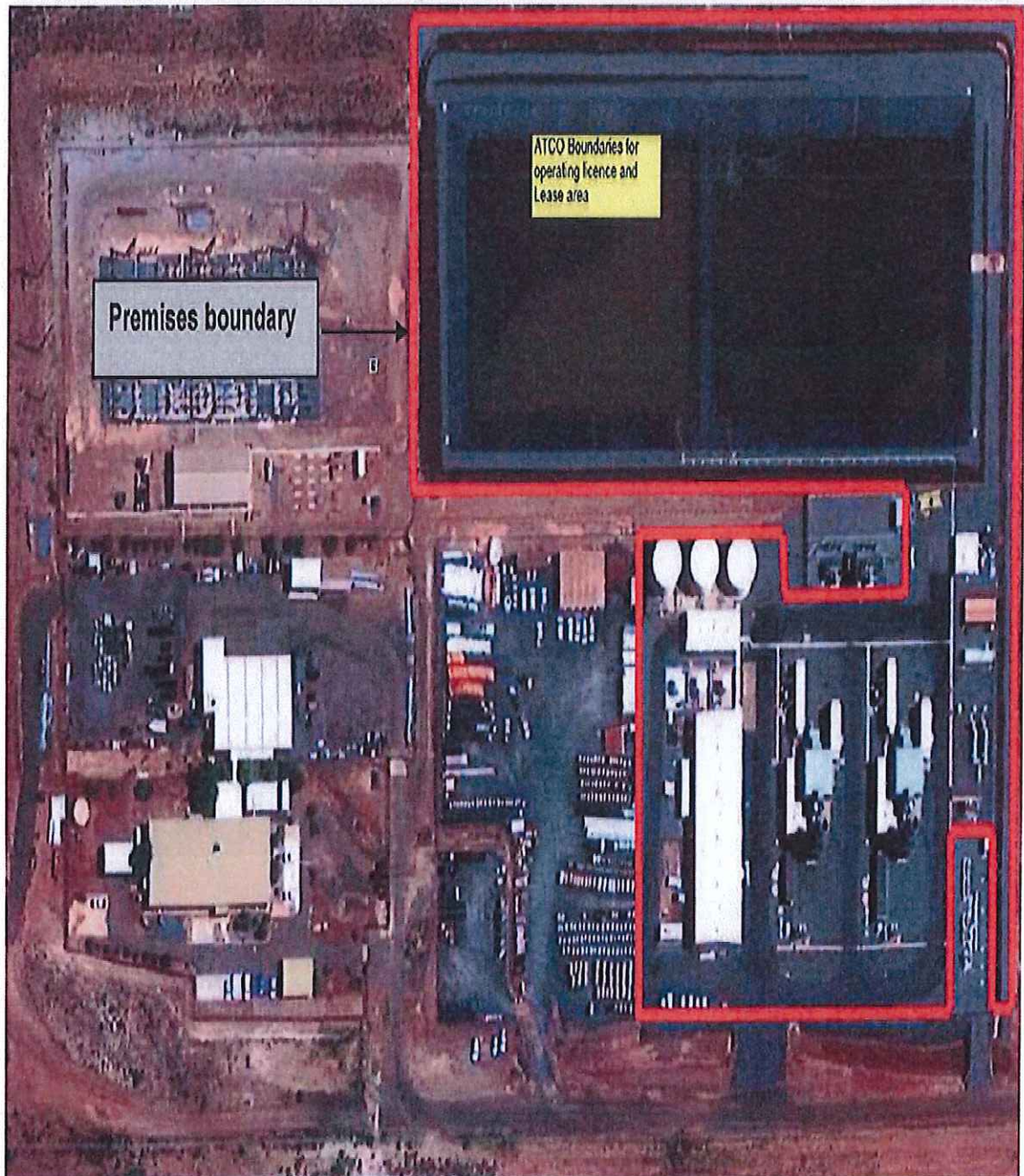
Note 2: Forms are in Schedule 2



Schedule 1: Maps

Premises map

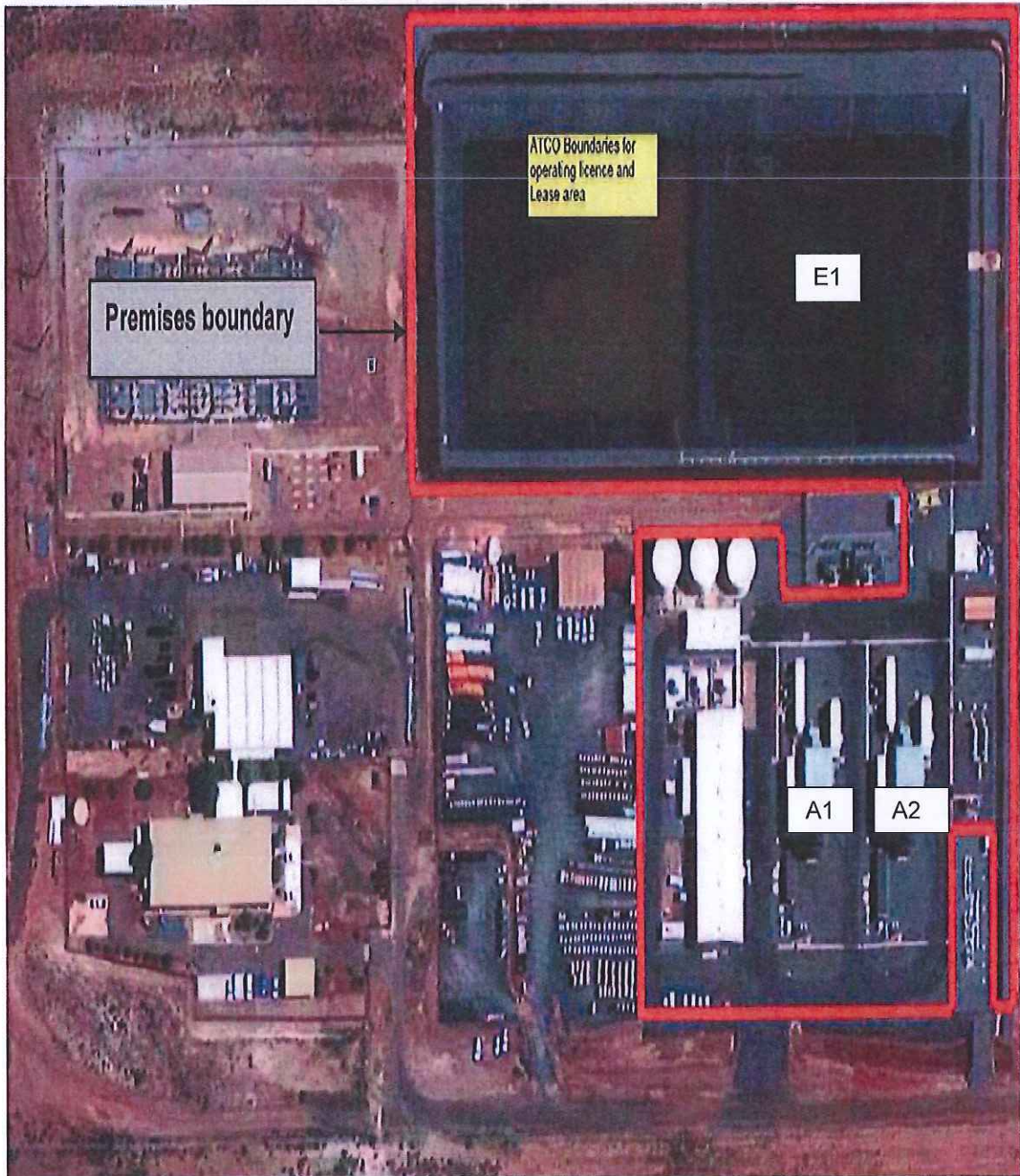
The Premises is shown in the map below. The red line depicts the Premises boundary.





Map of emission points and Monitoring locations

The locations of the emission points defined in Tables 2.2.1 and monitoring points defined in Table 3.2.1 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.

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ 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?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> 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	<input type="checkbox"/> <input type="checkbox"/>	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	<input type="checkbox"/> <input type="checkbox"/>	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	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; 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)	<input type="checkbox"/> <input type="checkbox"/>	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	<input type="checkbox"/> <input type="checkbox"/>	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: ____/____/____

SEAL (if signing under seal)

SIGNATURE: _____

NAME:
(printed) _____

POSITION: _____

DATE: ____/____/____



Licence: L8386/2009/2 Licensee: ATCO Power Australia (Karratha) Pty Ltd
 Form: AR1 Period :
 Name: Monitoring of point source emissions to air

Form AR1: Monitoring of point source emissions to air						
Emission point	Parameter	Result ^{1,2} (mg/Nm ³)	Result ^{1,2} (g/s)	Averaging period	Method	Sample date & times
A1	Nitrogen oxides				USEPA Method 7E	
A2					USEPA Method 7E	
A1	Carbon monoxide				USEPA Method 10	
A2					USEPA Method 10	

Note 1: All units are referenced to STP dry and relevant Oxygen Correction in Table 2.2.2

Signed on behalf of ATCO Power Australia (Karratha) Pty Ltd: Date:



Licence: L8386/2009/2
 Form: N1

Licensee: ATCO Power Australia (Karratha) 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 ATCO Power Australia (Karratha) Pty Ltd	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Proponent: ATCO Power Australia (Karratha) Pty Ltd

Licence: L8386/2009/2

Registered office: Level 12
2 Mill Street
PERTH WA 6000

ACN: 132 830 043

Premises address: Karratha Power Station
Lot 1996 on Plan 183890 Stove Hill Road
STOVE HILL WA 6714

Issue date: Thursday, 18 December 2014

Commencement date: Thursday, 8 January 2015

Expiry date: Tuesday, 7 January 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: Damian Thomas
Licensing Officer

Decision Document authorised by: Alana Kidd
Manager Licensing



Contents

Decision Document	1
Contents	2
1 Purpose of this Document	2
2 Administrative summary	3
3 Executive summary of proposal and assessment	4
4 Decision table	5
5 Advertisement and consultation table	11
6 Risk Assessment	12

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.

Works approval and licence conditions

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

Standard conditions (SC)

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

Optional standard conditions (OSC)

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

Non standard conditions (NSC)

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



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
	52	96MWe
Application verified	Date: 13/10/14	
Application fee paid	Date: 24/10/2014	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/>	No <input checked="" 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 type="checkbox"/>	No <input checked="" type="checkbox"/>
		Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
		Ministerial statement No: EPA Report No:
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 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

The Karratha Power Station (KPS) is located on Lot 1996 on Plan 183890, on land leased from Horizon Power, adjacent to a small range of hills situated between the Karratha township and the Karratha Industrial Estate. Karratha Terminal, which is a substation managed and operated by Horizon Power is located on the south-west corner of Lot 1996. The nearest sensitive receptors include the Karratha Caravan Park and the town of Karratha, which are located 2 kilometres from the premises.

KPS utilises open cycle power generation and has two 48 megawatt (MW) sprint gas turbine generators designed by General Electric and auxiliary infrastructure. Combined output from the power station is 96MW under a loading of 18 840 kilograms per hour (kg/hour) of natural gas. The turbines have Dry Low nitrogen oxide (NO_x) combustion control technology. Air quality modelling and potential for impacts resulting from operation of KPS have previously been assessed by DEC. The only significant emission identified was nitrogen dioxide (NO₂). Air emissions from KPS are considered to be low risk and not likely to cause significant environmental impact. Process wastewater is discharged to the High Density Polyethylene (HDPE) lined evaporation ponds on the premises.

This Licence is the successor to licence L8386/2009/1 and continues to authorise the operation of the Power Station. As part of this re-issue, DER has not re-assessed the acceptability or impacts of emissions and discharges from the Premises or re-visited any existing emission control levels with the exception of General emissions and point source emissions to air. No changes to the conditions on the previous licence have been made with the exception of these two changes and updating the licence to current REFIRE version.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987*, DEC's Policy Statement No 7 – Operational Risk Management, 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	OSC Or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
	L1.3.1	OSC	<p>Operation</p> <p>Emission Description <i>Emission:</i> Wastewater (up to 22 ML/year) from water treatment regeneration, back-wash and evaporative cooling system blowdown. <i>Impact:</i> Contamination of surrounding land and surface water drainage systems. Potential impacts on ecology of surface water from the addition of excess wastewater. <i>Controls:</i> The proponent will direct the wastewater to two 1.5mm HDPE lined evaporation ponds that have sufficient freeboard to prevent overflow during extreme weather events (for a 1:100 year storm event).</p> <p>Risk Assessment <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p>Regulatory Controls OSC 1.3.1 (Containment cells) has been added to the licence to require the operator to direct wastewater water treatment regeneration, back-wash and evaporative cooling system blowdown to lined evaporation ponds.</p>	<p>Gernal Provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>Application supporting documents</p>
General conditions				

DECISION TABLE

Works Approval / Licence section	Condition number W = Works Approval L - Licence	OSC Or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
			<u>Residual Risk</u> Consequence: Insignificant Likelihood: Unlikely Risk Rating: Low	
Emissions general	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A
Point source emissions to air including monitoring	L2.2.1 L2.2.2	OSC	Operation <u>Emission Description</u> Emission: Combustion gases (NOx) from Stack A1 and A2 (normal operation of gas turbines) Impact: Reduced local air quality, the nearest sensitive receptors range from 1-2.5km away; emissions modelling demonstrates emissions will not cause a breach of NEPM ambient air standards. Controls: EPA Guidance Statement No. 15 recommends that all new gas turbine proposals meet at least the AEC/NHMRC guideline of 34 ppmv for NO _x (as NO ₂) emissions. However, recent studies ('Capacity Expansion Study For The Gowanus and Narrows Generating Stations' Burns and Roe Enterprises, Inc 2006) have determined that GE 48 MW LM6000 PD Sprint Gas Turbines routinely operate with 25 ppm NOx emissions. The plant is fitted with Dry, Low NOx burners and has sufficient maintenance programs in place to minimise emissions.	General Provisions of the Environmental Protection Act 1986. Application supporting documents



DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L - Licence	OSC Or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
			<p><u>Risk Assessment</u> <i>Consequence: Insignificant</i> <i>Likelihood: Unlikely</i> <i>Risk Rating: Low</i></p> <p><u>Regulatory Controls</u> The generators are an efficient design. Licence condition 2.2.1 stipulates air emissions are those identified in a new map in Schedule 1 as A1 and A2 which are the respective gas turbine stacks. Limits (based on those used in the emissions modelling) will be applied under condition 2.2.2 of the licence to ensure emissions remain acceptable. These replace the previous use of targets which were not associated with any effective management action and were only assessed on an annual basis.</p> <p><u>Residual Risk</u> <i>Consequence: Insignificant</i> <i>Likelihood: Unlikely</i> <i>Residual Risk Rating: Low</i></p>	
Point source emissions to surface water including monitoring	N/A	N/A	<p><u>Operation</u> KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.</p>	N/A



DECISION TABLE					
Works Approval / Licence section	Condition number W = Works Approval L - Licence	OSC Or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents	
Emissions to land including monitoring	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A	
Point source emissions to groundwater including monitoring	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A	
Fugitive emissions	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A	
Odour	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A	
Noise	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A	



DECISION TABLE

Works Approval / Licence section	Condition number W = Works Approval L - Licence	OSC Or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
Monitoring general	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A
Monitoring of inputs and outputs	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A
Process monitoring	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A
Ambient quality monitoring	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A
Meteorological monitoring	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A



DECISION TABLE				
Works Approval / Licence section	Condition number W = Works Approval L - Licence	OSC Or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
Improvements	N/A	N/A	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A
Information	N/A	N/	Operation KPS submitted a licence application on 2 October 2014 for a new licence. No other changes will occur in relation to the new licence.	N/A
Licence Duration	N/A	N/A	This Licence is the successor to licence L8386/2009/1 and continues to authorise the operation of the Power Station. As part of this re-issue, DER has not re-assessed the acceptability or impacts of emissions and discharges from the Premises or re-visited any existing emission control levels with the exception of General emissions and point source emissions to air. No changes to the conditions on the previous licence have been made with the exception of these two changes and updating the licence to current REFIRE version. Recommend licence duration be for 5 years.	N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
03/11/2014	Application advertised in West Australian (or other relevant newspaper)	No comments received.	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