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**Natural
Resources**
Wales

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

U.K. Methane Limited

Cwmavon Exploration Site
Foel Fynyddau Forest
Pontrhydyfen
Cwmavon
SA12 9TF

Permit number
EPR/AB3092HY

Cwmavon Exploration Site

Permit number EPR/AB3092HY

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

This is a bespoke permit for a mining waste operation for the management of extractive waste not involving a mining waste facility.

This permit allows the operator to carry out activities related the management of extractive waste generated from the exploration of unconventional oil and gas resources. The wastes generated will be non-inert / non-hazardous only.

The proposed development is for the drilling of an exploratory borehole for hydrocarbons and permitted activities include management of extractive waste arising from the exploration of hydrocarbons (unconventional oil and gas) activities.

The development is temporary; and from the initial ground preparation works, drilling and testing, operations should not last longer than 54 weeks. The actual drilling operations and associated operations including establishment and site clearance will last approximately 14 weeks with a further period of up to 36 weeks for testing purposes.

This permit does not allow hydraulic fracturing.

This permit does not allow any point source emissions into surface waters or groundwater except:

- clean, rainfall dependant drainage from areas of the site not used in connection with the storage and/or treatment of waste.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application EPR/ZB3490HS/A001	Duly made 24/08/15	Application for mining waste operation without a mining waste facility.
Additional information received	04/12/15	Response to a Schedule 5 Notice received
Additional information received	17/12/15	Amended Waste Management Plan and Pollution Incident Plan received.
Additional information received	12/01/16	Amended Waste Management Plan and Pollution Incident Plan received.
Additional information received	18/01/16	Further justification on the unmapped mine works received.

Status log of the permit

Description	Date	Comments
Additional information received	18/01/16	Clear site map showing the site location and exact location of the borehole received.
Permit determined (EPR/AB3092HY)	20/01/16	Permit issued to U.K. Methane Limited.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/AB3092HY

The Natural Resources Body for Wales (“Natural Resources Wales”) authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

U.K. Methane Limited (“the operator”),

whose registered office is

Unit 13
51 Village Farm Road
Village Farm Estate
Pyle
Bridgend
Mid Glamorgan
Wales
CF33 6BL

company registration number 03452019

to operate a mining waste operation at

Cwmavon Exploration Site
Foel Fynyddau Forest
Pontrhydyfen
Cwmavon
SA12 9TF

to the extent authorised by and subject to the conditions of this permit.

Name

Date

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Authorised on behalf of Natural Resources Wales

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall not start the closure of the mining waste facility[ies] unless agreed in writing by Natural Resources Wales.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales.
- (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 2.3.2 The activities shall be operated in accordance with an approved waste management plan, unless otherwise agreed in writing by Natural Resources Wales.

- 2.3.3 The operator shall review the waste management plan every five years from the date of initial approval.

2.4 Pre-operational conditions

- 2.4.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.3 have been completed.

3 Emissions and monitoring

3.1 Emissions of substances not controlled by emission limits

- 3.1.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.1.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 3.1.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.2 Odour

- 3.2.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.2.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.3 Noise and vibration

- 3.3.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.3.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by Natural Resources Wales, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by Natural Resources Wales.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.

4.3 Notifications

- 4.3.1 Natural Resources Wales shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit; or
 - (c) any significant adverse environmental effects.

- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

- 4.3.5 Where the operator proposes to make an amendment to the approved waste management plan, which is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) Natural Resources Wales shall be notified at least 14 days before implementing the amended waste management plan in place of the original; and
 - (b) the notification shall contain a description of the proposed amendment.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities

Description of activities for waste operations		Limits of activities
A1- Mining Waste Operation without a Mining Waste Facility	A mining waste operation not including a waste facility for the management of non-hazardous extractive waste from exploratory drilling activities for unconventional oil and gas.	<p>Permitted waste types shall conform to the description in the approved waste management plan (WMP).</p> <p>The activities shall be limited to those described in the approved WMP.</p> <p>Only additives in the approved WMP shall be permitted.</p> <p>There will be no hydraulic fracturing.</p> <p>Drilling additives in addition to the list provided in the approved WMP shall be approved by Natural Resources Wales in writing prior to use.</p> <p>The storage of extractive waste is limited to temporary storage in enclosed secure containments prior to collection and transportation of waste from the site.</p> <p>There will be no discharge to any watercourse.</p> <p>All liquids collected via an interceptor shall be collected into a bowser and will be sent off site for recovery or disposal.</p>

Table S1.2 Operating techniques

Description	Parts	Date Received
Response to a Schedule 5 Notice served on 03 rd November 2015	<ul style="list-style-type: none"> Ref: Cwmavon Exploration Borehole, Cwmavon MWP-005- H5 Site Condition Report- Updated November 2015 – All Parts Ref: Cwmavon Exploration Borehole, Cwmavon MWP-004- Environmental Management Plan- Updated November 2015 – All Parts Ref: Cwmavon Exploration Borehole, Method Statement- Updated November 2015 – All Parts 	04/12/15
Further information received via email dated 12 th January 2016	<ul style="list-style-type: none"> Ref: Cwmavon Exploration Borehole, Cwmavon MWP-001- Waste Management Plan- Updated January 2016 – All Parts Ref: Cwmavon Exploration Borehole, Cwmavon MWP-003-Pollution Incident Plan Updated January 2016- All Parts 	12/01/16

Table S1.2 Operating techniques

Description	Parts	Date Received
Further information received via email dated 18 th January 2016	<ul style="list-style-type: none"> Email including site plans showing the exact location of the borehole and storage location received. Further justification received on the unmapped mine works. 	18/01/16

Table S1.3 Pre-operational measures

Reference	Pre-operational measures
POM1	At least 2 weeks before operation commencement date, the operator shall submit a full site survey establishing a site condition baseline. The activities shall not commence prior to a written approval of the site survey from NRW.
POM2	Prior to commencement of drilling and testing activities the operator shall inform NRW and agree an operations commencement date. The operator shall not begin operation without a written agreement from NRW.

Schedule 2 - Waste types, raw materials and fuels

The disposal or recovery of non-extractive wastes are not permitted activities and there are no restrictions on raw materials or fuels under this schedule.

Schedule 3 – Emissions and monitoring

There are no emission limits or associated monitoring requirements.

Schedule 4 - Reporting

There is no reporting under this schedule.

Schedule 5 - Notification

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.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) 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.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

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 unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

“accident” means an accident that may result in pollution.

“annually” means once every year

“authorised officer” means any person authorised by Natural Resources Wales under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“approved waste management plan” means a plan of the type described in Article 5(1) of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC, approved as part of the grant or variation of an environmental permit and as revised from time to time.

“authorised officer” means any person authorised by Natural Resources Wales under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit..

“exploration” means activities carried out to provide information about geological structures and the presence or absence of gas reserves together with assessments to determine whether the reservoir development is economically feasible.

“extractive waste” means waste resulting from the prospecting, extraction, treatment and storage of mineral resources and the working of quarries, excluding waste which does not directly result from these operations.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“groundwater protection zones 1 and 2” have the meaning given in the document titled "Groundwater Protection: Policy and Practice" published by the Environment Agency in 2006.

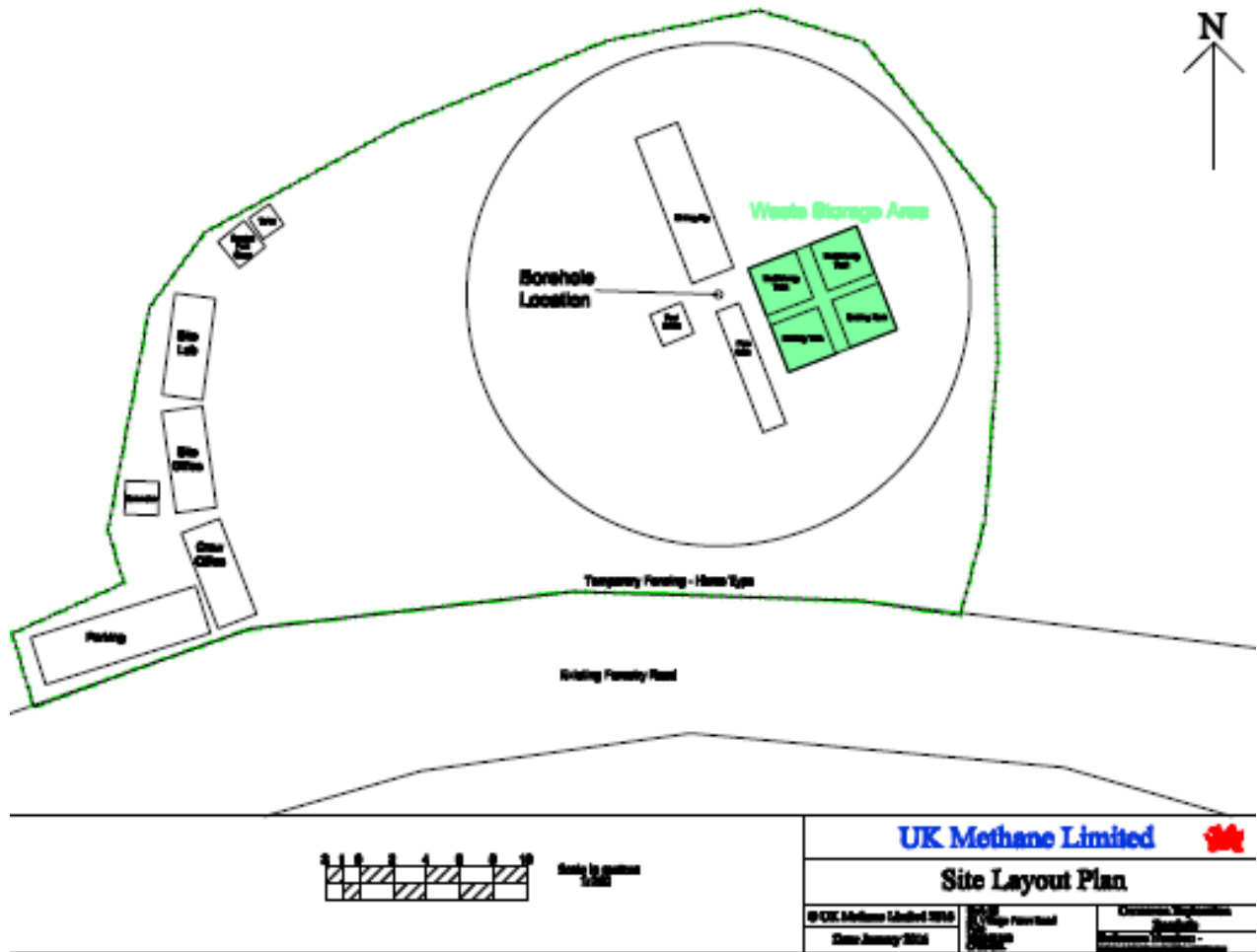
“hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 No.894, the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138), the List of Wastes (England) Regulations 2005 No.895 and the List of Wastes (Wales) Regulations 2005 No. 1820 (W.148).

“mining waste facility” means a waste facility as defined in Article 3(15) of Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC, where a mining waste operation is carried out.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“year” means calendar year ending 31 December.

Schedule 7 - Site plan



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END OF PERMIT