

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Europa Oil & Gas Limited

Holmwood Wellsite
Bury Hill Wood
Coldharbour Lane
Dorking, Surrey
RH5 6HN

Permit number

EPR/YP3735YK

Holmwood Wellsite

Permit number EPR/YP3735YK

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

The following mining waste permit authorises the management of extractive wastes not involving a waste facility to allow the drilling and testing of a single well for the purposes of onshore oil and gas exploration. An additional standard rules permit SR2015 No 2 will be authorised concurrent to this permit for the handling and storage of crude oil within the wellsite.

The Holmwood wellsite (including access track) will be constructed by removing trees and existing vegetation, with the temporary storage of surplus material on site in the form of bunds. This material will be used by the operator as part of restoration works once drilling and well testing works have been completed. Once cleared the wellsite compound will consist of a 118m by 55m drilling pad and perimeter ditch which will be sealed from surface and groundwater receptors by a layer of Secutex R401 geotextile, Bentofix (impermeable liner), sand, a second layer of Secutex 1201 geotextile and a final capping layer of either Type 3 stone (usually 250mm or 300mm) or ground matting to create a sealed hard standing. A concrete drilling chamber will be sunk for the well cellar, which will be constructed of concrete manhole rings, set into a concrete base.

Drilling will be undertaken in stages to a depth of approximately 1750m measured depth below rotary table (MDBRT) however should it be required a contingency section will be drilled to a depth of circa 1694m true vertical depth below rotary table (TVDBRT) / 2390m MDBRT. Drilling will be conducted using water and oil based drilling muds, taking into consideration the risks to groundwater receptors including productive strata within the Hythe Formation which is classified as a principal aquifer. All sections of the proposed exploratory borehole will be cemented back to the top of the liner and pressure tested to confirm integrity.

To remove damage induced by drilling the operator may use hydrochloric acid as part of acid wash and squeeze activities on the target formations. Acid returned to the surface will be neutralised due to contact with carbonates within the target formation and will be stored in dedicated tanks prior to disposal offsite at a licensed facility.

The operator also intends to undertake testing of the well to determine whether petroleum is present. Fluids arising from this activity will be diverted via a phase separator, which will separate oil, gas and produced fluids. Waste gas arising from testing will be flared on site at a rate of <10 tonnes per day and will be undertaken within a shrouded flare. Although the Environment Agency state in most cases an enclosed ground flare will be considered BAT, the applicant has demonstrated that the performance of the shrouded flare will be an equivalent measure.

The storage of oil will be regulated under a SR2015 No 2 and this document sets out the requirements for the operator to follow.

The operator has also applied for a separate RSR Standard rules permit which covers the testing, storage and disposal of NORM associated with drilling activities. This will not be discussed further within this note.

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/YP3735YK/A001	Duly made 16/02/17	Application for a mining waste permit not including a waste facility.
Schedule 5 notice issued	19/06/17	Notice served to request further information.
Additional information received	14/07/17	Revised information including: <ul style="list-style-type: none"> - Non-Technical Summary - Site Plans - Waste Management Plans Rev 2 - Site Condition Report Rev 1 - PW Well Test Flare – Technical Document R0 - Drilling Products R1 - Spill Prevention and Containment Plan R0
Additional information received	26/07/17	<ul style="list-style-type: none"> - Waste Management Plans Rev 3 - Environmental Risk Assessment R3
Additional information received	29/08/17	Revised MSDS for drilling fluids and chemicals.
Additional information received	12/09/17	Revised information including: <ul style="list-style-type: none"> - Environmental Risk Assessment R4 - Site Condition Report Rev 2 - Waste Management Plan Rev 4 - Drilling Products 12092017 - UF10 Flare Technical Document - Non-Technical Summary Rev2 - Site Plans Rev 2 - MSDS Complete 12092017
Additional information received	13/10/17	Revised information including: <ul style="list-style-type: none"> - Site Condition Report Rev 3 - Site Plans - 02102017
Additional information received	17/10/17	Revised information including: <ul style="list-style-type: none"> - PW Well Test Flare – Technical Document R1 - UF10 Flare Technical Document
Additional information received	01/11/17	Revised information including: <ul style="list-style-type: none"> - Waste Management Plan Rev 5
Additional information received	04/12/17	Revised Information including: <ul style="list-style-type: none"> - Justification for flare selection and use
Additional information received	05/01/18	Revised information include: <ul style="list-style-type: none"> - Waste Management Plan Rev 6
Additional information received	23/01/18	Revised information including: <ul style="list-style-type: none"> - Waste Management Plan Rev 7 - Site Condition Report Rev 4 - Non-Technical Summary Rev 3
Additional information received	30/01/18	Revised information including: <ul style="list-style-type: none"> - Waste Management Plan Rev 8 - Drilling products Rev 4
Additional information received	03/07/18	Revised information including: <ul style="list-style-type: none"> - Technical justification for use of Oil Based muds.
Permit determined EPR/YP3735YK	23/07/18	Permit issued to Europa Oil & Gas Limited.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/YP3735YK

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Europa Oil & Gas Limited (“the operator”),

whose registered office is

6 Porter Street

London

W1U 6DD

company registration number 03093716

to operate a mining waste operation at

Holmwood Wellsite

Bury Hill Wood

Coldharbour Lane

Dorking, Surrey

RH5 6HN

to the extent authorised by and subject to the conditions of this permit and in addition,

under regulation 27(2) of the Regulations, standard rules **SR2015 No 2** are conditions of this permit.

Name	Date
Team Leader	23/07/2018

Authorised on behalf of the Environment Agency

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, so far as is practicable, including those risks 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 the permit.

1.2 Avoidance, recovery and disposal of wastes produced by the activities

1.2.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities;
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.2.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

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 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 the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency 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 the Environment Agency.

2.3.3 The operator shall:

- (a) review the waste management plan at least every five years from the date of initial approval and submit any written revisions to the Environment Agency for approval.
- (b) implement the approved waste management plan from the date of approval, unless otherwise agreed in writing by the Environment Agency

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 to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1.

3.1.2 The limits given in schedule 3 table S3.1 shall not be exceeded.

3.2 Emissions of substances not controlled by emission limits

3.2.1 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.

3.2.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency 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 the Environment Agency.

3.2.3 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.

3.2.4 The Operator shall take appropriate measures:

- (a) to prevent the input of hazardous substances to groundwater; and
- (b) where a non-hazardous pollutant is not controlled by an emission limit, to limit the input of such non-hazardous pollutants to groundwater so as to ensure that such inputs do not cause pollution of groundwater.

3.3 Odour

3.3.1 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 the Environment Agency, 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.

3.4 Noise and vibration

3.4.1 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 the Environment Agency, 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.

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency 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 the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

- (a) point source emissions specified in table S3.1;
- (b) process monitoring specified in table S3.2; and
- (c) surface water or groundwater specified in tables S3.3 and S3.4;

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 The operator shall carry out:

- (a) regular calibration, at an appropriate frequency, of systems and equipment provided for carrying out any monitoring and measurements necessary to determine compliance with this permit; and
- (b) regular checking, at an appropriate frequency, that such systems and equipment are serviceable and correctly used.

3.5.5 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.3 and S3.4 unless otherwise agreed in writing by the Environment Agency.

3.5.6 If required by the Environment Agency, the operator shall:

- (a) take such samples and conduct such measurements, tests, surveys, analyses and calculations, including environmental measurements and assessments, at such times and using such methods and equipment as the Environment Agency may specify; and
 - (b) keep samples, provide samples, or dispatch samples for tests at a laboratory, as the Environment Agency specifies, and ensure that the samples or residues thereof are collected from the laboratory within three months of receiving written notification that testing and repackaging in accordance with the relevant legislation are complete.
- 3.5.7 On a monthly basis; the Operator shall analyse the flare feed gas. The analysis shall include speciation and concentration of organic substances, carbon monoxide, sulphur containing compounds, halogen containing compounds and moisture. A report of the analysis shall be submitted to the Environment Agency within 28 days of completion of each analysis.
- 3.5.8 The operator shall by calculation determine the emissions of the substances identified in table S3.1, based on the most recent feed gas composition analysis, feed gas flow rate and combustion efficiency of the flare.

4 Information

4.1 Records

- 4.1.1 All records required to be made by schedules 3, 4 and 5 to 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 the Environment Agency, 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 maintain convenient access, in either electronic or hard copy, to the records, plans and management system required to be maintained by this permit.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.3; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report

assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 The Environment Agency 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 schedule 3 table S3.1, S3.3 and S3.4; or
- (c) any significant adverse environmental effects.

4.3.2 The information provided under condition 4.3.1 shall be supported by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency 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:

- (c) any change in the operator's name or address; and
- (d) 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 a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 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) the Environment Agency 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.

4.3.8 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

(a) a decision by the Secretary of State not to re-certify the agreement;

(b) a decision by either the operator or the Secretary of State to terminate the agreement; and

(c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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		
Activity reference	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	<p>The management of extractive waste from production activities, not involving a waste facility.</p> <p>The management of extractive waste generated by well decommissioning.</p>	<p>Permitted waste types shall conform to the description in the approved waste management plan.</p> <p>Drilling additives shall be approved in writing by the Environment Agency prior to use.</p> <p>Well stimulation by hydraulic fracturing is not permitted.</p> <p>Flaring of waste gas shall be limited to less than 10 tonnes per day.</p>

Table S1.2 Operating techniques		
Description	Parts	Date Received
Information supplied in response to Schedule 5 notice dated the 19/06/17	Revised information include: - Spill prevention and containment plan R0	14/07/2017
	Revised information including: - Environmental Risk Assessment R4	12/09/17
	Revised information including: - Site Plans - 02102017	13/10/17
	Revised information including: - PW Well Test Flare - Technical Document R1	17/10/17
	Revised information including: - Site Condition Report Rev 4 - Non-Technical summary Rev 3	23/01/18
	Revised information including: - Waste Management Plan Rev 8 - Drilling products Rev 4	30/01/18

Table S1.3 Pre-operational measures	
Reference	Pre-operational measures
PO-1	Within 1 month of permit issue, and before the commencement of operations, the Operator shall provide a report demonstrating the method of calculating air emissions of oxides of nitrogen, carbon monoxide and total volatile hydrocarbons as set out in schedule 3, table 3.1 and obtain the Environment Agency's written approval to the method.
PO-2	At least 1 month prior to the commencement of operations, the Operator shall provide a Construction Quality Assurance (CQA) Plan for the proposed installation of the site surfacing, secondary and tertiary containment and obtain the Environment Agency's written approval to the plan.
PO-3	Prior to the commencement of drilling operations, the Operator will provide a construction quality assurance (CQA) validation report on site surfacing, secondary and tertiary containment installed at the wellsite and obtain the Environment Agency's written approval to the report.
PO-4	At least 1 month prior to the commencement of operations, the Operator shall submit a report detailing monitoring locations (including a plan), monitoring procedures, baseline monitoring results (including test reports) and proposed compliance limits for all parameters set out in Schedule 3, Table S3.3 and S3.4, and obtain the Environment Agency's written approval to the report.
PO-5	At least 1 month prior to the commencement of operations, the Operator shall submit a report detailing proposals for monitoring key indicators of chemical additives, including proposed compliance limits for surface and groundwater monitoring locations listed in Schedule 3, Table S3.3 and S3.4, and obtain the Environment Agency's written approval to the report.

Schedule 2 – Waste types, raw materials and fuels

Non-extractive wastes are not accepted as part of the permitted activities and there are no restrictions on raw materials or fuel under this schedule.

Schedule 3 – Emissions and monitoring

Emission point ref. & location	Source	Parameter	Limit (including unit)^	Reference period	Monitoring frequency	Monitoring standard or method
A1 - Flare emission point as shown in Schedule 7, Figure S7.2.	Gas flare.	Oxides of nitrogen	- mg m ⁻³	--	Weekly, by calculation	As per PO-01 or as otherwise agreed in writing with the Environment Agency
		Carbon monoxide	- mg m ⁻³	--	Weekly, by calculation	As per PO-01 or as otherwise agreed in writing with the Environment Agency
		Total volatile organic compounds	- mg m ⁻³	--	Weekly, by calculation	As approved in writing with the Environment Agency
		Methane (inlet concentration)	- (% v/v)	--	Continuous	As approved in writing with the Environment Agency
		Temperature	>800°C	--	Continuous	As approved in writing with the Environment Agency
		Flare gas feed flow rate	0.3 MMSCFD	--	Continuous	As approved in writing with the Environment Agency
		Video feed with screen time display of flare	-	--	Continuous while flare is in operation.	As approved in writing with the Environment Agency

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Choke manifold as described in PW Well Test Flare - Technical Document R1 as referenced in Table S1.2.	Pressure (psi)	Continuous	-	As agreed in writing with the Environment Agency.
	Gas flow (MMSCFD)	Continuous	-	As agreed in writing with the Environment Agency.

Table S3.3 Groundwater monitoring requirements				
Location or description of point of measurement	Parameter	Limit (including unit)	Monitoring frequency (operational phases in BOLD)	Monitoring standard or method
On-site boreholes:				
Groundwater monitoring boreholes, numbers and locations as approved in writing with by the Environment Agency in response to pre-operational condition PO-4.	Groundwater level, pH, Temperature, Electrical conductivity, Major and minor ions (including as a minimum Sodium, Potassium, Calcium, Chloride, Bicarbonate, Sulphate), Petroleum Hydrocarbons (by carbon banding) and Total Petroleum Hydrocarbons and methane (dissolved).	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.	<p>Prior to operational drilling work commencing:</p> <p>Monthly (unless otherwise agreed in writing by the Environment Agency)</p> <p>During operational drilling / testing work:</p> <p>Weekly</p> <p>Post operational drilling / testing work and site restoration</p> <p>Monthly for a period of 6 months (unless otherwise agreed in writing by the Environment Agency).</p>	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.
Off-site springs and wells				
F4, OS Grid Reference TQ1620444709	Groundwater level, pH, Temperature, Electrical conductivity, Major and minor ions (including as a minimum Sodium, Potassium, Calcium, Chloride, Bicarbonate, Sulphate), Petroleum Hydrocarbons (by carbon banding) and Total Petroleum Hydrocarbons and methane (dissolved).	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.	<p>Prior to operational drilling work commencing:</p> <p>Monthly (unless otherwise agreed in writing by the Environment Agency)</p> <p>During operational drilling / testing work:</p> <p>Weekly</p> <p>Post operational drilling / testing work and site restoration</p> <p>Monthly for a period of 6 months (unless otherwise agreed in writing by the Environment Agency).</p>	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.
F6, OS Grid Reference TQ1517245634				

Table S3.3 Groundwater monitoring requirements				
Location or description of point of measurement	Parameter	Limit (including unit)	Monitoring frequency (operational phases in BOLD)	Monitoring standard or method
Table S3.4 Surface monitoring requirements				
Location or description of point of measurement	Parameter	Limit (including unit)	Monitoring frequency (operational phases in BOLD)	Monitoring standard or method
F1, OS Grid Reference TQ1527744632	Visual observation inspection, observation of flow conditions, pH, Temperature, Electrical conductivity, Major and minor ions (including Sodium, Potassium, Calcium, Chloride, Bicarbonate, Sulphate) and Petroleum Hydrocarbons (by carbon banding and Total Petroleum Hydrocarbons).	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.	<p>Prior to operational drilling work commencing: Monthly (unless otherwise agreed in writing by the Environment Agency)</p> <p>During operational drilling / testing work: Weekly</p> <p>Post operational drilling / testing work and site restoration Monthly for a period of 6 months (unless otherwise agreed in writing by the Environment Agency).</p>	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.
F2, OS Grid Reference TQ1521345181				
F3, OS Grid Reference TQ1616744727				
F5, OS Grid Reference TQ1583944418				

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1.	A1	Monthly	At least one month prior to the commencement of operations or as otherwise agreed by the Environment Agency.
Groundwater monitoring Parameters as required by condition 3.5.1	Groundwater monitoring points as defined within Schedule 3, Table S3.3.	Monthly	Within one month of the issue of the permit.
Surface water monitoring Parameters as required by condition 3.5.1	F1, F2, F3 and F5.	Monthly	At least one month prior to the commencement of operations or as otherwise agreed by the Environment Agency.

Parameter	Units
Methane Flared	Standard cubic feet

Media/parameter	Reporting format	Date of form
Air	Form Air1 or other form as agreed in writing by the Environment Agency	08/06/2018
Groundwater	Form Groundwater 1, or other reporting format to be agreed in writing with the Environment Agency	08/06/2018
Surfacewater	Form Surfacewater1 or other form as agreed in writing by the Environment Agency	08/06/2018

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	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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.

“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 the Environment Agency 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.

“background concentration” means such concentration of that substance as is present in:

“Competent Authority” means, in relation to –

- (a) London, the London Fire and Emergency Planning Authority;
- (b) an area where there is a fire and civil defence authority, that authority;
- (c) the Isles of Scilly, the Council of the Isles of Scilly;
- (d) an area in the rest of England, the county council for that area, or where there is no county council for that area, the district council for that area;

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations 2016 No.1154 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 limit.

“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.

“Hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended).

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“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.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

“year” means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 KPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Figure 7.2 – Site plan showing air emission point – Flare emission point (key overleaf)

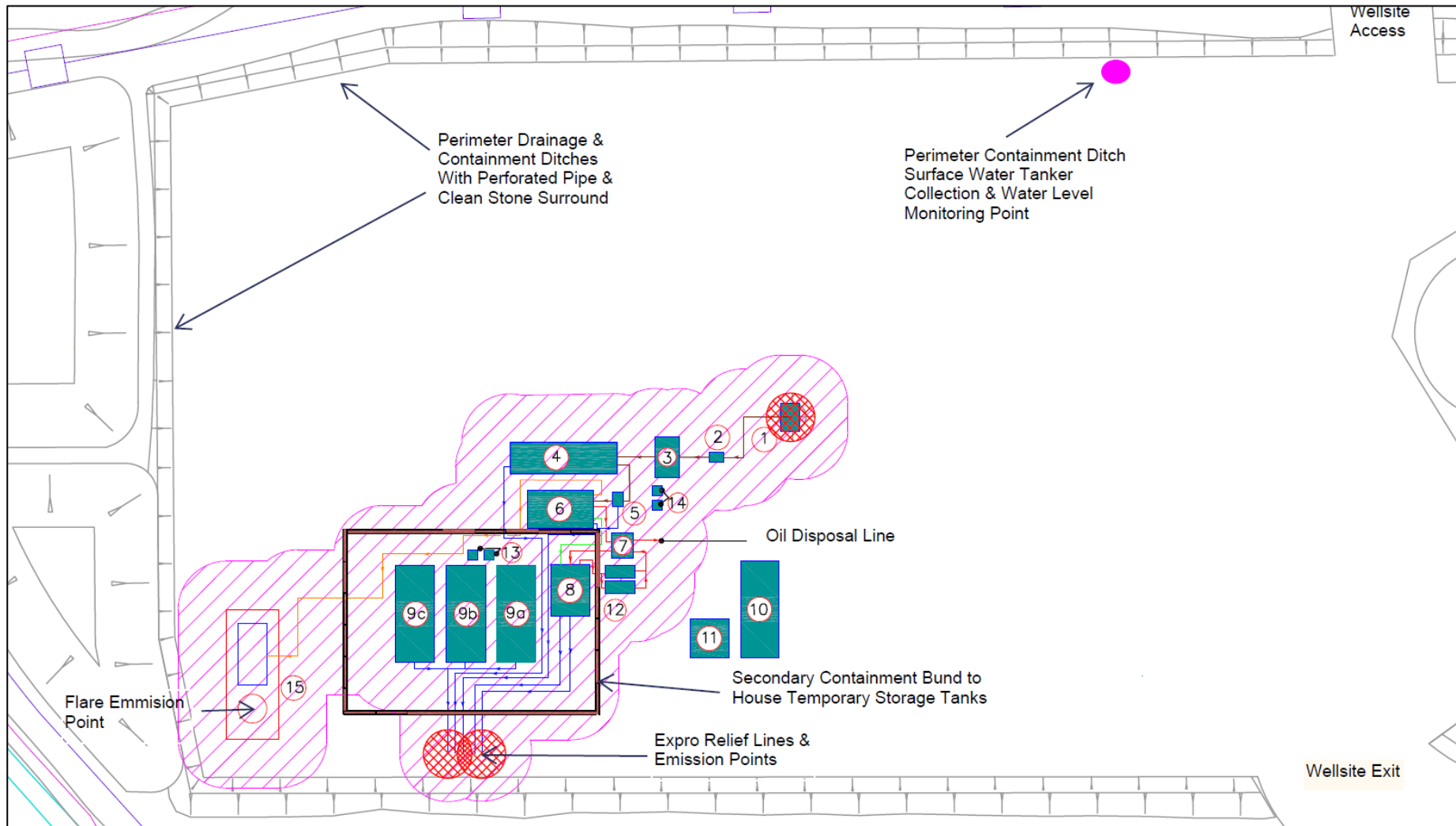


Figure 7.2 – Site plan key	
Item	Description
1	Surface test tree
2	ESD Valve
3	Choke manifold
4	Heat Exchanger
5	Inline relief valve
6	separator
7	Oil Diverter manifold
8	Surge Tank
9	200BBL Stock Tank
9b	200BBL Stock Tank
9c	200BBL Stock Tank
10	Pressurised Lab cabin
11	Well test container
12	Transfer pump (x2)
13	Diaphragm pump (x2)
14	Chemical injection pump
15	Flare

END OF PERMIT

Appendix 1 – Reporting Forms

Permit Number: EPR/YP3735YK **Operator:** Europa Oil & Gas Limited

Facility: Holmwood Wellsite **Form Number:** Air1 / 08/06/18

Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
A1	Oxides of nitrogen	- mg m-3	--		As per PO-01 or as otherwise agreed in writing with the Environment Agency		
A1	Carbon monoxide	- mg m-3	--				
A1	Total volatile organic compounds	- mg m-3	--				
A1	Methane (inlet concentration)	- (% v/v)	--		As approved in writing with the Environment Agency		
A1	Temperature	>800°C	--				
A1	Flare gas feed flow rate	0.3 MMSCFD	--				
A1	Oxides of nitrogen	- mg m-3	--				

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/YP3735YK **Operator:** Europa Oil & Gas Limited

Facility: Holmwood Wellsite **Form Number:** Groundwater1 / 08/06/18

Reporting of groundwater monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

Monitoring Point	Substance / Parameter	Trigger level	Monitoring period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Groundwater monitoring boreholes, numbers and locations as approved in writing with by the Environment Agency in response to pre-operational condition PO-4.	Groundwater level, pH, Temperature, Electrical conductivity, Major and minor ions (including as a minimum Sodium, Potassium, Calcium, Chloride, Bicarbonate, Sulphate), Petroleum Hydrocarbons (by carbon banding) and Total Petroleum Hydrocarbons) and methane (dissolved).	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.	<p>Prior to operational drilling work commencing: Monthly (unless otherwise agreed in writing by the Environment Agency)</p> <p>During operational drilling / testing work: Weekly</p> <p>Post operational drilling / testing work and site restoration Monthly for a period of 6 months (unless otherwise agreed in writing by the Environment Agency).</p>	Attached separately to reporting form.	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.		

Monitoring Point	Substance / Parameter	Trigger level	Monitoring period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
F4, OS Grid Reference TQ1620444709	Groundwater level, pH, Temperature, Electrical conductivity, Major and minor ions (including as a minimum Sodium, Potassium, Calcium, Chloride, Bicarbonate, Sulphate), Petroleum Hydrocarbons (by carbon banding) and Total Petroleum Hydrocarbons) and methane (dissolved).	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.	Prior to operational drilling work commencing: Monthly (unless otherwise agreed in writing by the Environment Agency) During operational drilling / testing work: Weekly Post operational drilling / testing work and site restoration Monthly for a period of 6 months (unless otherwise agreed in writing by the Environment Agency).	Attached separately to reporting form.	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.		
F6, OS Grid Reference TQ1517245634				Attached separately to reporting form.			

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/YP3735YK **Operator:** Europa Oil & Gas Limited

Facility: Holmwood Wellsite **Form Number:** Surfacewater1 /
08/06/2018

Reporting of groundwater monitoring for the period from DD/MM/YYYY to DD/MM/YYYY

Monitoring Point	Substance / Parameter	Trigger level	Monitoring period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
F1, OS Grid Reference TQ1527744632	Visual observation inspection, observation of flow conditions, pH, Temperature, Electrical conductivity, Major and minor ions (including Sodium, Potassium, Calcium, Chloride, Bicarbonate, Sulphate) and Petroleum Hydrocarbons (by carbon banding and Total Petroleum Hydrocarbons).	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.	Prior to operational drilling work commencing: Monthly (unless otherwise agreed in writing by the Environment Agency) During operational drilling / testing work: Weekly Post operational drilling / testing work and site restoration Monthly for a period of 6 months (unless otherwise agreed in writing by the Environment Agency).	Attached separately to reporting form.	As approved in writing with the Environment Agency in response to pre-operational condition PO-4 and PO-5.		
F2, OS Grid Reference TQ1521345181				Attached separately to reporting form.			
F3, OS Grid Reference TQ1616744727				Attached separately to reporting form.			
F5, OS Grid Reference TQ1583944418				Attached separately to reporting form.			

1. The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.
2. Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
3. For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.
4. The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)