



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Perenco UK Limited

Central Bacton Gas Terminal
Paston Road
Bacton
Norfolk
NR12 0JF

Variation application number

EPR/PP3633LM/V008

Permit number

EPR/PP3633LM

Central Bacton Gas Terminal

Permit number EPR/PP3633LM

Introductory note

This introductory note does not form a part of the notice.

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. We have reviewed the permit for this installation against the revised BAT Conclusions for the refining of mineral oil and gas industry sector published on 28th October 2014.

The rest of the installation is unchanged and continues to be operated as follows:

The Terminal receives and processes natural gas (primarily methane) and Natural Gas Liquids (NGL) from fields in the Southern North Sea to the site via gas pipelines. This natural gas is then supplied to an adjacent operator (National Grid) for transmission to the national distribution network. The installation consists of a listed activity for refining gas (Section 1.2 Part A(1)(a)) Supporting the gas refining are a number of directly associated activities including effluent treatment and drainage, fuel and power gas systems, instrument and plant air system, electricity generation, diesel storage, hydraulic system, firewater system and vapour recovery systems. The process activity requires combustion activities for heating, compression etc. There is also a large combustion plant (LCP) on site (LCP 42: net rated thermal input 75MWth) for the provision of mechanical energy to drive the compressors. There is a 1.1MW standby diesel generator used for electricity generation in the event of a power outage of the main electrical supply. Effluent is collected, via the site drainage system and discharges wastewater to coastal waters from two release points designated as W1 and W2. The W1 release point serves the main Perenco installation while W2 serves the additional Annexe area that was transferred to Perenco in 2011.

The main emissions to air from the site are oxides of nitrogen and carbon monoxide from combustion activities, and natural gas (as methane) from venting and fugitive sources. The LCP stack is 20 metres tall and air pollutants are abated by means of a catalytic converter.

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

Status log of the permit		
Description	Date	Comments
Application PP3633LM received (EPR/PP3633LM/A001)	15/08/06	Duly made
Additional information received (further process clarification)	11/12/07	
Permit PP3633LM determined (EPR/PP3633LM)	27/06/07	
Application for variation UP3039XY received (EPR/PP3633LM/V002)	26/11/07	
Variation UP3039XY determined (EPR/PP3633LM/V002)	07/01/08	
Variation and consolidation (with EPR/JP3838FX) notice determined EPR/PP3633LM/V003	Determined 11/08/11 Effective 16/08/11	Variation and consolidation following partial transfer from ENI Hewett Limited (EPR/VP3637SB) to Perenco UK Limited (EPR/JP3838FX)
Agency variation determined EPR/PP3633LM/V004	30/05/13	Agency variation to implement the changes introduced by IED
Application EPR/PP3633LM/V005	Returned 06/11/14	Variation returned as it did not qualify as a minor variation
Application EPR/PP3633LM/V006	Duly made 18/02/15	Variation to amend and correct emission points to air and associated permit limits
Agency variation determined EPR/PP3633LM/V006 (PAS billing ref: TP3337WY)	24/03/15	Varied permit issued
Regulation 60 Notice sent to the Operator	31/10/14 and 27/01/15	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency Initiated review and variation to vary the permit under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V. The permit is also updated to modern conditions.
Regulation 60 Notice response	30/03/15	Response received from the Operator
Additional information received	29/05/15	Response to request for further information (RFI) dated 13/05/15
Additional information received	20/11/15	Response to request for further information (RFI) dated 13/05/15
Agency variation determined EPR/PP3633LM/V007 (PAS billing ref: HP3534AT)	18/12/15	Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/16
Regulation 60 Notice sent to the Operator	05/11/15	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency initiated review and variation to vary the permit under IED to implement Chapter II following the publication of the revised Best Available Techniques (BAT) Reference Document for the Refining of Mineral Oil and Gas.
Regulation 60 Notice response	15/03/16	Response received from the Operator.
Regulation 60 Notice further information	15/03/16	BAT compliance for combustion units.

Status log of the permit		
Description	Date	Comments
Regulation 60 Notice further information	21/05/18	Water BAT assessment
Regulation 60 Notice further information	21/06/18	Waste water management
Variation determined EPR/PP3633LM/V008 (PAS Billing ref: SP3338DL)	15/10/18	Varied and consolidated permit issued.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates

Permit number

EPR/PP3633LM

Issued to

Perenco UK Limited (“the operator”)

whose registered office is

8 Hanover Square

London

W1S 1HQ

company registration number 04653066

to operate a regulated facility at

Central Bacton Gas Terminal

Paston Road

Bacton

Norfolk

NR12 0JF

to the extent set out in the schedules.

The notice shall take effect from 28/10/2018

Name	Date
M Bischer	15/10/18

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/PP3633LM

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/PP3633LM/V008 authorising,

Perenco UK Limited (“the operator”),

whose registered office is

8 Hanover Square

London

W1S 1HQ

company registration number 04653066

to operate an installation at

Central Bacton Gas Terminal

Paston Road

Bacton

Norfolk

NR12 0JF

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

Name	Date
M Bischer	15/10/18

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, 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.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) take appropriate measures to ensure the efficiency of energy generation at the permitted installation is maximised;
 - (c) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (d) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

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

- 1.4.1 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.

1.4.2 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 For the following activities referenced in schedule 1, table S1.1: LCP 42. Without prejudice to condition 2.3.1, the activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” revision 1 dated February 2015 or any later version unless otherwise agreed in writing by the Environment Agency.

2.3.3 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.

2.3.4 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP 42. The end of the start up period and the start of the shutdown period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5.

2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP 42. The following conditions apply where there is a malfunction or breakdown of any abatement equipment:

Unless otherwise agreed in writing by the Environment Agency:

- (i) if a return to normal operations is not achieved within 24 hours, the operator shall reduce or close down operations, or shall operate the activities using low polluting fuels;
- (ii) the cumulative duration of breakdown in any 12-month period shall not exceed 120 hours; and
- (iii) the cumulative duration of malfunction in any 12-month period shall not exceed 120 hours.

2.3.7 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazardous property associated with the waste, if applicable; and
- (e) the waste code of the waste.

- 2.3.8 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational condition

- 2.5.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table 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 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 The emission values from emission point A17 listed in schedule 3 table S3.1, measured during periods of abatement equipment malfunction and breakdown shall be disregarded for the purposes of compliance with Table S3.1 emission limit values.
- 3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

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.

3.3 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.
- 3.3.2 The operator shall:
 - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency 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 the Environment Agency.

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 tables S3.1 and S3.2;
- (b) process monitoring specified in table S3.3.

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 continuous), 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 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 and S3.2 unless otherwise agreed in writing by the Environment Agency.

3.6 Monitoring for the purposes of the Industrial Emissions Directive Chapter III

3.6.1 All LCP monitoring required by this permit shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive.

3.6.2 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Environment Agency.

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 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 keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

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 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the resource efficiency metrics set out in schedule 4 table S4.2;
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- (d) where condition 2.3.6 applies, the cumulative duration of breakdown and cumulative duration of malfunction in any 12 month period.

4.2.3 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 S4.4; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 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.

4.2.5 Within 10 days of the notification of abatement equipment malfunction or breakdown (condition 2.3.6) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- (d) of any malfunction or breakdown of abatement equipment relating to condition 2.3.6, the operator shall notify the Environment Agency within 48 hours unless notification has already been made under (a) to (c) above.

4.3.2 Any information provided under condition 4.3.1 (a)(i), 4.3.1 (b)(i) where the information relates to the breach of a condition specified in the permit or 4.3.1 (d) where the information relates to malfunction or breakdown of abatement equipment 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 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.

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 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.
- 4.3.8 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

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 “immediately” in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A1	Section 1.2 A(1) (a): Refining gas where this is likely to involve the use of 1000 tonnes or more of gas in any period of 12 months.	Refining of natural gas from the following gas fields:- <ul style="list-style-type: none"> • Leman, • Inde, • Trent and Cygnus, • Hewett, • Thames, and • Lancelot Area Pipeline (LAPS). 	From receipt of natural gas, natural gas liquids and raw materials to despatch of treated gas, condensate and waste.
A2	Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP 42: 73 MWth Natural gas-fired turbine for the provision of mechanical energy to drive the gas compressors. Standby diesel generator: 1.1MWth for electricity generation in the event of power outage of the main electrical supply.	From receipt of natural gas and compression to export pressure in natural gas fired gas turbine compressors (the LAPS compressors).
Directly Associated Activity			
A3	Directly associated activity	The recovery of mono ethylene glycol (MEG) by distillation for reinjection in to gas refining systems.	The receipt of MEG within the Installation to its re-use within the Installation.
A4	Directly associated activity	Utility systems including hot water circuit, hot oil circuits, fuel gas system, instrument air system, electricity generation, diesel storage, hydraulic system firewater system, flash gas and vapour recovery system.	From receipt of raw materials to dispatch for use and transfer of wastes off-site.
A5	Directly associated activity	Surface water, effluent and domestic drainage and treatment.	Handling and storage of site drainage until discharge to the site surface water system.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to section 2.1 and 2.2 in the Application	15/08/2006
Receipt of additional information to the application	Entire response	11/12/2006
Part Transfer Application of Environmental Permit EPR/VP3637SB	"Part transfer application of Environmental Permit VP3637SB" June 2011 (ref:933988(3)).	02/08/11
Variation Application (EPR/PP3633LM/V006)	Application documents and all associated supporting information.	07/01/15
Variation Application (EPR/PP3633LM/V006)	Further information and site plan with emission points to air (SN-BX-XX-DW-AG-000002)	12/02/15 & 23/02/15
Response to regulation 60(1) Notice – request for information dated 31/10/14	Compliance routes and operating techniques identified in response to questions 1 (LCP details), 2 (compliance route), 4 (LCP configuration), 5 (net rated thermal input) and 6 (start up and shut down).	30/03/15
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 13/05/15	Compliance routes and operating techniques identified in response to questions 5 (net rated thermal input), 6 (start up and shut down) and 9 (monitoring).	30/05/15 & 20/11/15
Response to regulation 60(1) Notice – request for information dated 05/11/15	Compliance and operating techniques identified in response to the BAT Conclusions for the refining of mineral oil and gas industry sector published on 28th October 2014.	15/03/16
Additional information in response to regulation 60(1) Notice	Compliance and operating techniques identified in response to the BAT Conclusions 34 and 37.	15/03/16
Additional information in response to regulation 60(1) Notice	Compliance and operating techniques identified for waste water management.	21/06/18

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	<p>A written procedure shall be submitted to the Agency for approval. The procedure shall contain list of parameters and methodologies used for six monthly comprehensive monitoring of the final wastewater at discharge point W1.</p> <p>The Operator shall implement the proposals as agreed in writing with the Environment Agency.</p> <p>The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.</p>	Complete
IC2	<p>A written report shall be submitted to the Agency for approval. The report shall contain the methodologies, results and any statistical relationships in the levels of TOC and BOD in effluent samples collected from the final wastewater discharged from monitoring point W1. The report shall also contain any relationships between this study and the findings of improvement condition 8.1.8 in authorisation BZ0572</p> <p>The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.</p>	Complete
IC3	<p>A written report shall be submitted to the Agency for approval. The report shall contain a review of VOC emissions to air (both fugitive and point source) from the installation. The report shall also contain the results, detailing mass emissions to air and identifying the main sources of loss, and proposals for any improvements, taking into consideration BAT requirements as described in 2.1.4 and 2.2.4 of the Gasification, Liquefaction and Refining sector guidance note S1.02.</p> <p>The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.</p> <p>The improvements identified in the report shall be implemented by the operator from the date of approval in writing by the Agency.</p>	Complete
IC4	<p>A written report shall be submitted to the Agency for approval. The report shall contain a BAT review of the options for reduction of NOx and CO from release points A4 and A5, having regard for the benchmark emission limit values as given within the Gasification, Liquefaction and Refining sector guidance note S1.02. The report shall also include a plan with dates for the implementation of the improvements identified as necessary.</p> <p>The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.</p> <p>The improvements identified in the report shall be implemented by the operator from the date of approval in writing by the Agency.</p>	Complete
IC5	<p>A written report shall be submitted to the Agency for approval. This report should include a detailed BAT review of the energy efficiency of process equipment and related plant. The report shall have regard for Sector Guidance Note S1.02 and shall contain proposals to operate the site using equipment that has the lowest environmental impact.</p> <p>The operator shall implement the proposals as agreed in writing with the environment agency</p>	Complete

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report	
IC6	<p>A written report shall be submitted to the Agency for approval. The report shall contain a review of the on site measures for treating water against the BAT listed within the Gasification, Liquefaction and Refining Sector SGN IPPC S1.02 Section 2 for control of point source emissions to water, with proposed improvements to reduce emissions from these release points, having regard for the ELVs given within the SGN for releases to water from W1. The report shall also include, but not be limited to, all of the relevant techniques listed within the SGN, the reduction in the level of pollutants (for each option) and the costs of achieving the reduction (for each option).</p> <p>The Operator shall implement the proposals as agreed in writing with the Environment Agency.</p> <p>The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.</p>	Complete
IC7	<p>A written report shall be submitted to the Agency for approval. The report shall evaluate the potential for impact and/or harm to the aquatic environment of the releases to controlled waters from Release Point W1, having regard for the Agency Guidance Note 'The Use of Direct Toxicity Assessment in PPC Impact Assessments'. A report on the results, with interpretation, conclusions and proposed actions to prevent any acute toxic effects in the receiving waters, with timescales for implementation, shall be supplied to the Agency.</p> <p>The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.</p> <p>The improvements identified in the report shall be implemented by the operator from the date of approval in writing by the Agency.</p>	Complete
IC8	<p>The operator shall develop a written site closure plan with regard to the requirements of sect 2.11 of Agency Guidance note IPPC S1.02 Upon completion of the plan a summary of the document shall be submitted in writing to the Agency.</p> <p>The notification requirements of 2.4.2 shall be deemed to have been complied with on submission of the plan</p>	Complete
IC9	<p>A written report shall be submitted to the Environment Agency for approval. The report shall contain a review of the Site Protection and Monitoring Programme (as covered by condition 2.8.2 of this permit) considering the amendments made by this variation and consolidation notice.</p> <p>The report shall identify any necessary measures for implementation by the operator from the date of approval in writing by the Agency.</p> <p>The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.</p>	Complete

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC10	The Operator shall provide a written report to the Environment Agency fully detailing the integrated site accident management plan having regards to all relevant Environment Agency guidance.	Complete
IC11	'For LCPD LCP 434 (now LCP 42 under IED). Annual emissions of dust, sulphur dioxide and oxides of nitrogen including energy usage for the year 01/01/2015 to 31/12/2015 shall be submitted to the Environment Agency using form AAE1 via the NERP Registry. If the LCPD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.'	Complete
IC12	<p>The Operator shall submit a diffuse VOC monitoring plan to the Environment Agency for written approval. This shall include but not be limited to:</p> <ul style="list-style-type: none"> • The nature of the material handled; • The sources of emissions; • Justification of the monitoring techniques selected • How the monitoring data will be recorded and reviewed <p>The plan shall take into account the appropriate techniques for VOC monitoring specified in BAT conclusion 6 for the Refining of Mineral Oil and Gas. The Operator shall implement the approved plan and produce and submit an annual report on the results of the monitoring undertaken under the plan.</p>	01/11/19
IC13	<p>The operator shall submit a written monitoring plan to the Environment Agency for approval that includes:</p> <p>(a) proposals to undertake representative monitoring of hazardous pollutants (as set out in the Environment Agency's Surface Water Pollution Risk Assessment guidance) in the discharge to surface water from points W1 and W2 including the parameters to be monitored, frequencies of monitoring and methods to be used.</p> <p>The operator shall carry out the monitoring in accordance with the Environment Agency's written approval.</p>	01/07/19
IC14	<p>The operator shall submit a written report to the Environment Agency for approval that includes:</p> <p>the results of an assessment of the impact of the emissions to surface water from the site in accordance with the Environment Agency's Surface Water Pollution Risk Assessment Guidance available on our website. The report shall:</p> <p>(a) be based on the parameters monitored in IC13 above; and</p> <p>(a) Include proposals for appropriate measures to mitigate the impact of any emissions where the assessment determines they are liable to cause pollution, including timescales for implementation of individual measures.</p>	01/11/20
IC15	<p>The Operator shall carry out an assessment of the impact of emissions of mercury present in raw natural gas. The report shall include;</p> <ul style="list-style-type: none"> • the measures used to remove the mercury, • mercury emissions to air from handling and treating the raw natural gas • how the mercury containing sludge/absorbent is recovered and handled 	01/11/19

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<ul style="list-style-type: none"> the final fate of any mercury containing waste streams. <p>A written report summarising the findings shall be submitted to the Agency for approval, along with a timetable for implementing improvements. The Operator shall implement the improvements to the approved timetable.</p>	
IC16	<p>The Operator shall review the measures and procedures in place to prevent and reduce/mitigate venting of gas from the process. The review must consider in detail all available options, both combustion and non-combustion based (including but not necessarily limited to flaring, vapour recovery, scrubbing and adsorption), for the reduction/abatement/mitigation of waste gas so as to minimise its environmental impacts as far as available techniques allow.</p> <p>A written report summarising the findings shall be submitted to the Agency for approval, along with a timetable for implementing improvements. The Operator shall implement the improvements to the approved timetable.</p>	01/05/20

Table S1.4 Pre-operational measures		
Reference	Operation	Pre-operational measures
PO1	Discharge of effluent via point W1.	The operator shall submit a report demonstrating that an MCERTS approved flow proportional sampler has been installed/commissioned.

Table S1.5 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	“Minimum Start-Up Load” Load in MW and as percent of rated power output (%) and/or when two of the criteria listed below for the LCP or unit have been met.	“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%) and/or when two of the criteria listed below for the LCP or unit have been met.
A17 LCP 42	4.6MW; 30% Start mode completed once main flame detected; Power turbine speed >4652 rpm Fuel gas flow >28MJ/sec.	4MW; 15.7% Fuel valves ramped to closed position; Shut off valves to gas manifolds closed; Remaining gas is vented.

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	-

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air						
Emission point ref. & location	Source	Parameter	Limit (including unit)- these limits do not apply during start up or shut down.	Reference period <small>note 3</small>	Monitoring frequency	Monitoring standard or method
A1	Plant A1 Refrigeration compressor K101	Oxides of Nitrogen <small>note 1</small>	10,000 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	600 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A2	Plant A1 Refrigeration compressor K201	Oxides of Nitrogen <small>note 1</small>	10,000 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	600 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A3	Plant A1 Refrigeration compressor K301	Oxides of Nitrogen <small>note 1</small>	10,000 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	600 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A6	Recycle Gas Compressor K801A	Oxides of Nitrogen <small>note 1</small>	6000 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	7000 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A7	Recycle Gas Compressor K801B	Oxides of Nitrogen <small>note 1</small>	6000 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	7000 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A8	Vapour Recovery Compressor C300	Oxides of Nitrogen <small>note 1</small>	5000 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	750 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A9E	Natco 3 MEG Reboiler F2201	Oxides of Nitrogen <small>note 1</small>	150 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	1000 mg/m ³	Hourly mean	3 monthly	BS EN 15058

Table S3.1 Point source emissions to air						
Emission point ref. & location	Source	Parameter	Limit (including unit)- these limits do not apply during start up or shut down.	Reference period <small>note 3</small>	Monitoring frequency	Monitoring standard or method
A9W	Natco 3 MEG Reboiler F2201	Oxides of Nitrogen <small>note 1</small>	150 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	1000 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A10E	Natco 4 MEG Reboiler F2212	Oxides of Nitrogen <small>note 1</small>	150 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	1000 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A10W	Natco 4 MEG Reboiler F2212	Oxides of Nitrogen <small>note 1</small>	150 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	1000 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A11	Inde/Leman Stabilisation Reboiler F7001	Oxides of Nitrogen <small>note 1</small>	250 mg/m ³	Hourly mean	3 monthly	BS EN 14792
		Carbon Monoxide	500 mg/m ³	Hourly mean	3 monthly	BS EN 15058
A12	Inde/Leman Stabilisation Reboiler V7001 & Tower C7001	Methane and non-methane hydrocarbons	-	-	-	-
A13	Propane Vent Header S901	Methane and non-methane hydrocarbons	-	-	-	-
A14	Operational Venting	Methane and non-methane hydrocarbons	-	-	-	-
A15	Standby Generator	Oxides of Nitrogen <small>note 1</small>	-	-	-	-
		Carbon Monoxide	-	-	-	-
A16	Firewater Pump	Oxides of Nitrogen <small>note1</small>	-	-	-	-

Table S3.1 Point source emissions to air						
Emission point ref. & location	Source	Parameter	Limit (including unit)- these limits do not apply during start up or shut down.	Reference period <small>note 3</small>	Monitoring frequency	Monitoring standard or method
A16	Firewater Pump	Carbon Monoxide	-	-	-	-
A17	Siemens SGT600 LAPS gas compressor 12. LCP No.42	Oxides of Nitrogen <small>note 1</small>	82.5 mg/m ³ <small>note 2</small>	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	75 mg/m ³ <small>note 2</small>	-	At least every 6 months	BS EN 15058
		Sulphur dioxide	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
		Stack gas temperature	-	-	At least every 6 months	Traceable to national standards
		Stack gas pressure	-	-	At least every 6 months	Traceable to national standards
		Oxygen	-	-	Periodic As appropriate to reference	BS EN 14789
		Water Vapour	-	-	Periodic As appropriate to reference	BS EN 14790
		As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259

Emission point ref. & location	Source	Parameter	Limit (including unit)- these limits do not apply during start up or shut down.	Reference period <small>note 3</small>	Monitoring frequency	Monitoring standard or method
Pressure relief valves	Gas treatment system	Methane and non-methane hydrocarbons	-	-	-	-
Vacuum pressure safety valves	Condensate storage tanks	Methane and non-methane hydrocarbons	-	-	--	-
Vacuum pressure safety valves	Glycol recovery system	Methane and non-methane hydrocarbons	-	-	-	-

Note 1: NO and NO₂ expressed as NO₂.
Note 2: These limits apply when the load is >70% throughout the reference period.
Note 3: Monitoring is to be representative of the operation of plant.

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1 on figure 6 in the permit application EPR/PP3633LM– sea outfall	Drainage and effluent treatment system	Total organic carbon (TOC)	600 mg/l	24-hour flow proportional sample	Weekly	BS EN 1484
W1 on figure 6 in the permit application EPR/PP3633LM– sea outfall and W2 (point W1 on figure 6 in permit application EPR/VP3637SB) – sea outfall	Drainage and effluent treatment system	pH	5 - 9	24-hour flow proportional sample	Weekly	-
		Oil or grease	No visible emission	24-hour flow proportional sample	Weekly	-
		Chemical Oxygen Demand	125 mg/l Annual average	24-hour flow proportional sample	Weekly	BS ISO 15705:2002 or as agreed in writing with the Environment Agency

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1 on figure 6 in the permit application EPR/PP3633LM– sea outfall and W2 (point W1 on figure 6 in permit application EPR/VP3637SB) – sea outfall	Drainage and effluent treatment system	Biochemical Oxygen Demand	200 mg/l	24-hour flow proportional sample	Weekly	BS EN 1899-1 or as agreed in writing with the Environment Agency
		Suspended solids	25 mg/l Annual average	24-hour flow proportional sample	Weekly	BS EN 872:2005 or as agreed in writing with the Environment Agency
		Hydrocarbon oil index	2.5 mg/l Annual average	24-hour flow proportional sample	6 monthly	BS EN 9377 – 2
		Total nitrogen expressed as N	25 mg/l Annual average	24-hour flow proportional sample	6 monthly	BS EN 12260
		Phenol index	-	24-hour flow proportional sample	6 monthly	BS EN ISO 14402
		Benzene, toluene, ethyl benzene, xylene (BTEX)	Benzene 0.05 mg/l Annual average	24-hour flow proportional sample	6 monthly	ISO 11423-1
		Lead expressed as Pb	0.03 mg/l Annual average	24-hour flow proportional sample	6 monthly	BS EN ISO 11885
		Cadmium expressed as Cd	0.008 mg/l Annual average	24-hour flow proportional sample	6 monthly	BS EN ISO 11885
		Nickel expressed as Ni	0.1 mg/l Annual average	24-hour flow proportional sample	6 monthly	BS EN ISO 11885

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1 on figure 6 in the permit application EPR/PP3633LM–sea outfall and W2 (point W1 on figure 6 in permit application EPR/VP3637SB) – sea outfall	Drainage and effluent treatment system	Mercury expressed as Hg	0.001 mg/l Annual average	24-hour flow proportional sample	6 monthly	BS EN 12846

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Fugitive emissions of VOCs from operational plant at the installation.	VOCs	-	LDAR programme in accordance with BAT conclusion 6 and with regard to the Institute of Petroleum [Energy Institute] protocol) for testing potential sources of fugitive emissions of VOCs.	The operator shall complete repairs and/or carry out other actions to prevent, or where that is not possible, minimise continued emissions from those sources.
Fuel Gas Monitoring	Mercury	6 monthly	BS ISO 6978 Part 2	Sampling to be undertaken at locations within the gas system that are representative of the gas composition burnt in combustion units.

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
Oxides of nitrogen	A1, A2, A3, A6, A7, A8, A9E, A9W, A10E, A10W, A11	Every 3 months	1 January, 1 April, 1 July, 1 October
	A17	Every 6 months	1 January, 1 July
Carbon Monoxide	A1, A2, A3, A6, A7, A8, A9E, A9W, A10E, A10W, A11	Every 3 months	1 January, 1 April, 1 July, 1 October
	A17	Every 6 months	1 January, 1 July
Sulphur dioxide	A17	Every 6 months	1 January, 1 July
Emissions to Water Parameters as required by condition 3.5.1	W1, W2	Every 12 months	1 January

Parameter	Units
Electricity Exported	GWhr
Heat Exported	GWhr
Mechanical Power Provided	GWhr
Fossil Fuel Energy Consumption	GWhr
Non-Fossil Fuel Energy Consumption	GWhr
Annual Operating Hours	hr
Water Abstracted from Fresh Water Source	m ³
Water Abstracted from Borehole Source	m ³
Water Abstracted from Estuarine Water Source	m ³
Water Abstracted from Sea Water Source	m ³
Water Abstracted from Mains Water Source	m ³
Gross Total Water Used	m ³
Net Water Used	m ³
Hazardous Waste Transferred for Disposal at another installation	t
Hazardous Waste Transferred for Recovery at another installation	t
Non-Hazardous Waste Transferred for Disposal at another installation	t
Non-Hazardous Waste Transferred for Recovery at another installation	t

Table S4.2: Resource Efficiency Metrics	
Parameter	Units
Waste recovered to Quality Protocol Specification and transferred off-site	t
Waste transferred directly off-site for use under an exemption / position statement	t

Table S4.3 Chapter III Performance parameters for reporting to DEFRA and other Performance parameters		
Parameter	Frequency of assessment	Units
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NO _x for each LCP	Annually	t
Total Emissions to Air of SO ₂ for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP (Load Factor)	Annually	hr
Gas exported	Annually	MSCM

Table S4.4 Reporting forms				
Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air 1	Form Air 1 or other form as agreed in writing by the Agency	Permit issue	Area Office	01/06/07
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy	01/01/16	National & Area Office	31/12/15
LCP	Form IED HR1 – operating hours	01/01/16	National & Area Office	31/12/15
LCP	Form IED BD1 - Cumulative annual rolling malfunction and breakdown hours	01/01/16	Area Office	31/12/15
Air	Form IED MF1 – pollutant concentrations when during any day with malfunction or breakdown of abatement plant	01/01/16	Area Office	31/12/15
Air	Form IED PM1 - discontinuous monitoring and load.	01/01/16	Area Office	31/12/15
Resource Efficiency	Form REM1 – resource efficiency annual report	01/01/16	National & Area Office	31/12/15
Water	Form water 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	28/10/18

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	EPR/PP3633LM
Name of operator	Perenco UK Limited
Location of Facility	Central Bacton Gas Terminal
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

Part C Malfunction or Breakdown of LCP abatement equipment

Permit Number	EPR/PP3633LM
Name of operator	Perenco UK Limited
Location of Facility	Central Bacton Gas Terminal
LCP Number	42
Malfunction or breakdown	
Date of malfunction or breakdown	

(a) Notification requirements for any malfunction and breakdown of abatement equipment as defined by the Industrial Emission Directive*.	
To be notified within 48 hours of abatement equipment malfunction and breakdown	
Time at which malfunction or breakdown commenced	
Time at which malfunction or breakdown ceased	
Duration of the breakdown event in hours and minutes	
Reasons for malfunction or breakdown	
Where the abatement plant has failed, give the hourly average concentration of all measured pollutants.	
Cumulative breakdown operation in current year (at end of present event)	
Cumulative malfunction operation in current year (at end of present event)	
Name**	
Post	
Signature **	
Date	

* See section 3.6 and Appendix E of ESI Compliance Protocol for guidance

** authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“*Acid Gas*” (or sour gas) means an off gas that contains high levels of hydrogen sulphide (H₂S)

“*Air Quality Risk Assessment*” has the meaning given in Annex D of IED Compliance Protocol for Utility Boilers and Gas Turbines.

“*Annual average*” means a calendar year starting 1 January.

“*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.

“*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:

for emissions to surface water, the surface water quality up-gradient of the site; or

for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“base load” means: (i) as a mode of operation, operating for >4000hrs pa; and (ii) as a load, the maximum load under ISO conditions that can be sustained continuously, i.e. maximum continuous rating.

“*BAT*” means Best available techniques, as defined in Article 3 of the Industrial Emissions Directive.

“*BAT AEL*” means the achievable emission level associated with application of the best available techniques.

“*breakdown*” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“*calendar monthly mean*” means the value across a calendar month of all validated hourly means.

“*CEN*” means Comité Européen de Normalisation.

“*Combustion Technical Guidance Note*” means IPPC Sector Guidance Note Combustion Activities, version 2.03 dated 27th July 2005 published by Environment Agency.

“*disposal*”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“*DLN*” means dry, low NO_x burners.

“dynamic emission limit value” (DELV) means an emission limit that varies in accordance with Article 40 of the Industrial Emissions Directive.

“emissions to land” includes emissions to groundwater.

“Energy efficiency” the annual net plant energy efficiency means the value calculated from the operational data collected over the year.

“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.

“*Flaring event*” means a large scale temporary operation of a flare system, caused by a process disruption.

“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.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions.

“large combustion plant” or “LCP” is a combustion plant or group of combustion plants discharging waste gases through a common windshield or stack, where the total thermal input is 50 MW or more, based on net calorific value. The calculation of thermal input, excludes individual combustion plants with a rated thermal input below 15MW.

“low polluting fuels” means biomass or coal with an average as-received sulphur content of less than 0.4% by mass as described in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“malfunction” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines

“Mid-merit” means combustion plant operating between 1,500 and 4,000 hrs/yr.

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

“MCR” means maximum continuous rating.

“MSDL” means minimum shut-down load as defined in Implementing Decision 2012/249/EU.

“MSUL” means minimum start-up load as defined in Implementing Decision 2012/249/EU.

“MSCM” means million standard cubic metres

“Natural gas” means naturally occurring methane with no more than 20% by volume of inert or other constituents.

“ncv” means net calorific value.

“*Normal Operation*” means the range of process conditions that can occur when a process unit is performing its intended duty.

“operational hours” are whole hours commencing from the first unit ending start up and ending when the last unit commences shut down.

“*Other than normal operating conditions*” means process conditions that would not occur during the normal operation of a process unit.

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

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“*RFG*” means Refinery Fuel Gas: off-gases from distillation or conversion units used as a fuel.

“SI” means site inspector.

“Standby fuel” means alternative liquid fuels that are used in emergency situations when the gas fuel which is normally used, is not available.

“*The BREF*” means the BAT Reference Document for the Refining of Mineral Oil and Gas published by the European commission 2014/738/EU.

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 gas turbine or compression ignition engine combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or

- in relation to emissions from combustion processes comprising a gas turbine with a waste heat boiler, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry, unless the waste heat boiler is operating alone, in which case, with an oxygen content of 3% dry for liquid and gaseous 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.

“VOC” means Volatile organic compounds as defined in Article 3(45) of Directive 2010/75/EU - ‘volatile organic compound’ means any organic compound as well as the fraction of creosote, having at 293,15 K a vapour pressure of 0,01 kPa or more, or having a corresponding volatility under the particular conditions of use

“year” means calendar year ending 31 December.

Schedule 7 – Site plan

Site plan subject to National Security

END OF PERMIT