

# Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

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**Eni UK Limited**

**Point of Ayr Gas Terminal  
Talacre  
Holywell  
Flintshire  
CH8 9RD**

Permit number

**EPR/DP3934EW**

# **Point of Ayr Gas Terminal**

## **Permit number EPR/DP3934EW**

### **Introductory note**

#### **This introductory note does not form a part of the permit**

The main features of the permit are as follows.

The installation, operated and owned by Eni UK Limited, is located at national grid reference SJ1224083900. The installation is on a 37 Ha site and is approximately 5km east of Prestatyn in north Wales. It is bounded to the east by the sea wall and the Dee Estuary, and to the southeast and south by the former Point of Ayr Colliery. To the north and west of the site is grazing land associated with Llawndy Farm. Beyond Llawndy farm is the village of Talacre and a caravan park.

The Dee Estuary (Site of Special Scientific Interest, Special Protection Area, Special Area of Conservation and Ramsar) are located 258m to the east of the installation. The Gronant Dunes and Talacre Warren (Site of Special Interest) is located 898 metres to the north of the installation.

The purpose of the installation is to process gas from the off-shore Douglas Platform to meet sales requirements, with the primary processes being gas sweetening (sulphur removal) and dewpoint control (condensable liquid removal). The Terminal consists of A and B trains, each with Gas Sweetening and Dewpoint Control Units. Each train is capable of achieving 50% of the total plant throughput (353,000 m<sup>3</sup>/h). Common gas import and export facilities serve both trains.

Gas sweetening is carried out by contacting the gas with an amine solvent. The amine is regenerated for re-use. The acid gases from the amine regeneration process are combusted in the Sulphur Recovery Unit (SRU) and converted in the presence of a catalyst to produce elemental liquid sulphur (exported for sale by road tanker). The Tail Gas Unit (TGU) provides further removal/conversion of sulphurous compounds. The first stage of TGU involves catalytically converting residual sulphur dioxide in the tail gas to hydrogen sulphide. The second stage involves removal of the hydrogen sulphide by contact with an amine solvent solution, followed by recycle back to the SRU. Residual gases are combusted in the installation's thermal oxidiser.

Dewpoint control is achieved by cooling the gas using a closed-loop propane refrigeration system.

The site also has various utilities systems including nitrogen for purging/blanketing, cooling water, compressed air, hot oil heating system, propane refrigeration system and a flare. The flare is primarily provided for short-term use during maintenance, e.g. when de-pressuring plant sections, or to vent the plant in an incident/ emergency.

The layout of the installation can be summarised as:

- Flare in the North;
- Process trains in the South;
- Gas inlet facilities and cooling tower in the East;
- Open ground for future expansion in the centre;

- Administration/control buildings in the West, and;
- Firewater retention pond in the North West.

The installation emits products of combustion to the air. The main sources of NO<sub>x</sub> at the installation are the thermal oxidiser, gas turbine and flares (when in operation).

Process effluent in the form of boiler and cooling tower blowdown and surface water run-off are discharged to the Talacre New Drain which flows into the Dee Estuary. Considerable amounts of hydrocarbon condensate are returned to the Douglas Platform for processing or re-injection.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application EPR/ZP3331LM/A001	Duly made 30/06/2006	Application for a gas processing plant
Permit determined EPR/ZP3331LM	20/03/2007	Original permit issued to BHP Billiton Petroleum limited
Application EPR/DP3934EW/T001 (Full transfer of permit EPR/ZP3331LM)	Duly made 14/01/2014	Application to transfer the permit in full to Eni Liverpool Bay Operating Company Limite
Transfer Determined EPR/DP3934EW	14/01/2014	Full transfer of permit complete
Application EPR/DP3934EW/T002 (full transfer)	Duly made 15/11/2016	Application to transfer the permit in full to Eni UK Limited
Transfer determined EPR/DP3934EW	13/12/2016	Full transfer of permit complete
Permit review determined EPR/DP3934EW/V003	26/10/2018	Reviewed against Refinery BREF Note.

End of introductory note

# Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number  
**EPR/DP3934EW**

The Natural Resources Body for Wales (“Natural Resources Wales”) authorises,  
under regulation 13 of the Environmental Permitting (England and Wales) Regulations  
2016

**Eni UK Limited** (“the operator”),  
whose registered office is

**Eni House**  
**10 Ebury Bridge Road**  
**London**  
**SW1W 8PZ**

company registration number **00862823**

to operate an installation at

**Point of Ayr Gas Terminal**  
**Talacre**  
**Holywell**  
**Flintshire**  
**CH8 9RD**

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

Signed	Date
	<b>26/10/2018</b>

Authorised on behalf of Natural Resources Wales

# Conditions

## 1 Management

### 1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
  - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

### 1.2 Energy efficiency

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

### 1.3 Efficient use of raw materials

- 1.3.1 For the following activities referenced in schedule 1, table S1.1. 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; and

- (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
  - (a) For the following activities referenced in schedule 1, table S1.1 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 Natural Resources Wales.
  - (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.3 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.
- 2.3.4 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 Natural Resources Wales.
- 2.4.2 Except in the case of an improvement which consists only of a submission to Natural Resources Wales, the operator shall notify Natural Resources Wales within 14 days of completion of each improvement.

## **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, S3.2, S3.3 and S3.4.
- 3.1.2 The limits given in schedule 3 shall not be exceeded
- 3.1.3 For the following activities referenced in schedule 1, table S1.1 where a substance is specified in schedule 3 table S3.2 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.
- 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.
- 3.1.5 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 and S3.2 unless otherwise specified in that schedule.
- 3.1.6 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, 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.

### **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 Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 3.2.3 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 Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
  - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

### **3.4 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 Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

### **3.5 Monitoring**

- 3.5.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in table S3.1
  - (b) surface water specified in table S3.2
- 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 based on 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) unless otherwise agreed in writing by Natural Resources Wales.
- 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 Natural Resources Wales.

## 4 Information

### 4.1 Records

4.1.1 All records required to be made by this permit shall:

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

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by Natural Resources Wales.

### 4.2 Reporting

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

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) 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 annual production /treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by Natural Resources Wales, 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 Natural Resources Wales, 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 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which affects or may affect the environment, the operator must immediately—
  - (i) inform Natural Resources Wales,
  - (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 Natural Resources Wales, 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 emission points on Table S4.1, the operator shall notify Natural Resources Wales 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 where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time-period specified in that schedule.

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

4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

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

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

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

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(s); 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) Natural Resources Wales 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 Natural Resources Wales 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, Natural Resources Wales 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 "immediately", in which case it may be provided by telephone.

# Schedule 1 - Operations

**Table S1.1 activities**

Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
S1.2 A1 (a)	Refining gas	From receipt of raw materials to the dispatch of products and wastes
S1.1 A1 (a)	Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.	Appliances with an aggregate rated thermal input of 50 megawatts or more. (i) Gas Turbine 37.63 MWth (ii) Hot Oil Heater A 15.33 MWth (iii) Hot Oil Heater B 15.33 MWth (iv) Steam Boiler 2.06 MWth (v) Generator 1.86MWth
<b>Directly Associated Activity</b>		
Emission abatement equipment	Thermal oxidiser and low and high pressure flares	Abatement using a thermal oxidiser at or above 850°C and a flare system
Utilities	Operation of cooling towers, hot oil system, demineralised water plant, compressed air plant and refrigeration system	From receipt of raw materials to the dispatch of wastes.

**Table S1.2 Operating techniques**

Description	Parts	Date Received
Application	The response to questions B2.1 and B2.2 in the Application.	30/06/06
Regulation 60 Response	Report on the Review of Gas Refineries BAT Conclusions – Point of Ayr Terminal	30/06/16

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
IC7	The operator shall review and produce a report detailing how the efficiency of the Sulphur Recovery Unit (SRU) is calculated to show that the abatement is operating at or over the 98.5 % efficiency requirement as detailed in BAT 41 of the Refinery BREF. The report is to be submitted to Natural Resources Wales.	01/04/19

# 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 limits and monitoring requirements**

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Thermal oxidiser	120 mg/m <sup>3</sup>	Hourly average	6-monthly	BS EN 14792
	Sulphur dioxide	Thermal oxidiser	98.5% efficiency	Monthly average	Continuous	BS EN 14181
			190 mg/m <sup>3</sup>	Hourly average	Continuous	BS EN 14181
A2 [Point A2 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Turbine Generator	100 mg/m <sup>3</sup>	Hourly average	6-monthly	BS EN 14792
	Carbon Monoxide	Turbine Generator	100 mg/m <sup>3</sup>	Hourly average	6-monthly	BS EN 15058
A3 [Point A3 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Hot oil heater A	100 mg/m <sup>3</sup>	Hourly average	6-monthly	BS EN 14792
	Carbon Monoxide	Hot oil heater A	100 mg/m <sup>3</sup>	Hourly average	6-monthly	BS EN 15058
A4 [Point A4 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Hot oil heater B	100 mg/m <sup>3</sup>	Hourly average	6-monthly	BS EN 14792
	Carbon Monoxide	Hot oil heater B	100 mg/m <sup>3</sup>	Hourly average	6-monthly	BS EN 15058
A5 [Point A5 on site plan in Schedule 7]	No parameters set	Steam boiler – standby	No limit set	-	-	-
A6 [Point A6 on site plan in Schedule 7]	No parameters set	High pressure flare	No limit set	-	-	-
A7 [Point A7 on site plan in Schedule 7]	No parameters set	Low pressure flare	No limit set	-	-	-

**Table S3.1 Point source emissions to air – emission limits and monitoring requirements**

<b>Emission point ref. &amp; location</b>	<b>Parameter</b>	<b>Source</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A8 [Point A8 on site plan in Schedule 7]	No parameters set	Diesel generator (backup)	No limit set			
A9 [Point A9 on site plan in Schedule 7]	No parameters set	Firewater pump	No limit set			
A10 [Point A10 on site plan in Schedule 7]	No parameters set	Cooling Tower	No limit set	-	-	-
A11 [Point A11 on site plan in Schedule 7]	No parameters set	Sales gas analyser	No limit set	-	-	-
A12 [Point A12 on site plan in Schedule 7]	No parameters set	Glycol sump via carbon filter	No limit set	-	-	-
A13 [Point A1 on site plan in Schedule 7]	No parameters set	Glycol storage tank via carbon filter	No limit set	-	-	-
A14 [Point A14 on site plan in Schedule 7]	No parameters set	Amine sump via carbon filter	No limit set	-	-	-
A15 [Point A15 on site plan in Schedule 7]	No parameters set	Amine surge tank A via carbon filter	No limit set	-	-	-
A16 [Point A16 on site plan in Schedule 7]	No parameters set	Amine surge tank B via carbon filter	No limit set	-	-	-
A17 [Point A17 on site plan in Schedule 7]	No parameters set	Solvent surge tank via carbon filter	No limit set	-	-	-
A18 [Point A18 on site plan in Schedule 7]	No parameters set	Solvent sump via carbon filter	No limit set	-	-	-
A19 [Point A19 on site plan in Schedule 7]	No parameters set	Spent caustic sump via carbon filter	No limit set	-	-	-

**Table S3.1 Point source emissions to air – emission limits and monitoring requirements**

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Pressure relief valves	No parameters set	Piping and vessels	No limit set	-	-	-
Vents from tanks	No parameters set	Storage tanks	No limit set	-	-	-

**Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements**

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1 on site plan in schedule 2 emission to Talacre New Drain	Biochemical oxygen demand	Boiler and cooling tower blowdown, site surface water and boiler water pre-treatment plant effluent.	15 mg/l	For 95% of all measured values of periodic samples taken over one month	Prior to each discharge	BS EN 1899-1 (1998) Or BS EN 1899-2 (1998)
W1 on site plan in schedule 2 emission to Talacre New Drain	pH	Boiler and cooling tower blowdown, site surface water and boiler water pre-treatment plant effluent.	6-9	Instantaneous	Prior to each discharge	BS ISO 10523

**Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements**

Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
-						

**Table S3.4 Process monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Thermal Oxidiser [Point A1 on site plan in Schedule 7]	Temperature	Continuous	Not applicable	Temperature to be maintained above 850°C

## Schedule 4 - Reporting

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

<b>Table S4.1 Reporting of monitoring data</b>			
<b>Parameter</b>	<b>Emission or monitoring point/reference</b>	<b>Reporting period</b>	<b>Period begins</b>
Emissions to air Parameters as required by condition 3.6.1.	A1, A2, A3, A4	Every 12 months	01/05/19
Emissions to water Parameters as required by condition 3.6.1	W1	Every 12 months	01/05/19

<b>Table S4.2: Annual production/treatment</b>	
<b>Parameter</b>	<b>Units</b>
Exported gas product	tonnes

<b>Table S4.3 Performance parameters</b>		
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
Water usage/tonne of product	Annually	tonnes
Electricity usage per tonne of product	Annually	MWh/tonne of product
Natural gas use per tonne of product	Annually	tonnes/tonne of product

<b>Table S4.4 Reporting forms</b>		
<b>Media/parameter</b>	<b>Reporting format</b>	<b>Date of form</b>
Air	Form air 1 or other form as agreed in writing by the Agency	26/10/18
Water	Form water 1 or other form as agreed in writing by the Agency	26/10/18
Water usage	Form water usage1 or other form as agreed in writing by the Agency	26/10/18
Energy usage	Form energy 1 or other form as agreed in writing by the Agency	26/10/18
Other performance indicators	Form performance 1 or other form as agreed in writing by the Agency	26/10/18

# 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	
Name of operator	
Location of Facility	
Time and date of the detection	

<b>(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment</b>	
<b>To be notified immediately</b>	
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>(b) Notification requirements for the breach of a permit condition</b>	
<b>To be notified immediately</b>	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

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

<b>(c) In the event 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:</b>	
<b>To be notified immediately</b>	
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.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* 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.

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

*“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.

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

*“CCR”* means Continuous Catalytic Regenerator

*“Combustion Technical Guidance Note”* means IPPC Sector Guidance Note Combustion Activities, version 2.03 dated 27<sup>th</sup> 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.

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

*“ELV”* means Emission Level Value

*“emissions to land”* includes emissions to groundwater.

*“energy efficiency”* the ISO base load net plant efficiency means the performance value established by acceptance testing following improvements made to the plant that could affect the efficiency.

*“GT”* means Gas Turbine

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

*“EP Regulations”* means The Environmental Permitting (England and Wales) Regulations SI **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.

*“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.

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

*“mcr”* means maximum continuous rating.

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

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

*“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

“RFO” means Refinery Fuel Oil

“SI” means site inspector

“SRU” Sulphur Recovery Unit

“Waste code” means the six-digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

“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:

1. 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, 3% dry for FCCU Regenerator and 3% O<sub>2</sub> for the Waste gas sulphur recovery Unit when BAT58 (SO<sub>2</sub> bubble) is applied.
2. in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with correction for water vapour content.
3. “assessment year” means any complete calendar year except that the first assessment year for the purposes of this permit shall run from 1 October 2006 until 31<sup>st</sup> December 2007
4. “CEN” means Comité Européen de Normalisation
5. “central office” means an address for reporting forms for the attention of Natural Resources Wales head office staff, which has been separately notified to the operator.
6. “combustion technical guidance note” means IPPC Sector Guidance Note Combustion Activities, version 2.03 dated 27th July 2005 published by The Environment Agency.
7. “operational hours” of an LCP is the time spent between start up and shut down of the LCP

