Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

ConocoPhillips (U.K.) Teesside Operator Limited

Teesside Crude Oil Stabilisation Terminal
Seal Sands
Middlesbrough
TS2 1UH

Variation application number

EPR/QP3004PD/V003

Permit number

EPR/QP3004PD

Teesside Crude Oil Stabilisation Terminal
Permit number EPR/QP3004PD

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. Only the variations specified in schedule 1 are subject to a right of appeal.

This variation:

- permits the operation of up to 16 process gas fired reciprocating engines, known as the Ethane to Power (E2P) Power Island project. Not all engines are expected to operate concurrently; up to four engines are provided for redundancy purposes to ensure the availability of the E2P Power Island to minimise the potential for flaring.
- removes references to the CHP plant (2 x 278 MWe gas turbines, 2 x 150 MW steam turbines) and 2 x auxiliary boilers (and associated emission points A20 to A23), included in activity AR2 of the existing permit, which has never been installed/do not exist at the site. References to activities directly associated with the CHP plant are also removed.
- removes references to multi-operator installation. The area of land previously used by RWE Generation UK PLC to operate the Seal Sands Power Station, which was authorised by permit EPR/CP3939QN, was located within the Teesside Crude Oil Stabilisation Terminal installation boundary, but that permit was surrendered on 20/03/2024.
- increases the installation boundary to include the area of land previously occupied by RWE Generation UK PLC.

Registered office address

The registered office address for ConocoPhillips (U.K.) Teesside Operator Limited has been updated to accurately reflect the details registered with Companies House under company number 11760664; changed from 20th Floor, 1 Angel Court, London, England, EC2R 7HJ to 20th Floor, 1 Angel Court, London, United Kingdom, EC2R 7HJ. The legal entity, identified by the company number remains the same, therefore this change is noted within this variation as a change of fact only.

The rest of the installation is unchanged and an updated summary follows:

The main features of the installation

The installation is located at Seal Sands, Middlesbrough at national grid reference NZ53502530.

The Crude Oil Stabilisation Process

The Crude Oil Stabilisation Process at the installation falls under the Environmental Permitting Regulation Schedule 1 listed activity:

Section 1.2 Part A(1)(e): The loading, unloading, handling or storage of, or the physical, chemical or thermal treatment of: (i) crude oil; and (ii) stabilised crude petroleum

The process is a crude oil stabilisation plant in which light hydrocarbons such as methane, ethane, propane and butane - termed Natural Gas Liquids (NGLs) – and contaminant water are removed from crude oil in large-scale continuous plant. The stabilised crude and the separated, purified propane and mixed butanes

are refrigerated and stored on site ready for bulk sale to world markets. Methane, and a portion of ethane, is consumed in the combustion plant on site as fuel gas. As a result of this variation, ethane is consumed in the E2P Power Island.

The stabilisation process has been operating since 1975 and has a nominal design throughput of 1 million barrels of crude per day. The Central Area Transmission System (CATS) is a natural gas transportation and processing system which transports gas from the Central North Sea. Since 1998, segregated NGLs have been imported from the CATS gas terminal for further processing and export using the established routes and processes permitted here.

The process comprises six main units as follows:-

- *Crude Oil receipt and storage* – including North Sea pipeline from the first onshore isolation valve and four storage spheres.
- *Oil Stabilisation Trains* – six parallel streams containing washing; heating; degassing, cooling and compression units.
- *NGL Plant* – converts the raw NGL feed mixture into individual constituent products; including distillation; cooling; compression; purification and storage units.
- *Product export* – including metering stations; pipelines from the Seal Sands Terminal to the Greatham Tank Farm and for export; ship loading jetties.
- *VOC Recovery Plant* – The volatile organic compound (VOC) vapours emitted from oil tankers during crude loading are collected. The unit uses a carbon bed absorption system to remove the VOCs from the ships vapour stream.
- *Effluent treatment* – including storage for untreated ballast water & process waste waters; plate separators; dissolved air flotation and chemical dosing (peroxide & flocculants). The final effluent is pumped to a third party for final (biological) treatment.

  Section 5.3 Part A1)(a)(ii): Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day by physico-chemical treatment.

  Section 5.4 Part A(1)(a)(ii): Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day by physico-chemical treatment.

Flaring also takes place at either the main elevated flare or the standby flare, air emission points A16 and A17.

<u>The Combustion Process</u>

The combustion processes at the installation fall under the Environmental Permitting Regulation Schedule 1 listed activity:

Section 1.1 Part A(1)(a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.

This scheduled activity consists of the following processes within the installation:

- Large combustion plant (LCP) comprising three gas turbines (31.2 MWth each) and three steam boilers (104 MWth each) which form one integrated steam raising plant (LCP 62).

The three gas turbines drive propane compressors in the propane refrigeration system which forms part of the crude oil stabilisation plant described above. The pass-out gases from the turbines have a high oxygen content (16%) and are normally routed to the combustion chambers of the steam boilers (emission points A8 & A9) as part of the combustion air supply. In the event of unavailability of the steam boilers the pass-out gases can also be vented to atmosphere via three 18 metre standby stacks at emission points A11 to A13. This however is an infrequent event.

The three steam boilers raise process steam for the crude oil stabilisation plant. Each boiler discharges to one of two shared 45 metre stacks at emission points A8 and A9, with the two stacks forming two large combustion plants (LCP). The feed water treatment plant associated with the steam boilers is included in this permit.

- Six crude oil stabilisation “reboilers”.

The six “reboilers” (Numbers 2 to 7 inclusive, each at 40 MWth) heat crude oil as part of the crude oil stabilisation plant. Each “reboiler” discharges to a dedicated 61 metre stack at emission points A2 to A7.

The gas turbines operate on a high-pressure fuel consisting mainly of methane. The boilers and reboilers are fuelled by a mixture of methane, ethane, propane and butane. Both fuels are derived from the stabilisation and fractionation process. Natural gas is available as a back-up fuel in the event that inadequate plant fuel is produced. There are no fuel storage facilities and no abatement plant associated with the process.

- E2P Power Island comprising 16 process gas (ethane) fired reciprocating engines (each 4.8 MWth) with a total thermal input of approximately 77 MWth.

Emissions

The main pollutants of concern from the installation are sulphur dioxide (SO_2) and oxides of nitrogen (NOx) from combustion. Low sulphur fuels are used on the site as well as low NOx burners on the stabilisation train reboiler exhausts, the LCP 62 gas turbines and the E2P Power Island. These emissions have been shown to be not significant at sensitive receptors.

An on-site effluent treatment plant (ETP) consisting of primary and secondary treatment facilities is used for all liquid effluent. Effluent is then transferred to the Bran Sands sewage treatment plant where further treatment is carried out prior to discharge to the River Tees.

Management

The site environmental management system is certified to ISO14001 standards.

The site is a top tier COMAH (Control of Major Accident Hazards) site.

The schedules specify the changes made to the permit.

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 received EPR/NP3033LN/A001	07/07/2006	Duly made
Additional information request	03/01/2007	Application Site Report received 19/01/2007
Permit determined EPR/NP3033LN	01/05/2007	Permit issued to ConocoPhillips Petroleum Company UK Ltd.
Variation determined EPR/NP3033LN/V002	20/12/2007	To implement the requirements of the National Emission Reduction Plan
Variation application EPR/NP3033LN/V003	23/07/2007	Duly made New combined heat and power (CHP) plant to provide electrical power and steam to the installation, replacing that currently provided by the grid and the existing combustion plant.
Environment Agency variation determined EPR/NP3033LN/V004	29/05/2013	Environment Agency initiated variation to implement the changes introduced by the IED (changes to Schedule 1 listed activities).
Regulation 60 Notice sent to the Operator	31/10/2014	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency Initiated review and

Status log of the permit		
Description	**Date**	**Comments**
		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	05/02/2015	Response received from the Operator.
Additional information received	19/05/2015	Response to request for further information (RFI) dated 13/05/2015.
Receipt of additional information to the application	18/11/2015	Variation application received to update: removal of references to LNG plant Updated with Reg 60(1) Notice.
Additional information received	27/11/2015	Response to request for further information (RFI) dated 27/11/2015.
Additional information received	01/12/2015	Response to request for further information (RFI) dated 30/11/2015.
Variation determined EPR/NP3033LN/V005	24/12/2015	Varied and consolidated permit issued in modern condition format for IED Variation effective from 01/01/2016.
Variation application EPR/NP3033LN/V006 (variation and consolidation)	10/11/2015	Duly made The reduction in A8 and A9 boiler stack heights from 76 m to 45 m.
Variation determined EPR/NP3033LN	08/02/2016	Varied and consolidated permit issued in modern condition format.
Regulation 61 Notice requiring information for statutory review of permit dated 19 November 2015 EPR/NP3033LN/V007	29/01/2016	Technical standards provided in response to the information notice. Information to demonstrate that relevant BAT conclusions are met for the refining activity. Response received from the Operator in spreadsheet format
Regulation 61 Notice requesting additional information for BAT conclusions 10 & 36 dated 23 January 2017 EPR/NP3033LN/V007	25/01/2017	Technical standards provided in response to the information notice. Information to demonstrate that relevant BAT conclusions are met for the refining activity. Response received from the Operator in spreadsheet format. No changes from the 29/01/2016 submission.
Additional information received	06/09/2018	Flare data, combustion fuels, VOC data, and usage of emission points A11 to A13.
Additional information received	11/09/2018	LDAR
Further information request sent 20/09/2018	20/09/2018	General update
Further information provided	08/10/2018 09/10/2018	Vapour recovery unit, emission point A19
Additional information received	22/10/2018	Boiler operation (duty boiler and support boiler)

Status log of the permit		
Description	**Date**	**Comments**
Variation determined EPR/NP3033LN/V007	26/10/2018	Statutory review of permit - BAT Conclusions published 28 October 2014. Varied and consolidated permit issued. Effective from 28/10/2018
Transfer application EPR/QP3004PD/T001 (full transfer of permit EPR/NP3033LN)	Duly made 06/06/2019	Application to transfer the permit in full to ConocoPhillips (U.K.) Teesside Operator Limited.
Transfer determined EPR/QP3004PD	06/08/2019	Full transfer of permit complete.
Variation application EPR/QP3004PD/V002	Received 26/03/2025	Application returned as not duly made 19/05/2025
Variation application EPR/QP3004PD/V003	Duly made 19/08/2025	Application to add E2P Power Island (16 gas engines) and to remove CHP plant (2 x 278 MWe gas turbines, 2 x 150 MW steam turbines) and 2 auxiliary boilers, previously included in activity AR2.
Additional information received in response to Schedule 5 notice dated 03/12/2025	08/01/2026	Updated air quality assessment and information regarding carbon monoxide oxidation catalyst, stack design and containment.
Variation determined EPR/QP3004PD	26/05/2026	Notice of variation (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

Permit number

EPR/QP3004PD

Issued to

ConocoPhillips (U.K.) Teesside Operator Limited ("the operator")

whose registered office is

20th Floor
1 Angel Court
London
United Kingdom
EC2R 7HJ

company registration number 11760664

to operate a regulated facility at

Teesside Crude Oil Stabilisation Terminal
Seal Sands
Middlesbrough
TS2 1UH

to the extent set out in the schedules.

The notice shall take effect from 26/05/2026

Name	Date
Sandra Cavill	**26/05/2026**

Authorised on behalf of the Environment Agency

Schedule 1

The following conditions have been varied by the consolidated permit EPR/QP3004PD as a result of the application made by the operator:

Table S1.1 (Activities), as referenced by conditions 2.1.1, 2.3.2 and 2.4.5, is amended to:

- Remove references to plant that were never installed at the site:
  - Combined Heat & Power (CHP) plant 2 x 278 MWe gas turbines with 2 x 150 MWe steam turbines (Activity AR2)
  - New boiler plant for CHP 2 x auxiliary boilers
  - Directly associated activities:
    - AR6 CHP cooling tower system
    - AR7 CHP heat recovery generators
    - AR8 CHP steam turbines
    - AR9 CHP water treatment plant).
- Add the E2P Power Island 16 x process gas (ethane) fired reciprocating engines (each 4.8 MWth) with a total thermal input of approximately 77 MWth (Activity AR2).

Table S1.2 (Operating techniques), as referenced by conditions 2.3.1, 2.3.3 and 2.3.5 has been amended to add operating techniques relevant to the E2P Power Island

Table S2.1 (Raw materials and fuels), as referenced by condition 2.3.4 has been amended to add a specification for the process gas fuelling the E2P Power Island engines.

Table S1.3 (Improvement programme requirements), as referenced by condition 2.4.1 has been amended to add improvement condition IP23.

Table S1.4 (Pre-operational measures for future development), as referenced by condition 2.5.2 has been amended to:

- Remove pre-operational conditions PO1 – PO9 which related to the CHP and auxiliary boilers that have been removed from the permit.
- Add pre-operational conditions PO10 – PO11 that require the submission of final design information and a commissioning plan.

Table S3.1 (Point source emissions to air), as referenced by conditions 3.1.1, 3.5.1, 3.5.4 and 3.6.7, has been amended to:

- Remove the emission limit values and monitoring requirements that related to the CHP and auxiliary boilers that have been removed from the permit.
- Add the emission limit values and monitoring requirements that relate the E2P Power Island.

Table S4.1 (Reporting of monitoring data), as referenced by condition 4.2.3, has been amended to:

- Remove the reporting requirements that related to the CHP and auxiliary boilers that have been removed from the permit.
- Add the reporting requirements for the E2P Power Island.

The site plan at Schedule 7, as referenced by condition 1.2.2, and the wording of the condition have been amended to remove reference to the area of land edged in red, previously used by another operator as part of a multi-operator installation.

The following conditions are deleted as a result of the application made by the operator:

1.5 Multiple operator installations

The following conditions are added as a result of the application made by the operator:

1.2.2 The operator shall review the viability of Combined Heat and Power (CHP) implementation at least every 4 years, or in response to any of the following factors, whichever comes sooner:

(a) new plans for significant developments within 15 km of the installation;

(b) changes to the Local Plan;

(c) changes to the BEIS UK CHP Development Map or similar; and

(d) new financial or fiscal incentives for CHP.

The results shall be reported to the Agency within 2 months of each review, including where there has been no change to the original assessment in respect of the above factors.

The following conditions were varied as a result of an Environment Agency initiated variation:

Condition 2.3.2 is amended to be consistent with the current permit template and to correct a typographical error (activity A1 amended to AR2):

2.3.2 For the following activities referenced in schedule 1, table S1.1: AR2 (LCP 62). The activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” November 2025 or any later version unless otherwise agreed in writing by the Environment Agency.

Condition 2.3.5 is amended to correct a typographical error (activity A1 amended to AR2):

2.3.5 For the following activities referenced in schedule 1, table S1.1: AR2 (LCP 62). The end of the start-up period and the start of the shut-down period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5.

Table S3.1, as referenced in conditions 3.1.1, 3.5.1, 3.5.4 and 3.6.7 is amended to correct a typographical error. Footnote ‘Note 1’ is amended to Note 3 for emission point A13, emissions of carbon monoxide.

Condition 3.6.7 is amended to be consistent with the current permit template:

3.6.7 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3, table S3.1; the Continuous Emission Monitors shall be used such that:

(e) for the continuous measurement systems fitted to the LCP release points defined in table S3.1 the validated hourly, monthly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval;

(f) the 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%;

(g) the 95% confidence interval for dust releases of a single measured result shall be taken to be 30%;

(h) the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;

(i) an invalid hourly average means an hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system;

(j) any day, in which more than three hourly average values are invalid shall be invalidated;

(k) to allow some discretion for zero and span gas checking, or cleaning (by flushing), an hourly average period will count as valid as long as data has been accumulated for at least:
(i) 20 minutes of the period for open cycle turbines and engines; and

(ii) 40 minutes of the period for all other combustion appliances.

Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid hourly average periods unless agreed in writing.

Condition 4.3.2 is amended to be consistent with the current permit template:

4.3.2 Any information provided under condition 4.3.1 where the information relates to the breach of a condition 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.

Schedule 5 (Notification form), as referenced by condition 4.3.2, is amended to be consistent with the current permit template.

Schedule 6 (Interpretation), as referenced by condition 4.4.1, is amended to update the following definition to be consistent with the current permit template:

- Industrial Emissions Directive

The schedule is also updated to include the following definitions:

- Commissioning
- Daily average.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/QP3004PD

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/QP3004PD/V003 authorising,

ConocoPhillips (U.K.) Teesside Operator Limited ("the operator"),

whose registered office is

20th Floor
1 Angel Court
London
United Kingdom
EC2R 7HJ

company registration number 11760664

to operate an installation at

Teesside Crude Oil Stabilisation Terminal
Seal Sands
Middlesbrough
TS2 1UH

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

Name	Date
Sandra Cavill	**26/05/2026**

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.

1.2.2 The operator shall review the viability of Combined Heat and Power (CHP) implementation at least every 4 years, or in response to any of the following factors, whichever comes sooner:

(a) new plans for significant developments within 15 km of the installation;

(b) changes to the Local Plan;

(c) changes to the BEIS UK CHP Development Map or similar; and

(d) new financial or fiscal incentives for CHP.

The results shall be reported to the Agency within 2 months of each review, including where there has been no change to the original assessment in respect of the above factors.

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: AR2 (LCP 62). The activities shall be operated in accordance with the "Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines" November 2025 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: AR2 (LCP 62). The end of the start-up period and the start of the shut-down period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5.

2.3.6 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 table S2.2; and

(b) it conforms to the description in the documentation supplied by the producer and holder.

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 conditions

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, S3.2 and S3.3.

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

3.1.3 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, S3.2 and S3.3;

(b) process monitoring specified in table S3.4.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and 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, S3.2 and S3.3 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 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 the monitoring results for more than 10 days a year are invalidated within the meaning set out in condition 3.6.7, the operator shall:

(a) within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Environment Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and

(b) implement the approved proposals.

3.6.3 Continuous measurement systems on emission points from the LCP shall be subject to quality control by means of parallel measurements with reference methods at least once every calendar year.

3.6.4 Unless otherwise agreed in writing by the Environment Agency in accordance with condition 3.6.5 below, the operator shall carry out the methods, including the reference measurement methods, to use and calibrate continuous measurement systems in accordance with the appropriate CEN standards.

3.6.5 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.

3.6.6 Where required by a condition of this permit to check the measurement equipment, the operator shall submit a report to the Environment Agency in writing, within 28 days of the completion of the check.

3.6.7 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3, table S3.1; the Continuous Emission Monitors shall be used such that:

(a) for the continuous measurement systems fitted to the LCP release points defined in table S3.1 the validated hourly, monthly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval;

(b) the 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%;

(c) the 95% confidence interval for dust releases of a single measured result shall be taken to be 30%;

(d) the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;

(e) an invalid hourly average means an hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system;

(f) any day, in which more than three hourly average values are invalid shall be invalidated;

(g) to allow some discretion for zero and span gas checking, or cleaning (by flushing), an hourly average period will count as valid as long as data has been accumulated for at least:
(i) 20 minutes of the period for open cycle turbines and engines; and

(ii) 40 minutes of the period for all other combustion appliances.

Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid hourly average periods unless agreed in writing.

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 annual production /treatment data 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.

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 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.

4.2.6 Every quarter, the operator shall report details to the Environment Agency, as specified in Form AIR: F1, of periods of flaring; where the aggregate quantity of gas flared from the installation exceeds 4.0 tonnes/hour, as a daily mean value.

4.2.7 Every quarter, the operator shall report details to the Environment Agency, as specified in Form AIR: F2, of all flaring.

4.2.8 The operator shall keep a record of each flaring event, where the gas flared exceeded 4.0 tonnes/hour, including the cause of the event, whether the event was planned and any action taken to minimise the duration of and/or the impact of flaring.

4.2.9 By 31 January each year the operator shall prepare and submit a report to the Environment Agency on the management of flaring, which includes:

(a) a summary of the root causes of any flaring events reported on form AIR F1, in accordance with condition 4.2.6;

(b) a review of possible improvements to minimise the number and/or impact of all flaring events, with proposals for improvement and timescales for implementation;

(c) progress against any improvement proposals, identified in previous reports submitted in compliance with condition 4.2.8; and

(d) any other actions taken in the previous 12 months to minimise the number and/or impact of flaring events.

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 in a safe and controlled manner until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 where the information relates to the breach of a condition 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 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 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**	
AR1	Section 1.2 Part A(1)(e)(i)(ii) The loading, unloading, handling or storage of, or the physical, chemical or thermal treatment of crude oil and stabilised crude petroleum. Primary activity	Handling and processing crude oil (stabilisation) and stabilised crude petroleum.	Primary activity at the terminal is the stabilisation of crude oil. Stabilised crude storage, loading and handling of stabilised crude petroleum via jetties 1, 2, 4 & 5 and export pipeline.	
AR2	Section 1.1 Part A(1)(a) Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	**LCP 62** 3 x 31.2 MWth gas turbines 3 x 104 MWth boilers for production of steam	From receipt of process gas/natural gas to discharge of exhaust gases at emission points A8 & A9 and the generation of steam.	
		6 x 40 MWth reboilers for heating crude oil	From receipt of process gas to discharge of exhaust gases at emission points A2 to A7.	
		E2P Power Island 16 x process gas (ethane) fired reciprocating engines (each 4.8 MWth) with a total thermal input of approximately 77 MWth.	From receipt of process gas to discharge of exhaust gases at emission points A20 to A35 and the generation of electricity.	
AR3	Section 5.1 Part A(1)(a) The incineration of hazardous waste in a waste incineration plant or waste co-incineration plant with a capacity exceeding 10 tonnes per day.	Routine flaring of waste gases.	From receipt of gas at the main elevated flare to combustion and release of emissions to air at emission point A16.	Waste incineration limits specified in Annex VI of the IED do not apply to the waste gas.
			From receipt of gas at the stand-by flare to combustion and release of emissions to air at emission point A17.	

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR4	Section 5.3 Part A(1)(a)(ii) Disposal of hazardous waste in a facility (other than landfill or incineration) with a capacity of more than 10 tonnes per day by physico-chemical treatment.	Physico-chemical treatment of wastes containing oil (ballast water).	On-site effluent treatment plant
AR5	Section 5.4 Part A(1)(a)(ii) Disposal of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by physico-chemical treatment.	Physico-chemical treatment of waste waters and storage of sludge.	On-site effluent treatment plant
	Directly Associated Activity		
AR6	Non-listed directly associated activity	Flaring of vent gases from butane, propane and ethane tanks in three ground flares	From receipt of gas at the flare from the NGL system to combustion and release of emissions to air at emission point A14.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/NP3033LN/A001	The response to sections 2.1 and 2.2 in the Application	07/07/2006
Receipt of additional information to the application	Further data provided for Biofilter monitoring and all release points	01/12/2006
Receipt of additional information to the application	Use of Biocat system for waste treatment, as in information received.	14/12/2006
Schedule 4 Notice Request dated 03/01/2007	Application Site Report assessment questions	19/01/2007
Variation application EPR/NP3033LN/V003	The response to Section C2.1 in the application	23/07/2007
Response to regulation 60(1) Notice – request for information dated 31/10/2014	Compliance route and operating techniques identified in response to questions 2 (compliance route), 4 (LCP configuration), 5 (net rated thermal input), 6 (MSUL/MSDL), 9ii (ELVs), 11 (Monitoring requirements).	05/02/2015
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 13/05/2015	Compliance routes and operating techniques identified in response to questions 4 (LCP configuration), 5 (net rated thermal input), 6 (MSUL/MSDL) 9 (justification of ELVs and MSUL/MSDL)	19/05/2015
Receipt of additional information to the application	Variation application received to update removal of references to LNG plant. Updated with Reg 60(1) Notice.	10/11/2015
Variation application EPR/NP3033LN/V006	Non-technical Summary. Environmental Management System, as updated Updated emissions assessment for Boiler Stacks.	10/11/2015
Response to Regulation 61 Notice dated 19 November 2015	Technical standards detailed in response to BAT conclusions of the notice provided under Regulation 60 of Environmental Permitting Regulations. Best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for the refining of mineral oil and gas.	29/01/2016
Response to second Regulation 61 Notice dated 23 January 2017	All parts	25/01/2017

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/QP3004PD/V003	Parts C2 and C3 of the application together with supplementary information supplied with these parts, including: - Engine normal operating scenario specified in section 1 (Non-technical Summary) of the application Main Supporting Document reference E2P-ARU-ZZ-ZZ-RP-YE-0018 version P04, dated 30 June 2025 (up to 12 engines operating concurrently, up to 4 engines provided for redundancy, 16 engines in total). - Engine stack parameters (stack height, flue diameter, volumetric flowrate) specified in Table 3.6 (Emission parameters and pollutant emission rates per engine) of the application Air Impact Assessment reference E2P-ARU-ZZ-ZZ-RP-YE-0022 version P04, dated 16 January 2026.	19/08/2025
Response to Schedule 5 notice dated 03/12/2025	Answers to questions 2, 3, 4 and 5 regarding carbon monoxide oxidation catalyst, stack design and containment.	08/01/2026

Table S1.3 Improvement programme requirements		
Reference Note 1	**Requirement**	**Date**
IP10	The Operator shall notify the Agency of the date when the commissioning of the CHP is complete.	No longer relevant - combustion plant removed from permit (application reference EPR/QP3004PD/V003)
IP11	The Operator shall provide a post commissioning report to the Agency. The report shall include a review of the operational performance of the CHP against the design parameters in the application. A review of process performance and emissions performance shall be included in the report.	No longer relevant - combustion plant removed from permit (application reference EPR/QP3004PD/V003)
IP12	The Operator shall submit a report on the efficiency of the gas turbine at ISO base load conditions. The report shall compare the performance of the gas turbine with the target efficiency of 75% for CHP systems set out in Chapter III of the Industrial Emission Directive.	No longer relevant - combustion plant removed from permit (application reference EPR/QP3004PD/V003)
IP13	The Operator shall carry out measurements to verify the predictions contained within the application for Environmental Noise.	No longer relevant - combustion plant removed from permit (application reference EPR/QP3004PD/V003)
IP14	The Operator shall provide a report on its progress on the implementation and accreditation of its Environmental Management System ISO14001, together with an action plan should accreditation not have been achieved.	Complete

Table S1.3 Improvement programme requirements		
Reference Note 1	**Requirement**	**Date**
IP15	The Operator shall update the air quality impact assessment submitted with the application to take account of actual emissions from the installation taken from emissions monitoring data form the first 12 months of operation.	No longer relevant - combustion plant removed from permit (application reference EPR/QP3004PD/V003)
IP20	BAT Conclusion 12 The Operator shall undertake an assessment of the effectiveness of the treatment of their effluent at the sewage treatment works and compare this with the effectiveness of on-site treatment using biological treatment and clarification providing details of reduction factors of individual pollutants. The assessment shall take into account the requirements of BAT Conclusion 12 for the Refining of Mineral Oil and Gas. A written report summarising the findings shall be submitted to the Environment Agency, along with a timetable for implementing improvements, if required, and this shall be agreed in writing with the Environment Agency prior to implementation.	Complete
IP21	Water Framework Directive The Operator shall submit a written monitoring plan to the Environment Agency for approval that includes 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 sewer from emission point S1 including the parameters to be monitored, frequencies of monitoring and methods to be used. The Operator shall carry out the monitoring in accordance with the Environment Agency's written approval.	Complete
IP22	Water Framework Directive The Operator shall submit a written report to the Environment Agency for approval in accordance with the Environment Agency's Surface Water Pollution Risk Assessment Guidance available on our website that includes: • The results of an assessment of the impact of the emissions to surface water from the site following the treatment of the effluent at the sewage treatment works. • The results of an assessment of the impact of the emissions to surface water from the emergency discharge points W1 & W2. • The report shall: - Be based on the parameters monitored in IP21 above; - 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. - Confirm what constitutes an emergency discharge and under what circumstances such a discharge would not lead to a deterioration of the receiving water.	Complete

Table S1.3 Improvement programme requirements		
Reference Note 1	**Requirement**	**Date**
IP23	**Site Condition Report** The operator shall submit to the Environment Agency for approval an updated and consolidated Site Condition Report for the E2P Power Island. The report shall include the baseline conditions of soil and groundwater at the installation. The report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for in Article 22(3) of the IED. The report shall contain all information needed to meet the information requirements of the Environment Agency H5 Site Condition Report Guidance Environmental permitting: H5 Site condition report - GOV.UK (www.gov.uk); and Article 22(2) of the IED including European Commission Guidance Note Concerning Baseline Reports under Article 22(2) (2014/C 136/03).	3 months from the commencement of commissioning of the E2P Power Island
Note 1: Completed improvement conditions have been removed with numbering retained for ease of future reference.		

Table S1.4 Pre-operational measures for future development		
Reference Note 1	**Operation**	**Pre-operational measures**
PO10	E2P Power Island	**Final design of E2P Power Island** Following the completion of the final detailed engineering design, and prior to the commencement of commissioning operations, the operator shall submit for approval by the Environment Agency the following final proposed information for the E2P Power Island: • site layout plan • emission point plan • monitoring point plan • drainage plan • detailed information that demonstrates compliance with CIRIA C736 guidance Containment systems for the prevention of pollution, on: - ground surfacing (i.e. hardstanding areas, unsurfaced areas and soft landscaped areas). - any primary, secondary and tertiary containment infrastructure. - construction specification of hardstanding areas, drainage and containment measures.

Table S1.4 Pre-operational measures for future development		
Reference [Note 1]	**Operation**	**Pre-operational measures**
PO11	E2P Power Island	**Commissioning Plan** At least four weeks before commencement of commissioning, the operator shall submit a written commissioning plan for assessment and written approval by the Environment Agency. The commissioning plan shall include, but is not limited to the following: • the timeline for commissioning and start-up operations and the expected durations of these activities • the expected emissions to the environment during the different stages of commissioning • the actions to be taken to protect the environment throughout all stages of commissioning • any sampling and testing to be undertaken, and • the mechanism for reporting to the Environment Agency, in the event that actual emissions exceed expected emissions. The operator shall implement commissioning in accordance with the commissioning plan as agreed with the Environment Agency's written approval.
Note 1: Pre-operational measures PO1 to PO9 have been removed with numbering retained for ease of future reference.		

Table S1.5 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	**"Minimum Start-Up Load"** **When two of the criteria listed below for the LCP or unit have been met.**	**"Minimum Shut-Down Load"** **When two of the criteria listed below for the LCP or unit have been met.**
A8 & A9 LCP 62	≥31.083 MW (30% MCR) Superheated steam in at 55.5 Barg Superheated steam temperature 427 ^{0}C	<31.083 MW (30% MCR) Superheated steam in at <55.5 Barg Superheated steam temperature <427 ^{0}C

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Process gas	Less than 200 ppm sulphur (monthly average)
Process gas (ethane), after abatement, as supplied to E2P Power Island engines (activity AR2)	Less than 10 ppm sulphur

Table S2.2 Permitted waste types and quantities for receipt and treatment of ballast water	
Maximum quantity	**N/A**
Waste code	Description
16 07 08 *	Wastes containing oil (ballast water)

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – Shall apply from 28 October 2018						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
Reboilers fired on process gas						
A2, A3, A4, A5, A6 & A7	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Low NOx burners on Stabilisation train Reboiler Exhausts - 40 MWth each	150 mg/Nm³ Note 1	Monthly average	Continuous	BS EN 14181 Note 2
A2, A3, A4, A5, A6 & A7	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Low NOx burners on Stabilisation train Reboiler Exhausts - 40 MWth each	300 mg/Nm³ Note 1	Hourly average	Continuous	BS EN 14181 Note 2
A2, A3, A4, A5, A6 & A7	Carbon Monoxide	Low NOx burners on Stabilisation train Reboiler Exhaust - 40 MWth each	35 to 50 mg/Nm³ Note 1	Monthly average	Continuous	BS EN 14181 Note 2
A2, A3, A4, A5, A6 & A7	Carbon Monoxide	Low NOx burners on Stabilisation train Reboiler Exhaust - 40 MWth each	70 mg/m³ Note 1	Hourly average	Continuous	BS EN 14181 Note 2
A2, A3, A4, A5, A6 & A7	Sulphur Dioxide	Low NOx burners on Stabilisation train Reboiler Exhausts - 40 MWth each	35 mg/Nm³ Note 1	Monthly average	Direct or Indirect monitoring at least one per calendar year when burning process gas	BS EN 14791 or as agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air – Shall apply from 28 October 2018						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
LCP Fired on process gas						
A8 & A9	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 62 (x 3 gas turbines and x 3 boilers) 3 x 31.2 MWth gas turbines 3 x 104 MWth boilers	90 mg/Nm^3 Note 3	Monthly average	Continuous	BS EN 14181 Note 2
A8 & A9	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 62 (x 3 gas turbines and x 3 boilers)	90 mg/Nm^3 Note 3 LCP Chapter III IED	Daily mean of validated hourly averages	Continuous	BS EN 14181 Note 2
A8 & A9	Oxides of Nitrogen (NO and NO2 expressed as NO_2)	LCP No. 62 (x 3 gas turbines and x 3 boilers)	90 mg/Nm^3 Note 3 LCP Chapter III IED	Hourly average	Continuous	BS EN 14181 Note 2
A8 & A9	Carbon Monoxide	LCP No. 62 (x 3 gas turbines and x 3 boilers)	12 mg/Nm^3 Note 3	Monthly average	Continuous	BS EN 14181 Note 2
A8 & A9	Carbon Monoxide	LCP No. 62 (x 3 gas turbines and x 3 boilers)	23 mg/Nm^3 Note 3 LCP Chapter III IED	Hourly average	Continuous	BS EN 14181 Note 2
A8 & A9	Sulphur Dioxide	LCP No. 62 (x 3 gas turbines and x 3 boilers)	12 mg/Nm^3 Note 3	Monthly average	Continuous	BS EN 14181 Note 2

Table S3.1 Point source emissions to air – Shall apply from 28 October 2018						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A8 & A9	Sulphur Dioxide	LCP No. 62 (x 3 gas turbines and x 3 boilers)	13 mg/Nm^3 Note 3 LCP Chapter III IED	Daily mean of validated hourly averages	Continuous	BS EN 14181 Note 2
A8 & A9	Sulphur Dioxide	LCP No. 62 (x 3 gas turbines and x 3 boilers)	17 mg/Nm^3 Note 3 LCP Chapter III IED	Hourly average	Continuous	BS EN 14181 Note 2
A8 & A9	Dust	LCP No. 62 (x 3 gas turbines and x 3 boilers)	2 mg/Nm^3 Note 3	Hourly average	Continuous	BS EN 14181 Note 2
A8 & A9	Oxygen	LCP No. 62 (x 3 gas turbines and x 3 boilers)	-	-	Continuous As appropriate to reference	BS EN 14181 Note 2
A8 & A9	Stack gas temperature	LCP No. 62 (x 3 gas turbines and x 3 boilers)	-	-	Continuous As appropriate to reference	Traceable to national standards
A8 & A9	Stack gas pressure	LCP No. 62 (x 3 gas turbines and x 3 boilers)	-	-	Continuous As appropriate to reference	Traceable to national standards

Table S3.1 Point source emissions to air – Shall apply from 28 October 2018						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
LCP Fired on natural gas Note 5						
A8 & A9 Note 12	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 62 (x 3 gas turbines and x 3 boilers)	90 mg/Nm^3 Note 3 LCP Chapter III IED	Monthly average	Continuous	BS EN 14181 Note 2
A8 & A9 Note 12	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 62 (x 3 gas turbines and x 3 boilers)	90 mg/Nm^3 Note 3 LCP Chapter III IED	Daily mean of validated hourly averages	Continuous	BS EN 14181 Note 2
A8 & A9 Note 12	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 62 (x 3 gas turbines and x 3 boilers)	90 mg/Nm^3 Note 3 LCP Chapter III IED	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181 Note 2
A8 & A9	Carbon Monoxide	LCP No. 62 (x 3 gas turbines and x 3 boilers)	34 mg/Nm^3 LCP Chapter III IED	Monthly average	Continuous	BS EN 14181 Note 2
A8 & A9	Carbon Monoxide	LCP No. 62 (x 3 gas turbines and x 3 boilers)	37 mg/Nm^3 LCP Chapter III IED	Daily mean of validated hourly averages	Continuous	BS EN 14181 Note 2
A8 & A9	Carbon Monoxide	LCP No. 62 (x 3 gas turbines and x 3 boilers)	67 mg/Nm^3 LCP Chapter III IED	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181 Note 2
A8 & A9	Oxygen	LCP No. 62 (x 3 gas turbines and x 3 boilers)	-	-	Continuous As appropriate to reference	BS EN 14181 Note 2
A8 & A9	Stack gas temperature	LCP No. 62 (x 3 gas turbines and x 3 boilers)	-	-	Continuous As appropriate to reference	Traceable to national standards

Table S3.1 Point source emissions to air – Shall apply from 28 October 2018						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A8 & A9	Stack gas pressure	LCP No. 62 (x 3 gas turbines and x 3 boilers)	-	-	Continuous As appropriate to reference	Traceable to national standards
Gas turbine fired on natural gas						
A11	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Note 3	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
A11	Carbon Monoxide	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Note 3	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
A12	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Note 3	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
A12	Carbon Monoxide	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Note 3	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air – Shall apply from 28 October 2018						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A13	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Note 3	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
A13	Carbon Monoxide	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Note 3	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
Gas turbine fired on process gas						
A11	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Notes 1 & 4	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
A11	Carbon Monoxide	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Notes 1 & 4	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
A12	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Notes 1 and 4	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air – Shall apply from 28 October 2018						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A12	Carbon Monoxide	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Notes 1 & 4	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
A13	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Notes 1 & 4	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
A13	Carbon Monoxide	Gas Turbine Standby stack 3 x 31.2 MWth gas turbines	No limit set Notes 1 & 4	-	Concentration by calculated every 4380 hours or 2 years whichever soonest	As agreed in writing with the Environment Agency
Flares						
A14	Sulphur Dioxide	Cold ground flare stack (normal operation)	-	-	-	-
A16	Sulphur Dioxide	122m elevated flare stack (normal operation)	-	-	-	-
A17	Sulphur Dioxide	82m elevated flare stack (Standby)	-	-	-	-
VOC recovery unit						
A19	Non methane Volatile Organic Compounds (NMVOC)	VOC recovery unit	-	-	Calculated monthly	As agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air – Shall apply from 28 October 2018						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A19	Benzene	VOC recovery unit	-	-	Calculated monthly	As agreed in writing with the Environment Agency
E2P Power Island						
A20 – A35	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	16 process gas fired reciprocating engines. Each engine 4.8 MWth.	95 mg/Nm^3 Note 6	Monthly average	Once a year and after significant fuel changes	BS EN 14792
	Sulphur Dioxide		35 mg/Nm^3 Note 6	Monthly average	Once a year and after significant fuel changes	EN 14791 or CEN TS 17021
	Carbon Monoxide		100 mg/Nm^3 Note 6	Monthly average	Once every 6 months	BS EN 15058

Note 1: Normalised to 273k, 101.3 kPa, dry and 3% v/v O_2 dry gas.

Note 2: The Operator shall carry out checks for functionality and to verify performance as specified in BS EN 14181:2014 unless otherwise agreed in writing with the Environment Agency.

Note 3: Normalised to 273k, 101.3 kPa, dry and 15% v/v O_2 dry gas.

Note 4: We have not set the limits from the Refinery BAT Conclusions at emission points A11 to A13 based on the limited operation in this configuration.

Note 5: Firing on natural gas shall only take place during planned maintenance, start-up, shut-down and during periods where process gas is unavailable. Refer to the response submitted under IC19 in table S1.3 of this permit.

Note 6: In relation to emissions from the E2P Power Island engines, the monitoring requirements are defined at a temperature of 273.15 K, a pressure of 101.3 kPa and after correction for the water vapour content of the waste gases at a standardised oxygen content of 15% dry.

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location Note 1	**Parameter**	**Source**	**Limit (incl. unit)**	**Reference period**	**Monitoring frequency Note 2**	**Monitoring standard or method Note 3**
W1 Emission to River Tees	Total hydrocarbon oil content (FTIR method)	Effluent Treatment Plant	20 mg/l	Composite flow proportional sample	24 hour average	FTIR
W1 Emission to River Tees	Chemical Oxygen Demand (COD)	Effluent Treatment Plant	12 tonnes/day	Composite flow proportional sample	24 hour average	Titrimetric
W1 Emission to River Tees	Sulphide	Effluent Treatment Plant	10 mg/l	Composite flow proportional sample	24 hour average	Colormetric
W1 Emission to River Tees	Total suspended solids	Effluent Treatment Plant	100 mg/l	Composite flow proportional sample	24 hour average	Gravimetric
W1 Emission to River Tees	Metals	Effluent Treatment Plant	No limit set	Monthly composite sample	Monthly	ICP
W1 Emission to River Tees	pH	Effluent Treatment Plant	5.5 – 9	Composite flow proportional sample	24 hour average	pH meter
W1 Emission to River Tees	Temperature	Effluent Treatment Plant	No limit set	24 hour average	Continuous	Thermocouple
W1 Emission to River Tees	Flow	Effluent Treatment Plant	18,000 m^3/day	24 hour average	Continuous	Flow-meter
W2 Emission to River Tees	Total hydrocarbon oil content (FTIR method)	Greatham Surge Pond	20 mg/l	24 hour average	24 hour average	FTIR
W2 Emission to River Tees	Visible oil and grease	Greatham Surge Pond	No visible emission	-	Daily	Visual
W2 Emission to River Tees	Flow	Greatham Surge Pond	10,800 m^3/day	24 hour average	Continuous	Flow-meter

Note 1: Emissions only to occur under abnormal or emergency conditions when effluent cannot be recovered or treated.

Note 2: Monitoring not required during periods of no flow.

Note 3: Methods used are in house methods as stated in Table 2.10 (b) of the IPPC application.

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**
S1 Emission to Northumbrian Water Bran Sands Treatment Facility	Flow	Site effluent treatment plant	No limit set Note 1	24 hour average	Continuous	Flow-meter
	Other parameters	Site effluent treatment plant	No limit set Note 1	-	-	-
Note 1: No limits are currently set, discharge is subject to a trade effluent consent and the outcome of IC21 & IC22 in Table S1.3 of this permit.						

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**
A18 – ETP (Effluent Treatment Plant)	Hydrogen Sulphide	Monthly	Gas Chromatography (Limit is 75% removal of parameter from inlet stream)	Does not apply during shell renewal
A18 – ETP (Effluent Treatment Plant)	Benzene	Monthly	Gas Chromatography (Limit is 55% removal of parameter from inlet stream)	Does not apply during shell renewal
Process Gas Monitoring	Mercury	6 monthly	BS ISO 6978 Part 2	Sampling to be undertaken at locations within the process gas system that are representative of the process gas composition burnt in major combustion units.

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**
A16 and A17 Flaring events	Duration of event Total mass of gas flared Mass of SO_2 released Calorific value of the gas flared	When the rate of gas flared exceeds 4.0 tonnes/hour	SO_2 may be determined by analysis of the flare gas or by application of emission factors.	The operator shall identify the root cause of the flaring event and consider ways to prevent or reduce the frequency and duration of reoccurrence.
A19 VOC Recovery Unit	Recovery rate	During ocean going crude oil tanker loading	Calculation by method to be agreed in writing with the Environment Agency.	Recovery rate ≥ 85%

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.5.1	LCP 62 A8 & A9	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
	A2 to A7 A16, A17 A18	Every 6 months	1 January, 1 July
	A11 to A13 A19 A20 to A35	Every 12 months	1 January
Emissions to water and sewer Parameters as required by condition 3.5.1	W1, W2 & S1	Every 6 months	1 January, 1 July
Number of hours of non-zero flow	W1 & W2	Every 6 months	1 January, 1 July

Table S4.2: Annual production/treatment	
Parameter	**Units**
Power generated	GWhr
Crude oil stabilised	Tonnes
NGL produced	Tonnes

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	Annually	hr
Natural gas usage Note 1	Annually	t
Distillate fuel oil usage	Annually	t

Table S4.3 Chapter III Performance parameters for reporting to DEFRA and other Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Total available energy Note 2	Annually	MJ
Net electricity Note 3	Annually	MWh
Total mass release of oxides of sulphur (as SO_2) to air	Annually	T
Total mass release of oxides of nitrogen (as NO_2) to air	Annually	T
Total mass release of volatile organic carbon to air	Annually	T
Total mass release of particulate matter to air	Annually	T
Water usage	Annually	M^3
Overall energy efficiency of the CHP Note 4	Annually	%
Gas turbine stack usage emission points A11 to A13	Annually	Number of occasions, cumulative hours and cause.

Note 1: Natural Gas usage shall be calculated as the quantity of gas drawn from the public supply. It shall comprise both the gas burnt in the CHP or boiler plant and any losses to atmosphere or flaring.

Note 2: Available energy shall be calculated by summing the usage of each fuel multiplied by its calorific value.

Note 3: Net Electricity shall be the amount of electricity consumed at the installation, i.e. the amount generated plus the amount imported from the National Grid less the amount exported to the National Grid.

Note 4: Energy efficiency shall be calculated using the protocol agreed in pre-operation condition PO7 of this permit.

Note 5: Standard temperature and pressure 15ºC and 1.01325 BarA (dry).

Table S4.4 Reporting forms				
Media/ Parameter	**Reporting format**	**Starting Point**	**Agency recipient**	**Date of form**
Air & Energy	Form IED AR1 – SO_2, NO_x and dust mass emission and energy	01/01/16	National	31/12/2015
LCP	Form IED HR1 – operating hours	01/01/16	National	2018
Air	Form IED CON 2 – continuous monitoring.	01/01/16	Area Office	2018
CEMs	Form IED CEM1 – Invalidation Log	01/01/16	Area Office	2018
Air	Form Air 1 – None LCP	28/10/18	Area Office	2018
Air	Form Air 2 – A11 to A13	28/10/18	Area Office	2018
Air - Flares	Form Air – F1 Reporting form for non-routine flaring	28/10/18	Area Office	2018
Air - Flares	For Air – F2 Reporting form for total flaring	28/10/18	Area Office	2018
Water & Sewer	Form water & sewer 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	2018
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	2018
Process	Form Process 1 or other form as agreed in writing by the Environment Agency	28/10/18	Area Office	2018
Air	Form Air – 4 NERP allocation log or other form as agreed in writing by the Environment Agency (See IC16)	01/01/08	Area Office	

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

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

Part A

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

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

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

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

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) 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	
Substance(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“annually” means once a year.

“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.

“average value” BAT AELs refer to the average value, for periodic measurements this means three spot samples of at least 30 minutes each.

“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.

“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.

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

“CEM” means MCERTs certified Continuous Emissions Monitor.

“CEN” means Commité 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.

“commissioning” means testing of the installation that involves any operation of a Large Combustion Plant referenced in schedule 1, table S1.1 [or as agreed with the Environment Agency].

“daily average” means the average over a period of 24 hours of validated hourly averages obtained by continuous measurements.

“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.

“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 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

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

“fugitive emission” means an emission to air, water or land from the activities which is not controlled by an emission or background concentration limit.

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

“Hazardous property” has the meaning in Annex lll of the Waste Framework Directive.

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

“Indirect monitoring of emissions to air” means the estimation of the emissions concentration in the flue-gas of a pollutant obtained through an appropriate combination of measurements of surrogate parameters (such as O_2 content, sulphur or nitrogen content in the feed/fuel), calculations and periodic stack measurements. The use of emission ratios based on S content in the fuel is one example of indirect monitoring. Another example of indirect monitoring is the use of PEMS.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

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

“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 15 MW.

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

“MCR” means maximum continuous rating.

“monthly average” BAT AELs refer to monthly average values, for continuous measurements, this means the averages of all valid hourly average values measured over a period of one month.

“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.

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

“ncv” means net calorific value.

“Nm^3” means normal cubic meter (volume at 101.325 kPa, 273 K).

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

“notify without delay” / ”notified without delay” means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

“Off-gas” means a gas stream produced by a refining process.

“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.

“Predictive Emissions monitoring system (PEMS)” means the system to determine the emissions concentration of a pollutant based on its relationship with a number of characteristic continuously monitored process parameters (e.g. fuel-gas consumption, air/fuel ratio) and fuel or feed quality data (e.g. the sulphur content) of an emission source.

“Process gas” means gaseous fuel for use in the installation, derived from off-gas from the stabilisation of crude oil.

“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.

“Recovery rate” means the “percentage of NMVOC recovered from the streams conveyed into a vapour recovery unit (VRU).

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

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

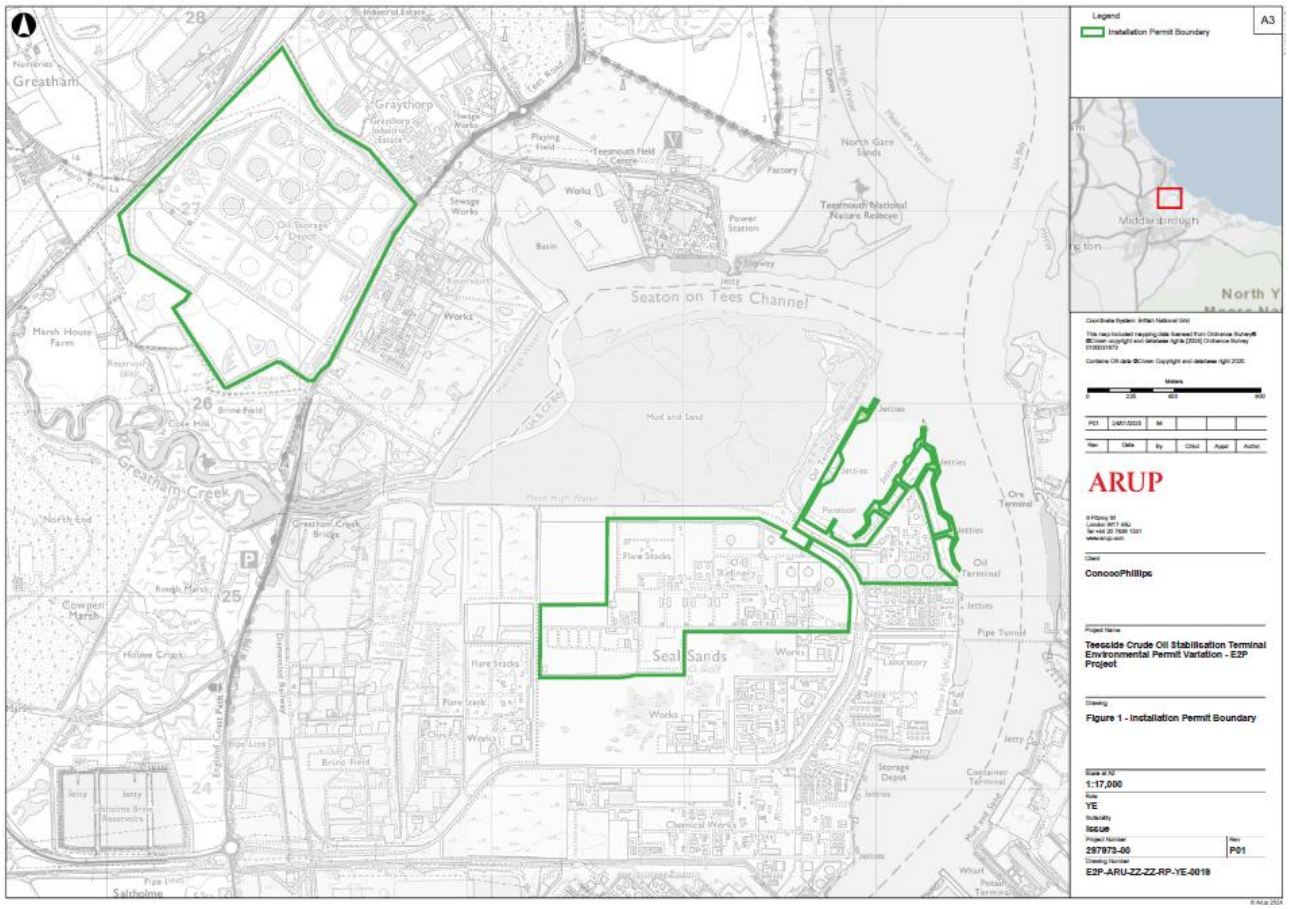
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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 providing air to a steam 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.

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



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