

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Puma Energy (UK) Limited

**Puma Energy (UK) Limited
Milford Haven Site
Milford Haven
Pembrokeshire
SA73 3JD**

Permit number
EPR/KP3036AX

Puma Energy (UK) Limited

Permit number EPR/KP3036AX

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

The permit variation following the publication of the revised Best Available Techniques (BAT) Reference Document (BRef) for the Refining of Mineral Oil and Gas. The associated BAT conclusions to this document were published on the 9th October 2014 in the Official Journal of the European Union.

This variation incorporates the changes required by the Industrial Emissions Directive following a statutory review of permits in the Refinery sector. These include the amendment of the wording of several permit conditions relating to notifications, changes to emission limits and monitoring requirements and also includes the addition of a condition relating to a requirement for monitoring of groundwater and soil. The interpretation section of the permit has also been updated and the opportunity has been taken to consolidate the original permit and subsequent variations.

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

Location: The installation is located 3.5 km to the northwest of Milford Haven, Pembrokeshire. The centre of the site is at National Grid Reference 18852085 (SM 885085). The site covers an area of 150 Ha. Four settlements are located within 1000 metres of the installation boundary. Robeston West lies approximately 300 metres to the north, Herbrandston village approximately 1000 metres to the southwest, Rickeston approximately 750m to the northwest and Thornton village approximately 1500 metres to the south east of the installation boundary. The site is connected via a series of pipelines to 3 jetties on the north side of Milford Haven waterway

Key activities: The purpose of the site is to store and distribute crude oil and other petroleum products for sale into various markets. The site store fuels on site and distribute via ship, rail and road networks.

Jetty and Wayleave : The operator loads oil products onto ships and off-loads crude oil from ships via a jetty on the North shore of the Milford Haven waterway. The jetty comprises 3 individual berthing points. The jetty is linked to the site (approximately 2km away) by 13 wayleave pipelines that are buried underground for most of their length.

Rail and Road Loading: The operator loads petroleum products via their on-site rail gantry for onwards distribution at other UK Fuel Terminals. The facility also operates a Road Tanker Wagon Loading area for the supply of fuels into local markets.

Waste water treatment facility (WWTP): All process water, surface water and ballast water are treated in the on-site WWTP. The WWTP consists of equalisation basins to ensure that the feed to the WWTP is fairly consistent, aerated plate interceptor (API) to remove oil and suspended solids from the feed, an aerated lagoon where aerobic bacteria further breakdown oil and nitrogen containing compounds, followed by a settling lagoon before discharge into the Milford Haven waterway.

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

Status log of the permit		
Description	Date	Comments
Application EPR/EP3838LG received	Duly made 06/09/06	
Additional information received	02/02/07	Response to Schedule 4 notice issued 08/12/06
Additional information received	15/02/07	Response to Schedule 4 notice issued 08/12/06
Additional information received	21/03/07	Response to Schedule 4 notice issued 08/12/06
Additional information received	16/02/07	Response to Schedule 4 notice issued 06/02/07
Additional information received	26/04/07	Response to Schedule 4 notice issued 09/03/07
Additional information received	03/07/07	Historical data for water emission monitoring (04-07)
Additional information received	08/09/07	Historical data for air emission monitoring (04-07)
Additional information received	21/09/07	Information on metal and fluoride releases to water
Additional information received	25/09/07	Annual VOC emissions
Additional information received	04/10/07	Email detailing water testing methods
Additional information received	23/10/07	Email regarding particulate testing capability
Additional information received	29/10/07	Additional information on annual SO2 releases
Permit EPR/EP3838LG Issued	30/10/07	Original permit issued to Total (UK) Limited
Transfer application EPR/AP3830XQ	Duly Made 30/10/07	To transfer Permit from total (UK) Limited to Murco Petroleum Limited
Transfer Issued	30/11/07	Permit transferred from total (UK) Limited to Murco Petroleum Limited
Agency Initiated Variation Notice CP3639XE	Issued 18/12/07	
Variation Application EPR/AP3830XQ/V003	Duly Made 06/04/09	Addition of new CHP plant.
RFI	20/05/09	
Variation Issued EPR/AP3830XQ/V003	28/07/09	
Variation application EPR/AP3830XQ/V004	Duly Made 11/09/09	
RFI	02/12/09	
Response to RFI	03/12/09	Information on the derivation of emission rates used in air dispersion modelling
Response to RFI	04/12/09	Justification for excluding CO emissions from air dispersion modelling

Status log of the permit		
Description	Date	Comments
RFI	11/12/09	Provided 14/12/09 Email confirmation that the increased hydrotreater throughput remains within permitted limits
Variation Issued EPR/AP3830XQ/V004	15/01/10	Variation issued to Murco Petroleum Limited
Variation Application EPR/AP3830XQ/V005	Duly Made 31/01/12	SRU caustic scrubber and amendment to table S4.3(a) annual limits for sulphur dioxide. Addition of improvement condition IC34
Variation Issued EPR/AP3830XQ/V005	30/04/12	Variation issued to Murco Petroleum Limited
Variation Application EPR/AP3830XQ/V006	Duly made 14/12/12	Application to add Bio-ethanol Blending as an activity
Variation determined EPR/AP3830XQ/V006	12/03/13	Variation issued to Murco Petroleum Limited
Environment Agency variation determined EPR/AP3830XQ/V007	21/03/13	Environment Agency variation to implement the changes introduced by IED
Variation Application EPR/AP3830XQ/V008	Duly made 15/04/14	Application to vary the emission limits and monitoring for SO ₂ on 3 emission points
Variation determined EPR/AP3830XQ/V008	15/07/14	Varied permit issued.
Variation Application EPR/AP3830XQ/V009	Duly made 28/11/14	Application to vary the permit to remove listed activities and emission points associated with oil refining operations.
Variation determined EPR/AP3830XQ/V009	18/12/14	Varied permit issued.
Variation Application EPR/AP3830XQ/V010	Duly made 09/04/15	Application to vary the permit to remove combustion plant listed activity and associated LCP conditions. Addition of non-listed combustion DAA for storage tank heating. Amendment of crude oil storage activity, by removal of storage limit.
Variation determined EPR/AP3830XQ/V010	13/05/15	Varied permit issued.
Transfer Application EPR/KP3036AX/T001	Duly Made 22/05/15	Application to transfer the permit to Puma Energy (UK) Limited
Transfer Application EPR/KP3036AX/T001 Determined	01/07/15	Permit EPR/KP3036AX Issued to Puma Energy (UK) Limited
Variation Application EPR/AP3830XQ/V011	Duly Made 18/10/16	Application to vary the permit to add a Direct Associated Activity – LPG Blending into Gasoline
Variation determined EPR/AP3830XQ/V011	31/10/16	Varied permit issued.
Permit Review Issued EPR/KP3036AX/V012	25/03/21	Reviewed against Refinery BREF Note. Consolidated permit issued.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number
EPR/KP3036AX

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

Puma Energy (UK) Limited (“the operator”),
whose registered office is

Westerleigh Terminal Oakleigh Green Farm Lane
Westerleigh
Bristol
England
BS37 8QE

company registration number **09156625**

to operate an installation at

Puma Energy (UK) Limited
Milford Haven Site
Milford Haven
Pembrokeshire
SA73 3JD

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

Signed	Date
Holly Noble	25/03/2021

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 red 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 and S3.2.
- 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 significantly affects or may significantly 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 (a)(i), or 4.3.1 (b)(i) 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 (e)	The loading, unloading or other handling of, the storage of, or the physical, chemical thermal treatment of crude oil.	Receipt and storage and the dispatch of crude oil including: (i) Jetty operations (ii) Crude oil Storage
S5.3 A1 (a)(i)	Disposal or recovery of hazardous waste in a facility with a capacity exceeding 10 tonnes per day involving biological treatment.	Treatment of sludge within aerated lagoon
S5.4 A1 (a)(i)	Treatment of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by biological treatment	Removal of oil and other chemicals from process water by action of aerobic bacteria within aerated lagoon.
S5.4 A(1) (a)(ii)	Treatment of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by physico -chemical treatment	From formation of waste water stream, discharge into site drainage systems to discharge of effluents to Milford Haven waterway.
S1.2 Part B (b)	The storage of petroleum in stationary storage tanks at a terminal, or the loading or unloading at a terminal of petrol or from road tankers, rail tankers or inland waterway vessels.	Loading petrol into road tankers
Directly Associated Activity		
LPG Blending	LPG Blending into Gasoline	All associated process control for the blending of LPG into Gasoline Storage Tanks.
Road, rail and ship loading	Loading of hydrocarbon products for export from site.	All associated line work for charging road, rail and ship. Vapour recovery unit on road loading facility.
Lagoons	The holding or temporary storage of water, effluents or oil-based liquids for settling (sedimentation) or other purposes.	The feed point to the lagoon(s), the lagoon(s) and its drainage point.
Surface water drainage	Collection and handling of surface waters within installation.	Handling and storage of site drainage until discharge to the site wastewater treatment system or to discharge off-site.
Combustion plant <20MWth	Steam raising	For crude oil storage tank heating.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	Application EPR/EP3838LG received	30/06/06
Response to Schedule 4 Notice dated 21 November 2006	Nov 06 response part 1 – details on road loading VRU	07/09/07
Regulation 60 Response	Response to the notice under Regulation 60 of The Environmental Permitting (England and Wales) Regulations 2010 detailing compliance with the best available techniques as described in BAT conclusions under Directive 2010/75/EU of the European Parliament and of the Council <i>for the Refining of Mineral Oil and Gas</i> .	30/06/16

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC34	The operator is required to undertake a BAT review for the use of a risk-based leak detection and repair (LDAR) programme to identify leaking components and minimising the VOC emissions to air. The review should consider techniques outlined in the Crude Oil Refinery BREF (BAT 6)	6 months from permit issue
IC35	The operator is required to review water emission monitoring methodology outlined in the Crude Oil Refinery BREF (BAT 10)	9 months from permit issue
IC36	The operator is required to undertake a BAT review for the use of floating roof tanks equipped with high efficiency seals or a fixed roof tank connected to a vapour recovery system (BAT 49)	9 months from permit issue
IC37	The operator is required to undertake a BAT review for the requirement of a vapour recovery process as outlined in the Crude Oil Refinery BREF (BAT 52) based on the last three years annual throughput.	6 months from permit issue

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
Crude Oil	n/a

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
A18	VOC	Local exhaust ventilation for Rail Loading	No limit set	Average over sampling period	6 monthly spot	Calculation based upon rail tanker loading rate and hydrocarbon vapour pressure.
Vents from oil storage tanks	VOC	Storage Tanks	No limit set	--	--	--
Floating Roof tanks	VOC	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 discharge to Milford Haven Waterway	Temperature	Effluent Treatment Plant	27°C	Hourly average	Continuous	
W1 discharge to Milford Haven Waterway	Flow	Effluent Treatment Plant	25,000m3/day	Weekly average of daily flow	Daily	
W1 discharge to Milford Haven Waterway	Oil	Effluent Treatment Plant	10mg/l	24- hour proportional sample	Daily	
W1 discharge to Milford Haven Waterway	Ammonia	Effluent Treatment Plant	16mg/l	24- hour proportional sample	Daily	
W1 discharge to Milford Haven Waterway	Phenols	Effluent Treatment Plant	5mg/l	24- hour proportional sample	Daily	
W1 discharge to Milford Haven Waterway	COD	Effluent Treatment Plant	125mg/l	24- hour proportional sample	Weekly	
W1 discharge to Milford Haven Waterway	Sulphides	Effluent Treatment Plant	1mg/l	24- hour proportional sample	Weekly	

W1 discharge to Milford Haven Waterway	Suspended Solids	Effluent Treatment Plant	25mg/l	24- hour proportional sample	Weekly
W1 discharge to Milford Haven Waterway	Copper	Effluent Treatment Plant	0.22mg/l	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Nickel	Effluent Treatment Plant	0.1mg/l	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Iron	Effluent Treatment Plant	4mg/l	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Zinc	Effluent Treatment Plant	0.085mg/l	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Arsenic	Effluent Treatment Plant	-	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Chromium	Effluent Treatment Plant	-	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Cadmium	Effluent Treatment Plant	0.03mg/l	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Lead	Effluent Treatment Plant	0.008mg/l	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Mercury and its compounds expressed as Mercury (Total Hg)	Effluent Treatment Plant	0.001mg/l	24- hour proportional sample	Quarterly
W1 discharge to Milford Haven Waterway	Cadmium and its compounds, expressed as cadmium (Total Cd)	Effluent Treatment Plant	0.008mg/l	24- hour proportional sample	Quarterly
W2 emergency discharge to Sandy Haven	Oil	Impounding Basin	5mg/l	Spot	3 hourly samples during emergency discharge
W3 to St. Botolphs stream	Oil	Tank 711 via East Weir	5mg/l	Spot	Weekly

W4 emission of groundwater to Rickeston water	Oil	Groundwater	5mg/l	Spot	Annual
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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.	A18	Annual	01/05/19
Emissions to water Parameters as required by condition 3.5.1	W1, W2, W3, W4	Quarterly	01/05/19

Table S4.2: Annual production/treatment	
Parameter	Units
Crude oil imports	tonnes
Road and other transport fuels	tonnes
Non Transport/ heating fuels	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
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

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by Natural Resources Wales	22/10/18
Water	Form water 1 or other form as agreed in writing by the Natural Resources Wales	22/10/18
Water usage	Form water usage1 or other form as agreed in writing by Natural Resources Wales	22/10/18
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	22/10/18
Other performance indicators	Form performance 1 or other form as agreed in writing Natural Resources Wales	22/10/18

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	

(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified immediately	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a permit condition	
To be notified immediately	
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) 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:	
To be notified immediately	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

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

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

“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.

“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

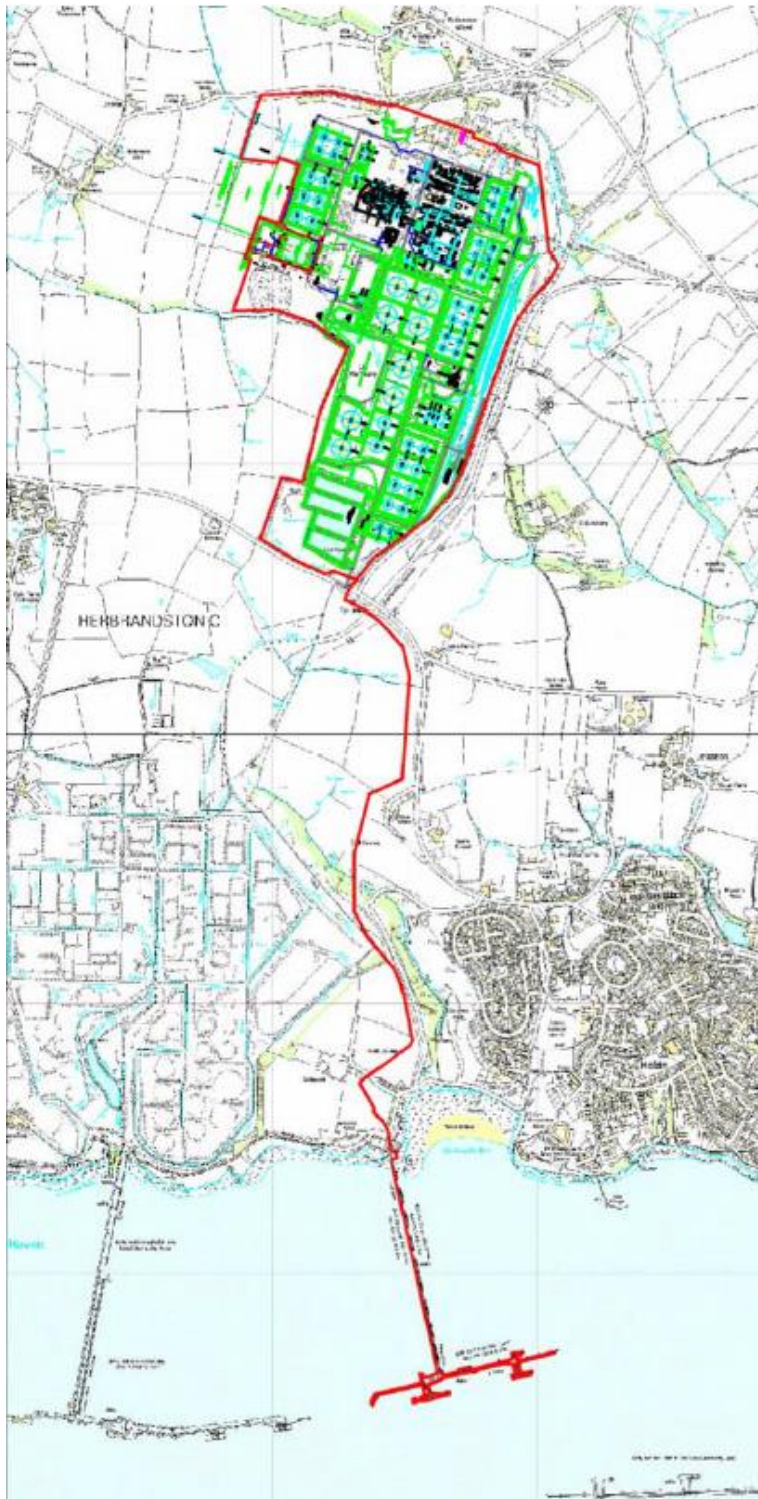
“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“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.

Schedule 7 - Site plan



END OF PERMIT