



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

BAE Systems Marine Limited

Barrow Shipyards
Barrow-in-Furness
Cumbria
LA14 1AF

Variation application number

EPR/SP3836SP/V006

Permit number

EPR/SP3836SP

Barrow Shipyards

Permit number EPR/SP3836SP

Introductory note

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

Under the Environmental Permitting (England & Wales) Regulations (EPR) 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.

The requirements of the Industrial Emissions Directive (IED) are given force in England through the EPR 2016. This permit, for the operation of large combustion plant (LCP), as defined by articles 28 and 29 of the IED, already implements the special provisions for LCP given in the IED. The IED makes special provisions for LCP under Chapter III and contains emission limit values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.

The Operator chose to operate LCP438, LCP439 and LCP450 under the ELV compliance route. IED Annex V limits were set based on boilers at <100 MWth, burning liquid fuel, permitted before 7 Jan 2013.

This variation is required to assess the permit for compliance with the revised Best Available Techniques (BAT) Conclusions for the LCP sector published on 17 August 2017 including the incorporation of relevant BAT Associated Emission Levels (AELs) into the permit.

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

Purpose of this variation:

Review permit conditions

Article 21(3) of the IED requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on BAT Conclusions. We have reviewed the permit for this installation against the revised BAT Conclusions for the LCP sector published on 17 August 2017. Only activities covered by this BAT Reference Document have been reviewed and assessed.

Key changes made as a result of the permit review:

This variation makes the key changes set out below following the permit review under Article 21(3) of the IED:

- Revised emission limits and monitoring requirements for emissions to air applicable from 17 August 2021 in table S3.1a; and
- Inclusion of process monitoring for energy efficiency in table S3.4.

Additional key changes in accordance with IED Chapter II requirements:

- Table S1.1 amended to include the thermal input of the LCPs and to confirm that one of the boilers is for standby purposes only;
- Table S1.2 amended to include the software restriction to limit the thermal input of each boiler to < 100 MWth, to incorporate the approved site closure plan (IP4 in table S1.3) and to replace operating techniques for the ion exchange plant with the reverse osmosis plant;
- Table S1.3 amended to confirm the completion of improvement conditions;
- Table S1.4 amended to include minimum start-up and minimum shut-down load (MSUL/MSDL) for the LCPs;
- Table S3.1 amended to update the continuous monitoring standard from BS EN 15267-3 to BS EN 14181;
- Emission points A4 and A5 for the D14 powerhouse added to tables S3.1 and S3.1a; and
- Table S3.2 amended to update monitoring methods for emissions to water.
- Condition 4.2.2 amended to remove the sub paragraph for annual production/treatment data, which refers to table S4.2. This table contains no parameters and is deleted.

The rest of the installation is unchanged and the main features of the installation are as follows:

The installation is located at national grid reference SD19206820 and falls under the following IED Schedule 1 listed activity description:

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

LCP438, LCP439 and LCP450

The permit allows the operation of three boilers within the Submarine Machinery Installation & Testing Establishment (SMITE). The boilers are used to support testing of marine propulsion machinery prior to its installation in submarines under construction.

Each boiler is fired on gas-oil and has a thermal input capacity as follows:

LCP438 – 85.59 MWth

LCP439 – 85.21 MWth

LCP450 – 97.98 MWth

They vent via emission points A1, A2 and A3 respectively within a common support structure. Each flue is fitted with a continuous emissions monitor (CEM).

The boilers operate intermittently as required by construction programme demands. Generally boiler operation is cyclic in nature covering a time of approximately 22 months, with 18 months in care and maintenance and 4 months supporting trials.

For the majority of the time only one boiler is required, operating at lower loads. There are short periods of time when two boilers are needed. The third boiler is for standby purposes only.

Other combustion plant

In addition, there is estimated to be approximately 1,200 combustion processes around the site. A significant number of these are <1MWth and consist of radiant heaters, direct fired air heaters, hot water heaters and small ovens. These are all gas-fired.

A number of more significant combustion processes with a thermal input of >1MWth and with point source emissions to air are present on the site and are as follows:

- D14 powerhouse - two 2.5MWth gas-fired boilers, venting via emission points A4 and A5;
- Boiler barge - 25MWth oil-fired boiler, plus a 2.2MWth auxiliary boiler, venting via emission point A10.

Emissions

The main emissions to air arise from the combustion of oil and gas within the boilers.

There are discharges to controlled waters as follows:

- Effluent (surface water) arising from the main oil storage bund at emission point W1;
- Seawater discharges from the SMITE boilerhouse at emission point W2;
- Boiler blow and drain-down from SMITE boilers at emission point W3;
- Test and boiler house floor drains discharge via the interceptor and outfall at emission point W4; and
- Boiler barge seawater discharges at emission point W5.

An effluent neutralisation and cooling system is used to treat boiler effluents from the SMITE boiler house prior to discharging to the Walney Channel at emission point W3. There are no discharges from within the installation boundary to sewer.

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/SP3836SP/A001	03/04/06	Duly made Application for three boilers, each with a thermal input capacity of between 80-100MW.
Additional information received	07/03/07 20/03/07	Updated application site layout plans Figures 1.3.2a, 1.3.2b, 1.3.3 (cover letter references SMITE/AA170/KEM/L & SMITE/AA171/KEM/L).
Permit determined EPR/SP3836SP	01/05/07	Permit issued to BAE Systems Marine Limited.
Variation determined EPR/SP3836SP/V002	05/03/09	Environment Agency initiated variation to remove NERP annual limits and other minor changes.
Variation determined EPR/SP3836SP/V003	11/03/13	Environment Agency initiated variation, to incorporate Eel Regulations improvement condition.
Variation determined EPR/SP3836SP/V004	27/02/15	Environment Agency initiated variation, to add an improvement condition requiring a cost benefit appraisal to ensure compliance with the Eels Regulations.
Regulation 60 Notice sent to the Operator	31/10/14	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency initiated review and variation to vary the permit under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V. The permit is also updated to modern conditions.
Regulation 60 Notice response	25/03/15	Response received from the Operator.
Variation determined EPR/SP3836SP/V005	18/12/15	Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/16.
Regulation 61 Notice sent to the Operator	01/05/18	Issue of a Notice under Regulation 61(1) of the EPR. Environment Agency initiated review and variation to vary the permit under IED to implement Chapter II following the publication of the revised BAT Reference Document for LCP.
Regulation 61 Notice response.	30/10/18	Response received from the Operator.

Description	Date	Comments
Email received from the Operator	23/08/19	CEMs monitoring standard.
Request for information sent to Operator 08/08/19	29/08/19	Response received: BAT Conclusions 1, 4, 5, 6, 8, 12, 13, 15, 16, 28, 29 and 30.
	24/09/19	Response received: BAT Conclusions 1, 4, 28, 29 and 30.
	01/10/19	BAT Conclusion 28
Request for information sent 08/10/19	15/10/19	Clarification on a number of items
	06/11/19	Site plan (superseded)
	13/11/19	Site plan for permit
Variation determined EPR/SP3836SP/V006 (Billing ref: UP3107PK)	06/12/19	Varied and consolidated permit issued.

End of introductory note

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/SP3836SP

Issued to

BAE Systems Marine Limited (“the operator”)

whose registered office is

Warwick House

PO Box 87

Farnborough Aerospace Centre

Farnborough

Hampshire

GU14 6YU

company registration number **00229770**

to operate a regulated facility at

Barrow Shipyards

Barrow-in-Furness

Cumbria

LA14 1AF

to the extent set out in the schedules.

The notice shall take effect from 06/12/2019

Name	Date
Anne Lloyd	06/12/2019

Authorised on behalf of the Environment Agency

Schedule 1

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

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/SP3836SP

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/SP3836SP/V006 authorising,

BAE Systems Marine Limited (“the operator”),

whose registered office is

**Warwick House
PO Box 87
Farnborough Aerospace Centre
Farnborough
Hampshire
GU14 6YU**

company registration number **00229770**

to operate a regulated facility at

**Barrow Shipyards
Barrow-in-Furness
Cumbria
LA14 1AF**

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

Name	Date
Anne Lloyd	06/12/2019

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

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

1.2 Energy efficiency

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

1.3 Efficient use of raw materials

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

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

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities;
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1, table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in red 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: LCP438, LCP439 and LCP450. The activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” dated December 2015 or any later version unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.4 Any raw materials or fuels listed in schedule 2, table S2.1 shall conform to the specifications set out in that table.
- 2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP438, LCP439 and LCP450. 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 S1.4.

- 2.3.6 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.
- 2.3.7 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.

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, S3.1a and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Total annual emissions from the emission point set out in schedule 3, table S3.2 of a substance listed in schedule 3, table S3.3 shall not exceed the relevant limit in table S3.3.
- 3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.3.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

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

- (a) point source emissions specified in tables S3.1, S3.1a and S3.2; and
- (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, S3.1a and S3.2 unless otherwise agreed in writing by the Environment Agency.

3.6 Monitoring for Large Combustion Plant

- 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 and the Large Combustion Plant Best Available Techniques Conclusions.
- 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 per operating campaign.
- 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, tables S3.1 and S3.1a; the Continuous Emission Monitors shall be used such that:
- (a) for the continuous measurement systems fitted to the LCP release points defined in tables S3.1 and S3.1a the validated hourly, monthly, yearly 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. However, 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 two thirds of the period. 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; and
 - (f) any day, in which more than three hourly average values are invalid shall be invalidated.

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; and
- (b) the performance parameters set out in schedule 4, table S4.2 using the forms specified in table S4.3 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 S4.3; 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.

4.3 Notifications

4.3.1 In the event:

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

4.3.2 Any information provided under condition 4.3.1 (a)(i), 4.3.1 (b)(i) where the information relates to the breach of a condition specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

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

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

Where the operator is a registered company:

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

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

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

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

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

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

- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.
- 4.3.8 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	<p>Section 1.1 Part A(1) (a)</p> <p>Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more</p>	<p>LCP</p> <p>Three boilers fired on gas-oil for producing steam</p> <p>LCP438: 85.59 MWth</p> <p>LCP439: 85.21 MWth</p> <p>LCP450: 97.98 MWth</p> <p>Other combustion plant</p> <p>D14 Powerhouse containing two 2.5 MWth gas-fired boilers</p> <p>Boiler barge containing one 25 MWth gas-oil fired boiler plus a 2.2 MWth auxiliary boiler</p> <p>All other combustion sources on site including temporary boilers and units <1MWth</p>	<p>From receipt of gas-oil and natural gas to discharge of exhaust gases and waste, and the generation of steam</p> <p>Each LCP boiler is limited to <100 MWth</p> <p>Only two of the LCP boilers shall be operational at any one time, with the third LCP boiler operated for standby purposes only</p>
Directly Associated Activity			
AR2	Fuel oil storage	Fuel oil handling and storage for SMITE (A31) and Boiler barge	<p>Main fuel oil storage area (A62) with two 3,500 tonne capacity tanks</p> <p>Transfer pipeline between A62 and A31</p> <p>Two 50 tonne capacity daily use tanks at SMITE (A31)</p> <p>Boiler barge oil storage tanks</p>
AR3	Chemical storage	Storage and handling of chemicals and oils used in SMITE demineralisation plant, boiler blow-down effluent treatment, boiler water treatment and lubrication	Chemical storage areas for SMITE (A62 and A31), DDH Powerhouse (D14) and on Boiler barge

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR4	Water treatment	Demineralisation of SMITE boiler feed water by reverse osmosis	From receipt of raw materials to transfer of demineralised water to SMITE boiler feed water tanks
AR5	Boiler blow-down and effluent treatment	Treatment of SMITE boiler blow-down and effluents by pH and temperature adjustment	From receipt of SMITE boiler blow-down effluents to discharge to site surface water drainage system at emission point W3.
AR6	Seawater cooling system	Seawater cooling operations for SMITE boilers and Boiler barge	From abstraction of seawater from Walney Channel (for SMITE boilers) or Devonshire Dock for (Boiler barge) pumping via cooling circuits to discharge to Walney Channel or Devonshire Dock
AR7	Waste storage	Storage of wastes arising from boiler operations and maintenance	From generation of wastes to transfer off-site

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/SP3836SP/A001	Sections 2.1, 2.2 and 2.10 of the application document	03/04/06
Noise management plan (Document Reference HS/TJA/E00325)	All parts	17/02/09
Response to regulation 60(1) Notice – request for information dated 31/10/14 EPR/SP3836SP/V005	Compliance route and operating techniques identified in response to questions: 2 (compliance route) 4 (configuration of LCPs) 5 (thermal input of LCP) 6 (start-up/shut-down) 7 (ELV alignment with IED BAT non ESI review paper) 9 (monitoring requirements)	25/03/15
Operating techniques for the reverse osmosis plant (replaces the ion exchange plant)	In accordance with SMITE Facility Operating Procedure 27 Reverse Osmosis Water Treatment Plant	07/10/19
Approved response to improvement condition IP4 in table S1.3 of this permit	Site closure plan reference 08359i1	July 2018
Response to regulation 61(1) Notice – request for information dated 01/05/18 EPR/SP3836SPV006	Compliance and operating techniques identified in response to the BAT Conclusions for LCP published on 17 August 2017	30/10/18
Request for additional information sent to Operator 08/08/19 EPR/SP3836SPV006	Additional compliance and operating techniques identified in response to BAT Conclusions 1, 4, 5, 6, 8, 12, 13, 15, 16, 28, 29 and 30 Software restriction to limit thermal input of each LCP boiler to < 100 MWth	29/08/19
		24/09/19
		01/10/19

Table S1.3 Improvement programme requirements		
Ref. Note 1	Requirement	Date
IP12	<p>The Operator has undertaken a review of the existing screening arrangements with reference to the Eels (England and Wales) Regulations 2009 (SI 2009/3344) and the Environment Agency "Safe Passage for Eel" Regulatory Position Statement version 1 dated July 2012 (and as amended February 2013) in response to Improvement Programme reference IP11.</p> <p>The Environment Agency has determined that the site does not comply with the requirements for safe passage of eel and the Operator is now required to complete a cost benefits appraisal of best available technique with reference to the Environment Agency "Safe Passage for Eel: Guidance on Exemptions" as a screening tool.</p> <p>a) If the Cost Benefit Assessment shows that the Benefits are greater than the costs by a factor of 1.5 or more, then the Operator shall submit to the Environment Agency for review a report setting out the costs and the technical and economic feasibility to introduce the improvements to achieve best available technique.</p> <p>b) If the Cost Benefit Assessment shows that the Benefits are not greater than the costs by a factor of 1.5 or more, then the Operator shall, with reference to the Environment Agency "Safe Passage for Eel: Guidance on exemptions, assess which alternative measure, or combination of alternative measures, could be implemented under a case of a conditioned Exemption. The Operator shall submit a report to the Environment Agency setting out the costs and the technical and economic feasibility of implementing their proposed alternative measure or measures.</p> <p>In all cases, the submission shall contain relevant timescales in accordance with the Safe Passage for Eel Regulatory Position Statement version 1 dated July 2012 (as amended 2013).</p> <p>The proposals shall be implemented following written approval of the Environment Agency.</p> <p>Whilst undertaking this Improvement Condition, the Operator shall be operating under exemption from the requirements to place eel screen diversion structures pursuant to Regulation 17(5)(a) of the Eels (England and Wales) Regulations 2009. The exemption will remain in place until the Environment Agency has provided written approval that the Improvement Condition has been deemed complete.</p>	30/06/15 Received and under assessment
IP15	<p>For LCP438, LCP439 and LCP450. Annual emissions of dust, sulphur dioxide and oxides of nitrogen including energy usage for the year 01/01/2015 to 31/12/2015 shall be submitted to the Environment Agency using form AAE1 via the NERP Registry. If the LPCD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.</p>	28/01/16
<p>Note 1: Completed IPs have been removed with numbering retained for ease of future reference.</p>		

Table S1.4 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	“Minimum Start-Up Load” (MSUL) After all three operational parameters have met their threshold values for the first time.	“Minimum Shut-Down Load” (MSDL) When the criteria listed below for the LCP or unit has been met.
A1 LCP438	Oxygen in flue gases: 18% Stack gas temperature: 200 °C Steam pressure: 30 bar	‘Plant off’ status (i.e. no flames detected in each burner system) has been reached.
A2 LCP439	Oxygen in flue gases: 18% Stack gas temperature: 200 °C Steam pressure: 30 bar	‘Plant off’ status (i.e. no flames detected in each burner system) has been reached.
A3 LCP450	Oxygen in flue gases: 18% Stack gas temperature: 200 °C Steam pressure: 30 bar	‘Plant off’ status (i.e. no flames detected in each burner system) has been reached.

Schedule 2 – Raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Gas-oil	Less than 0.1% w/w sulphur content

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – Emission limits and monitoring requirements - Shall apply until 16 August 2021						
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
A1, A2, A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	450 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	495 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	900 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Sulphur Dioxide	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	350 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Sulphur Dioxide	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	385 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1 Point source emissions to air – Emission limits and monitoring requirements - Shall apply until 16 August 2021						
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
A1, A2, A3 ^{Note 1}	Sulphur Dioxide	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	700 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Dust	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	30 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Dust	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	33 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Dust	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	60 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Oxygen	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	-	-	Continuous As appropriate to reference	BS EN 14181
A1, A2, A3 ^{Note 1}	Water Vapour	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	-	-	Continuous As appropriate to reference	BS EN 14181
A1, A2, A3 ^{Note 1}	Stack gas temperature	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	-	-	Continuous As appropriate to reference	Traceable to national standards

Table S3.1 Point source emissions to air – Emission limits and monitoring requirements - Shall apply until 16 August 2021						
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
A1, A2, A3 ^{Note 1}	Stack gas pressure	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	-	-	Continuous As appropriate to reference	Traceable to national standards
A1, A2, A3 ^{Note 1}	As required by the Method Implementation Document for BS EN 15259	LCP Nos. 438, 439, 450 Boiler plant fired on gas-oil	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A4, A5	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	D14 powerhouse gas-fired boilers	-	-	-	-
	Carbon monoxide (CO)					
A10	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Boiler barge main boiler gas-oil fired boiler	No limit set	Minimum of 1 hour sampling period	Once per operating campaign	BS EN 14792
A10	Particulate matter	Boiler barge main boiler gas-oil fired boiler	No limit set	Minimum of 1 hour sampling period	Once per operating campaign	BS EN 13284-1
Note 1: Emission limits and monitoring requirements shall apply to each individual emission point, A1, A2 and A3.						

Table S3.1a Point source emissions to air – Emission limits and monitoring requirements - Shall Apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1, A2, A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	270 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Yearly average	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	450 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Calendar monthly mean	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	330 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	900 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Carbon Monoxide (CO)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	30 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Yearly average	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Sulphur Dioxide (SO ₂)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	175 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Yearly average	Continuous	BS EN 14181

Table S3.1a Point source emissions to air – Emission limits and monitoring requirements - Shall Apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1, A2, A3 ^{Note 1}	Sulphur Dioxide (SO ₂)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	350 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Calendar monthly mean	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Sulphur Dioxide (SO ₂)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	200 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Sulphur Dioxide (SO ₂)	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	700 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Dust	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	20 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Yearly average	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Dust	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	30 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Calendar monthly mean	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Dust	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	25 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1a Point source emissions to air – Emission limits and monitoring requirements - Shall Apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1, A2, A3 ^{Note 1}	Dust	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	60 mg/m ³ MSUL/MSDL to maximum combustion rate ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1, A2, A3 ^{Note 1}	Metals and metalloids except mercury (As, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn) ^{Note 3}	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	-	-	Once every operating campaign ^{Notes 3 and 4}	BS EN 14385
A1, A2, A3 ^{Note 1}	Oxygen	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	-	-	Continuous As appropriate to reference	BS EN 14181
A1, A2, A3 ^{Note 1}	Water Vapour	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	-	-	Continuous As appropriate to reference	BS EN 14181
A1, A2, A3 ^{Note 1}	Stack gas temperature	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	-	-	Continuous As appropriate to reference	Traceable to national standards
A1, A2, A3 ^{Note 1}	Stack gas pressure	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	-	-	Continuous As appropriate to reference	Traceable to national standards
A1, A2, A3 ^{Note 1}	Flow		-	-	Continuous As appropriate to reference	EN ISO 16911 and M2

Table S3.1a Point source emissions to air – Emission limits and monitoring requirements - Shall Apply from 17 August 2021						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1, A2, A3 ^{Note 1}	As required by the Method Implementation Document for BS EN 15259	LCP Numbers 438, 439, 450 Boiler plant fired on gas-oil	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A4, A5	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	D14 powerhouse Gas-fired boilers	No limit set	-	-	-
	Carbon monoxide (CO)		No limit set			
A10	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Boiler barge main boiler Oil-fired boiler	No limit set	Minimum of 1 hour sampling period	Once per operating campaign	BS EN 14792
A10	Particulate matter	Boiler barge main boiler Oil-fired boiler	No limit set	Minimum of 1 hour sampling period	Once per operating campaign	BS EN 13284-1
<p>Note 1: Emission limits and monitoring requirements shall apply to each individual emission point, A1, A2 and A3.</p> <p>Note 2: This limit applies when the load varies between MSUL/MSDL and the maximum combustion rate during the daily reference period. MSUL and MSDL are defined in table S1.4 of this permit.</p> <p>Note 3: The list of pollutants monitored and the monitoring frequency may be adjusted after an initial characterisation of the fuel in accordance with BAT Conclusion 9, but in any case at least each time that a change of the fuel characteristics may have an impact on the emissions.</p> <p>Note 4: Definition of “Operating campaign” in Schedule 6 of this permit.</p>						

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 (SMITE main oil storage tanks bund) location SD19356790	Oil or grease	Surface water	No visible emission	Instantaneous	Before and during each discharge to Walney Channel	Visual
W2 (SMITE seawater discharge) location SD19206810	Temperature	Seawater abstraction, cooling and discharge system	35 °C	Instantaneous	Continuous	By installed temperature probe
W3 (SMITE boiler blow-down pit weir chamber) location SD19216825	Temperature	SMITE boiler blow-down & reverse osmosis plant effluent	35 °C	Instantaneous	Continuous	By installed temperature probe
W3 (SMITE boiler blow-down pit weir chamber) location SD19216825	pH	SMITE boiler blow-down & reverse osmosis plant effluent	6-9	Instantaneous	Continuous	BS ISO 10523
W3 (SMITE boiler blow-down pit weir chamber) location SD19216825	pH	SMITE boiler blow-down & reverse osmosis plant effluent	6-9	Sample taken during discharge of effluent	Monthly	BS ISO 10523
W3 (SMITE boiler blow-down pit weir chamber) location SD19216825	Total suspended solids	SMITE boiler blow-down & reverse osmosis plant effluent	30 mg/l	Sample taken during discharge of effluent	Monthly	BS EN 872
W3 (SMITE boiler blow-down pit weir chamber) location SD19216825	Cadmium and its compounds expressed as cadmium (Total Cd)	SMITE boiler blow-down & reverse osmosis plant effluent	0.02 mg/l	Sample taken during discharge of effluent	Monthly	BS EN ISO 11885 or EN ISO 17294-2

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W3 (SMITE boiler blow-down pit weir chamber) location SD19216825	Mercury and its compounds expressed as mercury (Total Hg)	SMITE boiler blow-down & reverse osmosis plant effluent	0.05 mg/l	Sample taken during discharge of effluent	Monthly	EN ISO 12846 or EN ISO 17852
W4 (SMITE oil in water separator discharge) location SD19146818	Oil or grease	Condensate and cooling waters from inside the boiler house and test house and sea water from the test house and dump steam condenser.	No visible emission	Instantaneous	Before and during each discharge to Walney Channel	By installed oil in water detector
	Total suspended solids		30 mg/l	Sample taken during discharge of effluent	Quarterly	BS EN 872
W5 (Boiler barge seawater discharge) location SD194688	Temperature	Seawater abstraction, cooling and discharge system	35 °C	Instantaneous	Continuous	By installed temperature probe

Table S3.3 Annual limits			
Substance	Medium	Limit (including unit)	Emission Point
Cadmium and its compounds, expressed as cadmium (Total Cd)	Water	5 g	W3
Mercury and its compounds, expressed as mercury (Total Hg)	Water	10 g	W3

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
LCP 438 LCP 439 LCP 450	Net total fuel utilisation	after each modification that could significantly affect these parameters	EN Standards or equivalent	-

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
Oxides of Nitrogen	A1, A2, A3	1 month after completion of each campaign	Commencement of each campaign
		Every year	1 January
Carbon Monoxide	A1, A2, A3	1 month after completion of each campaign	Commencement of each campaign
		Every year	1 January
Sulphur Dioxide	A1, A2, A3	1 month after completion of each campaign	Commencement of each campaign
		Every year	1 January
Dust	A1, A2, A3	1 month after completion of each campaign	Commencement of each campaign
		Every year	1 January
Metals and metalloids except mercury	A1, A2, A3	Every year	1 January
Emissions to air Parameters as required by condition 3.5.1 (a)	A10	1 month after completion of each campaign	Commencement of each campaign
Emissions to water Parameters as required by condition 3.5.1 (a)	W3 (W1, W2, W4, W5) ^{Note 1}	Every 3 months	1 January, 1 April, 1 July, 1 October
Mass release of cadmium to water	W3	Every 12 months	1 January
Mass release of mercury to water	W3	Every 12 months	1 January
Note 1: Monitoring data does not need to be reported but records shall be available for inspection.			

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	hour
Water Usage (mains and sea water)	Annually	m ³

Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
LCP	Form IED HR1 – operating hours	01/01/16	National and Area Office	31/12/15
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy	01/01/16	National and Area Office	01/01/17
CEMs	Form IED CEM – Invalidation Log	01/01/16	Area Office	31/12/15
Air	Form IED CON1 – continuous monitoring	01/01/16	Area Office	31/12/15
Air	Form air 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15
Water	Form water 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15
Mass release of cadmium and mercury to water	Form mass release 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

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

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

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

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

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

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

“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.

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

“CEN” means Comité Européen de Normalisation.

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

“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.

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

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

“emissions to land” includes emissions to groundwater.

“energy efficiency” means the annual net plant energy efficiency, the value for which is 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.

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

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

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

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

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

“MCR” means maximum continuous rating.

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

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

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

“ncv” means net calorific value.

“net total fuel utilisation” means the ratio between the net produced energy minus the imported electrical and/or thermal energy and the fuel energy input at the combustion unit boundary over a given period of time.

“operating campaign” means the period where the operational parameters for minimum start-up load have been met and the boilers could be online and ready to provide energy for testing of the propulsion machinery of a submarine.

“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.

“SI” means site inspector.

“year” means calendar year ending 31 December.

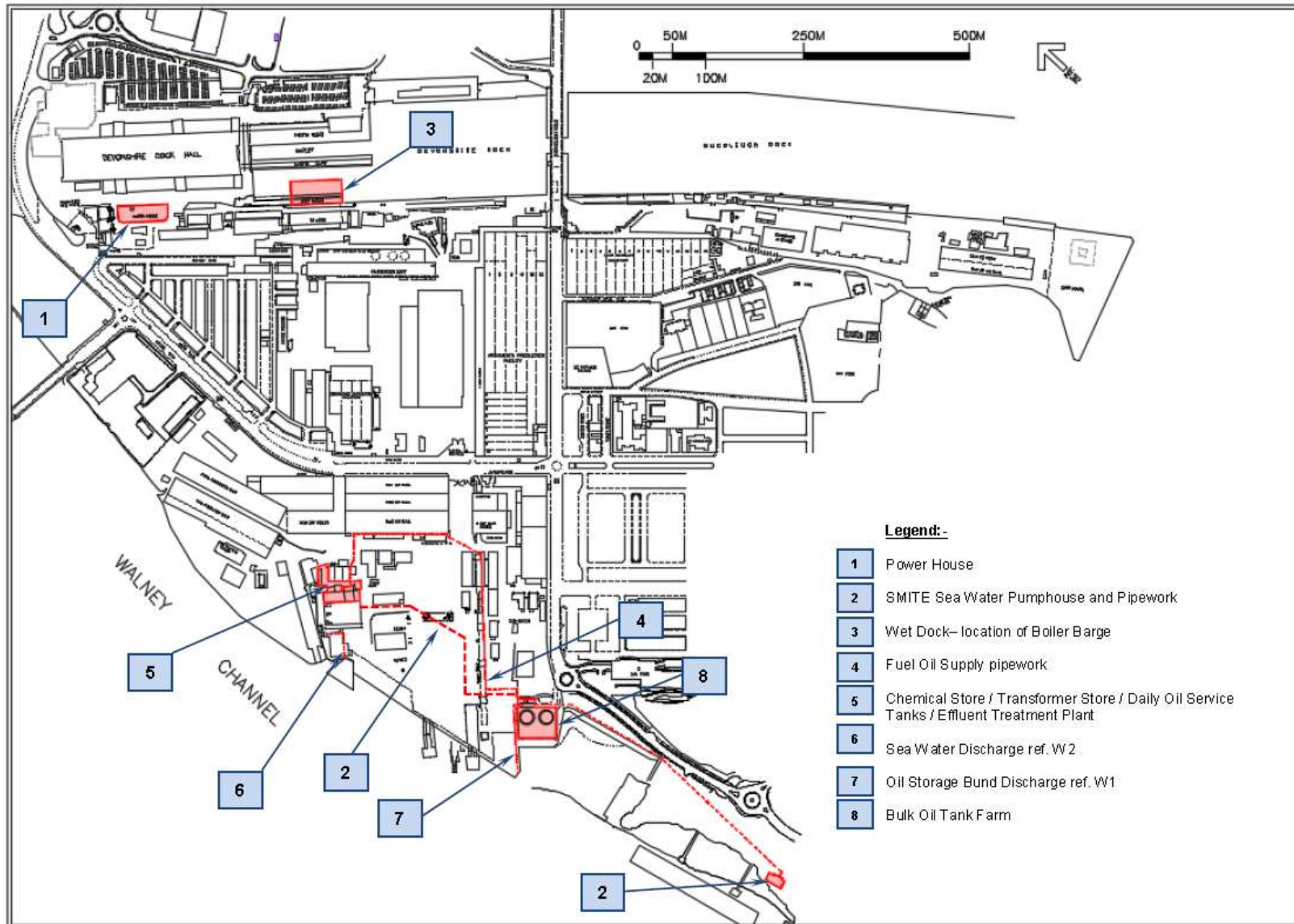
“yearly average” means the average over a period of one year of validated hourly averages obtained by continuous measurements.

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

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

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from gas turbine or compression ignition engine combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or
- in relation to emissions from combustion processes comprising a gas turbine with a waste heat boiler, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry, unless the waste heat boiler is operating alone, in which case, with an oxygen content of 3% dry for liquid and gaseous fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Schedule 7 – Site plan



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END OF PERMIT