



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

BAE Systems Marine Limited

Barrow Shipyards
Barrow-in-Furness
Cumbria
LA14 1AF

Variation application number

EPR/SP3836SP/V005

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 2010 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies that all the conditions of the permit have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made and contains all conditions relevant to this permit.

The requirements of the Industrial Emissions Directive (IED) 2010/75/EU are given force in England through the Environmental Permitting (England and Wales) Regulations 2010 (the EPR) (as amended).

This Permit, for the operation of large combustion plant (LCP), as defined by articles 28 and 29 of the Industrial Emissions Directive (IED), is varied by the Environment Agency to implement the special provisions for LCP given in the IED, by the 1 January 2016 (Article 82(3)). The IED makes 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.

As well as implementing Chapter III of IED, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issued. It also modernises all conditions to reflect the conditions contained in our current generic permit template.

The Operator has chosen to operate these LCPs 438, 439 and 450 under the ELV compliance route.

The variation notice uses LCP numbers in accordance with the most recent DEFRA LCP reference numbers.

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

BAE SYSTEMS Marine Ltd, on its site at Barrow Shipyards, Barrow-in-Furness, operates three boilers within the Submarine Machinery Installation & Testing Establishment (SMITE), each with a thermal input capacity of between 80-100MW. The boilers are used to support testing of marine propulsion machinery prior to its installation in submarines under construction. 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.

In addition, there is estimated to be approximately 1200 combustion processes around the BAE SYSTEMS Marine Ltd site at Barrow, including those rated at <3MW_{th}. Approximately 1200 combustion processes are <1MW_{th} 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 >1MW_{th} and with point source emissions to air are present on the site and can be summarised as follows:

- Boiler barge (containing a 25MW_{th} oil-fired boiler plus a 2.2MW_{th} auxiliary boiler);
- D14 powerhouse, containing two 2.5MW_{th} gas-fired boilers;

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;
- Seawater discharges from the SMITE boilerhouse and Boiler Barge;
- Boiler blowdown from SMITE boilers;
- SMITE water treatment (demineralisation) plant effluents; and
- surface water from daily service tank bund.

An effluent neutralisation system is used to treat demineralisation plant and boiler effluents from the SMITE boilerhouse prior to discharging to the Walney Channel. There are no discharges from within the installation boundary to sewer.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	Date	Comments
Application received (EPR/SP3836SP/A001)	Duly made 03/04/06	
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	
Variation determined CP3934GA (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 (Billing ref: SP3632AA)	18/12/15	Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/16

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

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 01/01/2016

Name	Date
Steve Howard	18/12/15

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 2010

Permit number

EPR/SP3836SP

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/SP3836SP/V005 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
Steve Howard	18/12/15

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. Without prejudice to condition 2.3.1, the activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” revision 1 dated February 2015 or any later version unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.4 Subject to condition 2.3.5, visible smoke emitted from any flue shall not exceed the equivalent of Ringlemann Shade 1 except during boiler ignition or load changes.
- 2.3.5 During boiler ignition or load changes, dark smoke shall not be emitted for periods in excess of 60 seconds.
- 2.3.6 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.7 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 shutdown period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.4.
- 2.3.8 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.
- 2.3.9 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 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 and 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 continuous), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 unless otherwise agreed in writing by the Environment Agency.

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

- 3.6.1 All monitoring required by this permit shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive.
- 3.6.2 If the monitoring results for more than 10 days a year are invalidated within the meaning set out in condition 3.6.7, the operator shall:
- (a) within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Environment Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and
 - (b) implement the approved proposals.
- 3.6.3 Continuous measurement systems on emission points from the LCP shall be subject to quality control by means of parallel measurements with reference methods at least once 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, table S3.1; the Continuous Emission Monitors shall be used such that:
- (a) for the continuous measurement systems fitted to the LCP release points defined in Table S3.1 the validated hourly, monthly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval;
 - (b) the 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%;
 - (c) the 95% confidence interval for dust releases of a single measured result shall be taken to be 30%;
 - (d) the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;
 - (e) an invalid hourly average means an hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system. 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 (40 minutes). 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;
 - (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 the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 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), or 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 listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP438, LCP439 and LCP450. Three 80-100 MW _{th} boilers for producing steam. Boiler barge containing one 25 MW _{th} oil fired boiler plus a 2.2 MW _{th} auxiliary boiler D47 Powerhouse containing two 2.5 MW _{th} gas fired boilers All other combustion sources on site including temporary boilers	From receipt of gas oil and natural gas to discharge of exhaust gases and waste, and the generation of steam.
Directly Associated Activities		
Fuel oil storage	Fuel oil handling and storage for SMITE (A31), Boiler Barge and DDH Powerhouse (D14)	Main fuel oil storage area (A62) with two 3500te capacity tanks Transfer pipeline between A62 and A31 Two 50te capacity daily use tanks at SMITE (A31) Boiler Barge oil storage tanks
Chemical storage	Storage and handling of chemicals and oils used in SMITE demineralisation plant, boiler blowdown effluent treatment, boiler water treatment and lubrication	Chemical storage areas for SMITE (A62 and A31), DDH Powerhouse (D14) and on Boiler Barge
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
Boiler blowdown and effluent treatment	Treatment of SMITE boiler blowdown and effluents from water treatment plant regeneration by pH and temperature adjustment	From receipt of SMITE boiler blowdown and water treatment plant regeneration effluents to discharge to site surface water drainage system
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
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	Compliance route(s) 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

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP1	The Operator shall review options for the reduction of emissions of oxides of nitrogen from the SMITE main boilers, including as a minimum the use of load-spreading, simulation of over-fire air conditions and improvements to combustion control. A report of the review, including proposals to implement the BAT identified, shall be submitted to the Agency. The Operator shall implement the proposals as agreed in writing with the Environment Agency	Completed
IP2	The Operator shall review options for the reduction of particulate emissions from the SMITE main boilers and the Boiler Barge main boiler, including as a minimum the use of ceramic or fabric filters. A report of the review, including proposals to implement the BAT identified, shall be submitted to the Agency. The Operator shall implement the proposals as agreed in writing with the Environment Agency.	Completed
IP3	As proposed in the Application, the Operator shall improve waste segregation within the site to enable the total waste generated from the regulated activities to be quantified, recorded and reported to the Agency as required.	Completed
IP4	The Operator shall produce a site closure plan and submit it for approval by the Agency.	Completed
IP5	As proposed in the Application, the Operator shall introduce monitoring of the process releases from the main boiler on the Boiler Barge for combustion products. Monitoring of the Boiler Barge emissions shall commence during re-commissioning.	Completed
IP6	As proposed in the Application, the Operator shall undertake dispersion modelling of aerial emissions from the main boiler on the Boiler Barge, to quantify potential environmental impact. A report on the modelling results shall be submitted to the Agency upon completion.	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP7	The Operator shall include in the Site Protection and Monitoring Programme to be submitted in accordance with condition 2.8.1, the gathering of baseline data as described in the Application at table 5.2 and section 6.5.1.	Completed
IP8	As proposed in the Application, the Operator shall undertake a CCTV inspection of the facility drains system at SMITE to confirm integrity and reduce the risk of land contamination. A written report of the survey shall be submitted to the Agency upon completion.	Completed
IP9	The Operator shall review options to reduce the volume of potentially oil-contaminated rainwater for disposal from the D14 oil storage tanks bunded areas, and to reduce the potential for tank corrosion. The options considered shall include roofing over the tanks to reduce rainwater ingress and cleaning the staining and debris from the bunded areas. A report of the review shall be submitted to the Agency. The Operator shall implement the proposals as agreed in writing with the Environment Agency.	Completed
IP10	The Operator shall check, and if necessary improve, the drainage path for water collecting in the main oil pumphouse underfloor trench to prevent/minimise water migrating through the base of the trench to the ground beneath. A report shall be provided to the Environment Agency describing findings and any improvements made.	Completed
IP11	<p>The Operator shall undertake a review of the existing screening measures at the intakes and outfalls which provide and discharge water to and from the Installation. The review shall be undertaken with reference to the Eels (England and Wales) Regulations 2009 (SI 2009/3344) and the Environment Agency "Safe Passage of Eel" Regulatory Position Statement version 1 dated July 2012.</p> <p>The Operator shall submit details of the arrangement suitable to meet the requirements for the safe passage of eels [of the Eels (England and Wales) Regulations 2009 (SI 2009/3344)] by either:-</p> <ul style="list-style-type: none"> • Providing a written proposal for the installation of an eel screen. • Providing a written proposal to the modification of existing screening arrangements. • Providing a written response with an explanation and description of how the existing screening arrangements can be regarded to meet the requirements for the safe passage of eels [of SI 2009/3344] either without change or with mitigation measures. • Providing a written response setting out a case for an exemption <p>In all cases, the proposal shall be submitted in writing for the approval of the Environment Agency. Where appropriate, each proposal shall contain an assessment of alternative options considered including impacts on other fish species and an explanation of why the proposed option has been chosen.</p> <p>Where installation of eel screen; modification of existing arrangements; or mitigation measures are proposed, the submission shall contain relevant timescales for installation in accordance with the Safe Passage of Eel Regulatory Position Statement version 1 dated July 2012.</p> <p>The proposals shall be implemented in accordance with the Environment Agency's written approval.</p>	Completed

Table S1.3 Improvement programme requirements		
Reference	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
IP13	<p>The Operator shall submit a report in writing to the Environment Agency for acceptance. The report shall define and provide a written justification of the "minimum start up load" and "minimum shut-down load", for each unit within the LCP as required by the Implementing Decision 2012/249/EU in terms of:</p> <p>The output load (i.e. electricity, heat or power generated) (MW); and This output load as a percentage of the rated thermal output of the combustion plant (%).</p> <p>And / Or</p> <p>At least three criteria (operational parameters and / or discrete processes as detailed in the Annex) or equivalent operational parameters that suit the technical characteristics of the plant, which can be met at the end of start-up or start of shut-down as detailed in Article (9) 2012/249/EU.</p>	1 month after completion of commissioning of boilers prior to next round of main propulsion machinery package testing

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IP14	<p>The operator shall provide a report in writing to the Environment Agency for acceptance which provides the net rated thermal input for LCP438, LCP439 and LCP450. The net rated thermal input is the 'as built' value unless the plant has been modified significantly resulting in an improvement of the plant efficiency or output that increases the rated thermal input (which typically requires a performance test to demonstrate that guaranteed improvements have been realised).</p> <p>Evidence to support this figure, in order of preference, shall be in the form of:-</p> <ul style="list-style-type: none"> a) Performance test results* during contractual guarantee testing or at commissioning (quoting the specified standards or test codes), b) Performance test results after a significant modification (quoting the specified standards or test codes), c) Manufacturer's contractual guarantee value, d) Published reference data, e.g., Gas Turbine World Performance Specifications (published annually); e) Design data, e.g., nameplate rating of a boiler or design documentation for a burner system; f) Operational efficiency data as verified and used for heat accountancy purposes, g) Data provided as part of Due Diligence during acquisition, <p>*Performance test results shall be used if these are available.</p>	1 month after completion of commissioning of boilers prior to next round of main propulsion machinery package testing
IP15	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.	28/01/16

Table S1.4 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	“Minimum Start-Up Load” Load in MW and as percent of rated power output (%) and/or steam/hot water flow rate in xx/xx and as percent of rated thermal output (%) and/or when two of the criteria listed below for the LCP or unit have been met.	“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%) and/or steam/hot water flow rate in xx/xx and as percent of rated thermal output (%) and/or when two of the criteria listed below for the LCP or unit have been met.
A1 LCP438	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IP13	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IP13
A2 LCP439	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IP13	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IP13
A3 LCP450	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IP13	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IP13

Schedule 2 – Waste types, 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 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	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Nos. 438, 439, 450 Boiler plant fired on oil	450 mg/m ³	Calendar monthly mean	Continuous	BS EN 15267-3
A1, A2, A3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Nos. 438, 439, 450 Boiler plant fired on oil	495 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 15267-3
A1, A2, A3	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP Nos. 438, 439, 450 Boiler plant fired on oil	900 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 15267-3
A1, A2, A3	Sulphur Dioxide	LCP Nos. 438, 439, 450 Boiler plant fired on oil	350 mg/m ³	Calendar monthly mean	Continuous	BS EN 15267-3
A1, A2, A3	Sulphur Dioxide	LCP Nos. 438, 439, 450 Boiler plant fired on oil	385 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 15267-3
A1, A2, A3	Sulphur Dioxide	LCP Nos. 438, 439, 450 Boiler plant fired on oil	700 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 15267-3
A1, A2, A3	Dust	LCP Nos. 438, 439, 450 Boiler plant fired on oil	30 mg/m ³	Calendar monthly mean	Continuous	BS EN 15267-3

Table S3.1 Point source emissions to air						
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	Dust	LCP Nos. 438, 439, 450 Boiler plant fired on oil	33 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 15267-3
A1, A2, A3	Dust	LCP Nos. 438, 439, 450 Boiler plant fired on oil	60 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 15267-3
A1, A2, A3	Oxygen	LCP Nos. 438, 439, 450 Boiler plant fired on oil	-	-	Continuous As appropriate to reference	BS EN 15267-3
A1, A2, A3	Water Vapour	LCP Nos. 438, 439, 450 Boiler plant fired on oil	-	-	Continuous As appropriate to reference	BS EN 15267-3
A1, A2, A3	Stack gas temperature	LCP Nos. 438, 439, 450 Boiler plant fired on oil	-	-	Continuous As appropriate to reference	Traceable to national standards
A1, A2, A3	Stack gas pressure	LCP Nos. 438, 439, 450 Boiler plant fired on oil	-	-	Continuous As appropriate to reference	Traceable to national standards
A1, A2, A3	As required by the Method Implementation Document for BS EN 15259	LCP Nos. 438, 439, 450 Boiler plant fired on oil	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A10	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Boiler barge main boiler	No limit set	Minimum of 1 hour sampling period	Once per operating campaign	BS EN 14792

Table S3.1 Point source emissions to air						
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
A10	Particulate matter	Boiler barge main boiler	No limit set	Minimum of 1 hour sampling period	Once per operating campaign	BS EN 13284-2

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 blowdown pit weir chamber) location SD19216825	Temperature	SMITE boiler blowdown & reverse osmosis plant effluent	35 °C	Instantaneous	Continuous	By installed temperature probe
W3 (SMITE boiler blowdown pit weir chamber) location SD19216825	pH	SMITE boiler blowdown & reverse osmosis plant effluent	6-9	Instantaneous	Continuous	BS6068-2.50
W3 (SMITE boiler blowdown pit weir chamber) location SD19216825	pH	SMITE boiler blowdown & reverse osmosis plant effluent	6-9	Sample taken during discharge of effluent	Monthly	BS6068-2.50

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W3 (SMITE boiler blowdown pit weir chamber) location SD19216825	Total suspended solids	SMITE boiler blowdown & reverse osmosis plant effluent	30 mg/l	Sample taken during discharge of effluent	Monthly	BS EN 872
W3 (SMITE boiler blowdown pit weir chamber) location SD19216825	Cadmium and its compounds expressed as cadmium (Total Cd)	SMITE boiler blowdown & reverse osmosis plant effluent	0.02 mg/l	Sample taken during discharge of effluent	Monthly	BS 6068-2.89
W3 (SMITE boiler blowdown pit weir chamber) location SD19216825	Mercury and its compounds expressed as cadmium (Total Hg)	SMITE boiler blowdown & reverse osmosis plant effluent	0.05 mg/l	Sample taken during discharge of effluent	Monthly	BS EN 13500
W4 (SMITE oil in water separator discharge) location SD19146818	Oil or grease	Surface water	No visible emission	Instantaneous	Before and during each discharge to Walney Channel	By installed oil in water detector
W5 (Boiler barge seawater discharge) location SD194688	Temperature	Seawater abstraction, cooling and discharge system	35 °C	Instantaneous	Continuous	By installed temperature probe

Substance	Medium	Limit (including unit)	Emission Points
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

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
Dust	A1, A2, A3	1 month after completion of each campaign	Commencement of each campaign
Sulphur dioxide	A1, A2, A3	1 month after completion of each campaign	Commencement of each campaign
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 ¹ , W2 ¹ , W4 ¹ , W5 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

¹ Monitoring data does not need to be reported but records are to be available for inspection

Table S4.2: Annual production/treatment	
Parameter	Units
None	-

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

Table S4.4 Reporting forms				
Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
LCP	Form IED HR1 – operating hours	01/01/16	National	31/12/15
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy	01/01/16	National	31/12/15
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.

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

“DLN” means dry, low NO_x burners.

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

“emissions to land” includes emissions to groundwater.

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

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

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

“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.

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

Pests” means Birds, Vermin and Insects.

“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.

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.

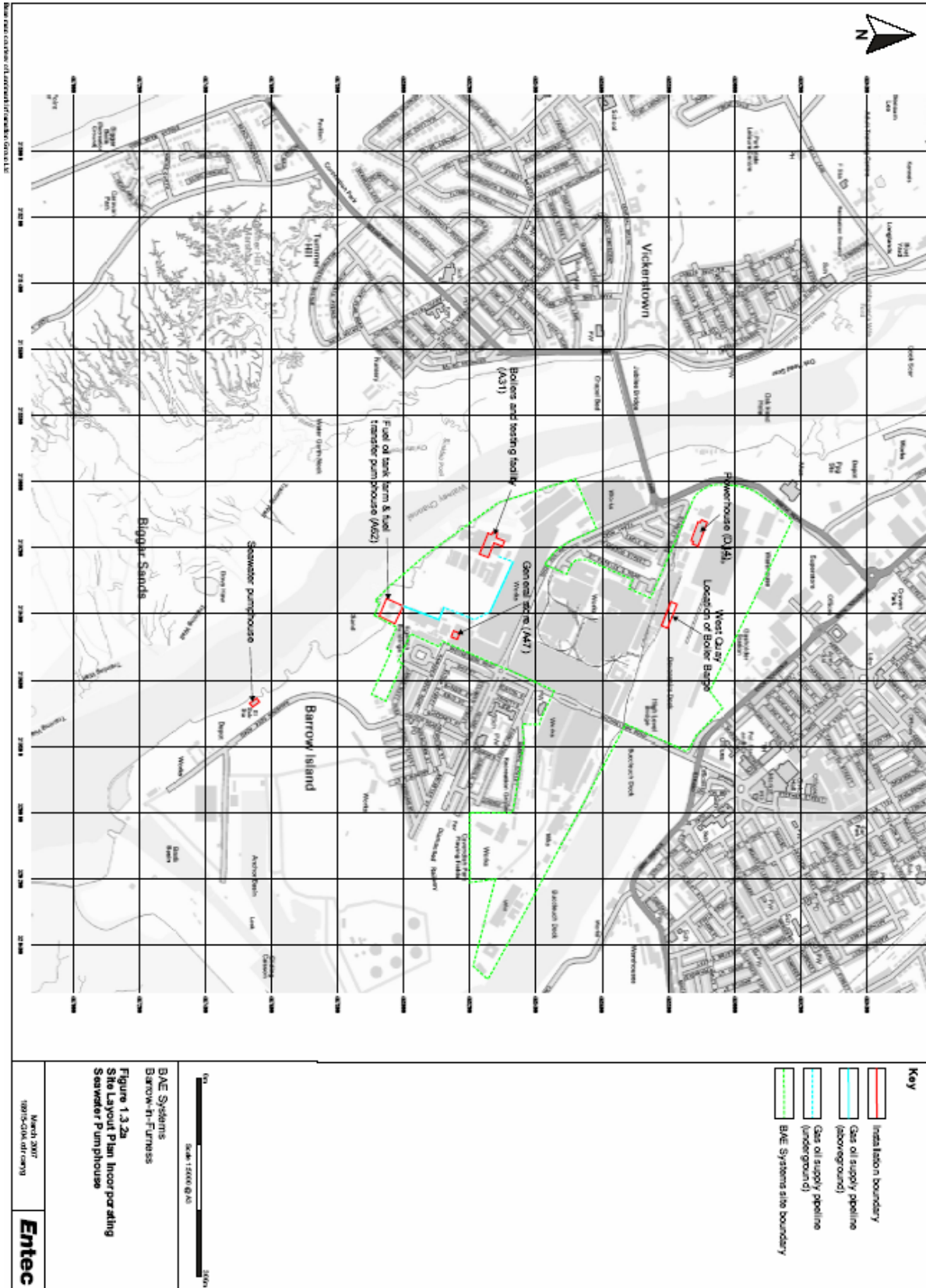
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

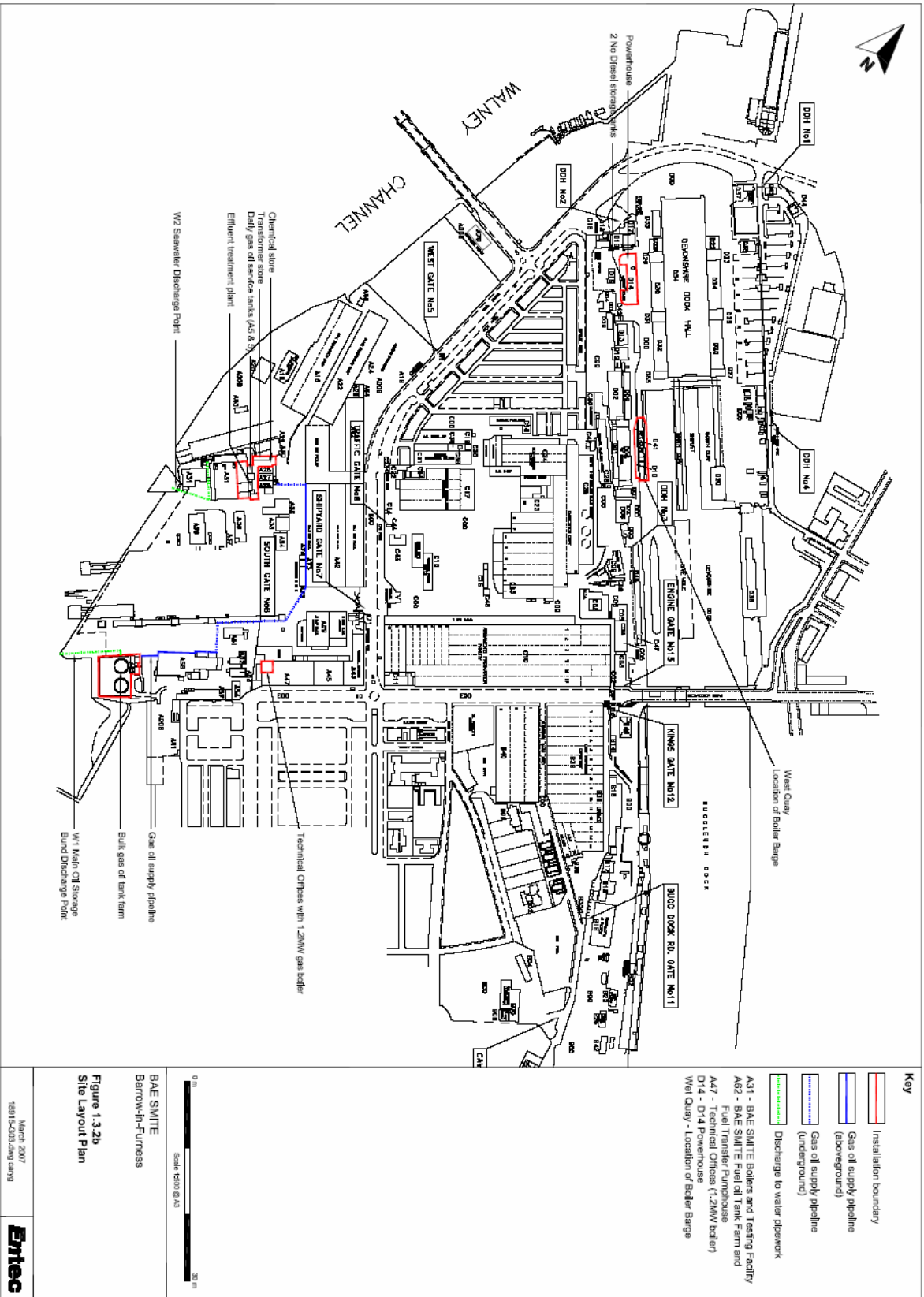
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from gas turbine or compression ignition 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.

“year” means calendar year ending 31 December.

Schedule 7 – Site plan

The figures in this section are figures 1.3.2a, 1.3.2b and 1.3.3 from the application main report, as updated March 2007.





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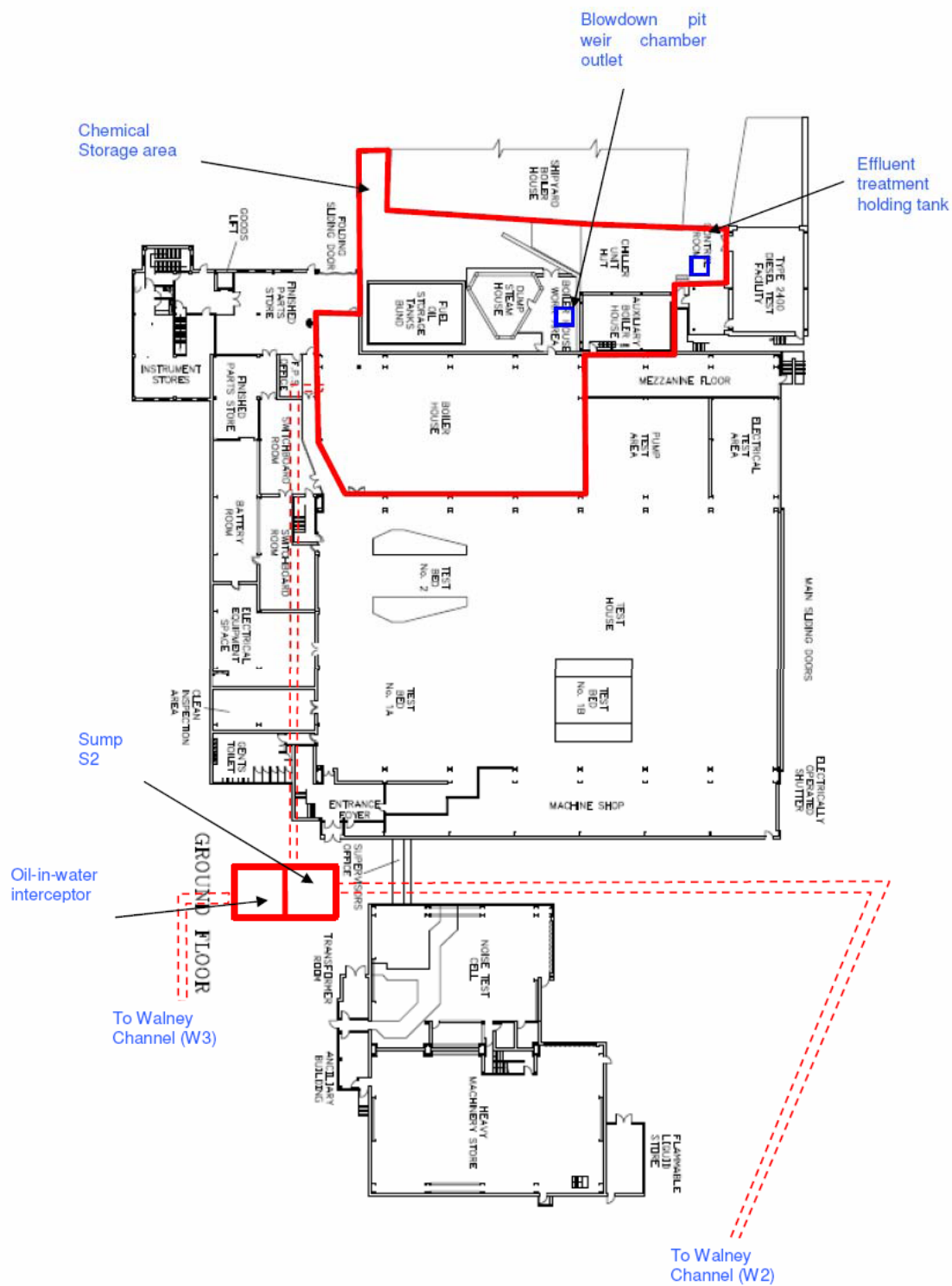


Figure 1.3.3 Detailed installation boundary for BAE SMITE

END OF PERMIT