



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

EDF Energy (Thermal Generation) Limited
West Burton Power Station
Retford
Nottinghamshire
DN22 9BL

Variation application number

EPR/SP3935LW/V011

Permit number

EPR/SP3935LW

West Burton Power Station

Permit number EPR/SP3935LW

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.

Chapter III/Annex V

The Operator chose to operate LCP130 and LCP131 under the transitional national plan (TNP) compliance route. Emission limit values (ELVs) were set which were derived for the period 2016 to 30 June 2020 (the duration of the TNP). From 01 July 2020 the appropriate limits in Annex V of the IED are applicable.

The Operator chose to operate LCP456 and LCP457 under the ELV compliance route. No ELVs were set based on operation of the plant at <500 hours/year.

Purpose of this variation:

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.

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:

- Incorporation of operating techniques in table S1.2 of the permit for compliance and operating techniques identified in response to the BAT Conclusions;
- Incorporation of operating techniques in table S1.2 of the permit for fuel characterisation to be in place by 2021, in accordance with BAT Conclusion 9;
- An improvement condition requiring demonstration of sufficiently stable emissions by 2021, in accordance with BAT Conclusion 4;
- Revised emission limits and monitoring requirements for emissions to air applicable from 01 July 2020 at the end of the TNP, to the 16 August 2021, in table S3.1a;
- Revised emission limits and monitoring requirements for emissions to air applicable from the BAT Conclusions implementation date, 17 August 2021, in table S3.1b;
- Revised emission limits and monitoring requirements for emissions to water applicable from the BAT Conclusions implementation date, 17 August 2021, in table S3.2a; and

- Inclusion of process monitoring for energy efficiency in table S3.4.

Additional key changes in accordance with IED Chapter II requirements:

- We have added condition 2.3.6 to limit the operation of LCP130 and LCP131 to <1,500 hours/year from 01 July 2020.
- We have amended condition 4.2.2 to reference condition 2.3.6.
- Table S1.1 amended for LCP130 and LCP131, to confirm that operation shall be <1,500 hours/year from 01 July 2020 in accordance with condition 2.3.6.
- Tables S1.1, S1.2 and S2.2 amended as the ability to co-fire biomass in LCP130 and LCP131 is no longer required.
- Table S2.1 amended to remove 'tall oil'.
- Table S2.2 amended to remove relevant exempt biomass.
- Table S2.3 amended to remove the waste code 10 01 02 for pulverised fuel ash (PFA) from Cottam Power Station.
- Table S3.3 amended to reduce annual limits to water at emission point W2 in accordance with the reduction in limits from 17 August 2021.
- Permit condition 2.3.9 has been included in the permit with corresponding improvement condition IC15 requiring the operator to submit a report in relation to potential black start operation of the plant.

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.

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

West Burton Power Station was constructed in the 1960s and is situated in the lower Trent valley, north east of Retford in Nottinghamshire at national grid reference SK79198553.

It 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.

The installation comprises four coal fired generating sets (LCP130 and LCP131) and two black start open cycle gas turbines (OCGT) (LCP456 and LCP457) fired on gas-oil (GT1 and GT4).

GT1 and GT4 are used in the event of a grid collapse to restart the station and to provide short-term load support as requested by the national grid.

LCP130 and LCP131 – four coal fired boilers – operation <1,500 hours/year

LCP130 consists of two boilers with a total net thermal input of 2,628 MWth which vent via multiple flues within a single windshield at emission point A1.

LCP131 consists of two boilers with a total net thermal input of 2,628 MWth which vent via multiple flues within a single windshield at emission point A3.

Both LCPs burn coal and generate electricity only.

LCP456 and LCP457 – two gas-oil fired OCGT – operation < 500 hours/year

Each LCP comprises a 76 MWth black-start OCGT, which vent via separate stacks at emission points A5a and A5b respectively.

The units burn gas-oil.

Coal, limestone and heavy fuel oil (for initial firing of the boilers and load support) are delivered to the station by the use of a dedicated rail system for bulk materials. Some coal and fuel oil are delivered to the station using road transport.

Solid residue from the combustion of fuel comprises two different types of ash. Furnace bottom ash (FBA) is collected from the base of the boilers and transported to holding areas and sold to the construction industry as a replacement aggregate. Pulverised fuel ash (PFA) leaves the boiler with the flue gases and is collected by electrostatic precipitators. Following the installation of a new PFA processing plant during autumn 2008 (STI plant), the PFA may now be further processed into two separate products; a high carbon ash and low carbon ash. The high carbon ash is re-burnt as a fuel in the power station boilers and the low carbon ash is sold as a cement replacement product.

The design of the boilers is to use corner firing rather than wall firing. This design imparts a vortex to the burning zone. Emissions of sulphur dioxide (SO₂) from the combustion of coal are abated by the use of limestone flue gas desulphurisation (FGD), one unit to each boiler. The units are of the regenerative heating design, which allows the absorbers to be by-passed during start-up and shut-down when the use of oil to initiate firing could cause problems in the absorbers. The boilers use primary measures to reduce emissions of oxides of nitrogen (NO_x).

The operation of the FGD units produces a by-product known as desulphogypsum (DSG), which is recovered in a purpose built plant. This material, produced to a specification, is sold to the building industry for the manufacture of plasterboard or for the formulation of cement.

The main emissions to air result from the combustion of fuel in the boilers. Treated flue gases from the four boiler units are released to air via separate flues and two identical chimneys. Each chimney stack contains two flues housed within a common windshield which is 200 m high.

Emissions to water are from the use of cooling water and the treatment of FGD wastewater. The power station is cooled using cooling towers. Treated water emissions discharge to the River Trent.

The permit takes account of the impact of the regulated facility both on the local area and nationally with appropriate permit conditions set accordingly. Emissions to air and water from the regulated facility have been considered individually and in combination with other sources and conditions imposed to prevent and reduce environmental impact.

The installation is a lower tier control of major accidental hazards (COMAH) site. The installation has a Major Accident Plan to ensure that the COMAH aspects of the installation are addressed. Procedures are in place to control other potential risks at the installation.

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 EPR/SP3935LW/A001	31/03/06	Duly made
Additional information received	10/08/06	Revised list of release points (Request for information sent 05/07/06)
Additional information received	05/09/06	Review Application Site Report (ASR) (Request for information sent 14/07/06)
Additional information received	01/10/06	Submission of revised and additional application documents, including a study of the thermal discharges to the River Trent
Additional information received	04/04/07	Submission of changes to the dust plant compressor cooling system
Permit determined EPR/SP3935LW	30/10/07	
Variation application EPR/SP3935LW/V002	03/09/08	Duly made STI & minor amendments
Additional information received	03/11/08	Submission of revised site plan
Variation determined EPR/SP3935LW/V002	21/11/08	
Variation application EPR/SP3935LW/V003	14/05/10	Duly made
Variation determined EPR/SP3935LW/V003	20/05/10	
Environment Agency initiated variation determined EPR/SP3935LW/V004	11/03/13	To incorporate Eel Regulations improvement condition
Environment Agency initiated variation determined EPR/SP3935LW/V005	13/12/13	To implement the changes introduced by the IED
Variation application EPR/SP3935LW/V006	29/09/14	Administrative variation to carry out a newly prescribed activity under the IED
Environment Agency initiated variation determined EPR/SP3935LW/V006	29/09/14	To add an improvement condition requiring a cost benefit appraisal to ensure compliance with the Eels Regulations Effective 01/10/14
Regulation 60 Notice sent to the Operator	09/12/14	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 was also updated to modern conditions.
Regulation 60 Notice response	31/03/15	Response received from the Operator
Additional information received	28/05/15	Response to request for further information dated 13/05/15
Additional information received	25/08/15	Updated values for MSUL and MSDL originally provided in Regulation 60 Notice response
Additional information received	09/11/15 16/11/15	Updated values and justification for LCP thermal input

Additional information received	13/11/15	Site plan showing main emission points
Variation determined EPR/SP3935LW/V007	30/12/15	Varied and consolidated permit issued in modern condition format Variation effective from 01/01/16
Variation application EPR/SP3935LW/V008	28/04/16	Duly made To remove a small error in the permit boundary
Variation determined EPR/SP3935LW/V008	11/07/16	Varied permit issued
Variation application EPR/SP3935LW/V009	11/10/16	Administrative variation to change monitoring method for total residual chlorine
Variation determined EPR/SP3935LW/V009	30/11/16	Varied permit issued
Notified of change of company name and registered office	12/01/18	Name and registered office changed to EDF Energy (Thermal Generation) Limited, 90 Whitfield Street, London W1T 4EZ
Variation issued EPR/SP3935LW/V010	16/01/18	Varied permit issued to EDF Energy (Thermal Generation) Limited
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	31/10/18	Response received from the Operator
Request for further information sent 07/10/19	18/10/19	Response received from the Operator Biomass firing, operating techniques, emissions to water, BAT Conclusions 2 and 37
Response received from Operator	14/01/20	Turbine energy efficiency and fuel characterisation
Additional information received	21/01/20	Updated site plan showing main emission points
Variation determined EPR/SP3935LW/V011 (Billing ref: XP3704PW)	21/01/20	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/SP3935LW

Issued to

EDF Energy (Thermal Generation) Limited (“the operator”)

whose registered office is

90 Whitfield Street

London

England

W1T 4EZ

company registration number **04267569**

to operate a regulated facility at

West Burton Power Station

Retford

Nottinghamshire

DN22 9BL

to the extent set out in the schedules.

The notice shall take effect from 21/01/2020

Name	Date
Anne Lloyd	21/01/2020

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/SP3935LW

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/SP3935LW/V011 authorising,

EDF Energy (Thermal Generation) Limited (“the operator”),

whose registered office is

90 Whitfield Street

London

England

W1T 4EZ

company registration number **04267569**

to operate a regulated facility at

West Burton Power Station

Retford

Nottinghamshire

DN22 9BL

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

Name	Date
Anne Lloyd	21/01/2020

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”).
- 2.1.2 For the following activities referenced in schedule 1, table S1.1: AR5, AR6 and AR7. Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 For the following activities referenced in schedule 1, table S1.1: AR1 LCP130, LCP131, LCP456 and LCP457. 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: AR1 LCP456 and LCP457. The activities shall not operate for more than 500 hours per year.
- 2.3.6 From 01 July 2020 for the following activities referenced in schedule 1, table S1.1: AR1 LCP130 and LCP131. The activities shall operate for less than 1,500 hours per year as a rolling average over a period of five years with a maximum of 2,250 hours operated in any one year in line with Section 4.0 of Version 5.1: The Protocol for IED Annex V 1500 Limited Hours Derogation July 2015 or any later version.
- 2.3.7 For the following activities referenced in schedule 1, table S1.1: AR1 LCP130, LCP131, LCP456 and LCP457. 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.

- 2.3.8 For the following activities referenced in schedule 1, table S1.1: AR1 LCP130 and LCP131. The following conditions apply where there is a malfunction or breakdown of any abatement equipment:
Unless otherwise agreed in writing by the Environment Agency:
- (i) if a return to normal operations is not achieved within 24 hours, the operator shall reduce or close down operations, or shall operate the activities using low polluting fuels;
 - (ii) the cumulative duration of breakdown in any 12-month period shall not exceed 120 hours; and
 - (iii) the cumulative duration of malfunction in any 12-month period shall not exceed 120 hours.
- 2.3.9 The emission limit values for emission points A1 and A3 listed in tables S3.1, S3.1a and S3.1b of Schedule 3 following the issue of a Black Start Instruction by the National Grid shall be disregarded for the purposes of compliance whilst that instruction remains effective and in accordance with the report submitted in response to improvement condition IC15 in table S1.3 of this permit.
- 2.3.10 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 tables S2.2 and S2.3; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.11 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.
- 2.3.12 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, S3.1b, S3.2, S3.2a and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 The emission values from emission points A1 and A3 listed in schedule 3 tables S3.1, S3.1a and S3.1b, measured during periods of abatement equipment malfunction and breakdown shall be disregarded for the purposes of compliance with tables S3.1, S3.1a and S3.1b emission limit values.
- 3.1.4 Total annual emissions from the emission points set out in schedule 3 tables S3.1, S3.2 and S3.2a of a substance listed in schedule 3 table S3.3 shall not exceed the relevant limit in table S3.3.

- 3.1.5 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, S3.1b, S3.2 and S3.2a; 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, S3.1b, S3.2 and S3.2a 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 every calendar year.
- 3.6.4 Unless otherwise agreed in writing by the Environment Agency in accordance with condition 3.6.5 below, the operator shall carry out the methods, including the reference measurement methods, to use and calibrate continuous measurement systems in accordance with the appropriate CEN standards.
- 3.6.5 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Environment Agency.
- 3.6.6 Where required by a condition of this permit to check the measurement equipment, the operator shall submit a report to the Environment Agency in writing, within 28 days of the completion of the check.

- 3.6.7 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3, tables S3.1, S3.1a and S3.1b; 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, S3.1a and S3.1b 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. 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 resource efficiency metrics set out in schedule 4 table S4.2;
 - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
 - (d) where conditions 2.3.5 applies the hours of operation in any year;
 - (e) where condition 2.3.6 applies, the rolling annual average hours of operation over a period of 5 years; and
 - (f) where condition 2.3.8 applies, the cumulative duration of breakdown and cumulative duration of malfunction in any 12 month period.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.
- 4.2.6 Within 10 days of the notification of abatement equipment malfunction or breakdown (condition 2.3.8) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).
- 4.2.7 For the following the following activities referenced in schedule 1, table S1.1: AR1 LCP130 and LCP131. Unless otherwise agreed in writing with the Environment Agency, within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form IED RTA1, listed in table S4.4, the information specified on the form relating to the site's mass emissions.

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.
- (d) of any malfunction or breakdown of abatement equipment relating to condition 2.3.8, the operator shall notify the Environment Agency within 48 hours unless notification has already been made under (a) to (c) above.

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

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

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

Where the operator is a registered company:

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

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

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

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

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

- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.7 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

4.4 Interpretation

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

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	Section 1.1 Part A(1)(a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP130: Operation of two boilers (each 1,314 MWth) burning coal for production of steam to generate electricity (2,628 MW aggregated net thermal input)	From receipt of coal, gas-oil, heavy fuel oil and propane to discharge of exhaust gases and wastes, and the generation and export of electricity Wastes as specified in Table S2.2 of this permit For LCP130 and LCP131, operation shall be <1,500 hours/year from 01 July 2020 in accordance with condition 2.3.6 in this permit LCP456 and LCP457 shall only be used for black-start events, short-term load support and testing <500 hours/year
		LCP131: Operation two of boilers (each 1,314 MWth) burning coal for production of steam to generate electricity (2,628 MW aggregated net thermal input)	
		LCP456: Operation of an open cycle gas turbine (OCGT) burning gas-oil to produce electricity (76 MW net thermal input)	
		LCP457: Operation of an open cycle gas turbine (OCGT) burning gas-oil to produce electricity (76 MW net thermal input)	
		2 x <1MWth diesel generators	
AR2	Section 4.2 Part A(1)(a)(iv): Producing inorganic chemicals such as – salts	Operation of four lime-stone slurry flue gas desulphurisation (FGD) units	From receipt of lime-stone to dispatch of gypsum off site and discharge of waste water to the wastewater treatment plant
AR3	Section 5.4 Part A(1)(a)(ii): Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day - physico-chemical treatment	Treatment of waste water from the FGD units	From discharge of wastewater from the FGD units to the discharge from site

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR4	Section 3.5 Part B (f): Loading, unloading or storing pulverised fuel ash in bulk prior to further transportation in bulk	Pulverised fuel ash (PFA) handling and storage	From removal of PFA and furnace bottom ash (FBA) from the combustion process to dispatch from site, excluding the treatment of PFA carried out as part of activities AR5, AR6 or AR7 Wastes as specified in Table S2.3 of this permit
AR5	Section 5.4 Part A(1)(b)(iii): Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day - treatment of slags and ashes	Classifying PFA	From receipt of PFA from the combustion process to dispatch of classified PFA for onward handling
AR6	Section 5.4 Part A(1)(b)(iii): Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day - treatment of slags and ashes	Separating high carbon PFA from low carbon PFA	Separating high carbon PFA from low carbon PFA with the use of the Separation Technology Inc (STI) plant as part of the ash production process
AR7	Section 5.4 Part A(1)(b)(iii): Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day - treatment of slags and ashes	Ash process plant	Blending FBA with PFA and grading the product into different grades according to particle sizes
	Directly Associated Activity		
AR8	Directly associated activity	Surface water drainage	From handling and storage of site drainage until discharge to the site surface water system
AR9	Directly associated activity	Water treatment	From receipt of raw materials to dispatch to chemical effluent and site drainage systems
AR10	Directly associated activity	Fuel Storage	From receipt of fuel to dispatch for use
AR11	Directly associated activity	The use of water from the River Trent to condense steam	From the pumping, filtering and chemical treatment of the water, its use in the condensers and cooling water system to the discharge of the water back to the River Trent

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/SP3935LW/A001	The response to sections 2.1 and 2.2 in the Application	31/03/06
Submission of revised site report information	All parts	05/09/06
Submission of revised list of emission points	All parts	23/08/06
Submission of revised and updated application documents, including a study of the impact of thermal discharges to the River Trent	All parts (revised organogram, update of progress on projects. Revised diagrams of release points)	03/01/07
Submission of changes to the dust plant compressor cooling system	All parts	04/04/07
Fugitive emissions monitoring plan, odour management plan and noise management plan	All parts	30/01/08
Variation application EA/EPR/SP3935LW/V002 (STI & minor amendments)	Sections 2 and 3 of submitted variation application document. Answers and submission against variation application form Part C, Questions 1 & 2 (proposed changes and operating techniques)	03/09/08
Submission of revised site plan	All parts	03/11/08
Variation application EA/EPR/SP3935LW/V003	Section 3.2 In process controls	14/05/10
Submission of revised application document 16	Section 3.5 "The FGD Effluent Treatment System" change to substitute the use of tri-mercapto triazine (TMT15) instead of sodium sulphide	01/04/09
Submission of revised operations for sludge dewatering	Change of operations as detailed	25/07/13
Submission of revised operations for re-firing of sludge from the FGD WWTP	Change of operations as detailed in email submissions	25/07/13
		07/08/13
Variation Application EPR/SP3935LW/V006 to carry out a newly prescribed activity	Parts 3 and 4 of "Administrative Variation – September 2014 Supporting Information"	29/09/14
Submission of revised site plan included in document "Additional information in relations to Environment Agency comments received on 11/08/2015"	All parts	28/08/15
Response to regulation 60(1) Notice – request for information dated 09/12/14 EPR/SP3935LW/V007	Compliance route(s) and operating techniques identified in response to questions 2 (compliance route), 4 (configuration of each LCP), 5 (net thermal input of each LCP), 6 (MSUL and MSDL) and 7 (sector approach) Excluding LLD compliance route for LCP183 (now LCP130) and LCP184 (now LCP131) and related operating techniques	31/03/15

Table S1.2 Operating techniques		
Description	Parts	Date Received
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 13/05/15 EPR/SP3935LW/V007	Compliance route(s) and operating techniques identified in response to questions 2 (compliance route), 5 (net thermal input of each LCP) and 6 (MSUL and MSDL)	28/05/15
Receipt of additional information to the regulation 60(1) Notice EPR/SP3935LW/V007	Revised MSUL and MSDL figures	25/08/15
Receipt of additional information to the regulation 60(1) Notice EPR/SP3935LW/V007	Revised LCP thermal input figures	09/11/15
Receipt of additional information to the regulation 60(1) Notice EPR/SP3935LW/V007	Confirmation of the compliance routes chosen for LCP183 (now LCP130) and LCP184 (now LCP131)	21/12/15
Response to regulation 61(1) Notice – request for information dated 01/05/18 EPR/SP3935LW/V011	Compliance and operating techniques identified in response to the BAT Conclusions for LCP published on 17 August 2017	31/10/18
Additional information in response to our further information request sent 07/10/19 EPR/SP3935LW/V011	Compliance and operating techniques identified in response to BAT Conclusions 2 and 37 Co-firing with biomass no longer required	18/10/19
Confirmation received from the operator for operation in accordance with this Joint Environmental Programme (JEP) document EPR/SP3935LW/V011	JEP report – ‘Characterisation of power plant fuels for compliance with LCP BREF Conclusion BAT 9’ Issued October 2019, or any later version agreed in writing by the Environment Agency	14/01/19

Table S1.3 Improvement programme requirements		
Ref.	Requirement	Date
IC1	<p>A written report shall be submitted to the Agency for approval. The report shall include the results of an assessment of whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution for the activities covered by this permit. The report shall be in sufficient detail to allow a permit review. The report shall also contain a timescale for the implementation of any individual measures identified to improve the performance of the installation, including emissions control performance, as appropriate following the review.</p> <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p> <p>The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Environment Agency.</p>	Complete
IC2	<p>A written report shall be submitted to the Agency for approval. The report shall contain a protocol detailing the methodology for measuring the fraction of PM₁₀ and PM_{2.5} within the release of total Dust from the combustion process. The protocol shall include but not be restricted to a variety of operating scenarios including start up and shut down, changes in operating loads and patterns and types of abatement. The report shall also contain a proposed time-scale within which the proposed sampling program contained within the protocol will be completed.</p> <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p> <p>The program shall be implemented by the operator from the date of approval in writing by the Agency.</p>	Complete
IC3	<p>A written report shall be submitted to the Agency for approval. The report shall include a detailed assessment, including economic factors, of the options to increase firing of biomass fuels.</p> <p>Where appropriate, the report shall contain dates for the implementation of individual measures. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p> <p>The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Environment Agency</p>	Complete
IC4	<p>A written report shall be submitted to the Agency for approval. The report shall include the results of a water efficiency audit in accordance with section 2.4.3 of IPPC Sector Guidance Note for the Combustion Sector. The report shall also contain a timescale for the implementation of any individual measures identified to address any deficiencies.</p> <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p> <p>The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Environment Agency.</p>	Complete
IC5	<p>A written report shall be submitted to the Agency for approval. The report shall include the results of a waste minimisation audit in accordance with section 2.4.2 of IPPC Sector Guidance Note for the Combustion Sector. The report shall also contain a timescale for the implementation of any individual measures identified to address any deficiencies.</p> <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report.</p> <p>The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Environment Agency.</p>	Complete

Table S1.3 Improvement programme requirements		
Ref.	Requirement	Date
IC6	Provide a written plan of how this installation will contribute to total emissions of SO ₂ from existing major coal-fired power stations in England and Wales being minimised and in any case not exceeding 70 kt/y by 2020. The report should consider scenarios for electricity demand in 2020 and give the planned arrangements for SO ₂ emissions control at this installation. (Existing coal-fired stations comprise LCP that might still be operating in 2020. These are at Aberthaw, Cottam, Drax, Eggborough, Ferrybridge, Fiddlers Ferry, Ratcliffe, Rugeley, Uskmouth and West Burton). The plan should be implemented after approval by the Environment Agency.	Complete
IC7	A written report shall be submitted to the Agency for approval. The report shall contain a protocol for a monitoring programme to assess changes in acidification and eutrophication deposition and ecological effects at appropriate Natura 2000 sites. The protocol will include the selection of the Natura 2000 sites and a time scale for implementation of the programme. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The protocol detailed in the report shall be implemented by the Operator from the date of approval by the Environment Agency.	Complete
IC8	The Operator shall complete the improvements to the site infrastructure identified in document 11 of the Application. The completion of each action shall be reported to the Agency in writing. The report shall include an assessment of the condition of the ground immediately surrounding the area improved.	Complete
IC9	A written procedure shall be submitted to the agency detailing the measures to be used so that monitoring equipment, personnel and organisations employed for the emissions monitoring programme shall have either MCERTS certification or accreditation in accordance with condition 3.6.3. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the procedure. The procedure shall be implemented by the operator from the date of approval in writing by the Agency	Complete
IC10	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. 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:- <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>	Complete

Table S1.3 Improvement programme requirements		
Ref.	Requirement	Date
	The proposals shall be implemented in accordance with the Environment Agency's written approval.	
IC11	<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 IC10.</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>	Complete
IC12	For LCPD LCP130, LCP131, LCP456 and LCP457: 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 LCPD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.	Complete
IC13	The operator shall submit a copy of the air quality monitoring and modelling results to demonstrate compliance with air quality standards for sulphur dioxide, oxides of nitrogen and particulate (PM ₁₀) during 2015, following the format and requirements of previous years submissions to the Environment Agency.	Complete
IC14	<p><u>BAT Conclusion 4</u></p> <p>The operator shall submit a report demonstrating sufficient stability of emissions of mercury and halogen compounds (chlorine and fluorine compounds) in accordance with the latest agreed version of the Protocol for LCP BREF Compliance with trace species monitoring requirements at coal fired power plant.</p>	31/03/21

Ref.	Requirement	Date
IC15	<p>Black start operations</p> <p>A written report shall be submitted to the Environment Agency for approval. The report shall contain an impact assessment demonstrating that there is no significant environmental risk associated with black start operations and propose a methodology for minimisation of environmental impact during such a period of operation and for reporting instances of black start operation.</p> <p>The plant can be operated as set out in condition 2.3.9 of the permit once the report has been approved by the Environment Agency. The methodology for operation and reporting set out in the report shall be implemented by the Operator from the date of approval by the Environment Agency.</p>	31/01/21

Emission Point and Unit Reference	“Minimum start up load” (MSUL) Load in MW and as percent of rated power output (%) Or when the criteria listed below have been met	“Minimum shut-down load” (MSDL) Load in MW and as percent of rated power output (%) Or when the criteria listed below have been met
A1 LCP130 Unit 1	260 MW; 54.2%	260 MW; 54.2%
A1 LCP130 Unit 2	260 MW; 52.8%	260 MW; 52.8%
A3 LCP131 Unit 1	260 MW; 52.8%	260 MW; 52.8%
A3 LCP131 Unit 2	260 MW; 54.2%	260 MW; 54.2%
A5a LCP456 GT1	As soon as the gas turbine start-up is initiated	As soon as the gas turbine is off-load
A5b LCP457 GT4	As soon as the gas turbine start-up is initiated	As soon as the gas turbine is off-load

Schedule 2 – Raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Heavy fuel-oil	Not exceeding 1.0% w/w sulphur content
Gas-oil	Not exceeding 0.1% w/w sulphur content

Table S2.2 Permitted waste types and quantities for combustion in steam boilers	
Waste code	Description
Other exempt waste	Other fuels exempt from the requirements of the Waste Incineration Directive 2000/76/EC and approved in writing by the Environment Agency for use in the installation

Table S2.3 Permitted waste types and quantities for ash processing	
Waste code	Description
10 01 01	Bottom ash, slag and boiler Dust (excluding boiler Dust mentioned in 10 01 04) produced at West Burton power station
10 01 02	Pulverised fuel ash (PFA) produced at West Burton power station and/or recovered from Bole lngs ash disposal site

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air Emission limits and monitoring requirements – Shall apply until 30 June 2020						
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
Coal fired boiler plant – LCP130 & LCP131						
A1 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP130 Coal fired boiler plant	450 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A1 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP130 Coal fired boiler plant	550 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A1 ^{Note 1}	Sulphur Dioxide	LCP130 Coal fired boiler plant	350 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A1 ^{Note 1}	Sulphur Dioxide	LCP130 Coal fired boiler plant	440 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A1 ^{Note 1}	Dust	LCP130 Coal fired boiler plant	20 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A1 ^{Note 1}	Dust	LCP130 Coal fired boiler plant	35 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A1 ^{Note 1}	Oxygen	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1 Point source emissions to air Emission limits and monitoring requirements – Shall apply until 30 June 2020						
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 ^{Note 1}	Water Vapour	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A1 ^{Note 1}	Stack gas temperature	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 ^{Note 1}	Stack gas pressure	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 ^{Note 1}	Stack gas volume flow	LCP130 Coal fired boiler plant	-	-	Continuous	BS EN 16911 & TGN M2
A1 ^{Note 1}	Total mercury	LCP130 Coal fired boiler plant	-	-	Annual	BS EN13211
A1 ^{Note 1}	As required by the Method Implementation Document for BS EN 15259	LCP130 Coal fired boiler plant	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP131 Coal fired boiler plant	450 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP131 Coal fired boiler plant	550 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181

Table S3.1 Point source emissions to air Emission limits and monitoring requirements – Shall apply until 30 June 2020						
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
A3 ^{Note 1}	Sulphur Dioxide	LCP131 Coal fired boiler plant	350 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A3 ^{Note 1}	Sulphur Dioxide	LCP131 Coal fired boiler plant	440 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A3 ^{Note 1}	Dust	LCP131 Coal fired boiler plant	20 mg/m ³	Calendar monthly mean	Continuous	BS EN 14181
A3 ^{Note 1}	Dust	LCP131 Coal fired boiler plant	35 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A3 ^{Note 1}	Oxygen	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A3 ^{Note 1}	Water Vapour	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A3 ^{Note 1}	Stack gas temperature	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A3 ^{Note 1}	Stack gas pressure	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A3 ^{Note 1}	Stack gas volume flow	LCP131 Coal fired boiler plant	-	-	Continuous	BS EN 16911 & TGN M2
A3 ^{Note 1}	Total mercury	LCP131 Coal fired boiler plant	-	-	Annual	BS EN13211

Table S3.1 Point source emissions to air Emission limits and monitoring requirements – Shall apply until 30 June 2020						
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
A3 ^{Note 1}	As required by the Method Implementation Document for BS EN 15259	LCP131 Coal fired boiler plant	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
Gas-oil fired gas turbines – LCP456 & LCP457						
A5a ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP456 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4,380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5a ^{Note 1}	Sulphur dioxide	LCP456 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4,380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5a ^{Note 1}	Dust	LCP456 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4,380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5a ^{Note 1}	CO	LCP456 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4,380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5b ^{Note 1}	Oxides of Nitrogen	LCP457	-	-	Concentration by calculation, every 4,380	Agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air Emission limits and monitoring requirements – Shall apply until 30 June 2020						
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
	(NO and NO ₂ expressed as NO ₂)	Gas turbine fired on gas-oil			operational hours or 2 years, whichever is sooner	
A5b ^{Note 1}	Sulphur dioxide	LCP457 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4,380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5b ^{Note 1}	Dust	LCP457 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4,380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5b ^{Note 1}	CO	LCP457 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4,380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
Other none-LCP emission points						
A6 (I) to (VI)	-	Release points from dry ash handling system (4 x storage silos, transfer pipework & tanker filling chute)	-	-	-	No permanent access required
A7	-	Vent on FGD limestone and gypsum loading and unloading system	-	-	-	No permanent access required

Table S3.1 Point source emissions to air Emission limits and monitoring requirements – Shall apply until 30 June 2020						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A8(I) to (III)	-	Limestone and gypsum handling system vents (conveyor junction tower vent, limestone mill building & feeder vents)	-	-	-	No permanent access required
A9 (I) to IV)	-	Over pressurisation vents on Dust bunkers and conditioners	-	-	-	No permanent access required
A10 (I) to (IX)	-	Vents on storage building	-	-	-	No permanent access required
A11 (I) to (LXXXVIII)	-	Steam safety valves on boiler house roof (6 boiler drum, 2 superheater, 11 reheater, 1 sootblower, 1 HP flash vessel, 1 blowdown vessel, per unit)	-	-	-	No permanent access required
A12 (I) to (CXII)	-	Furnace explosion relief valves (4 boiler furnace, 24 boiler top dead space, per unit)	-	-	-	No permanent access required
A13 (I) to (XXXII)	-	Steam safety valves on boiler house south wall (100' level) (1 LP heaters, 5 deaerator, 2 HP heaters, per unit)	-	-	-	No permanent access required
A14 (I) to (VI)	-	Vents on fuel oil storage tanks 1 & 2	-	-	-	No permanent access required
A15	-	Vent on gas oil storage tank 4	-	-	-	No permanent access required
A16 (I) to (III)	-	Vents on east end, west end & coal plant conveyor fire pump gas oil storage tanks	-	-	-	No permanent access required

Table S3.1 Point source emissions to air Emission limits and monitoring requirements – Shall apply until 30 June 2020						
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
A17 (I) to (IV)	-	Vents on E20 & T68 lubricating oil and waste oil tanks 1 & 2	-	-	-	No permanent access required
A18	-	Vent on coal plant mobile gas oil storage tank	-	-	-	No permanent access required
A19	-	Vents on hydraulic oil tanks at track hopper & reclaim paddle feeder	-	-	-	No permanent access required
A20	-	Vent on ash handling plant mobile gas oil storage tank	-	-	-	No permanent access required
A21 (I) to (VI)	-	Vents on water treatment plant storage tanks (2 x sulphuric acid, 2 x sodium hydroxide, hydrochloric acid and sodium bisulphite)	-	-	-	No permanent access required
A22	-	Vents on east end & west end sodium hypochlorite Tanks	-	-	-	No permanent access required
A23	-	Vent on molten sulphur storage tank	-	-	-	No permanent access required
A24 (I) to (III)	-	Vents on FGD waste water treatment plant chemical storage tanks (sodium hydroxide, ferric chloride, sodium sulphide)	-	-	-	No permanent access required
A25	-	Vent on STI high carbon PFA storage silo	-	-	-	No permanent access required
Note 1: Emission point on site plan in Schedule 7 of this permit.						

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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
Coal fired boiler plant – LCP130 & LCP131						
A1 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP130 Coal fired boiler plant	450 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP130 Coal fired boiler plant	495 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP130 Coal fired boiler plant	900 mg/m ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 ^{Note 1}	Sulphur Dioxide	LCP130 Coal fired boiler plant	350 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Sulphur Dioxide	LCP130 Coal fired boiler plant	440 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Sulphur Dioxide	LCP130 Coal fired boiler plant	700 mg/m ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 ^{Note 1}	Dust	LCP130 Coal fired boiler plant	20 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Dust	LCP130 Coal fired boiler plant	22 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Dust	LCP130 Coal fired boiler plant	40 mg/m ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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 ^{Note 1}	Oxygen	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A1 ^{Note 1}	Water Vapour	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A1 ^{Note 1}	Stack gas temperature	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 ^{Note 1}	Stack gas pressure	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 ^{Note 1}	Stack gas volume flow	LCP130 Coal fired boiler plant	-	-	Continuous	BS EN 16911 & TGN M2
A1 ^{Note 1}	Total mercury	LCP130 Coal fired boiler plant	-	-	Annual	BS EN13211
A1 ^{Note 1}	As required by the Method Implementation Document for BS EN 15259	LCP130 Coal fired boiler plant	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP131 Coal fired boiler plant	450 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP131 Coal fired boiler plant	495 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP131 Coal fired boiler plant	900 mg/m ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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
A3 ^{Note 1}	Sulphur Dioxide	LCP131 Coal fired boiler plant	350 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A3 ^{Note 1}	Sulphur Dioxide	LCP131 Coal fired boiler plant	440 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A3 ^{Note 1}	Sulphur Dioxide	LCP131 Coal fired boiler plant	700 mg/m ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A3 ^{Note 1}	Dust	LCP131 Coal fired boiler plant	20 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A3 ^{Note 1}	Dust	LCP131 Coal fired boiler plant	22 mg/m ³ MSUL/MSDL to base load ^{Note 2}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A3 ^{Note 1}	Dust	LCP131 Coal fired boiler plant	40 mg/m ³ MSUL/MSDL to base load ^{Note 2}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A3 ^{Note 1}	Oxygen	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A3 ^{Note 1}	Water Vapour	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A3 ^{Note 1}	Stack gas temperature	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A3 ^{Note 1}	Stack gas pressure	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A3 ^{Note 1}	Stack gas volume flow	LCP131 Coal fired boiler plant	-	-	Continuous	BS EN 16911 & TGN M2

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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
A3 ^{Note 1}	Total mercury	LCP131 Coal fired boiler plant	-	-	Annual	BS EN13211
A3 ^{Note 1}	As required by the Method Implementation Document for BS EN 15259	LCP131 Coal fired boiler plant	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
Gas-oil fired gas turbines – LCP456 & LCP457						
A5a ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP456 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5a ^{Note 1}	Sulphur dioxide	LCP456 Gas turbine fired on gas oil	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5a ^{Note 1}	Dust	LCP456 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5a ^{Note 1}	CO	LCP456 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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
A5b ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP457 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5b ^{Note 1}	Sulphur dioxide	LCP457 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5b ^{Note 1}	Dust	LCP457 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A5b ^{Note 1}	CO	LCP457 Gas turbine fired on gas-oil	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
Other none-LCP emission points						
A6 (I) to (VI)	-	Release points from dry ash handling system (4 x storage silos, transfer pipework & tanker filling chute)	-	-	-	No permanent access required

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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
A7	-	Vent on FGD limestone and gypsum loading and unloading system	-	-	-	No permanent access required
A8(I) to (III)	-	Limestone and gypsum handling system vents (conveyor junction tower vent, limestone mill building & feeder vents)	-	-	-	No permanent access required
A9 (I) to IV)	-	Over pressurisation vents on Dust bunkers and conditioners	-	-	-	No permanent access required
A10 (I) to (IX)	-	Vents on storage building	-	-	-	No permanent access required
A11 (I) to (LXXXVIII)	-	Steam safety valves on boiler house roof (6 boiler drum, 2 superheater, 11 reheater, 1 sootblower, 1 HP flash vessel, 1 blowdown vessel, per unit)	-	-	-	No permanent access required

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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
A12 (I) to (CXII)	-	Furnace explosion relief valves (4 boiler furnace, 24 boiler top dead space, per unit)	-	-	-	No permanent access required
A13 (I) to(XXXII)	-	Steam safety valves on boiler house south wall (100' level) (1 LP heaters, 5 deaerator, 2 HP heaters, per unit)	-	-	-	No permanent access required
A14 (I) to (VI)	-	Vents on fuel oil storage tanks 1 & 2	-	-	-	No permanent access required
A15	-	Vent on gas oil storage tank 4	-	-	-	No permanent access required
A16 (I) to (III)	-	Vents on east end, west end & coal plant conveyor fire pump gas oil storage tanks	-	-	-	No permanent access required
A17 (I) to (IV)	-	Vents on E20 & T68 lubricating oil and waste oil tanks 1 & 2	-	-	-	No permanent access required
A18	-	Vent on coal plant mobile gas oil storage tank	-	-	-	No permanent access required
A19	-	Vents on hydraulic oil tanks at track hopper & reclaim paddle feeder	-	-	-	No permanent access required

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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
A20	-	Vent on ash handling plant mobile gas oil storage tank	-	-	-	No permanent access required
A21 (I) to (VI)	-	Vents on water treatment plant storage tanks (2 x sulphuric acid, 2 x sodium hydroxide, hydrochloric acid and sodium bisulphite)	-	-	-	No permanent access required
A22	-	Vents on east end & west end sodium hypochlorite Tanks	-	-	-	No permanent access required
A23	-	Vent on molten sulphur storage tank	-	-	-	No permanent access required
A24 (I) to (III)	-	Vents on FGD waste water treatment plant chemical storage tanks (sodium hydroxide, ferric chloride, sodium sulphide)	-	-	-	No permanent access required
A25	-	Vent on STI high carbon PFA storage silo	-	-	-	No permanent access required

Table S3.1a Point source emissions to air Emission limits and monitoring requirements - Shall apply from 01 July 2020 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
<p>Note 1: Emission point on site plan in Schedule 7 of this permit.</p> <p>Note 2: This limit applies when the load varies between MSUL/MSDL and base load during the daily reference period. MSUL and MSDL are defined in table S1.4 of this permit.</p>						

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
Coal fired boiler plant – LCP130 & LCP131						
A1 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP130 Coal fired boiler plant	450 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP130 Coal fired boiler plant	340 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP130 Coal fired boiler plant	900 mg/m ³ MSUL/MSDL to base load ^{Note 4}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 ^{Note 1}	Sulphur Dioxide	LCP130 Coal fired boiler plant	350 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Sulphur Dioxide	LCP130 Coal fired boiler plant	220 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Sulphur Dioxide	LCP130 Coal fired boiler plant	700 mg/m ³ MSUL/MSDL to base load ^{Note 4}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 ^{Note 1}	Dust	LCP130 Coal fired boiler plant	20 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Dust	LCP130 Coal fired boiler plant	14 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 ^{Note 1}	Dust	LCP130 Coal fired boiler plant	40 mg/m ³ MSUL/MSDL to base load ^{Note 4}	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 ^{Note 1}	Hydrogen chloride (HCl)	LCP131 Coal fired boiler plant	20 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Yearly average or average of samples obtained during one year	Once every three months ^{Note 2}	BS EN 1911

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A1 ^{Note 1}	Hydrogen fluoride (HF)	LCP131 Coal fired boiler plant	7 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Yearly average or average of samples obtained during one year	Once every three months ^{Note 2}	^{Note 3}
A1 ^{Note 1}	Total mercury (Hg)	LCP130 Coal fired boiler plant	4 µg/m ³ MSUL/MSDL to base load ^{Note 4}	Yearly average or average of samples obtained during one year	Continuous ^{Note 2}	Generic EN standards and EN 14884
A1 ^{Note 1}	Oxygen	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A1 ^{Note 1}	Water Vapour	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A1 ^{Note 1}	Stack gas temperature	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 ^{Note 1}	Stack gas pressure	LCP130 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 ^{Note 1}	Stack gas volume flow	LCP130 Coal fired boiler plant	-	-	Continuous	BS EN 16911 & TGN M2
A1 ^{Note 1}	As required by the Method Implementation Document for BS EN 15259	LCP130 Coal fired boiler plant	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP131 Coal fired boiler plant	450 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A3 ^{Note 1}	Oxides of Nitrogen	LCP131	340 mg/m ³ MSUL/MSDL to base load ^{Note 4}	Daily mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
	(NO and NO ₂ expressed as NO ₂)	Coal fired boiler plant				
A3 Note 1	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP131 Coal fired boiler plant	900 mg/m ³ MSUL/MSDL to base load Note 4	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A3 Note 1	Sulphur Dioxide	LCP131 Coal fired boiler plant	350 mg/m ³ MSUL/MSDL to base load Note 4	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A3 Note 1	Sulphur Dioxide	LCP131 Coal fired boiler plant	220 mg/m ³ MSUL/MSDL to base load Note 4	Daily mean of validated hourly averages	Continuous	BS EN 14181
A3 Note 1	Sulphur Dioxide	LCP131 Coal fired boiler plant	700 mg/m ³ MSUL/MSDL to base load Note 4	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A3 Note 1	Dust	LCP131 Coal fired boiler plant	20 mg/m ³ MSUL/MSDL to base load Note 4	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A3 Note 1	Dust	LCP131 Coal fired boiler plant	14 mg/m ³ MSUL/MSDL to base load Note 4	Daily mean of validated hourly averages	Continuous	BS EN 14181
A3 Note 1	Dust	LCP131 Coal fired boiler plant	40 mg/m ³ MSUL/MSDL to base load Note 4	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A3 Note 1	Hydrogen chloride (HCl)	LCP131 Coal fired boiler plant	20 mg/m ³ MSUL/MSDL to base load Note 4	Yearly average or average of samples obtained during one year	Once every three months Note 2	BS EN 1911
A3 Note 1	Hydrogen fluoride (HF)	LCP131 Coal fired boiler plant	7 mg/m ³ MSUL/MSDL to base load Note 4	Yearly average or average of samples obtained during one year	Once every three months Note 2	Note 3
A3 Note 1	Total mercury (Hg)	LCP131 Coal fired boiler plant	4 µg/m ³ MSUL/MSDL to base load Note 4	Yearly average or average of samples obtained during one year	Continuous Note 2	Generic EN standards and EN 14884

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A3 ^{Note 1}	Oxygen	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A3 ^{Note 1}	Water Vapour	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A3 ^{Note 1}	Stack gas temperature	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A3 ^{Note 1}	Stack gas pressure	LCP131 Coal fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A3 ^{Note 1}	Stack gas volume flow	LCP131 Coal fired boiler plant	-	-	Continuous	BS EN 16911 & TGN M2
A3 ^{Note 1}	As required by the Method Implementation Document for BS EN 15259	LCP131 Coal fired boiler plant	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
Gas-oil fired gas turbines – LCP456 & LCP457						
A5a ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP456 Gas turbine fired on gas-oil	300 mg/m ³	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A5a ^{Note 1}	Sulphur dioxide	LCP456 Gas turbine fired on gas-oil	66 mg/m ³	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A5a ^{Note 1}	Dust	LCP456 Gas turbine fired on gas-oil	10 mg/m ³	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A5a ^{Note 1}	CO	LCP456 Gas turbine fired on gas-oil	-	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A5b ^{Note 1}	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP457 Gas turbine fired on gas-oil	300 mg/m ³	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A5b ^{Note 1}	Sulphur dioxide	LCP457 Gas turbine fired on gas-oil	66 mg/m ³	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A5b ^{Note 1}	Dust	LCP457 Gas turbine fired on gas-oil	10 mg/m ³	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A5b ^{Note 1}	CO	LCP457 Gas turbine fired on gas-oil	-	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
Other none-LCP emission points						
A6 (I) to (VI)	-	Release points from dry ash handling system (4 x storage silos, transfer pipework & tanker filling chute),	-	-	-	No permanent access required
A7	-	Vent on FGD limestone and gypsum loading and unloading system	-	-	-	No permanent access required
A8(I) to (III)	-	Limestone and gypsum handling system vents (conveyor junction tower vent, limestone mill building & feeder vents)	-	-	-	No permanent access required
A9 (I) to IV)	-	Over pressurisation vents on Dust bunkers and conditioners	-	-	-	No permanent access required
A10 (I) to (IX)	-	Vents on storage building	-	-	-	No permanent access required

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A11 (I) to (LXXXVIII)	-	Steam safety valves on boiler house roof (6 boiler drum, 2 superheater, 11 reheater, 1 sootblower, 1 HP flash vessel, 1 blowdown vessel, per unit)	-	-	-	No permanent access required
A12 (I) to (CXII)	-	Furnace explosion relief valves (4 boiler furnace, 24 boiler top dead space, per unit)	-	-	-	No permanent access required
A13 (I) to (XXXII)	-	Steam safety valves on boiler house south wall (100' level) (1 LP heaters, 5 deaerator, 2 HP heaters, per unit)	-	-	-	No permanent access required
A14 (I) to (VI)	-	Vents on fuel oil storage tanks 1 & 2	-	-	-	No permanent access required
A15	-	Vent on gas oil storage tank 4	-	-	-	No permanent access required

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A16 (I) to (III)	-	Vents on east end, west end & coal plant conveyor fire pump gas oil storage tanks	-	-	-	No permanent access required
A17 (I) to (IV)	-	Vents on E20 & T68 lubricating oil and waste oil tanks 1 & 2	-	-	-	No permanent access required
A18	-	Vent on coal plant mobile gas oil storage tank	-	-	-	No permanent access required
A19	-	Vents on hydraulic oil tanks at track hopper & reclaim paddle feeder	-	-	-	No permanent access required
A20	-	Vent on ash handling plant mobile gas oil storage tank	-	-	-	No permanent access required
A21 (I) to (VI)	-	Vents on water treatment plant storage tanks (2 x sulphuric acid, 2 x sodium hydroxide, hydrochloric acid and sodium bisulphite)	-	-	-	No permanent access required

Table S3.1b 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)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A22	-	Vents on east end & west end sodium hypochlorite tanks	-	-	-	No permanent access required
A23	-	Vent on molten sulphur storage tank	-	-	-	No permanent access required
A24 (I) to (III)	-	Vents on FGD waste water treatment plant chemical storage tanks (sodium hydroxide, ferric chloride, sodium sulphide)	-	-	-	No permanent access required
A25	-	Vent on STI high carbon PFA storage silo	-	-	-	No permanent access required

Note 1: Emission point on site plan in Schedule 7 of this permit.

Note 2: If the emission levels are proven to be sufficiently stable, periodic measurements may be carried out each time that a change of the fuel and/or waste characteristics may have an impact on the emissions, but in any case:

a) at least once every year for HCl and HF; and

b) at least once in any six month period for Hg.

This shall be subject to the outcome of IC14 in table S1.3 of this permit.

Note 3: Monitoring standard to be agreed in writing with the Environment Agency.

Note 4: This limit applies when the load varies between MSUL/MSDL and base load during the daily reference period. MSUL and MSDL are defined in table S1.4 of this permit.

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements – Shall apply until 16 August 2021						
Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1	Total suspended solids	Cooling water, water treatment plant effluent and site drainage	Inlet concentration +100 mg/l	Instantaneous	Weekly	BS EN 872
W1	pH	Cooling water, water treatment plant effluent and site drainage	Min 5.0 Max 9.5	Instantaneous	Continuous	BS ISO 10523
W1	Temperature	Cooling water, water treatment plant effluent and site drainage	30 °C Oct-Apr 35 °C May-Sept	Instantaneous	Continuous	Standard thermocouple
W1	Residual chlorine	Cooling water, water treatment plant effluent and site drainage	0.25 mg/l	24hrs	15mins	Proprietary instrument
W1	Oil or grease	Cooling water, water treatment plant effluent and site drainage	None visible	Spot sample	Daily	Visual inspection
W2 [Sampled at outlet of the FGD waste water treatment plant retention pond]	Flow	FGD waste water treatment plant	6,048 m ³	Daily	Continuous	Flow meter
	Total suspended solids		30 mg/l	Flow proportional sample	Weekly	BS EN 872
	pH		6 -10	Instantaneous	Continuous	BS ISO 10523
	Oil or grease		None visible	Spot sample	Daily	Visual inspection
	Temperature		40 °C	Instantaneous	Continuous	Standard thermocouple

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements – Shall apply until 16 August 2021

Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W2 [Sampled at outlet of the FGD waste water treatment plant retention pond]	Ammoniacal Nitrogen	FGD waste water treatment plant	10 mg/l	FGD waste water treatment plant	Weekly	Method as specified in current edition of M18 guidance
	Fluoride		20 mg/l			
	Chloride		40,000 mg/l			
	Cadmium		25 µg/l			
	Mercury		30 µg/l			
	Arsenic		100 µg/l			
	Chromium		500 µg/l			
	Copper		150 µg/l			
	Lead		200 µg/l			
	Nickel		200 µg/l			
	Zinc		500 µg/l			
	Vanadium		100 µg/l			
	Iron		1,800 µg/l			
	Selenium		500 µg/l			
	Antimony		80 µg/l			
	Silver		50 µg/l			
Aluminium	3,600 µg/l					
Molybdenum	2,000 µg/l					
Boron	175 mg/l					
W3	No parameter set	Cooling tower purge and drain	-	-	-	-
W4	Total suspended solids	Discharge from the coal stocking and fuel unloading areas	75 mg/l	Instantaneous	Weekly	BS EN 872
W4	Oil or grease	Discharge from the coal stocking and fuel unloading areas	None visible	Spot sample	Daily	Visual inspection

Note 1: Emission point on site plan in Schedule 7 of this permit.

Table S3.2a Point Source emissions to water (other than sewer) – emission limits and monitoring requirements - Shall apply from 17 August 2021						
Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1	Total suspended solids	Cooling water, water treatment plant effluent and site drainage	Inlet concentration +100 mg/l	Instantaneous	Weekly	BS EN 872
W1	pH	Cooling water, water treatment plant effluent and site drainage	Min 5.0 Max 9.5	Instantaneous	Continuous	BS ISO 10523
W1	Temperature	Cooling water, water treatment plant effluent and site drainage	30 °C Oct-Apr 35 °C May-Sept	Instantaneous	Continuous	Standard thermocouple
W1	Residual chlorine	Cooling water, water treatment plant effluent and site drainage	0.25 mg/l	24hrs	15mins	Proprietary instrument
W1	Oil or grease	Cooling water, water treatment plant effluent and site drainage	None visible	Spot sample	Daily	Visual inspection
W2 <small>Note 5</small>	Flow	FGD waste water treatment plant	6,048 m ³	Daily	Continuous	Flow meter
	pH	FGD waste water treatment plant	6 -10	Instantaneous	Continuous	BS ISO 10523
	Oil or grease	FGD waste water treatment plant	None visible	Spot sample	Daily	Visual inspection
	Temperature	FGD waste water treatment plant	40°C	Instantaneous	Continuous	Standard thermocouple
W2 <small>Note 5</small>	Total suspended solids	FGD waste water treatment plant	30 mg/l	Flow proportional sample	Weekly	BS EN 872
	Total organic carbon (TOC)	FGD waste water treatment plant	50 mg/l <small>Note 2</small>	24-hour flow proportional sample	At least once every month	ISO 8245:1999
	Sulphate (SO ₄ ²⁻)	FGD waste water treatment plant	2 g/l	24-hour flow proportional sample	At least once every month	EN ISO 10304-1
	Sulphide, easily released (S ²⁻)	FGD waste water treatment plant	0.2 mg/l	24-hour flow proportional sample	At least once every month	No EN standard available <small>Note 4</small>

Table S3.2a Point Source emissions to water (other than sewer) – emission limits and monitoring requirements - Shall apply from 17 August 2021

Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
	Sulphite (SO ₃ ²⁻)	FGD waste water treatment plant	20 mg/l	24-hour flow proportional sample	At least once every month	Note 4
	Chloride (Cl ⁻)	FGD waste water treatment plant	-	24-hour flow proportional sample	At least once every month	BS EN ISO 10304-1 or BS EN ISO 15682
	Total nitrogen	FGD waste water treatment plant	-	24-hour flow proportional sample	At least once every month	BS EN 12260
	Ammoniacal nitrogen	FGD waste water treatment plant	10 mg/l	24-hour flow proportional sample	Weekly	BS EN ISO 11732
	Fluoride	FGD waste water treatment plant	20 mg/l			ISO 10359-1
	Chloride	FGD waste water treatment plant	40,000 mg/l			BS EN ISO 10304-1 or BS EN ISO 15682
	Cadmium	FGD waste water treatment plant	25 µg/l <small>Note 3</small>			ISO 15586:2003
	Mercury	FGD waste water treatment plant	3 µg/l			ISO 12846:2012
	Arsenic	FGD waste water treatment plant	50 µg/l			ISO 17378-2:2014
	Chromium	FGD waste water treatment plant	50 µg/l			BS EN ISO 11885 or BS ISO 17294-2
	Copper	FGD waste water treatment plant	50 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Lead	FGD waste water treatment plant	200 µg/l <small>Note 3</small>			ISO 15586:2003
	Nickel	FGD waste water treatment plant	50 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Zinc	FGD waste water treatment plant	200 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Vanadium	FGD waste water treatment plant	100 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Iron	FGD waste water treatment plant	1,800 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Selenium	FGD waste water treatment plant	500 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2

Table S3.2a Point Source emissions to water (other than sewer) – emission limits and monitoring requirements - Shall apply from 17 August 2021

Emission point ref. & location <small>Note 1</small>	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
	Antimony	FGD waste water treatment plant	80 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Silver	FGD waste water treatment plant	50 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Aluminium	FGD waste water treatment plant	3,600 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Molybdenum	FGD waste water treatment plant	2,000 µg/l			BS EN ISO 11885 or BS EN ISO 17294-2
	Boron	FGD waste water treatment plant	175 mg/l			BS EN ISO 11885 or BS EN ISO 17294-2
W3	No parameter set	Cooling tower purge and drain	-	-	-	-
W4	Total suspended solids	Discharge from the coal stocking and fuel unloading areas	75 mg/l	Instantaneous	Weekly	BS EN 872
W4	Oil or grease	Discharge from the coal stocking and fuel unloading areas	None visible	Spot sample	Daily	Visual inspection
W7	Cadmium	Note 6	5 µg/l	Note 3	By calculation <small>Note 3</small>	Note 3
W7	Lead	Note 6	20 µg/l	Note 3	By calculation <small>Note 3</small>	Note 3

Note 1: Emission point on site plan in Schedule 7 of this permit.

Note 2: This BAT AEL applies after subtraction of the intake load.

Note 3: Monitoring carried out at W2 shall be used to determine compliance with the BAT AEL limits at the installation boundary defined as W7.

Note 4: Monitoring method to be agreed in writing with the Environment Agency.

Note 5: Sampled at outlet of the FGD waste water treatment plant retention pond.

Note 6: BAT AEL compliance point at the installation boundary.

Table S3.3 Annual limits				
Emissions to air (excluding start up and shut down except where otherwise stated)- Shall apply until 30 June 2020				
Substance	Medium	Limit (including unit)		Emission Points
Dust, Sulphur dioxide and Oxides of nitrogen	Air	Assessment year	LCP TNP Limit	A1, LCP130 A3, LCP131
		01/01/16 and subsequent years until 31/12/19	Emission allowance figure shown in the TNP Register as at 30 April the following year	
		01/01/20-30/06/20		
Emissions to water- Shall apply until 16 August 2021				
Substance	Medium	Limit (including unit)		Emission points
		Monthly load Kg	Annual load Kg	
Cadmium	Water	1.8	11	W2
Mercury	Water	2.5	13	W2
Antimony	Water	10	56	W2
Arsenic	Water	10	56	W2
Boron	Water	22,000	135,000	W2
Chromium	Water	45	275	W2
Copper	Water	20	110	W2
Iron	Water	272	1,650	W2
Lead	Water	20	110	W2
Molybdenum	Water	272	1,650	W2
Nickel	Water	20	110	W2
Selenium	Water	20	110	W2
Silver	Water	5	28	W2
Vanadium	Water	10	56	W2
Zinc	Water	45	275	W2

Table S3.3 Annual limits				
Emissions to water- Shall apply from 17 August 2021				
Substance	Medium	Limit (including unit)		Emission points
		Monthly load Kg	Annual load Kg	
Cadmium	Water	1.8	11	W2
Mercury	Water	0.3	1.3	W2
Antimony	Water	10	56	W2
Arsenic	Water	5	28	W2
Boron	Water	22,000	135,000	W2
Chromium	Water	5	28	W2
Copper	Water	7	37	W2
Iron	Water	272	1,650	W2
Lead	Water	20	110	W2
Molybdenum	Water	272	1,650	W2
Nickel	Water	5	28	W2
Selenium	Water	20	110	W2
Silver	Water	5	28	W2
Vanadium	Water	10	56	W2
Zinc	Water	18	110	W2

Table S3.4 Process monitoring requirements					
Emission point reference or source or description of point of measurement	Parameter	Limit (incl. unit)	Monitoring frequency	Monitoring standard or method	Other specifications
Inlet to Flue Gas Absorbing units 1 to 4	Sulphur dioxide	-	Continuous	BS EN 14181	To be used as part of the determination of removal efficiency
Process monitoring shall apply from 17 August 2021					
LCP130 LCP131	Net electrical efficiency	-	After each modification that could significantly affect these parameters	EN Standards or equivalent	-
LCP456 LCP457				By calculation	

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, A3	Every 3 months	1 January, 1 April, 1 July, 1 October
	A5a, A5b	Every 2 years	1 January
Carbon Monoxide	A5a, A5b	Every 2 years	1 January
Sulphur dioxide	A1, A3	Every 3 months	1 January, 1 April, 1 July, 1 October
	A5a, A5b	Every 2 years	1 January
Dust	A1, A3	Every 3 months	1 January, 1 April, 1 July, 1 October
	A5a, A5b	Every 2 years	1 January
HCl/HF	A1, A3	Every 12 months	1 January
Mercury	A1, A3	Every 12 months	1 January
Emissions to Water Parameters as required by condition 3.5.1	W1, W2, W4, W7	Every 3 months	1 January, 1 April, 1 July, 1 October
Mass release to water	W2	Every 3 months	1 January, 1 April, 1 July, 1 October

Table S4.2 Resource Efficiency Metrics	
Parameter	Units
Electricity Exported	GW hr
Heat Exported	GW hr
Mechanical Power Provided	GW hr
Fossil Fuel Energy Consumption	GW hr
Non-Fossil Fuel Energy Consumption	GW hr
Annual Operating Hours	hour
Water Abstracted from Fresh Water Source	m ³
Water Abstracted from Borehole Source	m ³
Water Abstracted from Estuarine Water Source	m ³
Water Abstracted from Sea Water Source	m ³
Water Abstracted from Mains Water Source	m ³
Gross Total Water Used	m ³
Net Water Used	m ³
Hazardous Waste Transferred for Disposal at another installation	t

Table S4.2 Resource Efficiency Metrics	
Parameter	Units
Hazardous Waste Transferred for Recovery at another installation	t
Non-Hazardous Waste Transferred for Disposal at another installation	t
Non-Hazardous Waste Transferred for Recovery at another installation	t
Waste recovered to Quality Protocol Specification and transferred off-site	t
Waste transferred directly off-site for use under an exemption / position statement	t

Table S4.3 Large Combustion Plant 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 (Load Factor)	Annually	hour

Table S4.4 Reporting forms			
Media/ parameter	Reporting format	Agency recipient	Date of form
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy	National and Area Office	-
Air	Form IED RTA1 – TNP quarterly emissions summary log	National and Area Office	-
LCP	Form IED HR1 – operating hours	National and Area Office	-
Air	Form IED CON 1 – continuous monitoring.	Area Office	-
CEMs	Form IED CEM – Invalidation Log	Area Office	-
LCP	Form IED BD1 - Cumulative annual rolling malfunction and breakdown hours	Area Office	-
Air	Form IED MF1 – pollutant concentrations when during any day with malfunction or breakdown of abatement plant	Area Office	-
Air	Form IED PM1 - discontinuous monitoring and load	Area Office	-
Resource Efficiency	Form REM1 – resource efficiency annual report	National and Area Office	-
Water	Form water 1 or other form as agreed in writing by the Environment Agency	Area Office	2019

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	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
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

Part C Malfunction or Breakdown of LCP abatement equipment

Permit Number	
Name of operator	
Location of Facility	
LCP Number	
Malfunction or breakdown	
Date of malfunction or breakdown	

(a) Notification requirements for any malfunction and breakdown of abatement equipment as defined by the Industrial Emission Directive*.	
To be notified within 48 hours of abatement equipment malfunction and breakdown	
Time at which malfunction or breakdown commenced	
Time at which malfunction or breakdown ceased	
Duration of the breakdown event in hours and minutes	
Reasons for malfunction or breakdown	
Where the abatement plant has failed, give the hourly average concentration of all measured pollutants.	
Cumulative breakdown operation in current year (at end of present event)	
Cumulative malfunction operation in current year (at end of present event)	
Name**	
Post	
Signature **	
Date	

* See section 3.6 and Appendix E of ESI Compliance Protocol for guidance

** authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“Air Quality Risk Assessment” has the meaning given in Annex D of IED Compliance Protocol for Utility Boilers and Gas Turbines.

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

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

“average over the sampling period” means the average value of three consecutive measurements of at least 30 minutes each or as agreed in writing with the Environment Agency.

“base load” means: (i) as a mode of operation, operating for >4000hrs pa; and (ii) as a load, the maximum load under ISO conditions that can be sustained continuously, i.e. maximum continuous rating.

“Black Start” means the procedure to recover from a total or partial shutdown of the UK Transmission System which has caused an extensive loss of supplies. This entails isolated power stations being started individually and gradually being reconnected to other power stations and substations in order to form an interconnected system again.

“breakdown” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“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.

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

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

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

“DLN” means dry, low NO_x burners.

“Emergency conditions” means black start or when this is a potential national loss of supply.

“emergency plant” means a plant which operates for the sole purpose of providing power at a site during an onsite emergency and/or during a black start and which does not provide balancing services or demand side response services.

“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.

“hazardous property” has the meaning in Annex III of the Waste Framework Directive.

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

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

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

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

“low polluting fuels” means coal with an average as-received sulphur content of less than 0.4% by mass as described in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“malfunction” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“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 electrical efficiency” means the ratio between the net electrical output (electricity produced minus the imported energy) and the fuel/feedstock energy input (as the fuel/feedstock lower heating value) at the combustion unit boundary over a given period of time.

“non-emergency plant” means a plant which provides balancing services or demand side response services.

“off load” means that no electricity is being generated.

“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.

“TNP Register” means the register maintained by the Environment Agency in accordance with regulation 4 of the Large Combustion Plants (Transitional National Plan) Regulations 2015 SI2015 No.1973

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

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

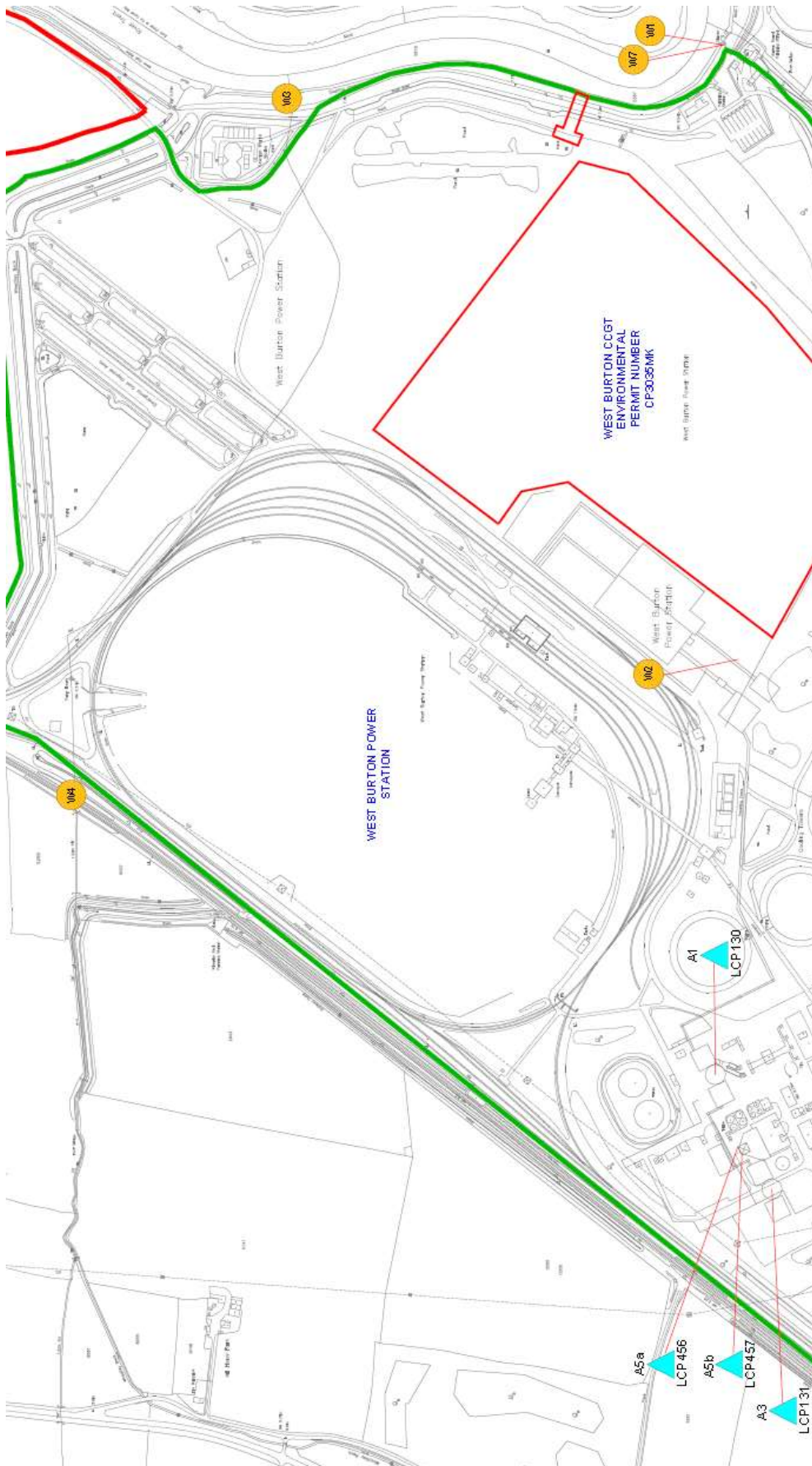
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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 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.

Emission points



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END OF PERMIT