

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Rugeley Power Ltd
Rugeley Power Station
Power Station Road
Rugeley
Staffordshire
WS15 1PR

Variation application number

EPR/EP3538LB/V004

Permit number

EPR/EP3538LB

Rugeley Power Station

Permit number EPR/EP3538LB

Introductory note

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

Under the Environmental Permitting (England & Wales) Regulations 2010 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

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

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

This Permit, for the operation of large combustion plant (LCP), as defined by articles 28 and 29 of the Industrial Emissions Directive (IED), is varied by the Environment Agency to implement the special provisions for LCP given in the IED, by the 1 January 2016 (Article 82(3)). The IED makes special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.

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

The Operator has chosen to operate this LCP under the Transitional National Plan (TNP) compliance route. This is a change from the previous operating regime which was the ELV approach under the Large Combustion Plant Directive (LCPD).

The variation notice uses updated LCP numbers in accordance with the most recent DEFRA LCP reference numbers. The LCP references have been changed as follows:

LCP203 is now LCP197;

GT16 (no LCP reference previously) is now LCP460; and

GT17 (no LCP reference previously) is now LCP461

This variation also removes the requirement to maintain an air quality management plan to demonstrate compliance with air quality standards, as well as the requirement to assess changes in acidification and eutrophication deposition and ecological effects at appropriate Natura 2000 sites.

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

The installation is situated in the Trent valley approximately 1km south east of Rugeley town centre. The installation comprises 2 pulverised coal fired boilers (Units 6 and 7 which comprise LCP197) with associated turbine and generator sets. The units have a net thermal input rating of 1324 MW each which equates to a station electrical output of 1000 MW. The station also maintains two black start gas turbine generating sets fired on gas oil which each have a net thermal input of 96 MW. These 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. The boilers have the burners on the front wall and have been up-graded over the years and are fitted with low NOx burners. The Central Electricity Generating Board constructed the plant in the 1960's as part of a major modernisation of the power generating capacity of the country. The location of the Station was determined by the access to cooling water from the River Trent, the proximity of coalfields and the 400KV transmission lines. The current Operator is Rugeley Power Limited who are part of International Power and this facility is their only UK based coal fired power station.

Emissions of Sulphur are abated by the use of limestone flue gas de-sulphurisation (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 have been modified to utilise a boosted over fire air system to reduce the emission of nitrogen oxides. The particulate abatement plant (electro-static precipitators) have also been upgraded.

Materials mainly coal and limestone are delivered to the Station by the use of a dedicated rail system for bulk materials although on occasion coal, biomass and oil are delivered to the station using road transport.

Ash from the boilers consists of Furnace Bottom Ash collected from the bottom of the boilers and transported to holding areas and thence sold to the building Industry to manufacture building blocks. Pulverised Fuel Ash leaves the boiler flue at the top and is collected by electrostatic precipitators. This material is also sold for use in the construction Industry; however, if no market can be found then this material can also be sent to a landfill site.

The installation of FGD has produced another stream from the plant desulphurogypsum (DSG), which is recovered in a purpose built plant. The material, produced to a specification, is sold to the gypsum Industry for the manufacture of plasterboard or for the formulation of cement.

Emissions from the installation are to air from the boilers and to water from the use of cooling water and ancillary process plant including the FGD plant. Emissions to air from the boilers (LCP197) are through separate flues within a common windshield which is 92 m high. The gas turbines (LCP460 and LCP461) and the auxiliary boiler exhaust through separate stacks.

Emissions to water are to the River Trent after suitable treatment. Cooling is provided by cooling towers.

Table S1.3 contains an improvement condition requiring the operators to produce a plan showing how the installation will contribute to total emissions of SO₂ from existing major coal and oil-fired power stations in England and Wales being minimised and not exceeding 70 kt/yr from 2020. The plan will be periodically updated. If the proposals do not meet the 70 kt in aggregation the Environment Agency will give each station a transferable allocation of the total.

The schedules specify the changes made to the permit.

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

| Status log of the permit | | |
|---|-----------------------|--|
| Description | Date | Comments |
| Application EP3538LB (EPR/EP3538LB/A001) | Duly made 31/03/06 | |
| Supplementary Information regarding FGD | 13/09/06 | |
| Permit determined | 30/10/07 | |
| Variation determined EPR/EP3538LB/V002 | 11/03/13 | Environment Agency Initiated Variation, to incorporate Eel Regulations improvement condition. |
| Variation determined EPR/EP3538LB/V003 | 28/08/13 | Environment Agency Initiated Variation to implement the changes introduced by IED. |
| Regulation 60 Notice sent to the Operator | 10/02/15 | Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency Initiated review and variation to vary the permit under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V. The permit is also updated to modern conditions. |
| Regulation 60 Notice response | 30/03/15 | Response received from the Operator. |
| Additional information received | 23/10/15 | Responses to request for further information (RFI) dated 06/10/15 |

| Status log of the permit | | |
|--|-----------------------|---|
| Description | Date | Comments |
| Additional information received | 23/10/15 and 20/11/15 | Response to emails requesting further information sent on 09/10/15 and 26/10/15 |
| Additional information received | 18/12/15 | Information on sulphur dioxide emissions following a return to service. |
| Variation determined EPR/EP3538LB/V004 (PAS Billing ref: WP3838AN) | 30/12/15 | Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/2016. |

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

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

Permit number

EPR/EP3538LB

Issued to

Rugeley Power Limited (“the operator”)

whose registered office is

Level 20

25 Canada Square

London

E14 5LQ

company registration number **04212554**

to operate a regulated facility at

Rugeley Power Station

Power Station Road

Rugeley

Staffordshire

WS15 1PR

to the extent set out in the schedules.

The notice shall take effect from 01/01/2016

| Name | Date |
|------------------|------------|
| Anne Nightingale | 30/12/2015 |

Authorised on behalf of the Environment Agency

Schedule 1

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

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/EP3538LB

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/EP3538LB/V004 authorising,

Rugeley Power Limited (“the operator”)

whose registered office is

**Level 20
25 Canada Square
London
E14 5LQ**

company registration number **04212554**

to operate an installation at

**Rugeley Power Station
Power Station Road
Rugeley
Staffordshire
WS15 1PR**

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

| Name | Date |
|------------------|------------|
| Anne Nightingale | 30/12/2015 |

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

1.2.1 The operator shall:

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

1.3 Efficient use of raw materials

1.3.1 The operator shall:

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

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

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities;
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

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

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in 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: LCP197, LCP460 and LCP461. Without prejudice to condition 2.3.1, the activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” revision 1 dated February 2015 or any later version unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.4 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: LCP460 and LCP461. The activities shall not operate for more than 500 hours per year.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP197, LCP460 and LCP461. The end of the start up period and the start of the shutdown period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5
- 2.3.7 For the following activities referenced in schedule 1, table S1.1: LCP197. 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.
- 2.3.8 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;

- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazardous property associated with the waste, if applicable; and
- (e) the waste code of the waste.

2.3.9 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.

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

3.1.3 The emission values from emission point A1 listed in schedule 3 tables S3.1, measured during periods of abatement equipment malfunction and breakdown shall be disregarded for the purposes of compliance with Table S3.1 emission limit values.

3.1.4 Total annual emissions from the LCP emission point(s) set out in schedule 3 table S3.1 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 and S3.2.
 - (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 and S3.2 unless otherwise agreed in writing by the Environment Agency.

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

- 3.6.1 All monitoring required by this permit shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive.
- 3.6.2 If the monitoring results for more than 10 days a year are invalidated within the meaning set out in condition 3.6.7, the operator shall:
- (a) within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Environment Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and
 - (b) implement the approved proposals.
- 3.6.3 Continuous measurement systems on emission points from the LCP shall be subject to quality control by means of parallel measurements with reference methods at least once every calendar year.
- 3.6.4 Unless otherwise agreed in writing by the Environment Agency in accordance with condition 3.6.5 below, the operator shall carry out the methods, including the reference measurement methods, to use and calibrate continuous measurement systems in accordance with the appropriate CEN standards.
- 3.6.5 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Environment Agency.
- 3.6.6 Where required by a condition of this permit to check the measurement equipment, the operator shall submit a report to the Environment Agency in writing, within 28 days of the completion of the check.
- 3.6.7 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3, table S3.1; the Continuous Emission Monitors shall be used such that:
- (a) for the continuous measurement systems fitted to the LCP release points defined in Table S3.1 the validated hourly, monthly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval;
 - (b) the 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%;

- (c) the 95% confidence interval for dust releases of a single measured result shall be taken to be 30%;
- (d) the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;
- (e) an invalid hourly average means an hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system. However, to allow some discretion for zero and span gas checking, or cleaning (by flushing), an hourly average period will count as valid as long as data has been accumulated for at least two thirds of the period (40 minutes). Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid hourly average periods unless agreed in writing; and
- (f) any day, in which more than three hourly average values are invalid shall be invalidated.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the 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 condition 2.3.5 applies, the hours of operation in any year; and
 - (e) where condition 2.3.7 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 10 days of the notification of abatement equipment malfunction or breakdown (condition 2.3.7) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).
- 4.2.6 For the following activities referenced in schedule 1, table S1.1: LCP197. 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 2.3.7, 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 |
| A1 | Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more. | <p>LCP197: Operation of two boilers (each 1324 MWth) burning coal for production of steam and electricity (2648 MW aggregated net rated thermal input)</p> <p>LCP460: GT16 Operation of an open cycle gas turbine (OCGT) burning gas oil to produce electricity (96 MW net rated thermal input)</p> <p>LCP461: GT17 Operation of an open cycle gas turbine (OCGT) burning gas oil to produce electricity (96 MW net rated thermal input)</p> <p>Auxiliary boiler burning gas oil to produce steam</p> | <p>From receipt of coal, gas oil, or heavy fuel oil to discharge of exhaust gases and wastes, and the generation and export of electricity</p> <p>LCP460 and LCP461 shall only be used during emergency conditions or for testing less than 500 hours per year.</p> |
| A2 | 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 | Removal of ash from the process to removal from the installation |
| A3 | Section 4.2 Part A(1) (a) (iv): Producing inorganic chemicals | Operation of wet limestone/gypsum Flue Gas De-Sulphurisation Units (FGD) | Receipt of limestone to export of gypsum from the installation and discharge of process water to the effluent treatment plant |
| A4 | Section 5.4 Part A(1) (a) (ii): Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day-physico-chemical treatment; | Waste water treatment from FGD | From discharge from FGD to discharge from site |
| Directly Associated Activity | | | |
| A5 | Directly associated activity | The use of water from the river Trent to condense steam | The pumping, treatment, use and return of river water to the river |
| A6 | Directly associated activity | Surface water drainage & process effluent | The site surface water drainage system |
| A7 | Directly associated activity | Fuel storage | From receipt of raw materials to dispatch for use |

| Table S1.2 Operating techniques | | |
|---|--|----------------------|
| Description | Parts | Date Received |
| Application | The response to section 2.1 and 2.2 including cross references in the Application. | 31/03/06 |
| Supplementary information | Expansions and superceeding sections to 2.1 and 2.2 above | 13/09/06 |
| Response to regulation 60(1) Notice - request for information dated 10/02/15 | 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) | 30/03/15 |
| Receipt of additional information to the regulation 60(1) Notice. requested by email 26/10/15 | Operating techniques identified in response to questions 6 (MSUL and MSDL). | 20//11/15 |

| Table S1.3 Improvement programme requirements | | |
|--|---|-------------|
| Reference | 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 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.</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 Agency</p> | Complete |

| Table S1.3 Improvement programme requirements | | |
|--|--|--|
| Reference | Requirement | Date |
| IC4 | 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. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Agency. | Complete |
| IC5 | 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. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The individual measures detailed in the report shall be implemented by the operator from the date of approval by the Agency. | Complete |
| 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 in operation in 2020. These are at Aberthaw, Cottam, Drax, Eggborough, Ferrybridge, Fiddlers Ferry, Rafcliffe, Rugeley, Uskmouth and West Burton). The plan should be implemented after approval by the Environment Agency. | 1 st April 2008. With updated versions by 1 st April 2012 & 1 st April 2016 |
| 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. | 31/12/16 |
| IC8 | The operator shall complete the improvements numbered 5,6,7, 8, 20, 21, 22 and 23 contained in table 33.1 of the application and report this in writing to the Agency. The report shall include an assessment of the condition of the ground surrounding each area | Complete |
| IC9 | In accordance with the site management systems produce policy, procedures, training and work instructions to ensure that NOx reduction is optimised following commissioning of the BOFA equipment. A written report shall be provided to the Agency confirming completion of this condition and summarising the measures taken | Complete |
| IC10 | In accordance with the site management systems produce policy, procedures, training and work instructions to ensure that SOx reduction is optimised following commissioning of the FGD equipment. A written report shall be provided to the Agency confirming completion of this condition and summarising the measures taken | Complete |
| IC11 | The operator shall develop a plan and practices to minimise waste production and optimise disposal in accordance with item 24 and 27 of table 33.1 contained in the application. A written report shall be provided to the Agency confirming completion of this condition and summarising the measures taken | Complete |

| Table S1.3 Improvement programme requirements | | |
|--|---|-------------|
| Reference | Requirement | Date |
| IC12 | The operator shall develop a plan and practices to minimise water usage and ensure that BAT is applied to monitoring requirements in accordance with item 25 and 26 of table 33.1 contained in the application. A written report shall be provided to the Agency confirming completion of this condition and summarising the measures taken | Complete |
| IC13 | The operator shall develop a plan and practices to minimise energy usage in accordance with item 11,12 and 13 of table 33.1 contained in the Application. A written report shall be provided to the Agency confirming completion of this condition and summarising the measures taken. | Complete |
| IC14 | The operator shall develop a policy and procedures to ensure that a site closure plan is maintained and subject to regular review. A written report shall be provided to the Agency confirming completion of this condition and summarising the measures taken | Complete |
| IC15 | 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 |
| IC16 | The operator shall review the discharge of total suspended solids from W3, W4 and W5 and submit to the Agency in writing proposals for reducing the current limits. | Complete |

| Table S1.3 Improvement programme requirements | | |
|--|---|-------------|
| Reference | Requirement | Date |
| IC17 | <p>The Operator shall undertake a review of the existing screening measures at the intakes and outfalls which provide and discharge water to and from the Installation. The review shall be undertaken with reference to the Eels (England and Wales) Regulations 2009 (SI 2009/3344) and the Environment Agency "Safe Passage of Eel" Regulatory Position Statement version 1 dated July 2012.</p> <p>The Operator shall submit details of the arrangement suitable to meet the requirements for the safe passage of eels [of the Eels (England and Wales) Regulations 2009 (SI 2009/3344)] by either:-</p> <ul style="list-style-type: none"> • Providing a written proposal for the installation of an eel screen. • Providing a written proposal to the modification of existing screening arrangements. • Providing a written response with an explanation and description of how the existing screening arrangements can be regarded to meet the requirements for the safe passage of eels [of SI 2009/3344] either without change or with mitigation measures. • Providing a written response setting out a case for an exemption <p>In all cases, the proposal shall be submitted in writing for the approval of the Environment Agency. Where appropriate, each proposal shall contain an assessment of alternative options considered including impacts on other fish species and an explanation of why the proposed option has been chosen.</p> <p>Where installation of eel screen; modification of existing arrangements; or mitigation measures are proposed, the submission shall contain relevant timescales for installation in accordance with the Safe Passage of Eel Regulatory Position Statement version 1 dated July 2012.</p> <p>The proposals shall be implemented in accordance with the Environment Agency's written approval.</p> | Complete |
| IC18 | For LCPD LCP197, LCP460 and LCP461. 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. | 28/01/16 |
| IC19 | 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 (PM10) during 2015, following the format and requirements of previous years submissions to the Environment Agency. | 30/06/16 |

| Table S1.4 Pre-operational measures for future development | | |
|---|---------------------------|---|
| Reference | Operation | Pre-operational measures |
| PO1 | LCP197 Coal-fired boilers | At least three months before any trial of biomass co-firing in the boilers the operator shall submit a written proposal to the Environment Agency. The trial shall be conducted in accordance with the Environment Agency's written approval. |

| Table S1.5 Start-up and Shut-down thresholds | | |
|---|--|---|
| Emission Point and Unit Reference | “Minimum start up load” Load in MW and as percent of rated power output (%) Or when the criteria listed below have been met | “Minimum shut-down load” Load in MW and as percent of rated power output (%) Or when the criteria listed below have been met |
| A1 LCP197 Unit 6 | 260MWe; 50.8% | 260MWe; 50.8% |
| A1 LCP197 Unit 7 | 260MWe; 50.8% | 260MWe; 50.8% |
| A2 LCP460 GT16 | As soon as the gas turbine start-up is initiated | As soon as the gas turbine is off-load |
| A3 LCP461 GT17 | As soon as the gas turbine start-up is initiated | As soon as the gas turbine is off-load |

Schedule 2 – Waste types, 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 |

Schedule 3 – Emissions and monitoring

| 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 [Point A1 on site plan in Schedule 7] | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | LCP No. 197 Coal fired boiler plant | 450 mg/m ³ | Calendar monthly mean | Continuous | BS EN 14181 |
| A1 [Point A1 on site plan in schedule 7] | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | LCP No. 197 Coal fired boiler plant | 550 mg/m ³ | 95% of validated daily means within a calendar year | Continuous | BS EN 14181 |
| A1 [Point A1 on site plan in Schedule 7] | Sulphur Dioxide | LCP No. 197 Coal fired boiler plant | 350 mg/m ³ | Calendar monthly mean | Continuous | BS EN 14181 |
| A1 [Point A1 on site plan in schedule 7] | Sulphur Dioxide | LCP No. 197 Coal fired boiler plant | 440 mg/m ³ | 95% of validated daily means within a calendar year | Continuous | BS EN 14181 |
| A1 [Point A1 on site plan in schedule 7] | Dust | LCP No. 197 Coal fired boiler plant | 20 mg/m ³ | Calendar monthly mean | Continuous | BS EN 14181 |
| A1 [Point A1 on site plan in schedule 7] | Dust | LCP No. 197 Coal fired boiler plant | 35 mg/m ³ | 95% of validated daily means within a calendar year | Continuous | BS EN 14181 |
| A1 [Point A1 on site plan in schedule 7] | Oxygen | LCP No. 197 coal fired boiler plant | - | - | Continuous As appropriate to reference | BS EN 14181 |
| A1 [Point A1 on site plan in schedule 7] | Water Vapour | LCP No. 197 coal fired boiler plant | - | - | Continuous As appropriate to reference | BS EN 14181 |

| Table S3.1 Point source emissions to air | | | | | | |
|---|---|---|--|-------------------------|--|---|
| Emission point ref. & location | Parameter | Source | Limit (including unit)- these limits do not apply during start up or shut down. | Reference period | Monitoring frequency | Monitoring standard or method |
| A1 [Point A1 on site plan in schedule 7] | Stack gas temperature | LCP No. 197 coal fired boiler plant | - | - | Continuous As appropriate to reference | Traceable to national standards |
| A1 [Point A1 on site plan in schedule 7] | Stack gas pressure | LCP No. 197 coal fired boiler plant | - | - | Continuous As appropriate to reference | Traceable to national standards |
| A1 [Point A1 on site plan in schedule 7] | Stack gas flow volume | LCP No. 197 coal fired boiler plant | - | - | Continuous | BS EN 16911 & TGN M2 |
| A1 [Point A1 on site plan in schedule 7] | Total mercury | LCP No. 197 coal fired boiler plant | - | - | Annual | BS EN13211 |
| A1 [Point A1 on site plan in schedule 7] | As required by the Method Implementation Document for BS EN 15259 | LCP No. 197 Coal fired boiler plant | - | - | Pre-operation and when there is a significant operational change | BS EN 15259 |
| A2 [Point A2 on site plan in Schedule 7] | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | LCP No. 383 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 |
| A2 [Point A2 on site plan in Schedule 7] | Sulphur dioxide | LCP No. 383 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 S3.1 Point source emissions to air | | | | | | |
|---|---|---|--|-------------------------|--|---|
| Emission point ref. & location | Parameter | Source | Limit (including unit)- these limits do not apply during start up or shut down. | Reference period | Monitoring frequency | Monitoring standard or method |
| A2 [Point A2 on site plan in Schedule 7] | Dust | LCP No. 383 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 |
| A2 [Point A2 on site plan in Schedule 7] | CO | LCP No. 383 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 |
| A3 [Point A3 on site plan in Schedule 7] | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | LCP No. 384 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 |
| A3 [Point A3 on site plan in Schedule 7] | Sulphur dioxide | LCP No. 384 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 |
| A3 [Point A3 on site plan in Schedule 7] | Dust | LCP No. 384 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 S3.1 Point source emissions to air | | | | | | |
|---|------------------|---|--|-------------------------|--|---|
| Emission point ref. & location | Parameter | Source | Limit (including unit)- these limits do not apply during start up or shut down. | Reference period | Monitoring frequency | Monitoring standard or method |
| A3 [Point A3 on site plan in Schedule 7] | CO | LCP No. 384 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 |
| A4 [Point A4 on site plan in Schedule 7] | - | Oil fired auxiliary boiler | - | - | - | - |
| Methane vents | - | - | - | - | - | No permanent access required |
| Hydrogen vents | - | - | - | - | - | No permanent access required |
| Pressure relief vents | - | - | - | - | - | No permanent access required |
| Vents from chemical/fuel storage tanks | - | - | - | - | - | No permanent access required |
| Vents from raw material handling equipment | - | - | - | - | - | No permanent access required |
| Vents from PFA silos | - | - | - | - | - | No permanent access required |

| Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements | | | | | | |
|--|------------------------------|--|---------------------------|---|---|---|
| Emission point ref. & location | Parameter | Source | Limit (incl. unit) | Reference period | Monitoring frequency | Monitoring standard or method |
| W3 Grid Ref SK0554 1800 | Total suspended solids | Site Drainage via B2A and B2B interceptors | 75 mg/l | For 95% of all measured values of periodic samples taken over one month | Weekly | BS EN 872 |
| W3 Grid Ref SK0554 1800 | pH | Site Drainage via B2A and B2B interceptors | 6 – 10 | Instantaneous | Continuous Reported monthly as min max and average pH | BS EN ISO 10523 |
| W3 Grid Ref SK0554 1800 | Mineral oil and hydrocarbons | Site Drainage via B2A and B2B interceptors | 1.0 mg/l | Instantaneous | Continuous | SCA blue book 77 |
| W3 Grid Ref SK0554 1800 | Free chlorine | Site Drainage via B2A and B2B interceptors | 0.20 mg/l | Instantaneous | Continuous | Proprietary Instrument |
| W3 Grid Ref SK0554 1800 | Flow | Site Drainage via B2A and B2B interceptors | No limit set | Instantaneous | Monthly | Method as specified in current edition of M18 |
| W4 Grid Ref SK0660 1735 | Total suspended solids | Site drainage via north drain interceptor | 75 mg/ml | For 95% of all measured values of periodic samples taken over one month | Weekly | BS EN 872 |
| W4 Grid Ref SK0660 1735 | pH | Site drainage via north drain interceptor | 6 – 9 | Flow proportional sample | Weekly | BS EN ISO 10523 |
| W4 Grid Ref SK0660 1735 | Mineral oil and hydrocarbons | Site drainage via north drain interceptor | None visible | Flow proportional sample | Weekly | Visual |
| W5 Grid Ref SK0626 1754 | pH | Cooling water and station drains | 6 – 9 | Instantaneous | Continuous Reported monthly as min max and average pH | BS EN ISO 10523 |
| W5 Grid Ref SK0626 1754 | Free chlorine | Cooling water and station drains | 0.20 mg/l | Instantaneous | Daily | Proprietary Instrument |

| Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements | | | | | | |
|--|-----------------------------|----------------------------------|---------------------------|---|-----------------------------|--|
| Emission point ref. & location | Parameter | Source | Limit (incl. unit) | Reference period | Monitoring frequency | Monitoring standard or method |
| W5 Grid Ref SK0626 1754 | Flow | Cooling water and station drains | No limits Set | Instantaneous | Daily | Method as specified in current edition of M18 |
| W5 Grid Ref SK0626 1754 | Mineral oil and hydrocarbon | Cooling water and station drains | 1 mg/l | Instantaneous | Continuous | SCA blue book 77 |
| W5 Grid Ref SK0626 1754 | Temperature | Cooling water and station drains | 30°C | Instantaneous | Continuous | Standard Thermocouple |
| W5 Grid Ref SK0626 1754 | BOD | Cooling water and station drains | 5 mg/l | Flow proportional sample | Weekly | 5 day ATU @20°C |
| W5 Grid Ref SK0626 1754 | Suspended solids | Cooling water and station drains | 50 mg/l | For 95% of all measured values of periodic samples taken over one month | Weekly | BS EN 872 |
| W5/FGD Grid Ref SK0626 1754 Monitored at outlets to FGD ETP. | Suspended solids | FGD Waste water treatment | 30 mg/l | Flow proportional sample | Weekly | BS EN 872 |
| W5/FGD Grid Ref SK0626 1754 Monitored at outlets to FGD ETP. | pH | FGD Waste water treatment | 6 – 10 | Flow proportional sample | Continuous | BS EN ISO 10523 |
| W5/FGD Grid Ref SK0626 1754 Monitored at outlets to FGD ETP. | Mineral oil and hydrocarbon | FGD Waste water treatment | None visible | Instantaneous | Continuous | Visual |
| W5/FGD Grid Ref SK0626 1754 Monitored at outlets to FGD ETP. | Temperature | FGD Waste water treatment | 40°C | Instantaneous | Continuous | Standard Thermocouple |
| W5/FGD Grid Ref SK0626 1754 Monitored at outlets to FGD ETP. | Ammoniacal Nitrogen | FGD Waste water treatment | 10 mg/l | Flow proportional sample | Weekly | Method as specified in the current edition of M18 guidance |

| Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements | | | | | | |
|--|------------------|---------------------------|---------------------------|--------------------------|-----------------------------|--|
| Emission point ref. & location | Parameter | Source | Limit (incl. unit) | Reference period | Monitoring frequency | Monitoring standard or method |
| W5/FGD Grid Ref SK0626 1754 Monitored at outlets to FGD ETP. | Fluoride | FGD Waste water treatment | 20 mg/l | Flow proportional sample | Weekly | Method as specified in the current edition of M18 guidance |
| W5/FGD Grid Ref SK0626 1754 Monitored at outlets to FGD ETP. | Chloride | FGD Waste water treatment | 40,000 mg/l | Flow proportional sample | Weekly | Method as specified in the current edition of M18 guidance |
| W5/FGD Grid Ref SK0626 1754 Monitored at outlets to FGD ETP. | Cadmium | FGD Waste water treatment | 0.025 mg/l | Flow proportional sample | Monthly | BS6068-2.89 |
| | Mercury | | 0.030 mg/l | | | |
| | Arsenic | | 0.1 mg/l | | | |
| | Chromium | | 0.5 mg/l | | | |
| | Copper | | 0.15 mg/l | | | |
| | Lead | | 0.2 mg/l | | | |
| | Nickel | | 0.2 mg/l | | | |
| | Zinc | | 0.5 mg/l | | | |
| | Vanadium | | 0.1 mg/l | | | |
| | Iron | | 1.8 mg/l | | | |
| | Selenium | | 0.5 mg/l | | | |
| | Antimony | | 0.08 mg/l | | | |
| | Silver | | 0.05 mg/l | | | |
| | Aluminium | | 3.6 mg/l | | | |
| | Molybdenum | | 2.0 mg/l | | | |
| Boron | 175 mg/l | | | | | |

| Table S3.3 Annual limits (excluding start up and shut down except where otherwise stated). | | | | |
|---|---------------|--|---|------------------------|
| Substance | Medium | Limit (including unit) | | Emission Points |
| Dust, Sulphur dioxide and Oxides of nitrogen | Air | Assessment year | LCP TNP Limit | LCP197 |
| | | 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 | | |

| Table S3.4 Process monitoring requirements | | | | |
|--|------------------|-----------------------------|--------------------------------------|-----------------------------|
| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
| Inlets to flue gas desulphurisation units | SO ₂ | Continuous | BSEN 14181 | |

Schedule 4 – Reporting

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

| Parameter | Emission or monitoring point/reference | Reporting period | Period begins |
|---|--|------------------|---------------------------------------|
| Oxides of nitrogen | A1 | Every 3 months | 1 January, 1 April, 1 July, 1 October |
| | A2, A3 | Every 2 years | 1 January |
| Dust | A1 | Every 3 months | 1 January, 1 April, 1 July, 1 October |
| | A2, A3 | Every 2 years | 1 January |
| Sulphur dioxide | A1 | Every 3 months | 1 January, 1 April, 1 July, 1 October |
| | A2, A3 | Every 2 years | 1 January |
| Carbon Monoxide | A2, A3 | Every 2 years | 1 January |
| Mercury | A1 | Annually | 1 January |
| Emissions to water Parameters as required by condition 3.5.1 | W3, W4, W5 | Every 6 months | 1 January, 1 July |

| Parameter | Units |
|--|----------------|
| Electricity Exported | GWhr |
| Heat Exported | GWhr |
| Mechanical Power Provided | GWhr |
| Fossil Fuel Energy Consumption | GWhr |
| Non-Fossil Fuel Energy Consumption | GWhr |
| Annual Operating Hours | hr |
| 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 |
| Hazardous Waste Transferred for Recovery at another installation | t |
| Non-Hazardous Waste Transferred for Disposal at another installation | t |

| Parameter | Units |
|---|-------|
| 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 |

| Parameter | Frequency of assessment | Units |
|--|-------------------------|-------|
| Thermal Input Capacity for each LCP | Annually | MW |
| Annual Fuel Usage for each LCP | Annually | tJ |
| Total Emissions to Air of NO _x for each LCP | Annually | t |
| Total Emissions to Air of SO ₂ for each LCP | Annually | t |
| Total Emissions to Air of dust for each LCP | Annually | t |
| Operating Hours for each LCP | Annually | hr |

| Media/ parameter | Reporting format | Starting Point | Agency recipient | Date of form |
|---------------------|---|----------------|-------------------|--------------|
| Air & Energy | Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy | 01/01/16 | National and area | 31/12/15 |
| Air | Form IED RTA1 –TNP quarterly emissions summary log | 01/01/16 | National and area | 31/12/15 |
| LCP | Form IED HR1 – operating hours | 01/01/16 | National and area | 31/12/15 |
| Air | Form IED CON 1 – continuous monitoring | 01/01/16 | Area Office | 31/12/15 |
| CEMs | Form IED CEM – Invalidation Log | 01/01/16 | Area Office | 31/12/15 |
| LCP | Form IED BD1 - Cumulative annual rolling malfunction and breakdown hours | 01/01/16 | Area Office | 31/12/15 |
| Air | Form IED MF1 – Pollutant concentrations during any day with malfunction or breakdown of abatement plant | 01/01/16 | Area Office | 31/12/15 |
| Air | Form IED PM1 - discontinuous monitoring and load. | 01/01/16 | Area Office | 31/12/15 |
| Resource Efficiency | Form REM1 – resource efficiency annual report | 01/01/16 | National | 31/12/15 |
| Water | Form water 1 or other form as agreed in writing by the Environment Agency | 01/01/16 | Area Office | 31/12/15 |

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

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

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

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

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

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

Part B – to be submitted as soon as practicable

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

| | |
|------------------|--|
| Name* | |
| Post | |
| Signature | |
| Date | |

* authorised to sign on behalf of the operator

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.

“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.

“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.

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

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

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

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

“hazardous property” has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

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

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

“low polluting fuels” means biomass or 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.

“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.

“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

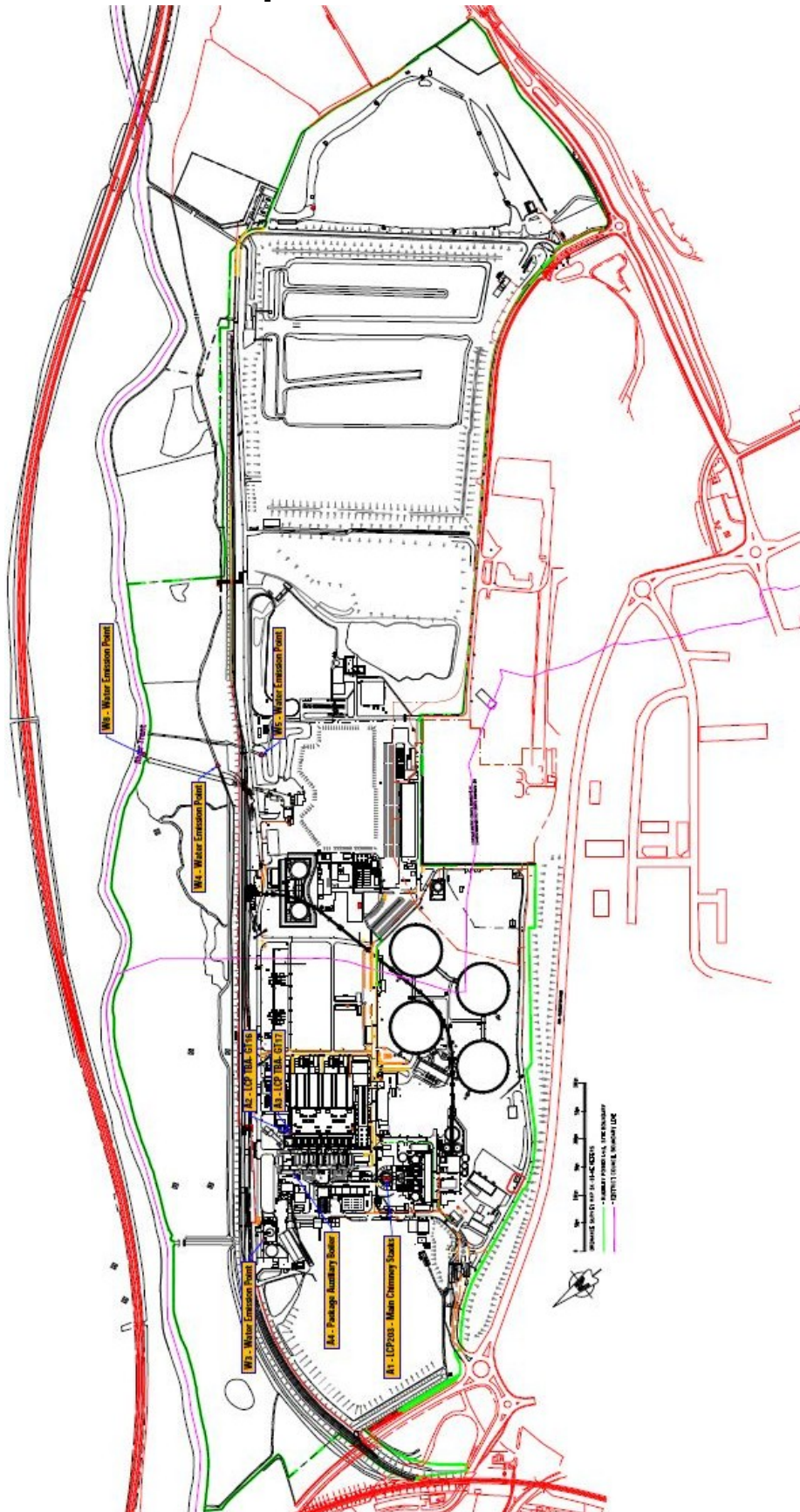
“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

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

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

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

Schedule 7 – Site plan



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