Notice of variation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Iggesund Paperboard (Workington) Limited

Workington Board Mill
Siddick
Workington
Cumbria
CA14 1JX

Variation application number

EPR/BJ7590IB/V003

Permit number

EPR/BJ7590IB

Workington Board Mill
Permit number EPR/BJ7590IB

Introductory note

This introductory note does not form a part of the notice

The following notice gives notice of the variation of an environmental 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.

The Operator has chosen to operate this LCP under the ELV compliance route.

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

- LCP438 is changed to LCP186
- LCP440 is changed to LCP187

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

LCP 186 - BIOMASS CHP PLANT

The Biomass CHP plant consists of a bubbling fluidised bed boiler (BFB) to provide steam and a single steam turbine to provide electricity. The BFB is rated at 150MW thermal input and abatement is provided by SNCR and an electrostatic precipitator and discharges to emission point A2. The boiler will be fuelled by clean biomass, virgin timber products or clean recovered wood which is excluded from the requirements of the Waste Incineration Directive.

The Biomass CHP is subject to Chapter 3 of the Industrial Emissions Directive.

Other operations include fuel receipt, storage and processing, a water demineralisation plant to provide boiler water, cooling towers and waste storage.

Emissions to air from the Biomass CHP will be oxides of nitrogen, sulphur dioxide, carbon monoxide, particulates and ammonia.

Emissions to water including boiler blowdown and neutralised water from the water dimineralisation plant.

LCP 187 – Auxiliary Boilers

The auxiliary boilers comprise 2 natural gas fired 35MW thermal input boilers which discharge to a common windshield providing an aggregated net rated thermal input of 70MW. The boilers discharge to emission points A3 and A4. The auxiliary boilers are subject to Chapter 3 of the Industrial Emissions Directive.

Status log of the permit		
Description	**Date**	**Comments**
Application received EPR/BJ7590IB/A001	Duly made 24/02/01	Application for pulp mill and board mills
Additional information received	20/01/02 & 23/03/02	Confirmation of site boundary.
Permit determined EPR/BJ7590IB	25/03/02	
Application EPR/BJ7590IB/V002 (variation and consolidation)	Duly made 24/02/11	Application for Biomass CHP plant
Additional information received	08/11/11 & 19/12/11	
Variation determined EPR/BJ7590IB/V002	07/08/12	Varied and consolidated permit issued in modern condition format
Regulation 60 Notice sent to the Operator	31/10/14	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency Initiated review and variation to vary the permit. under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.
Regulation 60 Notice response	25/03/15	Response received from the Operator.
Variation determined EPR/BJ7590IB/V003 (Billing ref: YP3735AK)	30/12/15	Varied permit issued. Variation effective from 01/01/16.

End of introductory note

Notice of variation

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

Permit number

EPR/BJ7590IB

Issued to

Iggesund Paperboard (Workington) Limited ("the operator")

whose registered office is

Iggesund Paperboard
Siddick
Workington
Cumbria
CA14 1JX

company registration number 75035

to operate a regulated facility at

Workington Board Mill
Siddick
Workington
Cumbria
CA14 1JX

to the extent set out in the schedules.

The notice shall take effect from 01/01/16

Name	Date
Anne Nightingale	**30/12/15**

Authorised on behalf of the Environment Agency

Schedule 1 – conditions to be deleted

Conditions to be deleted following an Environment Agency initiated variation.

Condition 4.4.1 refers to the meaning of expressions (*Interpretation*) in Schedule 6 - NERP references are deleted.

Schedule 2 – conditions to be amended

The following conditions are amended as detailed, following an Environment Agency initiated variation.

Condition 1.2.1 is amended to include energy efficiency conditions specifically to the generation of electricity and heat.

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.

Condition 2.3 is amended to include specific requirements for LCP186 and LCP187

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: LCP186 and LCP187. 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 In the case of emergencies direct discharges to emission point W1 may be made from the surge well, the distribution chamber or the mill sea valve. The circumstances for direct discharges shall be as defined in the Environmental Management System. Any direct discharge will be notifiable under condition 4.3.1. During the period of direct discharge the emission limits specified for emission point W1 in Table S3.2 shall not apply.

2.3.5 Direct discharges to emission point W1 may be made from the mill sea valve with the prior agreement of the Agency. During the period of direct discharge the emission limits specified for emission point W1 in Table 6.3.3 shall not apply.

2.3.6 The Biomass CHP plant and/or standby boilers shall only be operated at the same time as the existing gas fired CHP during the agreed period of commissioning of the Biomass CHP.

2.3.7 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.8 For the following activities referenced in schedule 1, table S1.1: LCP186 and LCP187. 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.

2.3.9 For the following activities referenced in schedule 1, table S1.1: LCP186. 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.

2.3.10 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 table S2.2; 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.

Condition 3.1 is amended to include specific requirements for LCP186 and the new IED monitoring requirement for groundwater and soil.

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, S3.2 and S3.3.

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

3.1.3 The emission values from emission point A2 listed in schedule 3 table 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 Where a substance is specified in schedule 3 tables S3.2 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.

3.1.5 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.

Condition 3.6 is amended in accordance with the IED.

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

3.6.1 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.

3.6.2 All monitoring required by this permit shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive.

3.6.3 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.

Condition 4.2.2 is amended to include reference to Tables S4.3A and S4.3B, for reporting of operational hours for the standby boilers and reporting of abatement plant breakdown or malfunction.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;

(b) the annual production /treatment data set out in schedule 4 table S4.2;

(c) the performance parameters set out in schedule 4 tables S4.3A and S4.3B using the forms specified in table S4.4 of that schedule.

(d) where condition 3.5.5 applies the hours of operation in any year; and

(e) where condition 2.3.9 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 2.3.9) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).

Condition 4.3 is amended in accordance with the IED.

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 2.3.9, 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 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:

(a) a decision by the Secretary of State not to re-certify the agreement;

(b) a decision by either the operator or the Secretary of State to terminate the agreement; and

(c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.3.8 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

Condition 4.4.2 is amended in accordance with the IED.

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 is amended to include the new description of the LCP activity.

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 Part A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP186: a 150MW bubbling fluidised bed (BFB) biomass fired boiler. Net rated thermal input to be confirmed upon completion of IC1 in table S1.3 of this permit. LCP187: 2 x nominal 35MW standby gas fired auxiliary boilers. Net rated thermal input to be confirmed upon completion of IC1 in table S1.3 of this permit.	Combustion plant including air supply, boilers, power plant, facilities for treatment of exhaust gases, stacks and systems for controlling combustion.
A2	Section 5.3 Part A(1) (c) (ii): Disposal of non-hazardous waste with a capacity of more than 50 tonnes per day by physio-chemical treatment (D9)	Treatment of effluent from pulp and paperboard production, combustion plant, water treatment and surface water drainage	From receipt of effluent to discharge to Irish Sea via release point W1
A3	Section 6.1 Part A(1) (a): Producing, in industrial plant, pulp from timber or other fibrous materials.	Production of mechanical pulp in a pulp mill	From receipt of raw logs to transfer of mechanical pulp to stock preparation. Includes debarking, chipping, refining and bleaching of mechanical pulp.
A4	Section 6.1 Part A(1) (b): Producing, in industrial plant, paper and board where the plant has a production capacity of more than 20 tonnes per day.	Production of paperboard on board machine BM2.	From stock preparation to despatch of finished product storage including re-pulping of chemical pulp.

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
	Directly Associated Activity		
A5	Electrical Power Station	Generation of electricity using a single steam turbine	From transfer of heat to steam turbine, generation of electricity and its use on site.
A6	Fuel handling and storage	Fuel receipt, storage and processing prior to use in biomass boiler	Receipt of fuel feedstock, storage, processing (chipping, crushing, screening) and transfer to biomass boiler.
A7	Water treatment plant	Treatment of raw water supply for use in pulp and paperboard production and biomass CHP plant	Treatment of raw water in Dynasand filtration plant. From receipt of incoming water on site to transfer to treated water storage tank
A8	Water demineralisation plant	Treatment of boiler makeup water	Treatment of boiler feed water by filtration and ion exchange, including regeneration and condensate polishing plant

Schedule 1 – 'Operations' Table S1.2 is amended to include operating techniques from the regulation 60 response.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	The response to question 2.3 in section 2.3 of the application	24/02/01
Response to Schedule 4 Part 1 Notice	Response to questions 15 - 24	20/01/02
Variation	Response to Part C3, section 3 of the variation application	24/02/11
Receipt of the additional information to the variation application	Response to question 1a (process overview), 2d & 2e (fuel receipt/acceptance), 2f (fuel processing), 4a & 4b (combustion control), 4c (SNCR optimisation), 6a (monitoring) 7b, (standby plant monitoring), 8a (water treatment plant), 11a (ash storage), 14b (fugitive emission control) in the further information request dated 23/08/11	08/11/11 &19/12/11

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Response to regulation 60(1) Notice – request for information dated 31/10/14	Compliance route(s) and operating techniques identified in response to questions: 2 - compliance route 4 - configuration 5 - net rated thermal input 6 - startup and shutdown 8 – choice of fuel (no standby fuel)	Received 25/03/15

Schedule 1 – 'Operations' Table S1.3 is amended to include additional conditions. (Completed conditions removed).

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IP10	The operator shall provide a report in writing to the Environment Agency for acceptance which provides the net rated thermal input for LCP186 and LCP 187. The net rated thermal input is the 'as built' value unless the plant has been modified significantly resulting in an improvement of the plant efficiency or output that increases the rated thermal input (which typically requires a performance test to demonstrate that guaranteed improvements have been realised). Evidence to support this figure, in order of preference, shall be in the form of:- a) Performance test results* during contractual guarantee testing or at commissioning (quoting the specified standards or test codes), b) Performance test results after a significant modification (quoting the specified standards or test codes), c) Manufacturer's contractual guarantee value, d) Published reference data, e.g., Gas Turbine World Performance Specifications (published annually); e) Design data, e.g., nameplate rating of a boiler or design documentation for a burner system; f) Operational efficiency data as verified and used for heat accountancy purposes, g) Data provided as part of Due Diligence during acquisition, *Performance test results shall be used if these are available.	31/12/16

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IP11	The Operator shall submit a report in writing to the Environment Agency for acceptance. The report shall define and provide a written justification of the "minimum start up load" and "minimum shut-down load", for each unit within the LCP as required by the Implementing Decision 2012/249/EU in terms of: a) The output load (i.e. electricity, heat or power generated) (MW); and, b) This output load as a percentage of the rated thermal output of the combustion plant (%). And / Or c) At least three criteria (operational parameters and / or discrete processes as detailed in the Annex) or equivalent operational parameters that suit the technical characteristics of the plant, which can be met at the end of start-up or start of shut-down as detailed in Article (9) 2012/249/EU.	31/12/16
IP12	'For LCPD LCP 438 and 440 (now LCP 186 and 187 under IED). Annual emissions of dust, sulphur dioxide and oxides of nitrogen including energy usage for the year 01/01/2015 to 31/12/2015 shall be submitted to the Environment Agency using form AAE1 via the NERP Registry. If the LPCD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.	28/01/16

Schedule 3 – 'Emissions and monitoring' Table S3.1 is amended to include the LCP numbers and emission limit values.

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]	Total Volatile Organic Compounds (expressed as Carbon)	Andritz Refiner	-	-	-	-
LCP186 BFB Plant						
A2 [Point A2 on site plan in schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP186 BFB Plant Stack	200 mg/m^3	Calendar monthly mean	Continuous	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**
A2 [Point A2 on site plan in schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP186 BFB Plant Stack	200 mg/m^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP186 BFB Plant Stack	400 mg/m^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Carbon Monoxide	LCP186 BFB Plant Stack	200 mg/m^3	Calendar monthly mean	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Carbon Monoxide	LCP186 BFB Plant Stack	200 mg/m^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Carbon Monoxide	LCP186 BFB Plant Stack	400 mg/m^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Sulphur Dioxide	LCP186 BFB Plant Stack	200 mg/m^3	Calendar monthly mean	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Sulphur Dioxide	LCP186 BFB Plant Stack	200 mg/m^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Sulphur Dioxide	LCP186 BFB Plant Stack	400 mg/m^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Dust	LCP186 BFB Plant Stack	20 mg/m^3	Calendar monthly mean	Continuous	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**
A2 [Point A2 on site plan in schedule 7]	Dust	LCP186 BFB Plant Stack	20 mg/m^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Dust	LCP186 BFB Plant Stack	40 mg/m^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Ammonia	LCP186 BFB Plant Stack	5mg/m^3	Average value over monitoring period	Quarterly	TGN M22
A2 [Point A2 on site plan in schedule 7]	Oxygen	LCP186 BFB Plant Stack	-	-	Continuous As appropriate to reference	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Water Vapour	LCP186 BFB Plant Stack	-	-	Continuous As appropriate to reference	BS EN 14181
A2 [Point A2 on site plan in schedule 7]	Stack gas temperature	LCP186 BFB Plant Stack	-	-	Continuous As appropriate to reference	Traceable to national standards
A2 [Point A2 on site plan in schedule 7]	Stack gas pressure	LCP186 BFB Plant Stack	-	-	Continuous As appropriate to reference	Traceable to national standards
A2 [Point A2 on site plan in schedule 7]	-	LCP186 BFB Plant Stack	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
LCP187 Standby Boilers No.1 & No.2						
A3 & A4 [Point A3 & A4 on site plan in schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP 187 Boiler 1 & Boiler 2 Stack	100mg/m^3	-	At least every 6 months	BS EN 14792

Table S3.1 Point source emissions to air						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)-these limits do not apply during start up or shut down.**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A3 & A4 [Point A3 & A4 on site plan in schedule 7]	Sulphur Dioxide	LCP 187 Boiler 1 & Boiler 2 Stack	35mg/m^3	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A3 & A4 [Point A3 & A4 on site plan in schedule 7]	Carbon Monoxide	LCP 187 Boiler 1 & Boiler 2 Stack	20mg/m^3	-	At least every 6 months	BS EN 15058
A3 & A4 [Point A3 & A4 on site plan in schedule 7]	Dust	LCP 187 Boiler 1 & Boiler 2 Stack	5mg/m^3	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A3 & A4 [Point A3 & A4 on site plan in schedule 7]	Oxygen	LCP 187 Boiler 1 & Boiler 2 Stack	-	-	Periodic As appropriate to reference	BS EN 14789
A3 & A4 [Point A3 & A4 on site plan in schedule 7]	Water Vapour	LCP 187 Boiler 1 & Boiler 2 Stack	-	-	Periodic As appropriate to reference	BS EN 14790
A3 & A4 [Point A3 & A4 on site plan in schedule 7]	-	LCP 187 Boiler 1 & Boiler 2 Stack	-	-	Pre-operation and when there is a significant operational change	BS EN 15259

Schedule 4 – 'Information' Table S4.1 is amended in accordance with the IED.

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Oxides of nitrogen	A2	Every 3 months	1 January, 1 April, 1 July, 1 October
	A3, A4	Every 6 months	1 January, 1 July
Carbon Monoxide	A2	Every 3 months	1 January, 1 April, 1 July, 1 October
	A3, A4	Every 6 months	1 January, 1 July
Sulphur dioxide	A2	Every 3 months	1 January, 1 April, 1 July, 1 October
	A3, A4	Every 6 months	1 January, 1 July
Dust	A2	Every 3 months	1 January, 1 April, 1 July, 1 October
	A3, A4	Every 6 months	1 January, 1 July
Ammonia	A2	Every 3 months	1 January, 1 April, 1 July, 1 October
Emissions to Water Parameters as required by condition 3.5.1	W1, W2	Every 3 months	1 January, 1 April, 1 July, 1 October
Exhaust gas temperature, pressure, water content, oxygen content and flow rate. Parameters as required by condition 3.5.1	A2	As requested by Environment Agency Note 1	1 January
Combustion chamber temperature Parameters as required by condition 3.5.1	A2	As requested by Environment Agency Note 1	1 January
Loss on Ignition Parameters as required by condition 3.5.1	Bottom Ash	Annually	1 January

Note 1: These parameters would not normally be required to be reported but would be available for inspection on site only where there is an operational need should a report be required.

Schedule 4 – 'Information' Table S4.3A is amended in accordance with the IED.

Table S4.3A Chapter III Performance parameters for reporting to DEFRA and other Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	tJ
Total Emissions to Air of NO_x for each LCP	Annually	T
Total Emissions to Air of SO_2 for each LCP	Annually	T
Total Emissions to Air of dust for each LCP	Annually	T
Operating Hours for each LCP (Load Factor)	Annually	hr
Total effluent filter cake used in BFB boiler	Annually	T
Total ammonia sulphate used	Annually	T
Total bottom ash sent for disposal	Annually	T
Total bottom ash sent for recovery	Annually	T
Total APC residues sent for disposal	Annually	T
Total APC residues sent for recovery	Annually	T

Schedule 4 – 'Information' Table S4.2 is amended in accordance with the IED.

Table S4.4 Reporting forms				
Media/ parameter	**Reporting format**	**Starting Point**	**Agency recipient**	**Date of form**
LCP	Form IED HR1 – operating hours	01/01/16	National Area Office	31/12/15DD/MM/YY
Air	Form IED CON 1 – continuous monitoring.	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
CEMs	Form IED CEM – Invalidation Log	01/01/16	Area Office	31/12/15
Air	Form IED PM1 - discontinuous monitoring and load.	01/01/16	Area Office	31/12/15
Water	Form water 1 or other form as agreed in writing by the Environment Agency	01/01/16	SI	31/12/15
Water usage	Form water usage1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15

Table S4.4 Reporting forms				
Media/ parameter	**Reporting format**	**Starting Point**	**Agency recipient**	**Date of form**
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15
Resource Efficiency Metrics	Form REM or other form as agreed in writing by the Environment Agency	01/01/16	Area & National Office	31/12/15
Bottom Ash	Form Ash 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15
Biomass CHP performance indicators	Form performance 2 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	31/12/15

Schedule 3 – conditions to be added

The following conditions are added following an Environment Agency initiated variation.

Schedule 1 – 'Operations' Table S1.5 is added.

Table S1.5, Minimum Start-up Load and Minimum Shutdown load		
Emission Point and Unit Reference	**"Minimum start up load"**	**"Minimum shut-down load"**
A2	To be assessed upon completion of IP10 &IP11	To be assessed upon completion of IP10 &IP11
A3	To be assessed upon completion of IP10 &IP11	To be assessed upon completion of IP10 &IP11
A4	To be assessed upon completion of IP10 &IP11	To be assessed upon completion of IP10 &IP11

Schedule 5 – 'Notification' Part C 'Malfunction or breakdown of LCP abatement equipment' is added.

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' we have made the following additions.

"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.

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

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

"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.

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

"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.

End of Notice