Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Drax Power Limited

Drax Power Station
Selby
North Yorkshire
YO8 8PH

Variation application number

EPR/VP3530LS/V022

Permit number

EPR/VP3530LS

Drax Power Station
Permit number EPR/VP3530LS

Introductory note

This introductory note does not form a part of the notice

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

This variation makes the following changes to the permit:

- Addition of post-combustion carbon capture (PCC) activity under Schedule 1, Part 2, Section 6.10 Part A(1)(a) of the Environmental Permitting (England and Wales) Regulations 2016
- Removal of the Ouse Renewable Energy Plant LCP and associated emission points
- Addition of a new treatment plant for treatment of effluent from the new flue gas treatment plant (quencher) on Units 1 and 2, which will replace the existing effluent treatment plant associated with flue gas desulphurisation if the PCC activity is implemented
- Modification to the flue gas layout and abatement of Units 5 and 6
- Installation of a new flue gas treatment plant (quencher)
- Addition of an activity for the production of hydrogen under Schedule 1, Part 2, Section 4.2 Part A(1)(a)(i) for use in the conditioning of the captured carbon dioxide
- Change to the management of Furnace Bottom Ash handling and its infrastructure

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

Drax Power Station is located near Selby, North Yorkshire.

Drax Power Station began generating electricity after its first 660 MW coal fired unit was commissioned in 1974. In 1975, Drax Power Station was officially opened, with three coal fired units and a total generating capacity of just under 2,000 MW. Eleven years later, in 1986, Drax Power Station doubled in size and became the largest power station in the UK.

The installation comprises the following activities listed in Schedule 1 to the Environmental Permitting (England and Wales) Regulations 2016:

- Section 1.1 Part A(1)(a) Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more
- Section 4.2 Part A(1)(a)(iv) Producing inorganic chemicals such as – salts
- Section 5.4 Part A(1)(a)(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day - physico-chemical treatment
- Section 3.5 Part B(f) Loading, unloading or storing pulverised fuel ash in bulk prior to further transportation in bulk
- Section 4.8 Part B (a)(iii): The storage in tanks of anhydrous ammonia
- Section 5.4 Part A(1)(b)(iii) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day - treatment of slags and ashes
- Section 6.10 Part A(1)(a) Capture of carbon dioxide streams from an installation for the purpose of geological storage
- Section 4.2 Part A(1)(a)(i) Producing inorganic chemicals such as - hydrogen

The combustion activity comprises four biomass fired Units (1-4) and two coal fired Units (5 and 6) and together they comprise a large combustion plant (LCP) reference LCP91. Units 5 and 6 are no longer

operational. Heavy fuel oil is used for start-up and stabilisation of the four operational units of LCP91. There are also three oil-fired open cycle gas turbines which comprise an LCP reference LCP454 used for start-up and grid support roles including black start. These units are only run for a few hundred hours per year at most.

- LCP91 – total thermal input of 10,000 MW
- LCP454 – total thermal input of 420 MW

Combustion gases from Units 1-4 containing carbon dioxide, oxides of nitrogen, nitrogen (from the combustion air and fuel) and water vapour together with smaller amounts of other substances including dust, are discharged from a flue (two boiler units per flue) rising inside a stack (single windshield) at a height of approximately 259m above ground. When carbon capture is in operation, the combustion gases from Units 1 and 2 will be directed to two carbon capture plants, one for each unit, for removal of the carbon dioxide.

The flue gases from each unit will pass through a gas/gas heat exchanger to reduce the gas temperature before entering a quencher tower where treatment with an alkali solution will reduce particulates, ammonia, sulphur and other pollutants that could impact the performance of the solvent in the capture plant. The cooled and treated flue gases are then discharged into the base of the absorber columns where they rise up the columns and the carbon dioxide is absorbed by a chemical reaction with a proprietary solvent which is added at the top of the columns. The solvent containing the carbon dioxide from each absorber column is discharged to two stripper columns working in parallel where they are heated to release the carbon dioxide. The captured carbon dioxide is conditioned, compressed and stored prior to discharge into the pipeline for transport off-site. The solvent from the stripper columns without the CO_2 is returned to the absorber towers for re-use. Solvent is periodically treated in a batch solvent reclaim process to remove heat stable salts and other contaminants.

The remaining gases from the absorber columns pass through a series of acid and water washes and are returned to the stack (single windshield) for discharge after passing through a gas/gas heat exchanger to heat the gases.

Waste water from the quencher column is treated in an on-site treatment plant and the treated effluent is used for cooling water.

Water used in the capture process (water washes) and produced in the conditioning of the carbon dioxide is re-used within the capture process and any water that is unsuitable for re-use is stored as hazardous waste prior to off-site disposal. No process water that has come in to contact with the solvent in the capture process is discharged to sewer or surface water.

Acid wash water and waste from the reclaiming of the solvent are stored prior to off-site disposal at a suitably licensed facility.

Combustion gases from LCP454 are discharged via a separate stack, 115m above ground level.

LCP91 is retrofitted with flue gas desulphurisation equipment (FGD) to remove approximately 90% of sulphur dioxide in the combustion gases from the coal Units 5 and 6. The FGD is turned off for units which are running on 100% biomass. The FGD plant will be removed should the PCC plant be installed.

A Reverse Osmosis water treatment plant is installed on the site to provide high quality water for use in the production of Selective Non-Catalytic Reduction (SNCR) reagent. Units 1-5 have been fitted with SNCR which will be used to minimise NO_x emissions in order to comply with IED and BREF. However, the operator has demonstrated that SNCR is not required to meet the NOx emission limits when burning biomass, so SNCR is not routinely employed. Unit 5 would be fuelled on coal and would operate for <1500 hours. As it would be operating with a highly variable load profile, the applicability of SNCR will be limited on Unit 5.

Biomass stock is held as a fuel for Units 1-4.

Ash produced is sold where possible, or otherwise transported after conditioning with water, to an adjacent ash disposal facility at Barlow (operating under a separate EPR 2016 permit). Under some conditions surface water from the Barlow site overflows to the station water system. Checks on this have been included in the process monitoring requirements of the permit. Slurrified pulverised fuel ash (PFA) sourced from Barlow is used in the biomass fired boilers to mitigate impacts of corrosion, fouling and slagging.

The station also uses oil (heavy fuel oil, bio-oil and Processed Fuel Oil) for start-up and flame stabilisation.

The installation discharges large volumes of cooling water, comprising water abstracted from the River Ouse and treated water from the wastewater treatment plant (which will treat effluent from the quencher if the PCC plant is installed), back to the same river following use in the cooling circuit after subsequent temperature reduction in natural draught cooling towers. These towers also discharge water vapour to the atmosphere. This is frequently more visible than the discharge of combustion gases.

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 EPR/VP3530LS/A001	Duly Made 30/03/2006	
Additional Information received		23/08/2006, 29/08/2006 and applicant's written clarification received up to 23/07/2007plus grid references of main emission points 17/09/2007
Permit determined EPR/VP3530LS	30/10/2007	
Variation Notice SP3039XR (EPR/VP3530LS/V002) Issued	20/12/2007	
Variation application KP3937KC (EPR/VP3530LS/V003) Received	21/01/2010	
Additional Information Received	11/02/2010	
Variation determined EPR/VP3530LS/V003	01/03/2010	
Variation application EPR/VP3530LS/V004	Duly Made 11/05/2010	
Additional information received via Schedule 5 notice (1)		
Additional information received via Schedule 5 notice (2)	17/08/2010	14/09/2010
Substantial Variation and consolidation EPR/VP3530LS/V004	23/02/2011	
Variation determined EPR/VP3530LS/V005	11/03/2013	Environment Agency Initiated Variation, to incorporate Eel Regulations Improvement Condition.
Application EPR/VP3530LS/V006 (variation)	06/02/2013	Application to vary the permit. Application not duly made and returned on 13/03/2013.
Application EPR/VP3530LS/V007 Variation	Duly Made 14/10/2013	Application to vary permit to allow 3 boilers to run on 100% Biomass.
Additional Information received	18/12/2013 & 20/12/2013	Response to Schedule 5 notice dated 22/11/2013

Status log of the permit		
Description	**Date**	**Comments**
Additional Information received	31/01/2014	Response to Schedule 5 notice dated 08/01/2014
Variation determined EPR/VP3530LS/V007	25/02/2014	Varied and consolidated Permit
Application EPR/VP3530LS/V008 (Variation)	Duly Made 10/03/2014	Application to permit the Co-combustion of coal and biomass in Unit 3 as part of an operational trial.
Variation EPR/VP3530LS/V008 determined	22/05/2014	
Application EPR/VP3530LS/V009 (Variation)	Duly Made 22/05/2014	Application for SNCR trial on Units 3 and 4 and for amendments with respect to the discharge of cooling water.
Variation determined EPR/VP3530LS/V009	19/08/2014	
Variation determined EPR/VP3530LS/V010	Issued 25/09/2014	Environment Agency Initiated Variation issued, to add an improvement condition requiring a cost benefit appraisal to ensure compliance with the Eels Regulations. Effective 1/10/14.
Regulation 60 Notice sent to the Operator	31/10/2014	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.
Application received	16/02/2015	Administrative variation to carry out a newly prescribed activity under the Industrial Emissions Directive.
Regulation 60 Notice response	27/03/2015	Response received from the Operator.
Application received EPR/VP3530LS/V012	21/04/2015	Substantial variation to add a new combustion activity with carbon capture. Application withdrawn.
Additional information received	28/05/2015	Response to request for further information (RFI) dated 14/05/15.
Regulation 60 Notice sent to the Operator	21/10/2015	Notice to require further justification for the proposed SNCR system.
Regulation 60 Notice response	16/11/2015	Response received from the Operator.
Variation determined EPR/VP3530LS/V011	30/12/2015	Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/2016.
Application withdrawn EPR/VP3530LS/V012	13/01/2016	Operator withdrawal.
EPR/VP3530LS/V013	-	Logged in error, cannot be reused.
Application received EPR/VP3530LS/V014	Duly made 01/11/2016	Application for normal variation.
Request from the Operator via email for a	01/12/2016	Application for variation to introduce slurried Pulverised Fuel Ash sourced from Barlow Mound into biomass fired boilers in order to mitigate impacts of corrosion fouling and slagging.

Status log of the permit		
Description	**Date**	**Comments**
further requirement to be included in Variation EPR/VP3530LS/V014		
Response to Schedule 5 Notice received	08/12/2016	
Variation determined EPR/VP3530LS	12/05/2017	Varied permit issued.
Application EPR/VP3530LS/V015 (variation)	Duly made 16/06/2018	Application for variation to permit use of biomass fuels from high arsenic regions. Renumbered from variation V016, as issued before Repower variation
Variation determined EPR/VP3530LS/V015	01/10/2018	Varied permit issued.
Application EPR/VP3530LS/V016 (Variation)	Duly made 20/07/2018	Application for authorisation to trial bio-energy carbon capture technology. Renumbered from variation V017, as issued before Repower variation.
Variation determined EPR/VP3530LS/V016	30/10/2018	Varied permit issued.
Application EPR/VP3530LS/V017 (Variation)	-	Application Withdrawn 31/10/19
Regulation 61 Notice sent to the Operator	01/05/2018	Issue of a Notice under Regulation 61(1) of the EPR. Environment Agency initiated review and variation to vary the permit under IED to implement Chapter II following the publication of the revised Best Available Techniques (BAT) Reference Document for large combustion plant.
Regulation 61 Notice response.	31/10/2018	Response received from the Operator.
Additional Information Received	26/09/2019	Further details regarding compliance and operating techniques identified in response to BAT Conclusions 2, 3, 4, 5, 6, 9, 12, 13, 14, 15, 16, 17, 19, 23 and 24
Additional Information Received	20/12/2019	Further details regarding compliance and operating techniques identified in response to BAT Conclusion 4, 5, 17 and 19.
Additional Information Received	16/01/2020	Further details regarding compliance and operating techniques identified in response to BAT Conclusion 4, 5, 17 and 19.
Additional Information Received	24/02/2020	Details regarding how the OCGT will comply with the BAT conclusions.
Regulation 61 Notice sent to the Operator	23/01/2020	Issue of a Notice under Regulation 61(1) of the EPR. Requesting BAT compliance route and electrical efficiency of the plant.
Regulation 61 notice response	30/03/2020	Response received from the Operator.
Variation determined EPR/VP3530LS/V018	18/06/2020	Varied and consolidated permit issued. Effective from 01/07/2020.

Status log of the permit		
Description	**Date**	**Comments**
Variation application EPR/VP3530LS/V019	Duly made 12/06/2020	Application to increase site area and add exhaust vent emission points.
Additional information EPR/VP3530LS/V019	01/07/2020	Historical maps.
Variation determined EPR/VP3530LS/V019	29/07/2020	Varied and consolidated permit issued.
Variation application EPR/VP3530LS/V020	03/07/2020	Application for normal variation
Variation application EPR/VP3530LS/V021	Duly made 12/02/2021	Application for substantial variation
Additional information EPR/VP3530LS/V020	08/07/2021	Alkali Chloride-Converting additive report
Additional information EPR/VP3530LS/V020	15/06/2021	Air dispersion modelling
Variation application EPR/VP3530LS/V021	08/10/2021	Withdrawn
Additional information EPR/VP3530LS/V020	11/02/2022	Cooling water thermal imaging
Variation determined EPR/VP3530LS/V020 (Billing ref: YP3707SL)	06/06/2023	Varied and consolidated permit issued.
Variation application EPR/VP3530LS/V022	Duly made 18/05/2023	Application to add carbon capture activity, make changes to the associated infrastructure and remove Ouse Renewable Energy Plant activity.
Variation application EPR/VP3530LS/V023	Duly made 20/11/2023	Application to increase filtration capacity
Additional information EPR/VP3530LS/V022	31/03/2024	Revised site plan and emission points; noise impact assessment; details of bunding and storage of raw materials; waste codes; details of effluent treatment; fugitive emissions; solvent selection justification; effectiveness of solvent recovery process; capture rate; solvent trials information.
Additional information EPR/VP3530LS/V023	16/05/2024	Details regarding point source emissions to air
Variation determined EPR/VP3530LS/V023	21/05/2024	Varied and consolidated permit issued.
Additional information EPR/VP3530LS/V022	18/06/2024	Confirmation of decommissioning of ash pits, waste code for acid wash and clarification of water demand and CO_2 compression
Additional information EPR/VP3530LS/V022	01/08/2024	Dates of background sound level measurements
Additional information EPR/VP3530LS/V022	13/09/2024	Assessment of solvent storage against BRef, clarification of underground storage, details of CO_2 conditioning and hydrogen use and manufacture.
Additional information EPR/VP3530LS/V022	29/11/2024	Revised air dispersion modelling
Additional information	08/01/2025	Clarification of solvent storage

Status log of the permit		
Description	**Date**	**Comments**
EPR/VP3530LS/V022		
Additional information EPR/VP3530LS/V022	27/01/2025	Derivation of EALs
Additional information EPR/VP3530LS/V022	01/04/2025	Clarification of modelling scenarios
Additional information EPR/VP3530LS/V022	20/06/2025	Review of solvent reclaiming, clarification of EAL
Additional information EPR/VP3530LS/V022	31/07/2025	Additional modelling for two operating scenarios
Additional information EPR/VP3530LS/V022	12/09/2025	CO_2 Venting assessment
Additional information EPR/VP3530LS/V022	19/12/2025	Assessment of amine hazards with use, confirmation of removal of references to SCR in the Permit
Additional information EPR/VP3530LS/V022	27/02/2026	Additional assessment of acid deposition
Variation determined EPR/VP3530LS/V022	DD/MM/YYYY	Varied and consolidated permit issued in modern format

Other Part A installation permits relating to this installation		
Operator	**Permit number**	**Date of issue**
Drax Power Limited	EPR/BW9395IF	29/03/2007

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/VP3530LS

Issued to

Drax Power Limited ("the operator")

whose registered office is

Drax Power Station
Selby
North Yorkshire
YO8 8PH

company registration number 04883589

to operate a regulated facility at

Drax Power Station
Selby
North Yorkshire
YO8 8PH

to the extent set out in the schedules.

The notice shall take effect from [DD/MM/YYYY]

Name	Date
[name of authorised person]	**[DD/MM/YYYY]**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions were varied as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/VP3530LS

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/VP3530LS/V022 authorising,

Drax Power Limited ("the operator"),

whose registered office is

Drax Power Station
Selby
North Yorkshire
YO8 8PH

company registration number 04883589

to operate an installation at

Drax Power Station
Selby
North Yorkshire
YO8 8PH

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

Name	Date
[name of authorised person]	**[DD/MM/YYYY]**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

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

1.2 Energy efficiency

1.2.1 The operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) take appropriate measures to ensure the efficiency of energy generation at the permitted installation is maximised;

(c) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(d) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

(a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

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

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities;

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

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

2 Operations

2.1 Permitted activities

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

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

2.2 The site

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

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 For the following activities referenced in schedule 1, table S1.1: LCP91 and LCP454. The activities shall be operated in accordance with the "Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines" dated December 2015 or any later version unless otherwise agreed in writing by the Environment Agency.

2.3.3 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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

2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP454. 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: LCP91, coal fired units 5 and 6. The activities shall operate for less than 1,500 hours per year as a rolling average over a period of five years with a maximum of 2,250 hours operated in any one year in line with Section 4.0 of Version 5.1: The Protocol for IED Annex V 1500 Limited Hours Derogation July 2015 or any later version.

2.3.7 For the following activities referenced in schedule 1, table S1.1: LCP91 and LCP454. 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.

2.3.8 For the following activities referenced in schedule 1, table S1.1: LCP91. The following conditions apply where there is a malfunction or breakdown of any abatement equipment:

Unless otherwise agreed in writing by the Environment Agency:

(i) if a return to normal operations is not achieved within 24 hours, the operator shall reduce or close down operations, or shall operate the activities using low polluting fuels;

(ii) the cumulative duration of breakdown in any 12-month period shall not exceed 120 hours; and

(iii) the cumulative duration of malfunction in any 12-month period shall not exceed 120 hours.

2.3.9 The emission limit values from emission points A1 and A2 listed in tables S3.1a, S3.1b and S3.1c of Schedule 3 following the issue of a Black Start Instruction by the National Grid shall be disregarded for the purposes of compliance whilst that instruction remains effective in accordance with the report submitted in response to improvement condition IC45D.

2.3.10 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2, tables S2.2 or S2.3; and

(b) it conforms to the description in the documentation supplied by the producer and holder.

2.3.11 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

(a) the nature of the process producing the waste;

(b) the composition of the waste;

(c) the handling requirements of the waste;

(d) the hazardous property associated with the waste, if applicable; and

(e) the waste code of the waste.

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

2.4 Improvement programme

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

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

2.5 Pre-operational conditions

2.5.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table 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 S3.1a, S3.1b, S3.1c 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, measured during periods of abatement equipment malfunction and breakdown shall be disregarded for the purposes of compliance with table S3.1b emission limit values.

3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

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

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

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

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

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

(a) point source emissions specified in tables S3.1a, S3.1b, S3.1c and S3.2;

(b) surface water or groundwater specified in table S3.3; and

(c) 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 S3.1a, S3.1b, S3.1c and S3.2 unless otherwise agreed in writing by the Environment Agency.

3.6 Monitoring for Large Combustion Plant

3.6.1 All monitoring required by this permit shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive and the Large Combustion Plant Best Available Techniques Conclusions.

3.6.2 If the monitoring results for more than 10 days a year are invalidated within the meaning set out in condition 3.6.7, the operator shall:

(a) within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Environment Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and

(b) implement the approved proposals.

3.6.3 Continuous measurement systems on emission points from the LCP shall be subject to quality control by means of parallel measurements with reference methods at least once every calendar year.

3.6.4 Unless otherwise agreed in writing by the Environment Agency in accordance with condition 3.6.5 below, the operator shall carry out the methods, including the reference measurement methods, to use and calibrate continuous measurement systems in accordance with the appropriate CEN standards.

3.6.5 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Environment Agency.

3.6.6 Where required by a condition of this permit to check the measurement equipment, the operator shall submit a report to the Environment Agency in writing, within 28 days of the completion of the check.

3.6.7 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3, tables S3.1a and S3.1b the Continuous Emission Monitors shall be used such that:

(a) for the continuous measurement systems fitted to the LCP release points defined in tables S3.1a and S3.1b the validated hourly, monthly, daily and yearly 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 ammonia releases of a single measured result shall be taken to be 40%;

(e) the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;

(f) 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;

(g) any day, in which more than three hourly average values are invalid shall be invalidated;

(h) 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:
(i) 20 minutes of the period for open cycle turbines and engines; and

(ii) 40 minutes of the period for all other combustion appliances.

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.

4 Information

4.1 Records

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

(a) be legible;

(b) be made as soon as reasonably practicable;

(c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and

(d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

(i) off-site environmental effects; and

(ii) matters which affect the condition of the land and groundwater.

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

4.2 Reporting

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

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

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

(b) the resource efficiency metrics set out in schedule 4 table S4.2;

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

(d) where conditions 2.3.5 and 2.3.6 applies, the hours of operation in any year; and

(e) where condition 2.3.8 applies, the cumulative duration of breakdown and cumulative duration of malfunction in any 12 month period.

(f) the function and monitoring of the carbon capture plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement give an account of the running of the process (including a summary of records of process monitoring requirements of table S3.4), the emissions into air compared with the emission limits in table S3.1a, and details of the waste generated.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter, if during that quarter the total amount accepted exceeds 100 tonnes of non-hazardous waste or 10 tonnes of hazardous waste.

4.2.6 Within 10 days of the notification of abatement equipment malfunction or breakdown (condition 2.3.8) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).

4.3 Notifications

4.3.1 In the event:

(a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) of a breach of any permit condition the operator must immediately—

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

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

4.3.2 Any information provided under condition 4.3.1 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.

In any other case:

(e) the death of any of the named operators (where the operator consists of more than one named individual);

(f) any change in the operator's name(s) or address(es); and

(g) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

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

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

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

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

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “immediately”, in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR1	Section 1.1 A(1)(a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP91: Operation of six boilers burning coal (Units 5 and 6) and biomass (Units 1 – 4) for the production of steam and electricity (10,000 MW aggregated net rated thermal input) Units 5 and 6 are not operational LCP454: Operation of three open cycle gas turbines (OCGTs) burning gas oil to produce electricity (420 MW aggregated net rated thermal input) Operation of three package boilers (Boiler 4, 20MWth, Boiler 5, 20MWth and Boiler 6, 15MWth) burning gas oil to produce steam to maintain systems to enable generation plant to be restarted in both normal and other than normal operations. (55 MWth aggregated net rated thermal input)	From receipt of biomass, coal, petroleum coke, furnace bottom ash at rates of up to 25% by mass per unit, heavy fuel oil or gas oil to discharge of exhaust gases and wastes, or discharge of flue gases from Units 1 and 2 to the carbon capture facility, and the generation and export of electricity, including operation of SNCR. LCP454 shall only be operated for start-up and grid support roles including black start. Limited to 500 hours per year as specified in condition 2.3.5. Wastes as specified in Table S2.2
AR2	Section 4.2 Part A(1)(a)(iv) Producing inorganic chemicals such as – salts	Operation of Flue Gas Desulphurisation (FGD) units	Receipt of limestone to dispatch of gypsum off site and discharge of wastewater to the wastewater treatment plant.
AR3	Section 5.4 Part A(1)(a)(ii): Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day - physico-chemical treatment	Treatment of wastewater from flue gas desulphurisation plant;	Discharge of wastewater from the FGD process to the discharge from site. This activity shall cease following compliance with pre-operational condition reference 45 in schedule 1, table S1.4
		Treatment of wastewater from the treatment of the flue gas from Units 1 and 2	Discharge of wastewater to the cooling water system This activity shall only commence following compliance with pre-operational condition reference 45 in schedule 1, table S1.4

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR4	Section 3.5 Part B (f): Loading, unloading or storing pulverised fuel ash in bulk prior to further transportation in bulk	Pulverised fuel ash (PFA) handling and storage	Removal of ash from the combustion process to despatch from site.
AR5	Section 4.8 Part B (a)(iii): The storage in tanks of anhydrous ammonia	The storage and use of anhydrous ammonia over 100 tonnes storage capacity.	For use with abatement equipment (SNCR) fitted to any or all of six main units discharging to air via point A1
AR6	Section 5.4 Part A(1)(b)(iii): treatment of slags and ashes	Treating pulverised fuel ash (PFA)	From receipt of PFA from the combustion process to dispatch off site. Wastes as specified in Table S2.3
AR7	Section 5.4 Part A(1)(b)(iii): treatment of slags and ashes	Treating pulverised fuel ash (PFA)	From receipt of PFA from Barlow Mound (BW9395IF) to slurrification and use as a mitigant against boiler corrosion at a rate of 15t/hr per unit to dispatch off site. Wastes as specified in Table S2.3
AR8	Section 6.10 Part A(1)(a): Capture of carbon dioxide streams from an installation for geological storage	Capture of carbon dioxide from an installation for the purposes of geological storage. Operation of two carbon capture plants involving the pre-treatment and treatment of exhaust gases from Units 1 and 2 in the capture plants using an amine-based solvent to extract CO_2 followed by compression, oxygen removal and dehydration of the CO_2 for off-site transportation and long-term storage, and release of CO_2-abated flue gas to atmosphere.	From receipt of exhaust gases from Units 1 and 2 into each of the carbon capture plants to the conditioning of captured CO_2 prior to export of CO_2 from the installation; release to atmosphere of treated exhaust gases from emission point A1; or venting of CO_2 from emission point agreed in accordance with pre-operational condition PO38 in table S1.4 in the event of other than normal operating conditions (OTNOC) Only MHI KS21 shall be used as the solvent to capture CO_2
AR9	Section 4.2 Part A(1)(a)(i): Production of inorganic chemicals such as - hydrogen	Production of hydrogen gas by the electrolysis of water in four units for use in the removal of oxygen from the captured CO_2.	From the receipt of raw materials to the production of hydrogen gas using an electrolyser, to temporary storage in the storage drum, solely for use within the process for CO_2 deoxygenation prior to export.
Directly Associated Activity			
AR10	Directly associated activity	Fuel storage	From receipt of raw materials to dispatch for use
AR11	Directly associated activity	Water treatment	From receipt of raw materials to dispatch to effluent or water system.

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR12	Directly associated activity	The use of water from the River Ouse in the process, primarily to condense steam.	The pumping, filtering and chemical treatment of the water, its use in the condensers and cooling water system to the discharge of the water back to the River Ouse.
AR13	Directly associated activity	Reverse Osmosis	From the use of cooling water from the North Dock cooling circuit flumes to the production of high-quality water for use with the SNCR's, to the return of reject water to the North Dock flumes to be discharged via the cooling water purge.
AR14	Directly associated activity	Surface water drainage	Handling and storage of site drainage until discharge to the site surface water system.
AR15	Directly associated activity	Storage and handling of amine solvent and other reagents for use at the carbon capture facility.	From receipt of raw materials to dispatch for use.
AR16	Directly associated activity	Storage of waste amine solvent and acid wash water generated at the carbon capture plants.	From generation of waste materials to dispatch off-site for disposal.
AR17	Directly associated activity	Operation of two steam turbines	From receipt of steam from LCP91, to generation and distribution of heat, steam and power for use within the carbon capture plant
AR18	Directly associated activity	High pressure compression plant to compress CO_2 prior to exporting it to an offshore storage facility.	From receipt of treated CO_2 to compression of CO_2 to dispatch from site.
AR19	Directly Associated Activity	Solvent reclaiming	From receipt of used solvent in the PCC plants thermal reclaimer units to discharge for re-use in the absorbers or for storage of waste before off-site disposal.

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	Documents 3 and 4 of application VP3530 and material referenced in these sections (covering application response to sections 2.1 and 2.2 of application) except that the installation boundary shall be as defined by Figure 2.1(part) in Schedule 2 as reproduced in section 2 of this permit (V004) and monitoring shall be as defined in section 4 of the permit where this differs from B2.10 (Monitoring) in document 3 of application VP3530	31/03/06 except modified V004 boundary plan Figure 2.1 supplied 20/01/2011

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Schedule 4 Notice Response	Response to question D4 detailing revised installation boundary Fig 4.2 a) – further revised to exclude Cemex plant area as Fig 4.2 b)	22/08/2006
Schedule 4 Notice Response	Response to question D10 part 10.3 detailing revised procedure for reprocessing acid clean waters (further conditions in S1.3 also apply)	22/08/2006
Schedule 4 Notice Response	Response to question D27 part 5 detailing future use of petroleum coke. (further conditions in S1.3 and S1.4 also apply)	22/08/2006
Document 14 –Raw Materials	14.4.2, Table 14.2 and preceding paragraph "The coals burnt at Drax generally fall into the broad specification given in Table 14.2 although fuels outside these specifications can be burnt after the consideration of the technical and environmental implications"	31/03/2006
Fig 8-1 surface water detail	All	07/03/2007
Fugitive emissions plan	All	25/05/2008
Variation application EA/EPR/VP3530LS/ V003	Application details to burn Processed Fuel Oil (PFO)	21/01/2010
Substantial Variation application EA/EPR/VP3530LS/ V004	Part B of the application form	Duly made 11/05/2010
Schedule 5 notice (1) for extra information for V004	Operator responses to extra information questions	Responses dated 12/07/2010
Schedule 5 notice (2) for extra information for V004	Further Operator responses to extra information questions	Responses dated 14/09/2010
Revised plan of installation – Fig 2.1 (part) - boundary modified as per information in application VP3530LS/V004	Revised boundary plan submitted by applicant including extra area near Ouse REP	Version as submitted on 20/01/2011
Application for variation EPR/VP3530LS/V007	Sections 2, 3, 4, 5, 6, 7, 9, 10, 11 & 14 of the "Provision of information for Unit conversion to Biomass at Drax Power Station July 2013" Answer to questions 1, 3, in further information letter dated 18th September Answer to question 4 in further information letter dated 14th October	Duly made 14/10/2013
Schedule 5 notice (20/11/13) for extra information for V007	Operator responses to extra information questions 1, 2, 3, 4, 5 and 9	Responses dated 12/07/2010
	Application document entitled 'Unit 3 Variation Technical Summary'	07/03/2014

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application for variation EPR/VP3530LS/V008	E-mail from Operator to Environment Agency confirming: a) the fuelling scenarios (envelopes) under both potential modes of operation b) that the maximum coal sulphur content under operational mode 1 will be 3.6% c) that only coal from the installation's normal fuel diet will be used under both modes of operation d) that the maximum chlorine content of biomass fuel used during the trial will not exceed 0.04%	23/04/2014
Application for variation EPR/VP3530LS/V009	"Application for variation to enable trial to assess Selective Non-Catalytic Reduction (SNCR) techniques for a coal unit and a biomass unit supporting information."	22/05/2014
Variation Application to carry out a newly prescribed activity	Parts 3 and 4 of "Administrative Variation – September 2014 Supporting Information"	16/02/2015
Response to regulation 60(1) Notice – request for information dated 31/10/14	Compliance route(s) and operating techniques identified in response to questions 2 (compliance route), 4 (configuration of each LCP), 5 (net thermal input of each LCP), 6 (MSUL and MSDL) and 7 (sector approach) Application for Variation to Operate Selective Non-Catalytic Reduction on up to Six Generating Units at Drax Power Station (all parts).	Received 27/10/2015
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 14/5/15	Compliance route(s) and operating techniques identified in response to questions 5 (net thermal input of each LCP) and 6 (MSUL and MSDL).	Received 28/05/2015
Application for Variation EPR/ VP3530LS/V012	Application for variation to re-burn Furnace Bottom Ash, to install a Reverse Osmosis Plant and convert remaining coal combustion units to biomass.	01/11/2016
Request from the Operator via email for a further requirement to be included in Variation EPR/ VP3530LS/V012	Application for variation to introduce slurried Pulverised Fuel Ash sourced from Barlow Mound into biomass fired boilers in order to mitigate impacts of corrosion slagging and fouling.	01/12/2016
Response to Schedule 5	Confirmed use of advantaged fuels e.g. pond fines, outlined metals screening assessment, and information water usage for Reverse Osmosis plant.	08/12/2016
Response to email RFI dated 22/12/2016	Confirmed the make up of advantaged fuels and clarified that 'pond fines' fit within the original coal specification ranges.	03/01/2017

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Response to regulation 61(1) Notice – request for information dated 01/05/18 EPR/VP3530LS/V018	Compliance and operating techniques identified in response to the BAT Conclusions for large combustion plant published on 17th August 2017.	31/10/2018
Additional information in response to regulation 61(1) Notice EPR/VP3530LS/V018	Compliance and operating techniques identified in response to BAT Conclusions 2, 3, 4, 5, 6, 9, 12, 13, 14, 15, 16, 17, 19, 23 and 24.	26/09/2019
Additional information in response to regulation 61(1) Notice EPR/VP3530LS/V018	Compliance and operating techniques identified in response to BAT Conclusions 4, 5, 17 and 19	20/12/2019
Additional information in response to regulation 61(1) Notice EPR/VP3530LS/V018	Compliance and operating techniques identified in response to BAT Conclusions 4, 5, 17 and 19	16/01/2020
Additional information in response to regulation 61(1) Notice EPR/VP3530LS/V018	Details regarding how the OCGT will comply with the BAT conclusions.	24/02/2020
Response to regulation 61(1) Notice – request for information dated 01/05/18 EPR/VP3530LS/V018	Compliance route and electrical efficiency of the plant	30/03/2020
Application EPR/VP3530LS/V019	Sections 2, 3 and 5 of document “Application for a Minor Technical Variation to Additional Local Exhaust Vents at Drax Power Station VP3530LS”, reference 311019/SF/KBW01	11/11/2019
Application EPR/VP3530LS/V020	Sections 3.1 – 3.6 of document “Variation to Alter W1 Discharge Temperature Limit Between 1 April 30 September and for Permanent Approval to operate Auxiliary Boiler 6 for Drax Power Station (VP3530LS)”	03/07/2020
Application EPR/VP3530LS/V022	Second Stage Information Report: Sections: • 3.0 Additional Best Available Techniques for emission to air from PCC • 3.1 Aerosol and Droplet control • 4.0 Carbon Dioxide High Pressure Compression and Venting • 5.0 PCC Operation and Control	12/05/2023

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/VP3530LS/V022	Supporting Information Report V2.0 Sections: • 4.0 Units 5 &6 • 5.0 Biomass Furnace Bottom Ash Handling • 7.0 BAT for Control of Emissions to Air from PCC, excluding 7.12 Proposed Air Emission Limit Values, 7.13 Mass Emission Releases, 7.14 Air Dispersion Modelling • 8.0 Monitoring • 9.1.3 Thermal integration • 9.2 Operational Control • 10.0 Carbon Dioxide Compression • 11.0 Chemical and Solvent Storage, Load and Filling Systems • 13.0 Cooling • 14.0 Discharges to water	24/05/2023
Response to schedule 5 notice No2 dated 23/10/2023	Schedule 5 Notice Part 2 Response version 2.0: 1. Emission points 2. Ash handling 3. Water emissions and Appendix A WWTP Block diagram 31/03/2024 4. c) confirmation that treated effluent will be re-circulated in the cooling water Appendix B Drax BECCS Cooling water balance 31/03/24 10. Bunding 13. Primary and secondary containment arrangements for the amine solvent 16. Amine solvent recovery process	09/04/2024
Response to schedule 5 notice No3 dated 11/07/2024	Schedule 5 Notice Part 3 Response: 1. Storage and transfer of amine solvent 2. Storage for raw materials 3. Treatment of carbon dioxide	13/09/2024
Response to schedule 5 notice No1 dated 27/07/2023	Schedule 5 Notice Part 1 Response: • Appendix B Air Emissions Risk Assessment: Section 4.2 Emission parameters • Appendix C Specification of Emissions for Control by Emission Limits: Section 3.2 Speciated emissions under Drax flue gas conditions	29/11/2024
Response to RFI dated 10/10/2024	Solvent storage	08/01/2025

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1D to IC19D are complete.		
IC20D to IC28D (EPR/VP3530LS/V004) are no longer required.		
IC29D to IC33D are complete.		
IC34D	The Operator has undertaken a review of the existing screening arrangements with reference to the Eels (England and Wales) Regulations 2009 (SI 2009/3344) and the Environment Agency ‘’Safe Passage for Eel’’ Regulatory Position Statement version 1 dated July 2012 (and as amended February 2013) in response to Improvement Programme reference IC29D. The Environment Agency has determined that the site does not comply with the requirements for safe passage of eel and the Operator is now required to complete a cost benefits appraisal of best available technique with reference to the Environment Agency ‘’Safe Passage for Eel: Guidance on Exemptions’’ as a screening tool. If the Cost Benefit Assessment shows that the Benefits are greater than the costs by a factor of 1.5 or more, then the Operator shall submit to the Environment Agency for review a report setting out the costs and the technical and economic feasibility to introduce the improvements to achieve best available technique. If the Cost Benefit Assessment shows that the Benefits are not greater than the costs by a factor of 1.5 or more, then the Operator shall, with reference to the Environment Agency ‘’Safe Passage for Eel: Guidance on exemptions, assess which alternative measure, or combination of alternative measures, could be implemented under a case of a conditioned Exemption. The Operator shall submit a report to the Environment Agency setting out the costs and the technical and economic feasibility of implementing their proposed alternative measure or measures. In all cases, the submission shall contain relevant timescales in accordance with the Safe Passage for Eel Regulatory Position Statement version 1 dated July 2012 (as amended 2013). The proposals shall be implemented following written approval of the Environment Agency. Whilst undertaking this Improvement Condition, the Operator shall be operating under exemption from the requirements to place eel screen diversion structures pursuant to Regulation 17(5)(a) of the Eels (England and Wales) Regulations 2009. The exemption will remain in place until the Environment Agency has provided written approval that the Improvement Condition has been deemed complete.	Updated response received 08/08/2018 and proposals accepted by Environment Agency. Implementation timescales to be agreed.
IC35D to IC42D are complete		
IC43D and IC44D are complete (EPR/VP3530LS/V014)		
IC45Da and IC45Db are complete (ERP/VP3530LS/V016 – BECCS Trial)		

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC46D, IC48D and IC49D are complete or no longer required (EPR/VP3530LS/V018 – BREF Review)		
IC47D	BAT Conclusion 4 The operator shall submit a report demonstrating sufficient stability of emissions of mercury and halogen compounds (chlorine and fluorine compounds) in accordance with the latest agreed version of the Protocol for LCP BREF Compliance with trace species monitoring requirements at coal fired power plant.	Within 12 months of operation of coal firing plant
IC50D is complete (EPR/VP3530LS/V019 – Increase in permit boundary area)		
EPR/VP3530LS/V022 – Addition of carbon capture plant		
IC51D	**Calibration and verification testing** The operator shall submit a summary report in writing to the Environment Agency to confirm the results of calibration and verification testing show that the performance of the Continuous Emission Monitors for parameters as specified in Table S3.1a comply with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3. The report shall include the results of calibration and verification testing.	Initial calibration report to be submitted to the Environment Agency within 3 months of completion of commissioning of each carbon capture plant. Full summary evidence compliance report to be submitted within 18 months of completion of commissioning of each carbon capture plant.
IC52D	**Monitoring location standards** During commissioning, the operator shall carry out tests to assess whether the new air emissions monitoring locations between the absorber and the main stack as provided in accordance with reference PO32 in table S1.4 meet the requirements of BS EN 15259 and supporting Method Implementation Document (MID). A report shall be submitted in writing to the Environment Agency for the Environment Agency's written approval setting out the results and conclusions of the assessment including where necessary proposals for improvements to meet the requirements. Where notified in writing by the Environment Agency that the requirements are not met, the operator shall submit proposals or further proposals for rectifying this in accordance with the time scale in the notification. The proposals shall be implemented in accordance with the Environment Agency's written approval.	Report to be submitted to the Environment Agency within 3 months of completion of commissioning of each carbon capture plant.

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC53D	**Commissioning** The operator shall submit a report in writing to the Environment Agency for the Environment Agency's written approval on the commissioning of the carbon capture plant. The report shall summarise the environmental performances of the carbon capture plant as set out in the commissioning plan required by pre-operational condition PO29 in table S1.4 of this permit. The report shall include: • A summary of the environmental performance of the carbon capture plants as installed against the design parameters and risk assessments set out in the application and updated in response to the pre-operational conditions in this permit; and • A review of the performances of the carbon capture plant against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions and confirmation that the Environmental Management System (EMS) has been updated accordingly.	Within 3 months of the completion of commissioning of each carbon capture plant.
IC54D	**Carbon capture performance** The operator shall submit a report in writing to the Environment Agency for the Environment Agency's written approval detailing the carbon capture efficiency of the Carbon Capture Plant under normal operating conditions (calculated using the methodology as approved in accordance with pre-operational condition PO33 in table S1.4 of this permit) averaged over one year of operation as specified in table S3.4 (performance monitoring) of this permit. Should the carbon capture efficiency during normal operating conditions be reported to be less than the design capture performance specification of 95%, the operator shall carry out an analysis of the issues affecting the performance of the plant with respect to achievement of the 95% carbon capture rate and either: • Submit written proposals for remedial actions designed to improve capture efficiency to the Environment Agency for approval; or • Provide an acceptable justification to the Environment Agency that a 95% capture rate is not reasonably achievable, and that no further remedial action is to be taken. The operator shall implement any proposals identified within the report in accordance with the Environment Agency's written approval and within the approved timescales.	Within 15 months of the completion of commissioning of each carbon capture plant.

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC55D	**Amine solvent degradation** The operator shall submit a report in writing to the Environment Agency for the Environment Agency's written approval on the degradation of absorber solvent quality. The report shall review the findings from the monitoring of absorber solvent quality over 12 months of operation, including but not limited to the monitoring carried out in accordance with table S3.4 of this permit. The report shall include: • An investigation into the reasons for solvent degradation and how degradation affects the performance of the plant over time; • A review of the options for reducing the rate of solvent degradation; and • Proposals for the implementation of any measures identified from the review. The proposals shall be implemented in accordance with Environment Agency's written approval.	Within 15 months of the completion of commissioning of the carbon capture plant.
IC56D	**Air emissions risk assessment (Carbon capture plant)** The operator shall submit a report in writing to the Environment Agency for the Environment Agency's written approval. The report must contain an emissions to air risk assessment in line with the Environment Agency's guidance which is based on sampled and monitored emissions data from emission point A1 in table S3.1a. Emissions monitoring data obtained during the first year of operation shall be used to compare the actual emissions with those assumed in the impact assessment submitted with the permit application EPR/VP3530LS/V022 ('Air Emissions Risk Assessment' dated November 2024, 'BECCS Environmental Permit Variation Application Schedule 5 Response: Q4' dated July 2025 and 'Drax Power Station Environmental Permit Variation V022 Schedule 5 Notice Part 5', dated 25/02/2026). For any parameters not included in the original impact assessment, or those showing to be at concentrations higher than those assumed in the impact assessment submitted in the application, an assessment shall be made of the impact to human health and habitats of each parameter using the 'Air emissions risk assessment for your environmental permit - GOV.UK (www.gov.uk)' guidance. Where Environmental Assessment Levels (EALs) for emitted substances are not available on the current published EAL list on gov.uk the operator should propose a new EAL. To derive a new EAL, the operator should follow the Environment Agency's published guidance on air emissions risk assessments. Where the updated environmental risk assessment shows a risk of causing exceedances of the EALs, the operator shall propose remedial actions to reduce the emissions of these pollutants to acceptable levels approved in writing by the Environment Agency. The operator must implement the proposals in the report in line with the timescales in accordance with the Environment Agency's written approval.	Within 15 months of commencement of operation of each carbon capture plant.

Table S1.4 Pre-operational measures		
Reference	**Operation**	**Pre-operational measures**
Pre-operational measures 1) to 6) are complete		
Pre-operational measures 7) to 23a) are no longer required (EPR/VP3530LS/V004)		
Pre-operational measures 24) and 25) are complete (EPR/VP3530LS/V008 for Unit 3 co-combustion trial)		
Pre-operational measures 26) to 28) are complete or not required (EPR/VP3530LS/V014)		
EPR/VP3530LS/V022 – Addition of carbon capture plant and other changes		
29)	Commissioning of each carbon capture plant	**Commissioning plan** At least 3 months prior to the commencement of commissioning of each carbon capture plant, the operator shall submit a written commissioning plan, including timelines for completion, to the Environment Agency for the Environment Agency's written approval. The commissioning plan shall include, but not be limited to: • The timelines for the commissioning and the expected durations of these activities. • The expected emissions to the environment during the different stages of commissioning; risk assessment demonstrating that the environmental risks are not significant throughout all the phases of commissioning; the expected durations of commissioning activities and the actions to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. • A Commissioning Monitoring Plan. • A methodology for approval to demonstrate the carbon capture efficiency of the plant. The approved methodology shall be used to demonstrate the carbon capture efficiency of the plant as part of the commissioning activities, and, after the commissioning phase, for process monitoring and reporting purposes in compliance with the conditions of the permit. • A methodology for approval for quantifying total mass of CO_2 emissions during short duration venting that may be required during the start-up sequence of the carbon capture plant and during other than normal operating conditions. The commissioning activities shall be carried out in accordance with the commissioning plan approved by the Environment Agency.
30)	Commissioning of each carbon capture plant	**Process monitoring methods** Following the completion of the final design of the carbon capture plant and at least 6 months prior to the commencement of commissioning the operator shall submit to the Environment Agency for the Environment Agency's written approval proposed methodologies for the following process monitoring requirements for absorber amine solvent quality as required in table S3.4 of this permit: • percent active amine • carbon dioxide loading (rich amine) • heat stable salts • soluble iron concentration (rich and lean amine) • colour • degradation products

Table S1.4 Pre-operational measures		
Reference	**Operation**	**Pre-operational measures**
31)	Commissioning of each carbon capture plant	**Carbon capture plant other than normal operating conditions (OTNOC) plan** Following the completion of the final design of the carbon capture plant and prior to the commencement of commissioning of each carbon capture plant, the operator shall submit to the Environment Agency for the Environment Agency's written approval a carbon capture plant OTNOC management plan. The plan shall include: (i) Any potential 'other than normal operating conditions (OTNOC)' for the carbon capture plant, taking into consideration both internal and external causes of OTNOC. (ii) Details of measures to: • minimise the occurrence of OTNOC that are within the operator's control; and • reduce the impact of all OTNOC events. (iii) Proposals for reviewing and optimising capture performance periodically so capture rates are as high as reasonably practicable during these periods. The OTNOC plan shall be included in the EMS.
32)	Commissioning of each carbon capture plant	**Monitoring standards** At least six months prior to (or other date agreed in writing with the Environment Agency) the commencement of commissioning of the carbon capture plant, the operator shall submit a report in writing to the Environment Agency, and obtain the Environment Agency's written approval for it, specifying arrangements for continuous and periodic monitoring of emissions to air from the carbon capture emission point to comply with EN 15259 and Environment Agency guidance notes on monitoring stack emissions measuring locations, techniques and standards for periodic monitoring and for quality assurance of CEMS: Monitoring stack emissions: carbon capture plants with solvent-based abatement - GOV.UK Monitoring stack emissions: techniques and standards for periodic monitoring - GOV.UK Monitoring stack emissions: quality assurance of continuous monitoring - GOV.UK Monitoring stack emissions: measurement locations - GOV.UK The report shall include the following: • Details of monitoring locations, access and working platforms. • Evidence that CEMS are MCERTS certified at the appropriate range. • Evidence that data handling and acquisition systems are MCERTS certified. • Methods and standards for periodic monitoring. • Procedures for the quality assurance of CEMS, which includes evidence of completion of CEMS' functional tests and setting up quality assurance level (QAL) 3 checks, prior to completing a QAL2.

Table S1.4 Pre-operational measures		
Reference	**Operation**	**Pre-operational measures**
33)	Commissioning of each carbon capture plant	**Carbon capture performance** At least 3 months prior to the commencement of commissioning, the operator shall submit the following methodologies to the Environment Agency for the Environment Agency's written approval: • A methodology to demonstrate the carbon capture efficiency of the plant. The approved methodology shall be used to demonstrate the carbon capture efficiency of the plant as part of the commissioning activities, and, after the commissioning phase, for process monitoring and reporting purposes in compliance with the conditions of the permit. • A methodology for quantifying total mass of CO_2 emissions during short duration venting that may be required during the start-up sequence of the carbon capture plant and during other than normal operating conditions.
34)	Commissioning of each carbon capture plant	**Storage and containment infrastructure** Following the completion of the final design for the carbon capture plant, and prior to the commencement of commissioning operations, the operator shall submit a report in writing on the containment infrastructure to the Environment Agency for the Environment Agency's written approval. The report shall include information on the detailed design and construction specification of the primary, secondary and tertiary containment infrastructure associated with the carbon capture plant. The report shall demonstrate that the containment systems have been designed and specified by suitably qualified and experienced engineers to comply with the requirements of CIRIA Report 736 – 'Containment systems for the prevention of pollution' 736, addressing the key elements which include: • updating the risk assessment and classification to identify the class of containment required; • developing the specification and design of the primary, secondary and tertiary containment appropriate to the class of containment, taking into account CIRIA 736 guidance on bunding, further containment and transfer systems; • demonstrating that design has taken into account the capacity requirements, including the capacity of the inventory to be contained, allowance for rainfall, firefighting and cooling water provision; and • demonstrating that the isolation and operating philosophy for the secondary and tertiary containment infrastructure prevents accidental emissions to the environment. The operator cannot begin the commissioning operations of the PCC plants, including any associated activities, until it has obtained approval in writing from the Environment Agency to this pre-operational condition.

Table S1.4 Pre-operational measures		
Reference	**Operation**	**Pre-operational measures**
35)	Commissioning of each carbon capture plant	**Noise Impact Assessment (NIA)** Following the completion of the final design of the carbon capture plant and at least 6 months prior to the commencement of commissioning, the operator shall submit an updated NIA to the Environment Agency for the Environment Agency's written approval. The revised NIA shall be informed by updated and final noise emissions data provided by equipment manufacturers during the detailed engineering design of the plant, taking into account the detailed noise attenuation measures included in the design according to BAT. The revised NIA shall be carried out by an experienced and suitably qualified person (i.e. a noise consultant with an appropriate qualification accredited by the Institute of Acoustics), in accordance with the procedures given in BS4142:2014 (Rating industrial noise affecting mixed residential and industrial areas) and BS7445: 2003 (Description and measurement of environmental noise).
36)	Commissioning of each carbon capture plant	**The leak detection and repair (LDAR) and fugitive emissions minimisation and monitoring plans** Following the completion of the final design of the carbon capture plant and prior to the commencement of commissioning of the carbon capture plant, the operator shall submit to the Environment Agency for the Environment Agency's written approval, the LDAR and fugitive emissions minimisation and monitoring plans for the carbon capture plant, solvent and hydrogen. The LDAR and fugitive emissions monitoring plans shall be included in the EMS.
37)	Commissioning of each carbon capture plant	**CO_2 compression system** Following the completion of the final design of the carbon capture plant and prior to the commencement of commissioning of the carbon capture plant, the operator shall submit to the Environment Agency for assessment and written approval, details of the system to be used to compress CO_2.

Table S1.4 Pre-operational measures		
Reference	**Operation**	**Pre-operational measures**
38)	Commissioning of each carbon capture plant	**CO_2 venting assessment** Following the completion of the final design of the carbon capture plant and at least 12 months prior to the commencement of commissioning, the operator shall submit to the Environment Agency for the Environment Agency's written approval a report that reviews and updates the outcomes of the CO_2 venting emissions to air risk assessment presented in the application EPR/VP3530LS/V022. This report shall include but not be limited to: • Confirmation of the vent location(s) and an updated drawing showing the location and reference of the vents; • Confirmation of the height and diameter of the vents; • Information on how modelling has been used to inform the process design and manage risks associated with CO_2 venting. This should include a description of the different potential venting scenarios; • Confirmation that the design is in line with industry best practice, such as that produced by the Energy Institute, or other equivalent guidance; • A description of the operating techniques that will minimise the risks associated with venting CO_2 to atmosphere and limit venting scenarios to those considered in their application; • A vent management plan which is in keeping with our published guidance on emerging techniques for post-combustion carbon capture and industry best practice, such as that produced by the Energy Institute, or other equivalent guidance.
39)	Commissioning of each carbon capture plant	**CO_2 dehydration** Following the completion of the final design of the carbon capture plant and prior to the commencement of commissioning of the carbon capture plant, the operator shall submit to the Environment Agency for the Environment Agency's written approval details of the methodology and substances to be used to dehydrate the captured CO_2.
40)	Commissioning of each carbon capture plant	**CO_2 monitoring** Following the completion of the final design of the carbon capture plant and prior to the commencement of commissioning of the carbon capture plant, the operator shall submit to the Environment Agency for the Environment Agency's written approval: • Details of the locations of monitoring points used to monitor CO_2 to determine capture rates; • Details of the monitoring of CO_2 quality, including location and methods, prior to storage and dispatch off-site.
41)	Commissioning of the hydrogen generation plant	**Hydrogen generation plant** Following the completion of the final design of the hydrogen generation plant and prior to the commencement of commissioning of the hydrogen generation plant, the operator shall submit to the Environment Agency for the Environment Agency's written approval, a report that includes: • A review of the final design and proposed operation of the hydrogen generating plant against the emerging techniques guidance: Hydrogen production by electrolysis of water: emerging techniques • An updated site layout plan that shows the location of the hydrogen generating plant and any emission points.

Table S1.4 Pre-operational measures		
Reference	**Operation**	**Pre-operational measures**
42)	Operation of the carbon capture plant	**Waste management plan** Prior to commencement of operation of the carbon capture plant, the operator shall submit to the Environment Agency for the Environment Agency's written approval a Waste Management Plan for the wastes arising from the operation of the carbon capture plant that includes, but is not limited to: • Details of the waste streams and quantities produced by the carbon capture process; • The hazardous properties associated with the waste streams; • Details of the storage for the waste streams, including segregation, containment and bunding as appropriate; • Details of the fate of the waste streams including disposal or recovery off-site; and • Confirmation that the Waste Management Plan for the wastes from the carbon capture activity has been included in the site's Environmental Management System
43)	Construction of each carbon capture plant	**Decommissioning Plan for the ash pits** Following completion of the final design of the carbon capture plant and prior to commencement of construction, the operator shall submit to the Environment Agency for the Environment Agency's written approval a Decommissioning Plan for ash pits 3, 4, 5 and 6 and details of the ash handling system and management for discharge of ash from Units 1 to 4 to ash pits 1 and 2.
44)	Commissioning of each carbon capture plant	**Site layout and drainage plans** Following the completion of the final design of the carbon capture plant, the operator shall submit the following plans to the Environment Agency: • The final site layout of the carbon capture plant and its associated infrastructure, including the CO_2 compressor, the hydrogen production plant, the wastewater treatment plant, solvent and other raw material storage and the storage areas for wastes generated by the carbon capture activity. • The site drainage system, taking account of the changes as a result of the installation of the carbon capture plant and its associated infrastructure.
45)	Prior to construction of carbon capture activity AR8	**Confirmation of carbon capture activity AR8** The operator shall confirm in writing to the Environment Agency that it is intended to carry out the carbon capture activity.

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 LCP91 Unit 1	200 MW; 30%	200 MW; 30%
A1 LCP91 Unit 2	200 MW; 30%	200 MW; 30%

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 LCP91 Unit 3	200 MW; 30%	200 MW; 30%
A1 LCP91 Unit 4	200 MW; 30%	200 MW; 30%
A1 LCP91 Unit 5	200 MW; 30%	200 MW; 30%
A1 LCP91 Unit 6	200 MW; 30%	200 MW; 30%
A2 LCP454 GT1	As soon as the gas turbine start-up is initiated	As soon as the gas turbine is off-load
A2 LCP454 GT2	As soon as the gas turbine start-up is initiated	As soon as the gas turbine is off-load
A2 LCP454 GT3	As soon as the gas turbine start-up is initiated	As soon as the gas turbine is off-load

Schedule 2 – Raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Heavy Fuel Oil	Not exceeding 1% sulphur w/w
Gas Oil or equivalent substitute to be approved in writing by the Environment Agency	Not exceeding 0.1% sulphur w/w
Processed Fuel Oil (added by variation EA/EPR/VP3530LS/V003)	As detailed in the Environment Agency document "Regulation of Waste Oil: Interim Arrangements" dated 1 August 2008 or as otherwise agreed in writing by the Environment Agency.
Biomass fuels	As defined in Article 3(31(a)) of the EU Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) and included in the application or otherwise agreed in writing with the Environment Agency, and not exceeding 0.3% sulphur w/w, or 8mg/kg arsenic.
Petroleum coke co-combusted with coal at a maximum 15% blend by weight. (Percentage to be calculated as a percentage of coal burnt in the same period expressed as a monthly installation average).	Within envelope specified in Schedule 4 response (dated 22/08/06) Table 16.1 (with As amendment as confirmed in letter dated 26/09/06 – NB to JP) unless otherwise approved in writing by the Environment Agency
Carbon capture solvent used for activity AR8	MHI KS21, formulation consistent with the emissions profile assessed in variation application EPR/VP3530LS/V022, Appendix C of response dated 29/11/2024 to schedule 5 No1.

Table S2.2 Permitted waste types and quantities for use as fuels	
Waste code	**Description**
Relevant exempt biomass waste code	As defined in Article 3(31(b)) of the EU Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) and included in the application or otherwise agreed in writing with the Environment Agency, and not exceeding 0.3% sulphur w/w, or 8mg/kg arsenic.
Relevant exempt waste code	Other fuels exempt from the requirements of Chapter IV of the EU Directive 2010/75/EU 2000/76/EC and included in applications or otherwise approved in writing by the Environment Agency.

Table S2.3 Permitted waste types and quantities for ash processing	
Waste code	**Description**
10	**Wastes from thermal processes**
10 01	**wastes from power stations and other combustion plants (except 19)**
10 01 01	bottom ash, slag and boiler dust (excluding boiler dust mentioned in 10 01 04)
10 01 02	coal fly ash
10 01 03	fly ash from peat and untreated wood

Schedule 3 – Emissions and monitoring

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	283 mg/Nm^3	Monthly mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	200 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	450 mg/Nm^3			
A1 [Point A1 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	247 mg/Nm^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	200 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	340 mg/Nm^3			

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	567 mg/Nm^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	400 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	900 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 91 Biomass fired boiler plant Note 1 (Units 1 and 2 from CC absorber)	160 mg/Nm^3	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan in Schedule 7]	Sulphur Dioxide	LCP No. 91Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	250 mg/Nm^3	Monthly mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	200 mg/Nm^3			

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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**
		LCP No. 91 Coal firing only boiler plant	350 mg/Nm^3			
A1 [Point A1 on site plan in Schedule 7]	Sulphur Dioxide	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	183 mg/Nm^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	165 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	220 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Sulphur Dioxide	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	500 mg/Nm^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	400 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	700 mg/Nm^3			

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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]	Sulphur Dioxide	LCP No. 91 Biomass fired boiler plant Note 1 (Units 1 and 2 from CC absorber)	100 mg/Nm^3	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	Dust	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	20 mg/Nm^3	Monthly mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	20 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	20 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Dust	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	15 mg/Nm^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	16 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	14 mg/Nm^3			

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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]	Dust	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	40 mg/Nm^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	40 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	40 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Dust	LCP No. 91 Biomass fired boiler plant Note 1 (Units 1 and 2 from CC absorber)	10 mg/Nm^3	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	Carbon monoxide	LCP No. 91 Biomass fired boiler plant (Units 1 and 2 from CC absorber)	400 mg/Nm^3	Yearly average	Continuous	CEN TS 17337
A1 [Point A1 on site plan in schedule 7]	Ammonia	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	10 mg/Nm^3	Yearly average or average over the sampling period	Continuous	BS EN 14181

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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**
		LCP No. 91 Biomass only fired boiler plant (Units 1 and 2 from CC absorber)	10 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Hydrogen chloride	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	23.5 mg/Nm^3	Yearly average	Continuous Note 2	CEN TS 17337
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	25 mg/Nm^3		Continuous	
		LCP No. 91 Coal firing only boiler plant	20 mg/Nm^3		Continuous Note 2	
A1 [Point A1 on site plan in schedule 7]	Hydrogen fluoride	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	3 mg/Nm^3	Average over the sampling period	At least once per year Note 2	CEN TS 17340
		LCP No. 91 Biomass firing only boiler plant (Units 1 and 2 from CC absorber)	<1 mg/Nm^3		At least once per year	
		LCP No. 91 Coal firing only boiler plant	7 mg/Nm^3		At least once per year Note 2	

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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]	Mercury	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 from CC absorber)	5 µg/Nm^3	Average over the sampling period	Continuous for coal Note 2 At least once per year for biomass	Generic EN standards and EN 14884 or EN 13211
		LCP No. 91 Biomass only fired boiler plant (Units 1 and 2 from CC absorber)	5 µg/Nm^3		At least once per year	
		LCP No. 91 Coal only fired boiler plant	4 µg/Nm^3		Continuous Note 2	
A1 [Point A1 on site plan in schedule 7]	Flow	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 burning biomass from CC absorber)	-	-	Continuous As appropriate to reference	EN ISO 16911
A1 [Point A1 on site plan in schedule 7]	Oxygen	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 burning biomass from CC absorber)	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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]	Water vapour	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 burning biomass from CC absorber)	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	Stack gas temperature	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 burning biomass from CC absorber)	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan in schedule 7]	Stack gas pressure	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 burning biomass from CC absorber)	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan in schedule 7]	As required by the Method Implementation Document for BS EN 15259	LCP No. 91 Coal and biomass fired boiler plant (Units 1 and 2 burning biomass from CC absorber)	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A1 [Point A1 on site plan in schedule 7] Note 3	Ammonia	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	10 mg/m^3	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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] Note 3	Total amines	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	4 mg/m^3 Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Ethylamine (CAS No. 75-04-7)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Methylamine (CAS No. 74-89-5)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Monoethanolamine (CAS No.141-43-5)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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] Note 3	Diethanolamine (CAS No.111-42-2)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Diethylamine (CAS No.109-89-7)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Dimethylamine (CAS No.124-40-3)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Ethyl ethanolamine (CAS No.110-7306)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 87

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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] Note 3	Ethyl methylamine (CAS No.624-78-2)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Piperazine (CAS No.110-85-0)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	N-Dimethylethylenediamine (CAS No.108-00-9)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Ethyl diethanolamine (CAS No.139-87-7)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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] Note 3	Total amides	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	1 mg/m^3 Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	N-(2-hydroxyethyl) acetamide (CAS No.142-26-7)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	N-(2-hydroxyethyl) formamide (CAS No.693-06-1)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Total nitrosamines	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	0.003 mg/m^3 Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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] Note 3	N-Nitrosomethylethylamine (CAS No.10595-95-6)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	N-Ethyl-N-(2-hydroxyethyl) nitrosamine (CAS No.13147-25-6)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	N-Nitrosodimethylamine (CAS No.62-75-9)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	1-Nitrosopiperazine (CAS No.5632-47-3)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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] Note 3	N-Nitrosodiethylamine (CAS No.55-18-5)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	N-Nitrosodiethanolamine (CAS No.1116-54-7)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	N-Nitrosomorpholine (CAS No.59-89-2)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	1,4-Dinitrosopiperazine (CAS No.140-79-4)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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] Note 3	Total nitramines	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	0.0005 mg/m^3 Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	2-(Ethylnitroamino) ethanol (CAS No. 217089-38-8)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	1-Nitropiperazine (CAS No.42499-41-2)	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	No limit set Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	Isokinetic impinger method based on EN ISO 21877 Notes 6 and 7
A1 [Point A1 on site plan in schedule 7] Note 3	Acetaldehyde	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	15 mg/m^3 Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	CEN TS 17638 Notes 6 and 7

Table S3.1a Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 abated mode and Units 3-6						
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] Note 3	Formaldehyde	CC absorber (LCP No 91 Units 1 and 2 burning biomass)	2 mg/m^3 Note 4	Average over the sampling period Note 5	Monthly, unless otherwise agreed with the Environment Agency following compliance with IC56D	CEN TS 17638 Notes 6 and 7

Note 1: No yearly limit for plant fired on coal operated for <1500 hours.

Note 2: The monitoring frequency specified is for the biomass fired boilers (boilers 1-4). For coal the operator intends to demonstrate sufficiently stable conditions in accordance with the requirements of IC47D. The agreed monitoring frequency for HCl, HF and Hg when burning coal shall be agreed through the completion of IC47D.

Note 3: Applies to each carbon capture plant on Unit 1 and Unit 2

Note 4: CC plants emission limits are normalised to reference conditions of temperature 273K, at a pressure of 101.3kPa and with an oxygen content of 6% dry.

Note 5: “average over the sampling period” means the average value of three consecutive measurements of at least 30 minutes each or as agreed in writing with the Environment Agency

Note 6: The monitoring standard or method shall be in accordance with our guidance (Monitoring stack emissions: carbon capture plants with solvent-based abatement - GOV.UK) and our standard monitoring guidance at: Monitoring stack emissions: techniques and standards for periodic monitoring - GOV.UK

Note 7: Isokinetic sampling shall be undertaken unless it is demonstrated that no mist or droplets are present at the monitoring location.

Table S3.1b Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 unabated mode and Units 3-6						
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. 91 Coal and biomass fired boiler plant	283 mg/Nm^3	Monthly mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	200 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	450 mg/Nm^3			
A1 [Point A1 on site plan in Schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 91 Coal and biomass fired boiler plant	247 mg/Nm^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	200 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	340 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	LCP No. 91 Coal and biomass fired boiler plant	567 mg/Nm^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	400 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	900 mg/Nm^3			

Table S3.1b Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 unabated mode and Units 3-6						
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. 91 Biomass fired boiler plant Note 1	160 mg/Nm^3	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan in Schedule 7]	Sulphur Dioxide	LCP No. 91Coal and biomass fired boiler plant	250 mg/Nm^3	Monthly mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	200 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	350 mg/Nm^3			
A1 [Point A1 on site plan in Schedule 7]	Sulphur Dioxide	LCP No. 91 Coal and biomass fired boiler plant	183 mg/Nm^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	165 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	220 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Sulphur Dioxide	LCP No. 91 Coal and biomass fired boiler plant	500 mg/Nm^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	400 mg/Nm^3			

Table S3.1b Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 unabated mode and Units 3-6						
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**
		LCP No. 91 Coal firing only boiler plant	700 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Sulphur Dioxide	LCP No. 91 Biomass fired boiler plant Note 1	100 mg/Nm^3	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	Dust	LCP No. 91 Coal and biomass fired boiler plant	20 mg/Nm^3	Monthly mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	20 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	20 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Dust	LCP No. 91 Coal and biomass fired boiler plant	15 mg/Nm^3	Daily mean of validated hourly averages	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	16 mg/Nm^3			
		LCP No. 91 Coal firing only boiler plant	14 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Dust	LCP No. 91 Coal and biomass fired boiler plant	40 mg/Nm^3	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
		LCP No. 91 Biomass firing only boiler plant	40 mg/Nm^3			

Table S3.1b Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 unabated mode and Units 3-6						
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**
		LCP No. 91 Coal firing only boiler plant	40 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Dust	LCP No. 91 Biomass fired boiler plant Note 1	10 mg/Nm^3	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	Carbon monoxide	LCP No. 91 Biomass fired boiler plant	400 mg/Nm^3	Yearly average	Continuous	CEN TS 17337
A1 [Point A1 on site plan in schedule 7]	Ammonia	LCP No. 91 Coal and biomass fired boiler plant	10 mg/Nm^3	Yearly average or average over the sampling period	Continuous	BS EN 14181
		LCP No. 91 Biomass only fired boiler plant	10 mg/Nm^3			
A1 [Point A1 on site plan in schedule 7]	Hydrogen chloride	LCP No. 91 Coal and biomass fired boiler plant	23.5 mg/Nm^3	Yearly average	Continuous Note 2	CEN TS 17337
		LCP No. 91 Biomass firing only boiler plant	25 mg/Nm^3		Continuous	
		LCP No. 91 Coal firing only boiler plant	20 mg/Nm^3		Continuous Note 2	
A1 [Point A1 on site plan in schedule 7]	Hydrogen fluoride	LCP No. 91 Coal and biomass fired boiler plant	3 mg/Nm^3	Average over the sampling period	At least once per year Note 2	CEN TS 17340

Table S3.1b Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 unabated mode and Units 3-6						
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**
		LCP No. 91 Biomass firing only boiler plant	<1 mg/Nm^3		At least once per year	
		LCP No. 91 Coal firing only boiler plant	7 mg/Nm^3		At least once per year Note 2	
A1 [Point A1 on site plan in schedule 7]	Mercury	LCP No. 91 Coal and biomass fired boiler plant	5 µg/Nm^3	Average over the sampling period	Continuous for coal Note 2 At least once per year for biomass	Generic EN standards and EN 14884 or EN 13211
		LCP No. 91 Biomass only fired boiler plant	5 µg/Nm^3		At least once per year	
		LCP No. 91 Coal only fired boiler plant	4 µg/Nm^3		Continuous Note 2	
A1 [Point A1 on site plan in schedule 7]	Flow	LCP No. 91 Coal and biomass fired boiler plant	-	-	Continuous As appropriate to reference	EN ISO 16911
A1 [Point A1 on site plan in schedule 7]	Oxygen	LCP No. 91 Coal and biomass fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1b Point source emissions to air - emission limits and monitoring requirements - Units 1-2 operating in CO_2 unabated mode and Units 3-6						
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]	Water vapour	LCP No. 91 Coal and biomass fired boiler plant	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on site plan in schedule 7]	Stack gas temperature	LCP No. 91 Coal and biomass 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. 91 Coal and biomass fired boiler plant	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan in schedule 7]	As required by the Method Implementation Document for BS EN 15259	LCP No. 91 Coal and biomass fired boiler plant	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
Note 1: No yearly limit for plant fired on coal operated for <1500 hours. Note 2: The monitoring frequency specified is for the biomass fired boilers (Units 1-4). For coal the operator intends to demonstrate sufficiently stable conditions in accordance with the requirements of IC47D. The agreed monitoring frequency for HCl, HF and Hg when burning coal shall be agreed through the completion of IC47D.						

Table S3.1c Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**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)	LCP No. 454 Gas turbines fired on gas oil	250 mg/Nm^3 Note 1	Daily average	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A2 [Point A2 on site plan in Schedule 7]	Sulphur dioxide	LCP No. 454 Gas turbines fired on gas oil	66 mg/Nm^3	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A2 [Point A2 on site plan in Schedule 7]	Dust	LCP No. 454 Gas turbines fired on gas oil	10 mg/Nm^3	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A2 [Point A2 on site plan in Schedule 7]	Carbon monoxide	LCP No. 454 Gas turbines fired on gas oil	-	-	Concentration by calculation every 2 years	Agreed in writing with the Environment Agency
A4	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Auxiliary boiler 4 fired on gas oil	200mg/Nm^3	Periodic	Every 3 years	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators Published 16 February 2021
	Carbon monoxide		No limit set			
A5	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Auxiliary boiler 5 fired on gas oil	200mg/Nm^3	Periodic	Every 3 years	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators Published 16 February 2021
	Carbon monoxide		No limit set			
A6	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	Auxiliary boiler 6 fired on gas oil	200mg/Nm^3	Periodic	Every 3 years	In line with web guide: Monitoring stack emissions: low

Table S3.1c Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
	Carbon monoxide		No limit set			risk MCPs and specified generators Published 16 February 2021
DG 1,2,3	CO/SO2/ NOx/dust	Small diesel generators (low use)	No limit set	-	-	-
OT 1-4	Fuel vapour	Oil tank farm north	No limit set	-	-	-
OT 5,6,7	Fuel vapour	Oil tank farm north	No limit set	-	-	-
LS 1-3 Lime storage silo vents	Dust	Filtered dust vents	No limit set	-	-	-
DB 1 Dust bunker vent	Dust	Filtered dust vents	No limit set	-	-	-
2KT 1-3 2000Te storage silo vents	Dust	Filtered dust vents	No limit set	-	-	-
GS 1- 8 FGD plant –gypsum slurry tank vents	Dust/condensation	Displacement air	No limit set	-	-	-
LSS 1-4 FGD plant – limestone slurry tank vents	Dust/condensation	Displacement air	No limit set	-	-	-
AV 1-6 FGD Absorber vents	Flue gas (on FGD shutdown)	Vents	No limit set	-	-	-
AP 1- 12 FGD Absorber purge vents	Flue gas	Vents	No limit set	-	-	-
CO 1- 6	Carbon dioxide	Generator CO2 purge	No limit set	-	-	-
T1-6	Oil vapour	Turbine bearings	No limit set	-	-	-

Table S3.1c Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
CB 1-26 Coal bunker house extract vents	Coal dust	Extracted ventilation air	No limit set	-	-	-
TH 1-3 Track hopper house extract vents	Diesel engine emissions from rail locomotives	Extracted ventilation air	No limit set	-	-	-
K 1-2 K pump de-dust filter units	Dust -PFA	Filtered dust vents	No limit set	-	-	-
BG 1	CO/SO2/ NO2 Particulate	Diesel generator – biomass prep plant	No limit set	-	-	-
2 vents on sample building 3	-	Extracted air from sample building 3	-	-	-	-
Vent on screenhouse 2	-	Extracted air from screenhouse 2	-	-	-	-
Vent on screenhouse 1	-	Extracted air from screenhouse 1 via vacuum system	-	-	-	-
Vent on ABC silos	-	Extracted air from ABC silos via vacuum system	-	-	-	-
TT1-1	Dust	Filtered dust vents	No limit set	-	-	-
TT1-2	Dust	Filtered dust vents	No limit set	-	-	-
TT4-1	Dust	Filtered dust vents	No limit set	-	-	-
TT4-2	Dust	Filtered dust vents	No limit set	-	-	-
TT4-3	Dust	Filtered dust vents	No limit set	-	-	-
TT4-4	Dust	Filtered dust vents	No limit set	-	-	-

Table S3.1c Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
Emission point reference and location as agreed in accordance with PO38	Carbon dioxide	CO_2 vent	-	-	-	-
Note 1: This is an industry benchmark emission level from reported industry performance documented in JEP report JEP17EMG02 / UTG/18/ERG/CT/773/R 'Maintaining the Emissions Performance of Open Cycle Gas Turbines that operate for less than 500 hours per year', October 2018.						

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** Note 1, Note 2, Note 3
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Flow	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	10 000 m^3/day	Day	Continuous Reported monthly as min max and average daily flow	Traceable to national standards
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	pH	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	-	Instantaneous	Continuous	BS EN ISO 10523

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** Note 1, Note 2, Note 3
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Temperature	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	-	Instantaneous	Continuous	Traceable to national standards
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Total organic carbon (TOC)	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	50 mg/l	Monthly spot sample	Monthly	Note 5
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Total Suspended Solids (TSS)	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	30 mg/l	Monthly spot sample	Monthly	ISO 17025:2017
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Fluoride	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	25 mg/l	Monthly spot sample	Monthly	Note 5

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** Note 1, Note 2, Note 3
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Sulphate	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	2.0 g/l	Monthly spot sample	Monthly	Note 5
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Sulphide	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	0.2 mg/l	Monthly spot sample	Monthly	Note 5
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Sulphite	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	20 mg/l	Monthly spot sample	Monthly	Note 5
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Chloride	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	-	Monthly spot sample	Monthly	ISO17025:2017

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** Note 1, Note 2, Note 3
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Arsenic	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	50 µg/l	Monthly spot sample	Monthly	Note 5
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Cadmium	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	5 µg/l	Monthly spot sample	Monthly	ISO17025:2017
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Chromium	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	50 µg/l	Monthly spot sample	Monthly	Note 5
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Copper	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	50 µg/l	Monthly spot sample	Monthly	ISO 17025:2017

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** Note 1, Note 2, Note 3
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Mercury	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	3 µg/l	Monthly spot sample	Monthly	Note 5
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Nickel	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	50 µg/l	Monthly spot sample	Monthly	ISO17025:2017
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Lead	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	20 µg/l	Monthly spot sample	Monthly	Note 5
W2 outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	Zinc	Outlet from FGD wastewater treatment or outlet from flue gas wastewater treatment plant Note 4	200 µg/l	Monthly spot sample	Monthly	Note 5
W1 before outfall to River Ouse after addition of W2	pH	Purge outfall	6-9	Instantaneous	Continuous Reported monthly as min max and average pH	BS EN ISO 10523

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** Note 1, Note 2, Note 3
W1 before outfall to River Ouse after addition of W2	Temperature	Purge outfall	30°C	99.9%ile of instantaneous (second) readings over a year.	Continuous Reported monthly as min max and average temperature	Traceable to national standards
W1 before outfall to River Ouse after addition of W2	Temperature	Purge outfall	32°C maximum	Instantaneous	Continuous Reported monthly as min max and average temperature	Traceable to national standards
W1 before outfall to River Ouse after addition of W2	Flow	Purge outfall	302 400 m^3/day	Day	Continuous Reported monthly as min max and average daily flow	Traceable to national standards
W1 before outfall to River Ouse after addition of W2	Total copper	Purge outfall	No limit set	Monthly average of weekly spot samples	Weekly analysed and reported monthly as monthly average	BS 6068
W1 before outfall to River Ouse after addition of W2	Copper (on filtered sample)	Purge outfall	No limit set	Monthly average of weekly spot sample OR other sampling / testing / reporting routine approved by the Environment Agency after completion of IC10D condition	Weekly analysed and reported monthly as monthly average	BS 6068
W1 before outfall to River Ouse	Total ammonia (as nitrogen)	Purge outfall (W1);	0.5 mg/l (As nitrogen) Unless otherwise confirmed in writing by the EA IC24D	Monthly average of weekly spot sample OR other sampling / testing / reporting routine approved by the Environment Agency in writing	Weekly analysed and reported monthly as monthly average	BS6068 or as agreed in writing by Environment Agency

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** Note 1, Note 2, Note 3
W1 on site plan in schedule 2 emission to River Ouse	Mercury and its compounds, expressed as mercury (Total Hg)	Purge outfall	0.005 mg/l	Monthly spot sample	Monthly	Note 5
W1 on site plan in schedule 2 emission to River Ouse	Cadmium and its compounds, expressed as cadmium (Total Cd)	Purge outfall	0.01 mg/l	Monthly spot sample	Monthly	BS 6068-2.89

Note 1: W1 is high volume flow generally well mixed - so flow proportional sampling not used.

Note 2: Testing methods shall be as above unless different methods are approved in writing by the Environment Agency.

Note 3: Testing on filtered samples except where specified in the table above.

Note 4: Outlet from flue gas wastewater treatment shall only apply if Activity AR8 is implemented and the FGD wastewater treatment is replaced

Note 5: Monitoring method to be agreed in writing with the Environment Agency.

Table S3.3 Surface water monitoring requirements				
Location or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Carr Dyke (Up Stream) as shown on Fig 8-1.	Aluminium, Antimony, Arsenic, Boron, Cadmium, Calcium, Chloride, Chromium, Electrical Conductivity, Fluoride, Magnesium, Manganese, Mercury, Molybdenum, pH, Potassium, Selenium, Sodium, Sulphate, TOC. TON, Vanadium.	Quarterly	In accordance with Environment Agency Guidance M18 unless other approved in writing by the Environment Agency	Any parameters reported at levels below limit of detection to be reviewed and deleted if approved in writing by the Environment Agency.

Table S3.3 Surface water monitoring requirements				
Location or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
Carr Dyke (Down Stream) as shown on Fig 8-1.	Aluminium, Antimony, Arsenic, Boron, Cadmium, Calcium, Chloride, Chromium, Electrical Conductivity, Fluoride, Magnesium, Manganese, Mercury, Molybdenum, pH, Potassium, Selenium, Sodium, Sulphate, TOC. TON, Vanadium.	Quarterly	In accordance with Environment Agency Guidance M18 unless other approved in writing by the Environment Agency	Any parameters reported consistently at levels below limit of detection to be reviewed and deleted if approved in writing by the Environment Agency.
Barlow Phase 1 discharge Grid ref **SE6593728146**	Copper Boron Molybdenum	Quarterly	BS 6068 (as for W1 copper - filtered samples)	Estimate annual total volume and provide details on methodology used for estimate.
Barlow Phase 2 discharge Grid ref **SE6585527434**	Copper Boron Molybdenum	During each period of discharge	BS 6068 (as for W1 copper - filtered samples)	Measured or estimated volume of discharge during each discharge period plus annual total volume and length of discharge periods (hours/dates) to be recorded provide details on methodology used for estimate.

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**
W1 purge outfall	Total suspended solids	Weekly	BS EN 872 Note 1	Analysed **weekly** and reported monthly as monthly average
Process water intake from River Ouse	Total suspended solids	Weekly	BS EN 872 Note 1	Analysed **weekly** and reported monthly as monthly average
Process water intake from River Ouse	Copper content (filtered)	Weekly	BS 6068 Note 1	Analysed **weekly** and reported monthly as monthly average

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**
Process water intake from River Ouse	Total copper	Weekly	BS 6068 Note 1	Analysed **weekly** and reported monthly as monthly average
W2 Discharge from FGD Wastewater treatment plant or Discharge from flue gas wastewater treatment plant Note 2	pH	Continuous	BS EN ISO 10523 Note 1	Reported monthly as min max and average pH
W2 Discharge from FGD Wastewater treatment plant or Discharge from flue gas wastewater treatment plant Note 2	Mercury and its compounds, expressed as mercury (Total Hg)	Monthly	BS EN 13506 Note 1	-
W2 Discharge from FGD Wastewater treatment plant or Discharge from flue gas wastewater treatment plant Note 2	Cadmium and its compounds, expressed as cadmium (Total Cd)	Monthly	BS 6068-2.89 Note 1	-
W2 Discharge from FGD Wastewater treatment plant or Discharge from flue gas wastewater treatment plant Note 2	Total copper	Monthly	BS 6068 Note 1	-
W2 Discharge from FGD Wastewater treatment plant or Discharge from flue gas wastewater treatment plant Note 2	Copper (on filtered sample)	Monthly	BS 6068 Note 1	-
W2 Discharge from FGD Wastewater treatment plant or Discharge from flue gas wastewater treatment plant Note 2	Chloride	Monthly	As in current edition of monitoring guidance (M18) Note 1	-

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**
W2 Discharge from FGD Wastewater treatment plant or Discharge from flue gas wastewater treatment plant Note 2	Nickel	Monthly	BS 6068 Note 1	-
W2 Discharge from FGD Wastewater treatment plant or Discharge from flue gas wastewater treatment plant Note 2	Vanadium	Monthly	BS 6068 Note 1	-
LCP 91, with Units 1-2 operating in CO_2 unabated mode and LCP454	Net electrical efficiency	After each modification which that could significantly affect these parameters	EN Standards or equivalent	-
LCP 91, with Units 1-2 operating in CO_2 abated mode	Net electrical efficiency	Once within 4 months of commissioning of the carbon capture plant on Units 1-2 and then after each modification which could significantly affect these parameters	EN Standards or equivalent	-

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**
Carbon capture performance	Carbon capture efficiency (%) during normal operation (Units 1-2 in CO_2 abated mode).	Continuous	Calculation by method traceable to national standards compliant with UK ETS, to be agreed in writing with the Environment Agency as part of PO33 in Table S1.4.	Instantaneous and annual average Carbon Capture Efficiency to be monitored for the CO_2 absorber stage. Annual average Carbon Capture Efficiency to be averaged over 1 year of operations (from 1st of January) during normal operation. Excluding periods of OTNOC. OTNOC includes venting of CO_2 during periods of time when the CO_2 transport and storage system is not available due to causes external to the operations of the installation; and periods of start-up and shutdown.
Venting of CO_2 from Carbon Capture Plant – venting locations as identified in the assessment provided in response to PO38 in table S1.4.	- Duration of event - Total mass of CO_2 emissions (tonnes / event)	Event specific, total annual	Calculation by method traceable to national standards compliant with UK ETS, to be agreed in writing with the Environment Agency as part of PO33 in Table S1.4.	The operator shall identify the root cause of the venting event and consider ways to prevent or reduce the frequency and duration of reoccurrence.
Carbon dioxide metering package	Exported CO_2 mass flow (tonnes/hour)	Continuous	Mass flow metering traceable to national standards compliant with UK ETS, to be agreed in writing with the Environment Agency as part of PO33 in table S1.4	-

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**
Custody transfer point	Composition of exported CO_2, including but not limited to: - Water content - H_2 content	To be approved in writing by the Environment Agency	By method traceable to national standards compliant with UK ETS, to be agreed in writing with the Environment Agency as part of PO33 in table S1.4	CO_2 transport and storage system specification
Absorber amine solvent quality, activity AR8 in table S1.1	Percent active amine	1-2 days or otherwise agreed in writing with the Environment Agency	As agreed in writing with the Environment Agency in accordance with PO30 in table S1.4.	-
	Carbon dioxide loading (rich amine)	Every 2 days or otherwise approved in writing by the Environment Agency		
	Heat stable salts	Every day during the first month of operation then once per week, or otherwise approved in writing by the Environment Agency.		
	Soluble iron concentration – rich amine			
	Soluble iron concentration – Lean amine following stripper	Once per week, or otherwise approved in writing by the Environment Agency		
	Colour	Weekly, or otherwise approved in writing by the Environment Agency.		
	Degradation products – including but not limited to amines, nitrosamines, nitramines (in absorber amine prior to reclaiming and after reclaiming)	Monthly, or otherwise approved in writing by the Environment Agency	BS EN ISO 10695, or otherwise agreed in writing with the Environment Agency	

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**
Note 1: As specified or as method in current edition of M18 guidance unless otherwise approved in writing by the Environment Agency. Note 2: Discharge from flue gas wastewater treatment shall only apply if Activity AR8 is implemented and the FGD wastewater treatment is replaced				

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Oxides of nitrogen	A1	Every 3 months Every year	1 January, 1 April, 1 July, 1 October 1 January
Oxides of nitrogen	A2	Every 2 years	1 January
Sulphur dioxide	A1	Every 3 months Every year	1 January, 1 April, 1 July, 1 October 1 January
Sulphur dioxide	A2	Every 2 years	1 January
Dust	A1	Every 3 months Every year	1 January, 1 April, 1 July, 1 October 1 January
Dust	A2	Every 2 years	1 January
Carbon Monoxide	A1	Every year	1 January
Carbon Monoxide	A2	Every 2 years	1 January
Hydrogen Chloride	A1	Every 3 months Every year	1 January, 1 April, 1 July, 1 October 1 January
Hydrogen fluoride	A1	Annually	1 January
Mercury	A1	Annually	1 January
Ammonia	A1	Annually	1 January
Emissions to air – Units 1 and 2 in CO_2 abated mode Parameters as required by condition 3.5.1	A1	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 6 months	1 January, 1 July
Surface water monitoring Parameters as required by condition 3.5.1	Car Dyke, Barlow Phase 1 discharge, Barlow Phase 2 discharge	Every 6 months	1 January, 1 April, 1 July, 1 October
Process monitoring Parameters as required by condition 3.5.1	W1, Process water intake from River Ouse, W2	Every 6 months	1 January, 1 July

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

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Large combustion plant performance parameters for reporting to DEFRA		
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NOx for each LCP	Annually	t
Total Emissions to Air of SO2 for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr
Operating Hours as a five yearly rolling average for LCP91 (coal fired Units 5 and 6)	Annually	hr

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Performance parameters relating to Activity AR8, carbon capture		
Water usage	Annually	m^3
Energy usage	Annually	MWh
Efficiency of carbon dioxide capture (CO_2 Absorber stage) during normal operation	Annually	%
Total (thermal and electrical) energy use per tonne of carbon dioxide captured	Annually	kWth/tonne CO_2 captured kWe/tonne CO_2 captured
Amine solvent usage	Annually	tonnes
Total CO_2 captured and exported	Annually	tonnes
Total CO_2 vented to atmosphere	Annually	tonnes
Water consumption per unit carbon dioxide captured	Annually	m^3/t
Period each carbon capture plant is not available	Annually	No of occasions and cumulative hours for current calendar year

Table S4.4 Reporting Forms		
Media/ parameter	**Reporting format**	**Agency recipient**
Air & Energy	Form IED AR1 – SO_2, NO_x and dust mass emission and energy Form as agreed in writing by the Environment Agency.	National and Area Office
LCP	Form IED HR1 – operating hours Form as agreed in writing by the Environment Agency.	National and Area Office
Air	Form IED CON 1 – continuous monitoring. Form as agreed in writing by the Environment Agency.	Area Office
CEMs	Form IED CEM – Invalidation Log Form as agreed in writing by the Environment Agency.	Area Office
LCP	Form IED BD1 - Cumulative annual rolling malfunction and breakdown hours Form as agreed in writing by the Environment Agency.	Area Office
Air	Form IED MF1 – pollutant concentrations when during any day with malfunction or breakdown of abatement plant Form as agreed in writing by the Environment Agency.	Area Office
Air	Form IED PM1 - discontinuous monitoring and load. Form as agreed in writing by the Environment Agency.	Area Office
Air	Form IED PM2 – discontinuous monitoring and load. Form as agreed in writing by the Environment Agency.	Area Office
Air	Form IED PM3 – discontinuous monitoring and load. Form as agreed in writing by the Environment Agency.	Area Office
Resource Efficiency	Form REM1 – resource efficiency annual report Form as agreed in writing by the Environment Agency.	National and Area Office

Table S4.4 Reporting Forms		
Media/ parameter	**Reporting format**	**Agency recipient**
Water	Form water 1 or other form as agreed in writing by the Environment Agency Form as agreed in writing by the Environment Agency.	Area Office
Point source emissions to air (Activity AR8 and auxiliary boilers 4, 5 and 6)	Emissions to Air Reporting Form, or other form as agreed in writing by the Environment Agency, Version 2, February 2026	Area Office
Other performance parameters (Activity AR8)	Other Performance Parameters Reporting Form, or other form as agreed in writing by the Environment Agency, Version 2, February 2026	Area Office

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	
Substance(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	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

(d) 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	
Substance(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Part C Malfunction or Breakdown of LCP abatement equipment

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

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

Date	

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

** authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

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

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

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

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

“average of samples obtained during one year” means the average of the values obtained during one year of the periodic measurements taken with the monitoring frequency set for each parameter.

“biomass” means any of the following:

(a) products consisting of any vegetable matter from agriculture or forestry which can be used as a fuel for the purpose of recovering its energy content;

(b) The following waste:

(i) vegetable waste from agriculture and forestry;

(ii) vegetable waste from the food processing industry, if the heat generated is recovered;

(iii) fibrous vegetable waste from virgin pulp production and from production of paper from pulp, if it is co-incinerated at the place of production and the heat generated is recovered;

(iv) cork waste; and

(v) wood waste with the exception of wood waste which may contain halogenated organic compounds or heavy metals as a result of treatment with wood preservatives or coating, and which includes in particular such wood waste originating from construction and demolition waste.

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

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

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

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

“CAS number” means Chemical Abstracts Service and is the unique and unambiguous identifier for a specific substance.

“CEN” means Commité Européen de Normalisation.

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

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

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

“DLN” means dry, low NO_x burners.

“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 or background concentration limit.

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

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

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

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

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

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

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

“low polluting fuels” means 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.

“MCR” means maximum continuous rating.

“MHI KS21” means the trademarked amine-based solvent produced by Mitsubishi Heavy Industries.

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

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

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

“ncv” means net calorific value.

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

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

“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.

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

“year” means calendar year ending 31 December.

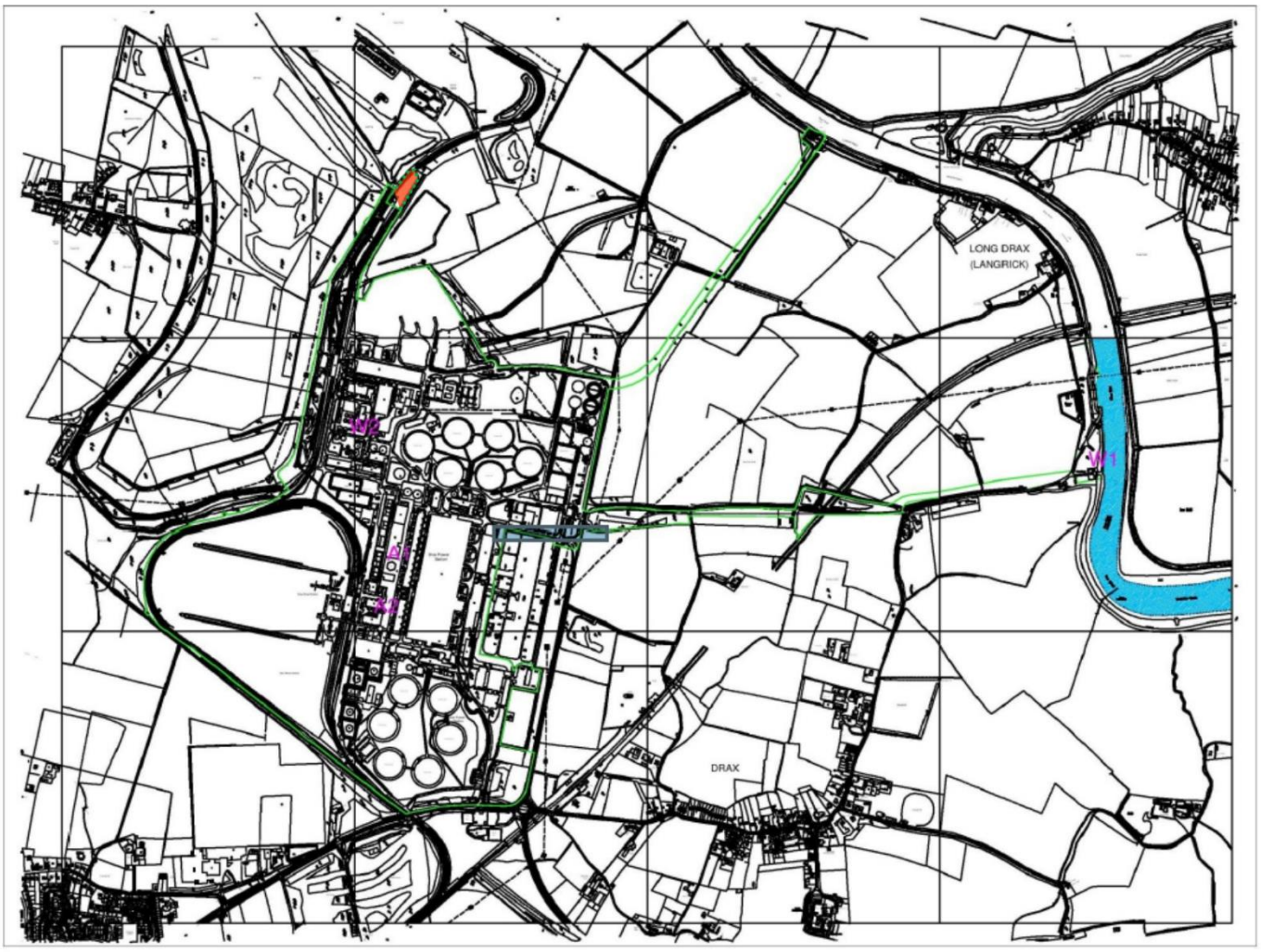
“yearly average” means the average over a period of one year of validated hourly averages obtained by continuous measurements.

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

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

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

Schedule 7 – Site plan



END OF PERMIT