



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Veolia Energy & Utility Services UK Plc
Huddersfield Chemical Works (Syngenta CHP)
Leeds Road
Huddersfield
West Yorkshire
HD2 1FF

Variation application number

EPR/EP3208PD/V002

Permit number

EPR/EP3208PD

Huddersfield Chemical Works (Syngenta CHP)

Permit number EPR/EP3208PD

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

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. We have reviewed the permit for this installation against the revised BAT Conclusions for the large combustion plant sector published on 17th August 2017. Only activities covered by this BAT Reference Document have been reviewed and assessed.

This variation makes the below changes following the review under Article 21(3) of the IED and the consolidation of the Environmental Permitting Regulations that came into force on the 4 January 2017:

- Revised emission limits and monitoring requirements for emissions to air applicable from 17 August 2021 in table S3.1a;
- An improvement condition (IC14) requiring a plan characterising Hydrotreated Vegetable Oil (HVO) to be in place by the implementation date;
- We have included an improvement condition (IC15) specifying that the Operator is required to propose an achievable emission limit for carbon monoxide expressed as an annual mean of validated hourly averages; and
- Inclusion of process monitoring for net total fuel utilisation in table S3.4.

During determination, the Operator confirmed that the site will no longer be using gas oil. They confirmed that the gas oil tank has now been emptied and cleaned and restocked with new Hydrotreated Vegetable Oil (HVO).

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

Four separate Operators, as part of a multi operator single installation, occupy the Huddersfield Chemical Industry installation. This Permit authorises Veolia Energy & Utility Services UK Plc to undertake the activities listed in Schedule 1 of this permit.

The Installation lies approximately 2.6km to the northeast of Huddersfield town centre on the A62 Leeds Road. The permitted area occupies approximately 0.5 hectares from a total area of approximately 46 hectares. Residential properties are within 1 – 2km in the north, northwest and southwest. Schools are located within 1.5km in the north, northwest, east and southwest. There are no sites of special scientific interest within 2km of the installation. There are no Special Areas of Conservation or Special Protection Areas within 10km of the Installation. The River Colne and Fenay Beck (part culverted) run through the Installation, the Colne running to the south of the Permitted area and Fenay Beck near to the northeast of the permitted area.

The main features are the production of electricity and steam for distribution to the three chemical manufacturing operations within the Installation. Natural gas is used in the combustion process with Hydrotreated Vegetable Oil (HVO) used as a standby fuel when gas is unavailable. The combustion plant consists of:-

- a) LCP61 with a total aggregated net rated thermal input of 92MW which includes within a single windshield which is 45m in height:-
 - i) a CHP unit (gas turbine, at 23.4MW and a waste heat boiler at 40MW) – discharging via flue A1 and, when the GT is in bypass mode, flue A4.
 - ii) an intermediate pressure steam boiler at 28.6MW – discharging via flue A2.
- b) A high-pressure steam boiler with a total net rated thermal input of 48.5MW – discharging via a separate windshield, A3, at a height of 45m.

The main exhaust gases produced from the CHP plant are carbon dioxide (CO₂), oxides of nitrogen (NO_x) and sulphur dioxide (SO₂).

All process effluents are discharged to the on-site physico / chemical effluent treatment plant operated by Syngenta Limited prior to discharge to a primary biological treatment plant, further treatment at the Cooper Bridge Sewage Treatment Works with final discharge to the River Calder. Steam condensate is not returned to the CHP from the three chemical plants, it is instead discharged to the on-site effluent treatment plant. It is the technical connection to the effluent treatment plant which brings Cofely Limited into the Huddersfield Chemical Industry installation.

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

Status log of the permit		
Description	Date	Comments
Application UP3638LR (EPR/UP3638LR/A001)	Duly made 03/03/2006	Application for CHP plant.
Additional information received	02/08/2006	
Permit determined EPR/UP3638LR (PAS Billing ref. UP3638LR)	22/12/2006	Original permit issued to Dalkia Utilities Services PLC.
Agency variation determined EPR/UP3638LR/V002 (PAS Billing ref: VP3633KT)	13/11/2009	Update to operators of related permits and the site plan.
Application EPR/WP3633CS/T001 (full transfer of permit EPR/UP3638LR)	Duly made 17/01/2012	Application received 23/12/11 to transfer the permit in full to Cofely limited.
Transfer determined EPR/WP3633CS/T001 (PAS Billing ref: WP3633CS)	23/01/2012	Full transfer of permit complete.
Application EPR/WP3633CS/V002 (variation)	Duly made 19/06/2013	Application to remove the permit requirement for Continuous Emission Monitoring (CEM).
Variation determined EPR/WP3633CS/V002 (PAS Billing ref: SP3035NB)	22/07/2013	Varied permit issued.
Agency variation determined EPR/WP3633CS/V003 (PAS Billing ref: BP3836WF)	11/12/2014	Administrative variation issued to reflect the transfer of Environmental Permit EPR/RP3333LP from Arch UK Biocide Limited to Arch Timber Protection Limited.

Status log of the permit		
Description	Date	Comments
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.
Regulation 60 Notice response	20/03/2014	Response received from the Operator.
Additional information received	16/06/2015	Response to request for further information (RFI) dated 13/05/15.
Additional information received	20/10/2015	Response to request for further information (RFI) dated 20/10/15.
Variation determined EPR/WP3633CS/V004 (PAS Billing ref: RP3634AY)	22/12/2015	Varied and consolidated permit issued in modern format. Variation effective from 01/01/2016.
Agency variation determined EPR/WP3633CS/V005 (PAS Billing ref: UP3530DW)	31/05/2016	Administrative variation issued to reflect Operators name change and typographical errors in V004.
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.	24/10/2018	Response received from the Operator.
Application EPR/EP3208PD/T001 (full transfer of permit EPR/WP3633CS)	Duly made 03/05/2019	Application to transfer the permit in full to Veolia Energy & Utility Services UK Plc.
Transfer determined EPR/EP3208PD	16/08/2019	Full transfer of permit complete.
Regulation 61 Notice response. Further information. EPR/EP3208PD/V002	08/07/2020	Additional information received from the Operator in response to BAT 1, BAT 2, BAT 3, BAT 6, BAT 9, BAT 10, BAT 12, BAT 14, BAT 16, BAT 40, BAT 41, BAT 42 and BAT 44
Further information. EPR/EP3208PD/V002	03/12/2020	Additional information received from the Operator in response to BAT 40 (fuel utilisation calculations)
Further information. EPR/EP3208PD/V002	04/05/2021	Additional information received from the Operator in response to BAT 42 (Dry Low NOx effective definition)
Variation determined EPR/EP3208PD/V002 (Billing ref: XP3808BZ)	05/08/2021	Varied and consolidated permit issued.

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
Syngenta Limited	EPR/UP3138LT	06/12/2006
Lubrazol Limited	EPR/AP3733LE	18/12/2006
Arch Timber Protection Limited	EPR/XP3533WY	01/01/2015 (effective date)

End of introductory note

The Environmental Permitting (England and Wales) Regulations 2016

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

Permit number

EPR/EP3208PD

Issued to

Veolia Energy & Utility Services UK Plc (“the operator”)

whose registered office is

210 Pentonville Road

London

N1 9JY

company registration number 02585759

to operate a regulated facility at

Huddersfield Chemical Works (Syngenta CHP)

Leeds Road

Huddersfield

West Yorkshire

HD2 1FF

to the extent set out in the schedules.

The notice shall take effect from 05/08/2021

Name	Date
Samantha Haddock	05/08/2021

Authorised on behalf of the Environment Agency

Schedule 1

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

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/EP3208PD

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/EP3208PD/V002 authorising,

Veolia Energy & Utility Services UK Plc (“the operator”),

whose registered office is

**210 Pentonville Road
London
N1 9JY**

company registration number 02585759

to operate a regulated facility at

**Huddersfield Chemical Works (Syngenta CHP)
Leeds Road
Huddersfield
West Yorkshire
HD2 1FF**

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

Name	Date
Samantha Haddock	05/08/2021

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.

1.5 Multiple operator installations

- 1.5.1 Where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator(s) of the installation of the same information.

2 Operations

2.1 Permitted activities

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

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7b to this permit, which is within the area edged in red on the site plan at schedule 7a to this permit that represents the extent of the installation covered by this permit and that/those of (the) other operator(s) of the installation.

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: LCP61. The activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” dated May 2021 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: LCP61 and HPB1. Standby fuel (Hydrotreated Vegetable Oil (HVO)) may be used but for no more than 500 hours per year.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP61 operating in open cycle mode (bypass mode). The activities shall not operate for more than 300 hours per year.
- 2.3.7 For the following activities referenced in schedule 1, table S1.1: LCP61. The end of the start up period and the start of the shutdown period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.4.
- 2.3.8 For the following activities referenced in schedule 1, table S1.1: LCP61. The effective Dry Low NOx threshold shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5.

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

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.1a, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

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

3.3.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
- (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

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

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

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

- (a) point source emissions specified in tables S3.1, S3.1a, S3.2 and S3.3; and
- (b) process monitoring specified in table S3.4.

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continuous), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.1a, S3.2 and S3.3 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, table S3.1a; the Continuous Emission Monitors shall be used such that:
- (a) for the continuous measurement systems fitted to the LCP release points defined in table(s) S3.1a the validated hourly, monthly, yearly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval;
 - (b) the 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%;
 - (c) the 95% confidence interval for dust releases of a single measured result shall be taken to be 30%;
 - (d) the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;
 - (e) an invalid hourly average means an hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system. However, to allow some discretion for zero and span gas checking, or cleaning (by flushing), an hourly average period will count as valid as long as data has been accumulated for at least two thirds of the period. Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid hourly average periods unless agreed in writing; and
 - (f) any day, in which more than three hourly average values are invalid shall be invalidated.

4 Information

4.1 Records

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

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

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

4.2 Reporting

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

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

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the resource efficiency metrics set out in schedule 4 table S4.2;
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- (d) where condition 2.3.6 applies the hours of operation in any year; and
- (e) where condition 2.3.5 applies, the start date and time, and the days and hours of operation for each period of standby fuel operation.

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

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

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

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

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

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

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

Where the operator is a registered company:

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

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

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

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 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
 - (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.
- 4.3.8 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “without delay”, 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.	<p>LCP61: Combined heat and power (CHP) production of steam and electricity which includes within the same windshield:-</p> <p>a) A CHP unit (gas turbine, at 23.4MW and a waste heat recovery boiler (WHRB) at 40MW) – discharging via flue A1 and, when the GT is in bypass mode, flue A4; and</p> <p>b) An intermediate pressure steam boiler (PB1) at 28.6MW – discharging via flue A2.</p> <p>HPB1: High Pressure Boiler with a total net rated thermal input of 48.5MW discharging via a separate windshield A3.</p>	From receipt of natural gas and Hydrotreated Vegetable Oil (HVO) to discharge of exhaust gases and the generation of electricity and steam for export.
Directly Associated Activity			
AR2	Directly associated activity	Boiler water	The collection, pumping, filtering and treatment of water.
AR3	Directly associated activity	Effluent treatment	From receipt of raw materials to dispatch to chemical effluent and dirty water system.
AR4	Directly associated activity	Surface water drainage.	Handling and storage of site drainage until discharge to the site surface water system.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to section 2.1 and 2.2	03/03/2006
Schedule 4 Notice (Request dated 19/07/2006)	Response to questions 1, 3 – 5, 15 and 16	02/08/2006
Response to regulation 60(1) Notice – request for information dated 31/10/2014	Compliance route and operating techniques identified in response to questions 4 (LCP configuration), 5 (net rated thermal input), 6 (MSUL/MSDL), 9 (monitoring requirements).	20/03/2015
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 13/05/2015	Compliance route and operating techniques identified in responses to questions 4 (LCP configuration), 5 (net rated thermal input), 5 (insert topic), 6 (MSUL/MSDL), 8 (standby fuel), 9 (monitoring requirements)	28/05/2015
Receipt of additional information to the regulation 60(1) Notice. requested by e-mail dated 20/10/2015 and 21/12/2015	Compliance route and operating techniques identified in response to questions 2 (compliance route), 7 (ELVs)	20/10/2015 and 21/12/2015
Response to regulation 61(1) Notice – request for information dated 01/05/2018 EPR/EP3208PD/V002	Compliance and operating techniques identified in response to the BAT Conclusions for large combustion plant published on 17th August 2017.	24/10/2018
Additional information in response to regulation 61(1) Notice – request for information dated 13/05/2020 EPR/EP3208PD/V002	Additional information received from the Operator in response to BAT 1, BAT 2, BAT 3, BAT 6, BAT 9, BAT 10, BAT 12, BAT 14, BAT 16, BAT 40, BAT 41, BAT 42 and BAT 44	08/07/2020

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
Improvement conditions 1 – 13 have been removed from the permit through variation EPR/EP3208PD/V002 as they are complete.		
IC14	<p><u>BAT Conclusion 9</u></p> <p>The operator shall submit a procedure for approval outlining how the Hydrotreated Vegetable Oil (HVO) will be characterised in line with Best Available Techniques Conclusion 9 in order to improve general performance of combustion and to reduce emissions to air. The procedure must include, but is not limited to, the following elements:</p> <ul style="list-style-type: none"> i) Initial fuel characterisation; ii) Regular testing of the fuel quality to check that it is consistent with the initial characterisation and according to the plant design specifications; and iii) Subsequent adjustments of the plant settings as and when needed and practicable. 	13/08/2021
IC15	The Operator shall propose an achievable emission limit value (ELV) from DLN effective to base load for carbon monoxide expressed as an	05/08/2022

Reference	Requirement	Date
	<p>annual mean of validated hourly averages for the gas turbine with the waste heat recovery boiler (WHRB) in supplementary mode.</p> <p>If the proposed ELV deviates from the indicative BAT AEL for CO of 30mg/m³ then an associated BAT justification shall be submitted to the Environment Agency in the form of a written report.</p>	
IC16	<p>The Operator shall propose an achievable emission limit value (ELV) from DLN effective to base load for carbon monoxide expressed as a daily mean of validated hourly averages for the gas turbine with the waste heat recovery boiler (WHRB) in supplementary mode.</p> <p>If the proposed ELV is higher than the previous ELV for CO of 100mg/m³ then a written report shall be submitted to the Environment Agency. The report shall include a BAT justification for the proposed ELV and a review of possible causes for the elevated CO emission. The Operator shall identify and evaluate opportunities for remediation works to reduce emissions of CO and submit a proposed timetable for completion of any additional improvement works.</p> <p>The Operator shall implement any necessary improvements to a timetable agreed in writing with the Environment Agency.</p>	05/08/2022

Emission Point and Unit Reference	“Minimum Start-Up Load” Load in MW and as percent of rated power output (%) or steam flow rate in t/hr and as percent of rated thermal output (%) and when two of the criteria listed below for the LCP or unit have been met.	“Minimum Shut-Down Load” Load in MW and as percent of rated power output (%) or steam flow rate in t/hr and as percent of rated thermal output (%) and when two of the criteria listed below for the LCP or unit have been met.
A1: LCP61 GT and GT+WHRB (in supplementary mode)	4.41 MWe; 70% load at GT outlet temperature 926°C and GT shaft speed 10,980rpm	4.41 MWe; 70% load at GT outlet temperature 926°C and GT shaft speed 10,980rpm
A1: LCP61 WHRB (auxiliary mode)	15t/hr steam; 25% load at 42bar and 400°C	15t/hr steam; 25% load at 42bar and 400°C
A2: LCP61-PB1	7t/hr steam; 25% load at 13.7 bar and 300°C	7t/hr steam; 25% load at 13.7 bar and 300°C
A4: LCP61	6.3MWe; 100% load	6.3MWe; 100% load

Table S1.5 Dry Low NOx effective definition	
Emission Point and Unit Reference	Dry Low NOx effective definition Load in MW and as percent of rated power output (%)
A1: LCP61 GT and GT+WHRB (in supplementary mode)	Load: 4.41 MWe; 70%

Schedule 2 – Raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Natural gas	-
Hydrotreated Vegetable Oil (HVO)	Less than 0.1% w/w sulphur content

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	Source	Parameter	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 7b]	LCP61 Gas turbine with the WHRB not firing and gas turbine with WHRB in supplementary mode, fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	55 mg/m ³ MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	100 mg/m ³ MSUL/MSDL to base load ¹	-		BS EN 15058
		Sulphur Dioxide	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1 [Point A1 on site plan in schedule 7b]	LCP61 WHRB in auxiliary mode fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	110 mg/m ³ MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	100 mg/m ³ MSUL/MSDL to base load ¹	-		BS EN 15058
		Sulphur Dioxide	38.5 mg/m ³ MSUL/MSDL to base load ¹	-		Concentration by calculation, as agreed in writing with the Environment Agency
		Dust	5.5 mg/m ³ MSUL/MSDL to base load ¹	-		
A1 [Point A1 on site plan in schedule 7b]	LCP61 WHRB in auxiliary mode fired on Hydrotreated Vegetable Oil (HVO)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	200 mg/m ³ MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
		Sulphur Dioxide	385 mg/m ³ MSUL/MSDL to base load ¹	-		Concentration by calculation, as agreed in writing with the Environment Agency
		Dust	33 mg/m ³ MSUL/MSDL to base load ¹	-		

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021

Emission point ref. & location	Source	Parameter	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 7b]	LCP61 Gas turbine with the WHRB not firing and gas turbine with WHRB in supplementary mode, fired on natural gas	Oxygen	-	-	Periodic As appropriate to reference	BS EN 14789
		Water Vapour	-	-		BS EN 14790
	LCP61 WHRB in auxiliary mode fired on natural gas OR Hydrotreated Vegetable Oil (HVO)	As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A2 [Point A2 on site plan in schedule 7b]	LCP61 Pressure steam boiler (PB1) fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	200 mg/m ³ MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	100 mg/m ³ MSUL/MSDL to base load ¹	-		BS EN 15058
		Sulphur Dioxide	38.5 mg/m ³ MSUL/MSDL to base load ¹	-		Concentration by calculation, as agreed in writing with the Environment Agency
		Dust	5.5 mg/m ³ MSUL/MSDL to base load ¹	-		
A2 [Point A2 on site plan in schedule 7b]	LCP61 Pressure steam boiler (PB1) fired on Hydrotreated Vegetable Oil (HVO)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	495 mg/m ³ MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
		Sulphur Dioxide	385 mg/m ³ MSUL/MSDL to base load ¹	-		Concentration by calculation, as agreed in writing with the Environment Agency
		Dust	33 mg/m ³ MSUL/MSDL to base load ¹	-		

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
A3 [Point A3 on site plan in schedule 7b]	High Pressure Boiler (HPB1) fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	110 mg/m ³	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	100 mg/m ³	-		BS EN 15058
A3 [Point A3 on site plan in schedule 7b]	High Pressure Boiler (HPB1) fired on Hydrotreated Vegetable Oil (HVO)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	200 mg/m ³	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	150 mg/m ³	-		BS EN 15058
A3 [Point A3 on site plan in schedule 7b]	High Pressure Boiler (HPB1) fired on natural gas OR Hydrotreated Vegetable Oil (HVO)	Oxygen	-	-	Periodic As appropriate to reference	BS EN 14789
		Water Vapour	-	-		BS EN 14790
		As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A4 [Point A4 on site plan in schedule 7b]	LCP61 Gas turbine bypass	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	-	-	Concentration by calculation, every 2 years	Agreed in writing with the Environment Agency
		Carbon Monoxide	-	-		
		Sulphur Dioxide	-	-		
		Dust	-	-		

Note 1: This ELV applies where the load varies between MSUL/MSDL and base load during the sampling period. MSUL and MSDL are defined in Table S1.4.

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021

Emission point ref. & location	Source	Parameter	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 7b]	LCP61 Gas turbine with the WHRB not firing and gas turbine with WHRB in supplementary mode, fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	55 mg/m ³ DLN effective to base load ²	Yearly average	Continuous	BS EN 14181
			75 mg/m ³ DLN effective to base load ²	Monthly mean of validated hourly averages		
			80 mg/m ³ DLN effective to base load ²	Daily mean of validated hourly averages		
			80 mg/m ³ MSUL/MSDL to base load ¹			
A1 [Point A1 on site plan in schedule 7b]	LCP61 Gas turbine with the WHRB not firing and gas turbine with WHRB in supplementary mode, fired on natural gas	Carbon Monoxide	To be confirmed following completion of IC15	Yearly average	Continuous	BS EN 14181
			DLN effective to base load ²			
			100 mg/m ³ DLN effective to base load ²	Monthly mean of validated hourly averages		

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
			110 mg/m ³ or as agreed following completion of IC16 DLN effective to base load ^{2,3}	Daily mean of validated hourly averages		
			110 mg/m ³ MSUL/MSDL to base load ¹			
			200 mg/m ³ DLN effective to base load ²	95% of validated hourly averages within a calendar year		
A1 [Point A1 on site plan in schedule 7b]	LCP61 Gas turbine with the WHRB not firing and gas turbine with WHRB in supplementary mode, fired on natural gas	Sulphur Dioxide	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1 [Point A1 on site plan in schedule 7b]	LCP61 Gas turbine with the WHRB not firing and gas turbine with WHRB in supplementary mode, fired on natural gas	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
		Water Vapour	-	-	Continuous As appropriate to reference	BS EN 14181
		Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
		Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
		Flow	-	-	Continuous determination by measurement or calculation	BS EN16911

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
		As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A1 [Point A1 on site plan in schedule 7b]	LCP61 WHRB in auxiliary mode fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	110 mg/m ³ MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	100 mg/m ³ MSUL/MSDL to base load ¹	-		BS EN 15058
		Sulphur Dioxide	38.5 mg/m ³ MSUL/MSDL to base load ¹	-		Concentration by calculation, as agreed in writing with the Environment Agency
		Dust	5.5 mg/m ³ MSUL/MSDL to base load ¹	-		
A1 [Point A1 on site plan in schedule 7b]	LCP61 WHRB in auxiliary mode fired on Hydrotreated Vegetable Oil (HVO)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	-	-	-	-
		Sulphur Dioxide	-	-	-	-
		Dust	-	-	-	-
A1 [Point A1 on site plan in schedule 7]	LCP61 WHRB in auxiliary mode fired on natural gas	Oxygen	-	-	Periodic As appropriate to reference	BS EN 14789
		Water Vapour	-	-	Periodic As appropriate to reference	BS EN 14790
		Stack gas temperature	-	-	Periodic As appropriate to reference	Traceable to national standards
		Stack gas pressure	-	-	Periodic As appropriate to reference	Traceable to national standards
		Flow	-	-	Periodic As appropriate to reference	BS EN16911

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
		As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A2 [Point A2 on site plan in schedule 7b]	LCP61 Pressure steam boiler (PB1) fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	110 mg/m ³ MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	100 mg/m ³ MSUL/MSDL to base load ¹	-		BS EN 15058
		Sulphur Dioxide	38.5 mg/m ³ MSUL/MSDL to base load ¹	-		Concentration by calculation, as agreed in writing with the Environment Agency
		Dust	5.5 mg/m ³ MSUL/MSDL to base load ¹	-		
A2 [Point A2 on site plan in schedule 7b]	LCP61 Pressure steam boiler (PB1) fired on Hydrotreated Vegetable Oil (HVO)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	-	-	-	-
		Sulphur Dioxide	-	-	-	-
		Dust	-	-	-	-
A2 [Point A2 on site plan in schedule 7b]	LCP61 Pressure steam boiler (PB1) fired on natural gas	Oxygen	-	-	Periodic As appropriate to reference	BS EN 14789
		Water Vapour	-	-	Periodic As appropriate to reference	BS EN 14790
		Stack gas temperature	-	-	Periodic As appropriate to reference	Traceable to national standards
		Stack gas pressure	-	-	Periodic As appropriate to reference	Traceable to national standards

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
		Flow	-	-	Periodic As appropriate to reference	BS EN16911
		As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Point A3 on site plan in schedule 7b]	High Pressure Boiler (HPB1) fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	110 mg/m ³	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	100 mg/m ³	-		BS EN 15058
A3 [Point A3 on site plan in schedule 7b]	High Pressure Boiler (HPB1) fired on Hydrotreated Vegetable Oil (HVO)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	200 mg/m ³	-	At least every 6 months	BS EN 14792
		Carbon Monoxide	150 mg/m ³	-		BS EN 15058
A3 [Point A3 on site plan in schedule 7b]	High Pressure Boiler (HPB1) fired on natural gas OR Hydrotreated Vegetable Oil (HVO)	Oxygen	-	-	Periodic As appropriate to reference	BS EN 14789
		Water Vapour	-	-		BS EN 14790
		As required by the Method Implementation Document for BS EN 15259	-	-		BS EN 15259
A4 [Point A4 on site plan in schedule 7b]	LCP61 Gas turbine bypass	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	-	-	Concentration by calculation, every 2 years	Agreed in writing with the Environment Agency
		Carbon Monoxide	-	-		
		Sulphur Dioxide	-	-		
		Dust	-	-		

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)-these limits do not apply during start up or shut down	Reference period	Monitoring frequency	Monitoring standard or method
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Note 1: This ELV applies where the load varies between MSUL/MSDL and base load during the sampling period. MSUL and MSDL are defined in Table S1.4.

Note 2: This ELV applies when DLN is effective as defined in Table S1.5.

Table S3.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
Minor release points as identified in H/A1/152879 sheet 6 emissions to Fenay Beck	Surface water	No parameter set	No limit set	-	-	Permanent sampling access not required

Emission point ref. & location	Parameter	Source	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
PE1 [Point PE1 on figure appendix 6 to ASR emission to Installations effluent treatment plant]	No parameter set	Collection sump drain from tanker off-loading area	No limit set	-	-	Permanent sampling access not required
PE2 [Point PE2 on figure appendix 6 to ASR emission to Installations effluent treatment plant]	No parameter set	Surface waters and waste waters from caustic, sulphuric acid and effluent plant	No limit set	-	-	Permanent sampling access not required
PE3 [Point PE3 on figure appendix 6 to ASR emission to Installations effluent treatment plant]	No parameter set	Condensate blow down from within the CHP plant	No limit set	-	-	Permanent sampling access not required
PE4 [Point PE4 on figure appendix 6 to ASR emission to Installations effluent treatment plant]	No parameter set	Dry sump to oil storage bund	No limit set	-	-	Permanent sampling access not required
PE5 [Point PE5 on figure appendix 6 to ASR emission to Installations effluent treatment plant]	No parameter set	HP boiler house surface water drains	No limit set	-	-	Permanent sampling access not required

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LCP61	Operating hours on Hydrotreated Vegetable Oil (HVO)	Continuous	Not applicable	Reported annually
LCP61	Net total fuel utilisation	After each modification that 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
High Pressure Boiler (HPB1)	Operating hours on Hydrotreated Vegetable Oil (HVO)	Continuous	Not applicable	Reported annually

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 (Gas turbine with the WHRB not firing and gas turbine with WHRB in supplementary mode, fired on natural gas)	Every 6 months until 16 August 2021	1 January, 1 July
Carbon Monoxide		Every 3 months from 17 August 2021	1 January, 1 April, 1 July, 1 October
Sulphur dioxide		Every 6 months	1 January, 1 July
Oxides of nitrogen	A1 (WHRB in auxiliary mode), A2	Every 6 months	1 January, 1 July
Carbon Monoxide			
Sulphur dioxide			
Dust			
Oxides of nitrogen	A3	Every 6 months	1 January, 1 July
Carbon Monoxide			
Oxides of nitrogen	A4	Every 2 years	1 January
Carbon Monoxide			
Sulphur dioxide			
Dust			

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 Large Combustion Plant Performance parameters for reporting to DEFRA		
Parameter	Frequency of assessment	Units
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NO _x for each LCP	Annually	t
Total Emissions to Air of SO ₂ for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr

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 (for LCP61). Form as agreed in writing by the Environment Agency.	National and Area Office
LCP	Form IED HR1 – operating hours (for LCP61). Form as agreed in writing by the Environment Agency.	National and Area Office
Air	Form IED CON 2 – continuous monitoring. Form as agreed in writing by the Environment Agency.	Area Office
Air	Form IED PM1 - discontinuous monitoring and load (for LCP61). 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
CEMs	Form IED CEM – Invalidation Log. Form as agreed in writing by the Environment Agency.	Area Office
Air	Form air 1 (for HPB1) or other form as agreed in writing by the Environment Agency	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	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	

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

(c) Notification requirements for the 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	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	

Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

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

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

“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.

“background concentration” means such concentration of that substance as is present in:

for emissions to surface water, the surface water quality up-gradient of the site; or

for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“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.

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

“CEN” means Comité Européen de Normalisation.

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

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

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

“DLN” means dry, low NO_x burners.

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

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

“emissions to land” includes emissions to groundwater.

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

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

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

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

“large combustion plant” or “LCP” is a combustion plant or group of combustion plants discharging waste gases through a common windshield or stack, where the total thermal input is 50 MW or more, based on net

calorific value. The calculation of thermal input, excludes individual combustion plants with a rated thermal input below 15MW.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“MCR” means maximum continuous rating.

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

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

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

“ncv” means net calorific value.

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

“Net total fuel utilisation” means the ratio between the net produced energy minus the imported electrical and/or thermal energy and the fuel energy input at the combustion unit boundary over a given period of time. For a combustion unit.

“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.

“Standby fuel” means alternative liquid fuels that are used in emergency situations when the gas fuel which is normally used, is not available.

“WHB” means waste heat boiler.

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

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

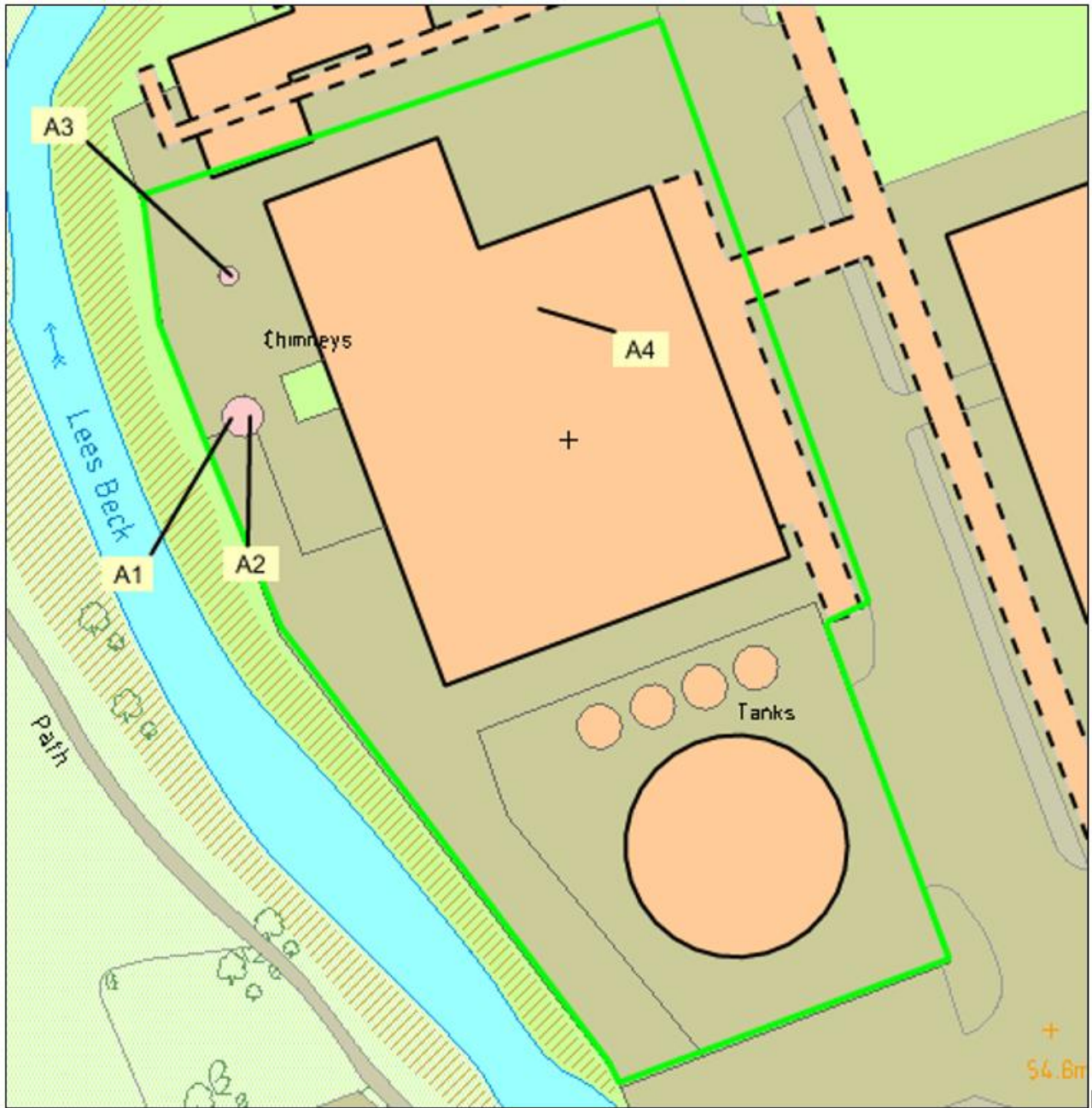
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from gas turbine or compression ignition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

“year” means calendar year ending 31 December.

Schedule 7a – Site Plan: Huddersfield Chemical Works Installation



Schedule 7b - Site plan: Syngenta CHP



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END OF PERMIT