

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

px Limited

Stallingborough Titanium Dioxide Site
c/o Cristal Pigment UK Limited
PO Box 26
Grimsby
North Lincolnshire
DN41 8DP

Variation application number

EPR/FP3031HJ/V002

Permit number

EPR/FP3031HJ

Stallingborough Titanium Dioxide Site

Permit number EPR/FP3031HJ

Introductory note

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

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

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

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

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

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

The Operator has chosen to operate this LCP under the Transitional National Plan (TNP).

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

- LCP420 is changed to LCP221
- LCP414 has been added

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

Two separate Operators, as part of a multi operator single installation, occupy the Stallingborough Titanium Dioxide pigment manufacturing installation. This permit authorises px Limited to undertake the activities listed in Schedule 1 of this permit.

The installation is situated within 300m of the Humber Estuary, designated as a Site of Special Scientific Interest (SSSI), and within 600m of a combined Special Protection Area (SPA)/Ramsar/SSSI area designated as Humber flats, Marshes and Coast, phase 1 (Pyewipe and Cleethorpes Coast). The impact of the plant's emissions have been modelled and assessed as being negligible for both these areas.

The plant produces electricity and steam using natural gas as fuel for use on the installation. The other operator on the installation, Cristal Pigment UK Limited (UP3537SJ), undertakes the production of titanium dioxide pigment from titanium ores using the chlorine process and as such requires both electricity and steam as generated by px Limited.

The Combined Heat and Power (CHP) Plant consists of two gas turbine (GT) electrical generators, each with its own supplementary fired heat recovery steam generator (HRSG), exhaust stack and associated equipment. The thermal input of each of these combustion lines is 70.0 MW (21.2 MWth for the gas turbine, 48.8 MWth for the HRSG) and the overall maximum electrical output for the CHP plant is 15 MW and an efficiency of approximately 72%. The two gas fired turbines are fitted with standard design burners with a steam injection NO_x abatement system. The plant receives a supply of demineralised boiler feed water from Cristal Pigment UK, which is "polished" at the plant by passing through a duplex mixed bed ion exchange system. Regeneration of this ion exchange system is carried out using 4% sulphuric acid and 4% caustic soda solution.

The main releases from the activity are air emissions related to combustion of natural gas and releases to water from the steam generator boiler blow down and boiler feed water treatment.

Releases to air are oxides of nitrogen, oxides of carbon, sulphur dioxide and dust via two main stacks (height 35m) with short term emissions from two by-pass stacks (heights 19.5m, used whilst the gas turbine achieves stable operating conditions prior to bringing the HRSG into operation). There is also the potential for releases from a temporary boiler, which may be used to fulfil the operator's steam capacity obligation to Cristal Pigment UK Limited, during the bi-annual statutory inspection of the turbines.

The CHP plant does not use a cooling water system that requires the abstraction and discharge of water. The plant uses a closed cooling water system for cooling plant items such as the gas turbines and back pressure steam turbine; this is achieved using an air blast radiator to remove heat.

There is no direct discharge of water from the CHP plant to either water or sewer, all waste water and surface water enters the installation waste water system and is treated by Cristal Pigment UK Limited before discharge to the River Humber. Waters discharged to this system are mainly HRSG blow-down water, containing boiler treatment chemicals, and water from the regeneration of the ion exchange beds.

px Limited has an Environmental Management System externally certified to ISO 14001, which is also regularly internally audited as per the ISO 14001 standard.

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 PP3132SQ (EPR/PP3132SQ)	Received 30/09/05	Application for 3000MW thermal input Power Station
Request to extend determination	Request dated 18/01/06	Request accepted 24/01/06
Request for further information	10/02/06	Information received 24/02/06
Permit determined	30/06/06	
Application EPR/FP3031HJ/T001 (full transfer of permit EPR/PP3132SQ)	Duly made 01/02/11	
Transfer determined	01/04/11	

Status log of the permit		
Description	Date	Comments
Regulation 60 Notice sent to the Operator	17/12/14	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency initiated review and variation to vary the permit under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limits 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	25/03/15	Response received from the Operator.
Additional information received	17/07/15	Response to request for further information (RFI) dated 17/06/15.
Variation determined EPR/FP3031HJ/V002 (PAS Billing ref: FP3031HJ)	22/12/15	Varied and consolidated permit issued in modern condition format. Variation effective from 01/01/2016.

Other Part A installation permits relating to this installation		
Operator	Permit number	Date of issue
Cristal Pigment UK Limited (previously known as Millennium Inorganic Chemicals Limited)	EPR/UP3537SJ	30/06/06

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

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

Permit number

EPR/FP3031HJ

Issued to

px Limited (“the operator”)

whose registered office is

px House

Westpoint Road

Stockton on Tees

TS17 6BF

company registration number 04373756

to operate an installation at

Stallingborough Titanium Dioxide Site

c/o Cristal Pigment UK Limited

PO Box 26

Grimsby

North Lincolnshire

DN41 8DP

to the extent set out in the schedules.

The notice shall take effect from 01/01/2016

Name	Date
Rebecca Warren	22/12/2015

Authorised on behalf of the Environment Agency

Schedule 1

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

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/FP3031HJ

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/FP3031HJ/V002 authorising,

px Limited (“the operator”),

whose registered office is

px House

Westpoint Road

Stockton on Tees

TS17 6BF

company registration number 04373756

to operate an installation at

Stallingborough Titanium Dioxide Site

c/o Cristal Pigment UK Limited

PO Box 26

Grimsby

North Lincolnshire

DN41 8DP

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

Name	Date
Rebecca Warren	22/12/2015

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

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

1.2 Energy efficiency

1.2.1 The operator shall:

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

1.3 Efficient use of raw materials

1.3.1 The operator shall:

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

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

1.4.1 The operator shall take appropriate measures to ensure that:

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

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

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 7 to this permit, which is within the area edged in red on the site plan that represents the extent of the installation covered by this permit and that of the other operator 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: LCP221 and LCP414. Without prejudice to condition 2.3.1, the activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” revision 1 dated February 2015 or any later version unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.4 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP221 and LCP414. 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
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP221 and LCP414. The following conditions apply where there is a malfunction or breakdown of any abatement equipment:
Unless otherwise agreed with 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 accumulative duration of breakdown in any 12-month period shall not exceed 120 hours;
 - (iii) The cumulative duration of malfunction in any 12-month period shall not exceed 120 hours.

- 2.3.7 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.
- 2.3.8 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 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 The emission values from emission points A1, A2, A3 and A4 measured during periods of abatement equipment malfunction and breakdown shall be disregarded for the purposes of compliance with Table S3.1 emission limit values.
- 3.1.4 Total annual emissions from the LCP emission point(s) set out in schedule 3 tables S3.1 and S3.2 of a substance listed in schedule 3 table S3.3 shall not exceed the relevant limit in table S3.3.
- 3.1.5 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

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

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

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1 and S3.2;
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continuous), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 unless otherwise agreed in writing by the Environment Agency.

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

- 3.6.1 All monitoring required by this permit shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive.
- 3.6.2 If 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.
- 3.6.3 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.

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.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
 - (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and

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

- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 Within 10 days of the notification of abatement equipment malfunction or breakdown (condition 2.3.6) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).
- 4.2.6 Unless otherwise agreed in writing with the Environment Agency, within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form IED RTA1, listed in table S4.4, the information specified on the form relating to the site's mass emissions.

4.3 Notifications

- 4.3.1 In the event:
 - (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
 - (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
 - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
 - (d) Of any malfunction or breakdown of abatement equipment relating to condition 2.3.6, the operator shall notify the Environment Agency within 48 hours unless notification has already been made under (a) to (c) above.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), 4.3.1 (b)(i) where the information relates to the breach of a condition specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
 - Where the operator is a registered company:
 - (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

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

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

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

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

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

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

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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

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 listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP221: Production of electrical power and steam in a Combined Heat and Power (CHP) plant comprising of one gas fired turbines and associated heat recovery steam generating (HRSG) boiler. LCP414: Production of electrical power and steam in a Combined Heat and Power (CHP) plant comprising of one gas fired turbines and associated heat recovery steam generating (HRSG) boiler.	From receipt of natural gas to discharge of exhaust gases and the generation of electricity and steam for export.
Directly Associated Activity		
Directly associated activity	De-ionisation of boiler feed water and regeneration of ion exchange.	Treatment of water supplied from Cristal Pigment UK Limited for use in the CHP plant only.
Directly associated activity	Boiler blowdown, boiler water treatment effluent, condensate drainage and turbine blade washings.	Handling and storage of effluents until discharge to Cristal Pigment UK Limited.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to questions 2.1 and 2.2 given in subsection 2.3 and 2.4 of the application supporting document section 6. Also further information that was received on 24/02/06.	20/09/05
Response to regulation 60(1) Notice – request for information dated 17/12/14	Compliance route(s) and operating techniques identified in response to questions 1 (DEFRA LCP identifier), 2 (which compliance route), 3 (provide evidence of any notification made in relation to the TNP), 4 (configuration of each LCP), 5 (the net rated thermal input of each LCP), 6 (details of the derivation of minimum start-up load and minimum shut-down load), 7 (provide your proposed emission limit values), 8 (do you wish to apply for derogation not to undertake monitoring when on standby fuels), 9 (monitoring requirements with reference to IED).	Received 25/03/15

Table S1.2 Operating techniques		
Description	Parts	Date Received
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 17/06/15	Compliance route(s) and operating techniques identified in response to questions 1 (DEFRA LCP identifier), 2 (which compliance route), 3 (provide evidence of any notification made in relation to the TNP), 4 (configuration of each LCP), 5 (the net rated thermal input of each LCP), 6 (details of the derivation of minimum start-up load and minimum shut-down load), 7 (provide your proposed emission limit values), 8 (do you wish to apply for derogation not to undertake monitoring when on standby fuels), 9 (monitoring requirements with reference to IED).	Received 17/07/15

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC 1	The Operator shall inform the Environment Agency in writing of the details of the agreement between the Operator and Millennium Inorganic Chemicals Limited relating to the actions required by condition 2.12.1 of this permit.	Completed
IC 2	The Operator shall investigate measures available for the control and reduction of carbon monoxide emissions from the operation of the Heat Recovery Steam Generators. This shall include consideration of the effectiveness of current measures and identification of potential improvements. A written report detailing the scope and finding of the investigation, including a timetable for implementation of the improvements identified, shall be submitted to the Environment Agency.	Completed
IC3	For LCPD LCP221 (previously LCP420) and newly added LCP414 under IED). Annual emissions of dust, sulphur dioxide and oxides of nitrogen including energy usage for the year 01/01/2015 to 31/12/2015 shall be submitted to the Environment Agency using form AAE1 via the NERP Registry. If the LPCD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.	31/01/16

Table S1.4 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 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:OCGT(No.1) A3:OCGT(No.2)	At 3.3MWe; 50% load at GT outlet temperature 990°C and GT shaft speed 11,000rpm or above	Less than 3.3MWe, 50% load at GT outlet temperature 990°C and GT shaft speed 11,000rpm
A2: LCP221 (GT/HRSG No.1) in supplementary mode A4:LCP414 (GT/HRSG No.2) in supplementary mode	At 6.6MWe; 100% load at GT outlet temperature 1059°C and GT shaft speed 11,000rpm or above	Below 3.3MWe; 50% load at GT outlet temperature 990°C and GT shaft speed 11,000rpm
A2: LCP221 (HRSG No.1) in auxiliary mode A4:LCP414 (HRSG No.2) in auxiliary mode)	At 18t/hr steam; 30% load at 42bar and temperature 400°C or above	Below 18t/hr steam; 30% load at 42bar and 400°C flame switched off

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Natural gas	-

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – from turbines and boilers <50MWth (each unit) operating under the Transitional National Plan (TNP)						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference Period	Monitoring frequency	Monitoring standard or method
A2 [Gas turbine/HRSG Point A2 on site plan in schedule 7]	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	LCP221 Gas turbine with HRSG in supplementary mode fired on natural gas	125 mg/m ³ (at 15% O ₂ reference) MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
A2 [Gas turbine/HRSG Point A2 on site plan in schedule 7]	Carbon monoxide	LCP221 Gas turbine with HRSG in supplementary mode fired on natural gas	100 mg/m ³ (at 15% O ₂ reference) MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 15058
A2 [Gas turbine/HRSG Point A2 on site plan in schedule 7]	Sulphur dioxide	LCP221 Gas turbine with HRSG in supplementary mode fired on natural gas	-	-	6 monthly by calculation	Concentration by calculation as agreed in writing with the Environment Agency
A2 [Gas turbine/HRSG Point A2 on site plan in schedule 7]	Oxygen	LCP221 Gas turbine with HRSG in supplementary mode fired on natural gas	-	-	Periodic as appropriate to reference	BS EN 14789
A2 [Gas turbine/HRSG Point A2 on site plan in schedule 7]	Water vapour	LCP221 Gas turbine with HRSG in supplementary mode fired on natural gas	-	-	Periodic as appropriate to reference	BS EN 14790
A2 [Gas turbine/HRSG Point A2 on site plan in schedule 7]	Stack gas volume flow	LCP221 Gas turbine with HRSG in supplementary mode fired on natural gas	-	-	-	BS EN 16911 & TGN M2

Table S3.1 Point source emissions to air – from turbines and boilers <50MWth (each unit) operating under the Transitional National Plan (TNP)

Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference Period	Monitoring frequency	Monitoring standard or method
A2 [HRSG Point A2 on site plan in schedule 7]	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	LCP221 HRSG in auxiliary mode fired on natural gas	150 mg/m ³ (at 3% O ₂ reference) ² MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
A2 [HRSG Point A2 on site plan in schedule 7]	Carbon monoxide	LCP221 HRSG in auxiliary mode fired on natural gas	100 mg/m ³ (at 3% O ₂ reference) ² MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 15058
A2 [HRSG Point A2 on site plan in schedule 7]	Sulphur dioxide	LCP221 HRSG in auxiliary mode fired on natural gas	-	-	6 monthly by calculation	Agreed in writing with the Environment Agency
A2 [HRSG Point A2 on site plan in schedule 7]	Dust	LCP221 HRSG in Auxiliary mode fired on natural gas.	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A2 [HRSG Point A2 on site plan in schedule 7]	Oxygen	LCP221 HRSG in auxiliary mode fired on natural gas.	-	-	Periodic As appropriate to reference	BS EN 14789
A2 [HRSG Point A2 on site plan in schedule 7]	Water vapour	LCP221 HRSG in auxiliary mode fired on natural gas	-	-	Periodic As appropriate to reference	BS EN 14790
A2 [HRSG Point A2 on site plan in schedule 7]	Stack gas volume flow	LCP221 HRSG in auxiliary mode fired on natural gas	-	-	-	BS EN 16941 & TGN M2

Table S3.1 Point source emissions to air – from turbines and boilers <50MWth (each unit) operating under the Transitional National Plan (TNP)

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
A4 [Gas turbine/HRSG Point A4 on site plan in schedule 7]	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	LCP414 Gas turbine with HRSG in supplementary mode fired on natural gas	125 mg/m ³ (at 15% O ₂ reference) MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792
A4 [Gas turbine/HRSG Point A4 on site plan in schedule 7]	Carbon monoxide	LCP414 Gas turbine with HRSG in supplementary mode fired on natural gas	100 mg/m ³ (at 15% O ₂ reference) MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 15058
A4 [Gas turbine/HRSG Point A4 on site plan in schedule 7]	Sulphur dioxide	LCP414 Gas turbine with HRSG in supplementary mode fired on natural gas	-	-	6 monthly by calculation	Agreed in writing with the Environment Agency
A4 [Gas turbine/HRSG Point A4 on site plan in schedule 7]	Oxygen	LCP414 Gas turbine with HRSG in supplementary mode fired on natural gas	-	-	Periodic as appropriate to reference	BS EN 14789
A4 [Gas turbine/HRSG Point A4 on site plan in schedule 7]	Water vapour	LCP414 Gas turbine with HRSG in supplementary mode fired on natural gas	-	-	Periodic as appropriate to reference	BS EN 14790
A4 [Gas turbine/HRSG Point A4 on site plan in schedule 7]	Stack gas volume flow	LCP414 Gas turbine with HRSG in supplementary mode fired on natural gas	-	-	-	BS EN 16911 & TGN M2
A2 & A4 [Gas turbines/HRSGs Points A2 & A4 on site plan in schedule 7]	As required by the Method Implementation Document for BS EN 15259	LCP221 & LCP414 Gas turbines with HRSGs	-	-	Pre-operation and when there is a significant operational change	BS EN 15259

Table S3.1 Point source emissions to air – from turbines and boilers <50MWth (each unit) operating under the Transitional National Plan (TNP)

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
A4 [HRSG Point A4 on site plan in schedule 7]	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	LCP414 HRSG in Auxiliary mode fired on natural gas.	150 mg/m ³ (at 3% O ₂ reference) ² MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792 BS EN 15058
A4 [HRSG Point A4 on site plan in schedule 7]	Carbon monoxide	LCP414 HRSG in Auxiliary mode fired on natural gas.	100 mg/m ³ (at 3% O ₂ reference) ² MSUL/MSDL to base load ¹	-	At least every 6 months	BS EN 14792 BS EN 15058
A4 [HRSG Point A4 on site plan in schedule 7]	Sulphur dioxide	LCP414 HRSG in Auxiliary mode fired on natural gas.	-	-	6 monthly by calculation	Agreed in writing with the Environment Agency
A4 [HRSG Point A4 on site plan in schedule 7]	Dust	LCP414 HRSG in Auxiliary mode fired on natural gas.	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner	Agreed in writing with the Environment Agency
A4 [HRSG Point A4 on site plan in schedule 7]	Oxygen	LCP414 HRSG in Auxiliary mode fired on natural gas.	-	-	Periodic as appropriate to reference	BS EN 14789
A4 [HRSG Point A4 on site plan in schedule 7]	Water vapour	LCP414 HRSG in Auxiliary mode fired on natural gas.	-	-	Periodic as appropriate to reference	BS EN 14790
A4 [HRSG Point A4 on site plan in schedule 7]	Stack gas volume flow	LCP414 HRSG in Auxiliary mode fired on natural gas.	-	-	-	BS EN 16911 & TGN M2

Table S3.1 Point source emissions to air – from turbines and boilers <50MWth (each unit) operating under the Transitional National Plan (TNP)

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 [Gas turbine Point A1 on site plan in schedule 7]	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	Gas turbine by-pass No.1	Operation less than 500 hours per calendar year	-	6 monthly by calculation	Agreed in writing with the Environment Agency
A1 [Gas turbine Point A1 on site plan in schedule 7]	Carbon monoxide	Gas turbine by-pass No.1	Operation less than 500 hours per calendar year	-	6 monthly by calculation	Agreed in writing with the Environment Agency
A1 [Gas turbine Point A1 on site plan in schedule 7]	Sulphur dioxide	Gas turbine by-pass No.1	Operation less than 500 hours per calendar year	-	6 monthly by calculation	Agreed in writing with the Environment Agency
A1 [Gas turbine Point A1 on site plan in schedule 7]	Oxygen	Gas turbine by-pass No.1	Operation less than 500 hours per calendar year	-	Periodic as appropriate to reference	BS EN 14789
A1 [Gas turbine Point A1 on site plan in schedule 7]	Water vapour	Gas turbine by-pass No.1	Operation less than 500 hours per calendar year	-	Periodic as appropriate to reference	BS EN 14790
A1 [Gas turbine Point A1 on site plan in schedule 7]	Stack gas volume flow	Gas turbine by-pass No.1	Operation less than 500 hours per calendar year	-	-	BS EN 16911 & TGN M2
A3 [Gas turbine Point A3 on site plan in schedule 7]	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	Gas turbine by-pass No.2	Operation less than 500 hours per calendar year	-	6 monthly by calculation	Agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air – from turbines and boilers <50MWth (each unit) operating under the Transitional National Plan (TNP)

Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference Period	Monitoring frequency	Monitoring standard or method
A3 [Gas turbine Point A3 on site plan in schedule 7]	Carbon monoxide	Gas turbine by-pass No.2	Operation less than 500 hours per calendar year	-	6 monthly by calculation	Agreed in writing with the Environment Agency
A3 [Gas turbine Point A3 on site plan in schedule 7]	Sulphur dioxide	Gas turbine by-pass No.2	Operation less than 500 hours per calendar year	-	6 monthly by calculation	Agreed in writing with the Environment Agency
A3 [Gas turbine Point A3 on site plan in schedule 7]	Oxygen	Gas turbine by-pass No.2	Operation less than 500 hours per calendar year	-	Periodic as appropriate to reference	BS EN 14789
A3 [Gas turbine Point A3 on site plan in schedule 7]	Water vapour	Gas turbine by-pass No.2	Operation less than 500 hours per calendar year	-	Periodic as appropriate to reference	BS EN 14790
A3 [Gas turbine Point A3 on site plan in schedule 7]	Stack gas volume flow	Gas turbine by-pass No.2	Operation less than 500 hours per calendar year	-	-	BS EN 16911 & TGN M2

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: Under emergency (abnormal) conditions, where the GT is taken off-line and where the Operator has a credible plan to recover operation of the GT, the Oxygen reference condition is 15%.

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
W1 discharge from 8 tonne drain sump tank (reference W2 in application) to Cristal Pigment UK Limited effluent flume.	pH	Boiler feed-water treatment effluent, boiler blow-down waters, condensate drainage and washings from turbine blade cleaning	Note 1.	Continuous	Weekly	BS EN 6068-2.50
W1 discharge from 8 tonne drain sump tank (reference W2 in application) to Cristal Pigment UK Limited effluent flume.	Oil or grease	Boiler feed-water treatment effluent, boiler blow-down waters, condensate drainage and washings from turbine blade cleaning	No visible emission	24 hour period beginning 00.01	Daily	-

Note 1: Records of effluent pH sent to Cristal Pigment UK Limited shall be retained and available for inspection.

Table S3.3 Annual limits (excluding start up and shut down except where otherwise stated).				
Substance	Medium	Limit (including unit)		Emission Points
Oxides of nitrogen	Air	Assessment year	LCP TNP Limit	Define each LCP as per the TNP
		01/01/16 and subsequent years until 31/12/19	Emission allowance figure shown in the TNP Register as at 30 April the following year	
		01/01/20-30/06/20		

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by Condition 3.5.1	A2, A4	Every 6 months	1 January, 1 July
Number of periods and duration of LCP221 and LCP414 within start-up configuration.	A1, A2, A3, A4	Every 6 months	1 January, 1 July
Number of periods and duration of LCP221 and LCP414 operating HRSG only.	A2, A4	Every 6 months	1 January, 1 July

Parameter	Units
Electricity Exported	GWhr
Heat Exported	GWhr
Mechanical Power Provided	GWhr
Fossil Fuel Energy Consumption	GWhr
Non-Fossil Fuel Energy Consumption	GWhr
Annual Operating Hours	hr
Water Abstracted from Fresh Water Source	m ³
Water Abstracted from Borehole Source	m ³
Water Abstracted from Estuarine Water Source	m ³
Water Abstracted from Sea Water Source	m ³
Water Abstracted from Mains Water Source	m ³
Gross Total Water Used	m ³
Net Water Used	m ³
Hazardous Waste Transferred for Disposal at another installation	t
Hazardous Waste Transferred for Recovery at another installation	t
Non-Hazardous Waste Transferred for Disposal at another installation	t
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
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 CO for each LCP	Annually	t
Total Emissions to Air of dust for each LCP	Annually	t

Table S4.4 Reporting forms				
Media/parameter	Reporting format	Starting Point	Agency recipient	Date of form
LCP	Form IED HR1 – operating hours	01/01/16	National & Area Office	31/12/15
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emissions and energy. For all LCPs	01/01/16	National & Area Office	31/12/15
Air	Form IED RTA1 –TNP quarterly emission and summary log	01/01/16	National & Area Office	31/12/15
LCP	Form IED BD1 – Cumulative annual rolling malfunction and breakdown hours	01/01/16	Area Office	31/12/15
Air	Form IED MF1 – SO ₂ , NO _x , Dust and CO concentrations when during any day with malfunction or breakdown of abatement plant	01/01/16	Area Office	31/12/15
Air	Form IED PM1 - discontinuous monitoring and load	01/01/16	Area Office	31/12/15
Resource Efficiency	Form REM1 – resource efficiency annual report	01/01/16	National & Area Office	31/12/15

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

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

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

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

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

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

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Part C Malfunction or Breakdown of LCP abatement equipment

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

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

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

** authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“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.

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

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

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

“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.

“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 to land” includes emissions to groundwater.

“Energy efficiency” the ISO base load net plant efficiency means the performance value established by acceptance testing following commissioning or performance testing following improvements made to the plant that could affect the efficiency.

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

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

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

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

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

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

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

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

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

“MCR” means maximum continuous rating.

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

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

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

“ncv” means net calorific value.

“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.

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

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

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

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

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or

in relation to emissions from gas turbine or compression ignition engine combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or

in relation to emissions from combustion processes comprising a gas turbine with a waste heat boiler, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry, unless the waste heat boiler is operating alone, in which case, with an oxygen content of 3% dry for liquid and gaseous fuels; and/or

- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

“year” means calendar year ending 31 December.

Schedule 7 – Site plan

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END OF PERMIT