



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Equinix (UK) Limited
Equinix Powergate
2 Powergate Business Park
Volt Avenue
London
NW10 6PW

Variation application number

EPR/TP3500PB/V003

Permit number

EPR/TP3500PB

Equinix Powergate

Permit number EPR/TP3500PB

Introductory note

This introductory note does not form a part of the notice

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

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

This variation adds an additional 4 new diesel generators in the new HV building of the site. Each individual generator is a Medium Combustion Plant (MCP) having a thermal input of approximately 6.9 MWth. The new engines are specified to TA Luft 2g standard and are fitted with Selective Catalytic Reduction systems to abate approximately 90% of the emissions of oxides of nitrogen, compared to their unabated operations. The operation of the additional 4 new diesel engines is conditional to the satisfactory completion of pre-operational conditions for future development PO1, PO2 and PO3. The total thermal input of the site is now approximately 199 MWth. We have also added a new improvement condition (IC08), updated the deadline of the outstanding improvement conditions IC01, IC02 and IC05 and amended improvement conditions IC01 and IC05 as an Environment Agency initiated variation.

The rest of the installation is unchanged and continues to be operated as permitted before of this variation. After the changes introduced by this variation, the installation operates as follows:

The site is an electronic data storage centre which includes a Section 1.1 Part A (1)(a) activity under the Environmental Permitting Regulations (England and Wales) 2016 for the burning of any fuel in an appliance with a rated thermal input of 50 or more megawatts (MW). The site is located in Powergate Business Park, North-West London. The National Grid Reference for the site is TQ 21070 82738. The site is approximately 3 hectares in size. The surrounding area is a mix of industrial, commercial and residential uses.

The combustion plant only operates during limited routine maintenance or in an emergency scenario. The emergency combustion activity comprises 33 diesel fuelled standby generators. The site consists of two data halls – PG1, PG2 and HP. PG1 became operational in 2008, and consists of 8 generators (each approximately 5.7 MWth input aggregated to approximately 46 MWth). PG2 became operational in 2012 and consists of 21 generators (13 generators at 5.7 MWth, and 8 generators at 6.4 MWth, aggregated to approximately 126 MWth). HV, yet to be put into operation, consists of 4 engines at approximately 6.9 MWth each, aggregated to approximately 29 MWth) whose NOx emissions are abated with SCR systems. Each generator has a stack between 5 and 17m in height.

Electrical power is provided to the data centre from the National Grid. However, in the event of a failure in the electrical supply, the operator will utilise the generators to maintain the electrical supply. The generators will be used solely for the purpose of generating power for the facility. No electricity will be exported from the installation. The standby generators are designed and configured so that in the event of a mains failure all the generators will fire up then subsequently ramp down to meet the load at the site. All the generators are subject to a maintenance testing schedule.

The engines run on diesel fuel. Most engines have an individual double skinned day tanks, although some share these. There are 12 bulk fuel tanks to the north of PG2 which are double skinned, and within a concrete bund. There is one bulk tank for PG1 which is inside the building and is also double skinned. All fuel tanks are fitted with leak detection and level alarms.

The site is covered in hardstanding outside the buildings and concrete inside. Rainwater is kept separate from any areas where there may be potential contaminants, and is allowed to run off to surface water drainage serving the trading estate. As mentioned, the bulk fuel tanks are bunded and the smaller day tanks are double skinned and inside buildings or generator containers, without bunds. Any water collected in

external bunds is directed into a holding pit before being pumped out into a vacuum truck before disposal or recycling by an appropriate waste disposal company.

The main emissions from the installation are to air in the form of nitrogen oxides, sulphur dioxide, particulate matter and carbon monoxide.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	Date	Comments
Application EPR/TP3500PB/A001	Duly made 07/06/2019	Application for a combustion facility consisting of a data centre.
Additional information received EPR/TP3500PB/A001	18/09/2019	Response to Schedule 5 dated 13/08/19 notice regarding air quality modelling
Additional information received EPR/TP3500PB/A001	12/11/2019	Response to Schedule 5 notice dated 09/10/19 regarding fuel storage
Additional information received EPR/TP3500PB/A001	13/12/2019	Response to Schedule 5 notice dated 13/11/19 regarding noise assessments
Permit determined EPR/TP3500PB (Billing ref. TP3500PB)	08/09/2020	Permit issued to Equinix (UK) Limited.
Application EPR/TP3500PB/V002 (variation and consolidation)	Duly made 18/12/2020	Application to add an additional 7 diesel generators (approximately 5.7 MWth each).
Additional information received EPR/TP3500PB/V002	31/03/2021	Confirmation of testing regime
Variation determined and consolidation issued EPR/TP3500PB/V002 (PAS/Billing ref: VP3202LY)	14/06/2021	Varied and consolidated permit issued in modern format to Equinix (UK) Limited.
Application EPR/TP3500PB/V003	Duly made 11/10/2022	Application to add an additional 4 diesel generators (approximately 6.9 MWth each).
Additional information received EPR/TP3500PB/V003	06/10/2023	Revised application to include SCR systems to the additional 4 diesel generators.
Variation determined and consolidation issued EPR/TP3500PB/V003	21/12/2023	Varied and consolidated permit issued in modern format to Equinix (UK) Limited.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

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

Permit number

EPR/TP3500PB

Issued to

Equinix (UK) Limited (“the operator”)

whose registered office is

**Masters House
107 Hammersmith Road
London
W14 0QH**

company registration number 03672650

to operate a regulated facility at

**Equinix Powergate
2 Powergate Business Park
Volt Avenue
London
NW10 6PW**

to the extent set out in the schedules.

The notice shall take effect from 21/12/2023

Name	Date
Sandra Cavill	21/12/2023

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

The following conditions were varied as a result of an Environment Agency initiated variation:

- Improvement conditions IC01, IC02 and IC05.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/TP3500PB

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/TP3500PB/V003 authorising,

Equinix (UK) Limited (“the operator”),

whose registered office is

**Masters House
107 Hammersmith Road
London
W14 0QH**

company registration number 03672650

to operate an installation at

**Equinix Powergate
2 Powergate Business Park
Volt Avenue
London
NW10 6PW**

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

Name	Date
Sandra Cavill	21/12/2023

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) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

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

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

1.4.1 The operator shall take appropriate measures to ensure that:

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

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

2 Operations

2.1 Permitted activities

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

2.2 The site

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

2.3 Operating techniques

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

2.3.2 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.

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

2.3.4 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.

2.3.5 For the following activities referenced in schedule 1, table S1.1: AR1. The activities shall not operate for more than 500 hours in emergency use per annum.

2.4 Improvement programme

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

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

2.5 Pre-operational conditions

2.5.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2
- 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 and S3.2;
 - (b) process monitoring specified in table S3.3.
- 3.5.2 The first monitoring measurements shall be carried out within four months of the issue date of the permit or the date when the MCP is first put into operation, whichever is later.

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 annual production /treatment data set out in schedule 4 table S4.2; and
- 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) or 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:

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

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) 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.

4.4 Interpretation

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

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

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
AR1	Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	<p>Operation of emergency standby generators burning diesel solely in order to provide electricity to the installation in the event of a failure of National Grid electricity supply.</p> <p>The standby emergency generators comprise:</p> <ul style="list-style-type: none"> - PG1 – 8 x 5.7 MWth - PG2 – 13 x 5.7 MWth, and 8 x 6.4 MWth - HV – 4 x 6.9 MWth. New MCP <p>With a total thermal input of approximately 199 MWth</p>	<p>From receipt of raw material (diesel) to combustion in Emergency standby generators for electricity production to exhaust of products of combustion to atmosphere to generation, storage and dispatch of wastes.</p> <p>Including Selective Catalytic Systems (SCR) where fitted according to the operating techniques specified in Table S1.2 or discharge of improvement conditions.</p> <p>Electricity produced at the installation cannot be exported to the National Grid.</p> <p>The operational hours of the installation shall not exceed the specifications set out in condition 2.3.5.</p> <p>Generators shall only be operated for on-site emergencies and not for elective power generation, such as Balancing Services, Demand Side Response operations including Frequency Control Demand Management (FCDM) or Triad Avoidance.</p>
Directly Associated Activity			
AR2	Storage of raw materials including diesel		From receipt of raw materials to use within the facility.
AR3	Surface water drainage		Input to site drainage system until discharge to surface water via interceptors.
AR4	Storage of urea solution to operate the Selective Catalytic Systems (SCR)		From receipt of raw materials to use within the facility.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/TP3500PB/A001	Environmental Permit Application: Supporting Information and Annexes C-H	18/02/2019
Response to Schedule 5 Notice dated 13/08/2019	Response to questions 1-2	18/09/2019
Response to Schedule 5 Notice dated 09/10/2019	Response to questions 1-6	12/11/2019
Application EPR/TP3500PB/V002	Parts C2 and C3 of the application and all referenced supporting documentation.	Duly made 18/12/2020
Application EPR/TP3500PB/V003	Application document titled 'Environmental Permit Variation Application – Powergate (LD9) Data Centre: Supporting Information Document, dated 06 October 2023	06/10/2023
Application EPR/TP3500PB/V003 Generators maintenance testing schedule and SCR abatement	Operating techniques described in application document 'Air Quality Impact Assessment', including, but not limited to, details of the generators maintenance testing schedule detailed in Tables 2.1 and 2.2 of this document and NOx abatement efficiency for the selective catalytic reduction systems fitted to emission points A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site plan).	06/10/2023

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC01	The operator shall carry out a feasibility study into retro-fitting abatement measures to the engines specified within this permit and submit a written report including timescales to the Environment Agency for approval. Any agreed proposals shall be implemented by the operator in line with the timescales approved by the Environment Agency.	29 February 2024 or as agreed in writing with the Environment Agency.
IC02	The operator shall carry out a feasibility study into the installation of vertically discharging exhausts on the generators that currently have horizontal stacks, and submit a written report including timescales to the Environment Agency for approval. Any agreed proposals shall be implemented by the operator in line with the timescales agreed by the Environment Agency.	29 February 2024 or as agreed in writing with the Environment Agency.
IC03	The operator shall carry out a feasibility study into the installation of 2g engines to replace those engines on site which are not currently at this specification and submit a written report including timescales to the Environment Agency for approval. Installation of any 2g engines agreed shall be implemented by the operator in line with the timescales agreed by the Environment Agency.	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC04	<p>The operator shall submit a written report to the Environment Agency for approval verifying the predicted short-term nitrogen dioxide concentrations at the boundary of the site. The report shall include but is not limited to:</p> <ul style="list-style-type: none"> • Monitoring of ambient air quality at the boundary of the site during the 'Black Building' operating scenario using monitoring methods agreed in advance with the Environment Agency • A comparison of modelled concentrations against monitored concentrations of nitrogen dioxide • A demonstration that appropriate monitoring location(s) were selected at the boundary of the site, taking into account the modelled predictions and the weather conditions prevalent at the time of the monitoring • Evidence to demonstrate that the monitoring team holds appropriate qualifications. <p>The output of the verification exercise should be used to revise the air quality management plan if necessary to the timescales agreed by the Environment Agency.</p>	Completed
IC05	<p>The operator shall produce a review, with timescales, of options for reducing predicted short term nitrogen dioxide emissions impacts. This shall include but is not limited to:</p> <p>Considerations of the conclusions of the validation exercise specified in improvement condition 4 (IC04) to inform a feasibility study including cost benefit analysis for potential upgrades or other changes to infrastructure or operational regimes on site that could reduce emissions;</p> <p>Use of the above information to propose appropriate changes in stack height or orientation or other potential options increasing dispersion to ensure emergency scenario emission levels do not exceed acceptable maximum levels specified in relevant guidance at sensitive receptors;</p> <p>Proposal of an appropriate timescale for improvements.</p> <p>The review and timescale for improvement shall be submitted to the Environment Agency in writing for approval.</p> <p>Any agreed proposals shall be implemented by the operator in line with the timescales approved by the Environment Agency.</p>	29 February 2024 or as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC06	<p>The operator shall produce a report outlining the maintenance and operating regime following the first year of operation following permitting. This shall include but is not limited to the following points:</p> <ul style="list-style-type: none"> • An update on the control systems used to carry out the testing of the generators and how these have been used to minimise emissions; and • Any additional improvements that have been identified to reduce emissions during the maintenance testing and operation of the generators. This should include timescales for the implementation of the improvements. <p>The operator shall submit this report in writing to the Environment Agency for approval.</p> <p>Any agreed proposals shall be implemented by the operator in line with the timescales agreed by the Environment Agency</p>	Completed
IC07	<p>The operator shall produce an Air Quality Management Plan in conjunction with the Local Authority outlining response measures to be taken in the event of a grid failure. This should include but not be limited to the following considerations:</p> <ul style="list-style-type: none"> • The response should be tailored to reflect the predicted potential impact indicated by the air dispersion modelling at individual receptors; • Specific timescales for response measures; • How local conditions during a grid failure might influence the response required, for example meteorological conditions or time of day; • Contingency for how the response will be carried out in the event scenario i.e. loss of power; and • Timescales for continued review of the management plan. <p>The agreed Air Quality Management Plan shall be submitted to the Environment Agency for approval.</p>	Completed
IC08	<p>Updated Air Quality Management Plan</p> <p>The operator shall submit an updated version the Air Quality Management Plan to the Environment Agency for confirmation, written in accordance with IC07 to include the operations of the additional four new engines corresponding to emission points A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site plan) permitted by variation V003.</p>	28 March 2024 or as agreed in writing with the Environment Agency

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
PO1	<p>Operation of the engines corresponding to emission points A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site</p>	<p>Improvement programme</p> <p>Prior to the commissioning of the 4 new engines in the scope of this variation application, the operator shall have obtained the Environment Agency's written approval to the reports, review and plans submitted in response to the outstanding improvement conditions IC01, IC02 and IC05. The commissioning of the 4 new engines shall not begin prior to having obtained the written</p>

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
	plan) permitted by variation V003	approval from the Environment Agency to a detailed and substantiated plan setting the actions and their implementation timeline to improve the environmental performance of the installation and reduce the impacts associated with the emissions of oxides of nitrogen from the engines permitted prior to this variation, in response and as a follow-up to the outstanding improvement conditions IC01, IC02 and IC05.
PO2	Operation of the engines corresponding to emission points A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site plan) permitted by variation V003	<p>Commissioning plan</p> <p>At least 1 month prior to the commissioning of the additional four new engines, the operator shall submit a commissioning plan to the Environment Agency for approval. The plan shall provide timescales for the commissioning of the diesel generators and shall demonstrate that the commissioning of the diesel generators is covered within the site's permitted regular testing regime, thereby minimising durations and impacts. When the commissioning is not covered within the site's permitted regular testing regime, the operator shall submit an environmental risk assessment for approval by the Environment Agency, demonstrating that the environmental risks during the commissioning are minimised and remain not significant. The commissioning of the engines shall not begin prior to receiving written approval to the plan and associated environmental risk assessment by the Environment Agency.</p> <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>
PO3	Operation of the engines corresponding to emission points A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site plan) permitted by variation V003	<p>Performance of SCR systems</p> <p>At least 1 month prior to operation of the additional four new engines, the operator shall submit a written report to the Environment Agency for assessment and written approval. The report must contain:</p> <ul style="list-style-type: none"> - Detailed information on the specification of the suitability of the NOx sensors and urea solution dosing to the SCR systems - Evidence of the initial calibration of the NOx sensors and verification of the levels of unabated and abated NOx emissions upstream and downstream of the SCR system according to a methodology consistent with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021 (formerly known as TGN M5) - Confirmation that the SCR systems achieve the NOx abatement performance stated in the application documents referred to in table S1.2, or a proposal for remedial actions when this is not achieved - A plan to periodically calibrate the NOx sensors and verify the performance of the SCR systems, including the proposed frequencies. <p>The operator must implement the proposals in the report in line with the timescales agreed within the Environment Agency's written approval.</p>

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Gas oil or equivalent substitute to be agreed in writing with the Environment Agency	Ultra-Low Sulphur (<10 mg S/kg)

Schedule 3 – Emissions and monitoring

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A101 to A108 and A201 to A221 (PG1_01 to PG1_08 And PG2_01 to PG2_21 as referenced in Schedule 7 Site plan)	Diesel Generator exhausts	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	No limit set	--	No monitoring required	--
		Carbon Monoxide	No limit set	--	No monitoring required	--
		Sulphur dioxide	No limit set	--	No monitoring required	--
		Particulates	No limit set	--	No monitoring required	--
A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site plan)	Diesel Generator exhausts abated through Selective Catalytic Reduction system	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first).	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021 (formerly known as TGN M5)
		Carbon Monoxide	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first).	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021 (formerly known as TGN M5)
		Sulphur dioxide	No limit set	--	No monitoring required	--

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
		Particulates	No limit set	--	No monitoring required	--
		Ammonia	No limit set	--	No monitoring required	--
Vents associated with each of the 13 bulk diesel storage tanks	Vents from bulk diesel in PG1 (1 bulk tank) and PG2 (12 bulk tanks)	No parameters set	No limit set	--	No monitoring required	--

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
Emission points to offsite surface water drain as shown on document referenced Annex F Drainage Drawing received 01/02/2019	Uncontaminated site surface water	No parameter set	No limit set	-	-	-

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site plan)	SCR abatement efficiency	Continuous	Continuous reading of NOx sensors fitted to SCR system to manufacturer's specification. Periodic validation according to the plan approved by the Environment Agency in response to	Minimum abatement of NOx, in accordance with operating techniques in application documents listed in table S1.2

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
			pre-operational condition PO3	

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.	A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site plan)	Every 1500 hours of operation or once every five years (whichever comes first).	Within 4 months of the issue date of the permit variation V003 or the date when the engine is first put into operation, whichever is later.
Process monitoring Parameters as required by condition 3.5.1	A222 to A225 (PG2-22 to PG2-25 as referenced in Schedule 7 Site plan)	Annually	January

Parameter	Frequency of assessment	Units
Gas Oil usage	Annually	tonnes
Generator operation for testing/maintenance	Report to be submitted annually	<ul style="list-style-type: none"> - Total hours operation for the site (hours) - Total hours operation per generator (hours) - Total number of runs per generator (quantity) - Time per run (minutes)
Generator operation for emergency running	Within 24 hours of emergency operation commencing	<ul style="list-style-type: none"> - Date and time of National Grid failure - Number of generators operating immediately after the failure - Number of generators operating two hours after failure - Anticipated duration of the mains supply failure (hours)
Generator operation for emergency running	Annually	<ul style="list-style-type: none"> - Total number of runs - Duration of runs (hours)
Operation of SCR systems	Annually	<ul style="list-style-type: none"> - Gas oil usage in each generator fitted with SCR - Readings of NOx sensors - NOx abatement efficiency - Evidence of periodic calibration with frequency specified according to Environment Agency's approval of pre-operational condition PO3

Table S4.3 Reporting forms		
Media/parameter	Reporting format	Date of form
Other performance indicators	Form 'performance 1' or other form as agreed in writing by the Environment Agency	08/09/2020
Generator operation during emergency scenario	Form 'emergency scenario' or other form as agreed in writing by the Environment Agency	08/09/2020
Air	Emissions to Air Reporting Form or other form as agreed in writing by the Environment Agency	08/03/2021
Process monitoring Parameters as required by condition 3.5.1	Process Monitoring Form, or other form as agreed in writing by the Environment Agency	08/03/2021

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	

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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.

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

“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.

“existing MCP” means an MCP first put into operation before 20/12/2018.

“gas oil” includes diesel and is defined in Article 3(19) of the MCPD.

“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, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

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

“Medium Combustion Plant” or “MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“new MCP” means an MCP first put into operation on or after 20/12/2018.

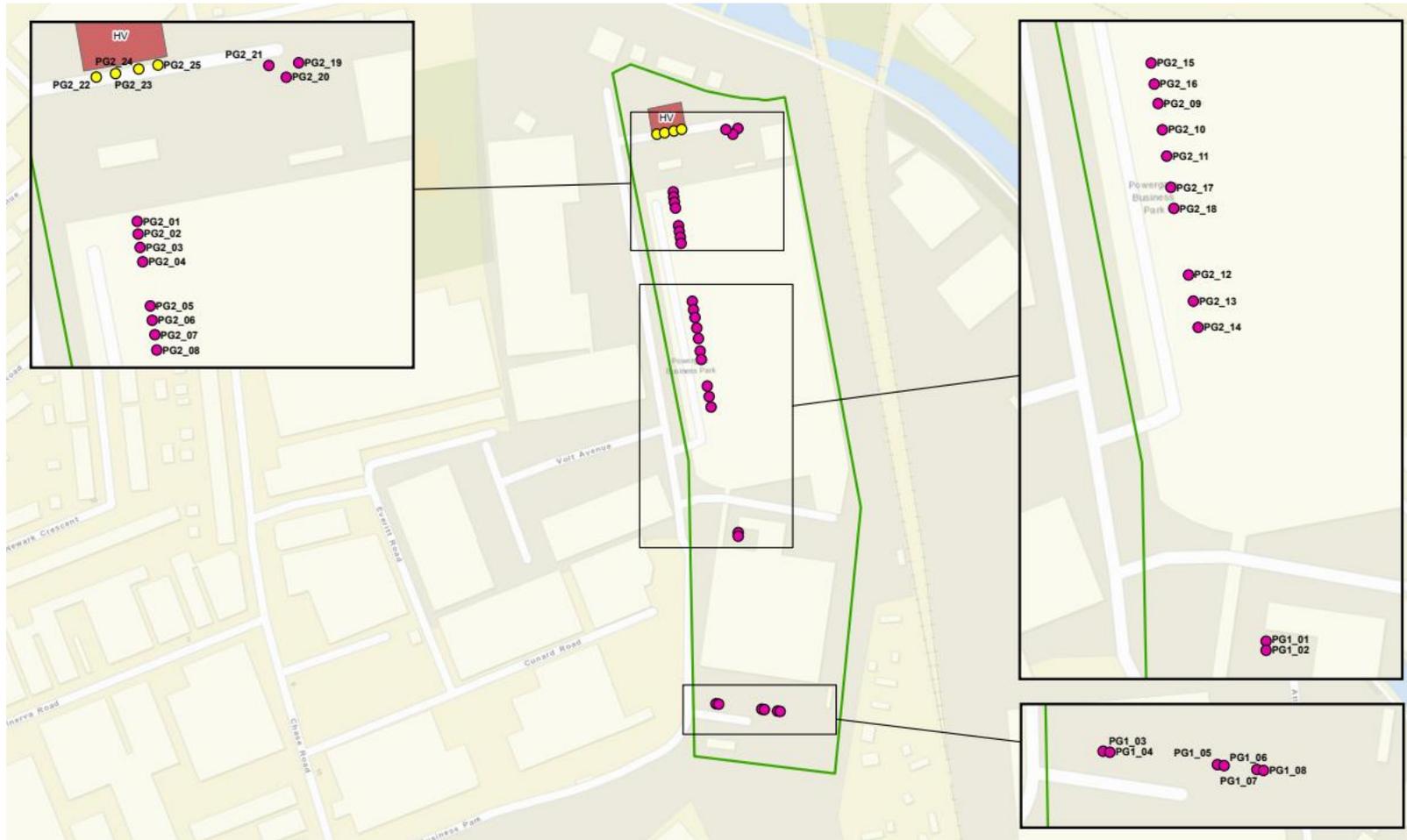
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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 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

Emissions to Air Reporting Form

Permit number: [EPR/AB1234CB]

Operator: [A Company Name Limited]

Facility name: [Unit A, Anytown]

Emissions to Air Reporting Form: version 1, 08/03/2021

Reporting of emissions to air for the period from [DD/MM/YY] to [DD/MM/YY]

Emission point	Substance / parameter	Emission Limit Value	Reference period	Test method ¹	Result ²	Sample dates and times ³	Uncertainty ⁴
[e.g. A1]	[e.g. Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)]	[e.g. 200 mg/m ³]	[e.g. daily average]	[e.g. BS EN 14181]	[State result]	[State relevant dates and time periods]	[State uncertainty if not 95% confidence interval]

Signed: [Name]

Date: [DD/MM/YY]

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.

Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

- ¹ Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
- ² Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.
- ³ For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.
- ⁴ Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Process Monitoring Form

Permit number: *[EPR/AB1234CB]*

Operator: *[A Company Name Limited]*

Facility name: *[Unit A, Anytown]*

Process Monitoring Form: version 1, 08/03/2021

Reporting of process monitoring for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Monitoring point description or source	Parameter	Reference period	Test method ¹	Result ²	Sample dates and times ³	Uncertainty ⁴
<i>[e.g. Condenser V 2345]</i>	<i>[e.g. cooling water outlet temperature]</i>	<i>[e.g. instantaneous]</i>	<i>[if applicable]</i>	<i>[State result]</i>	<i>[State relevant dates and time periods]</i>	<i>[if applicable]</i>

Operator's comments

Signed: *[Name]*

Date: *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.

Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

- ¹ Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
- ² Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.
- ³ For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.

Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.