Permitting Decisions- Variation

We have decided to grant the variation for Wressle 1 operated by Egdon Resources U.K. Limited.

The variation number is EA/EPR/AB3609XX/V006.

The variation is for changes to permitted Medium Combustion Plant (MCP) and Specified Generator.

The current permit authorises a medium combustion plant (MCP) which is also considered a Specified Generator (SG) with a net thermal input of 2 MW. This activity has not yet commenced but now exportation of gas has become available option. This variation allows for capacity increase to facilitate installation of gas engine up to 4.7 MW thermal input. This is capable of meeting both the increased site load and surplus export.

The first phase will incorporate up to three micro-turbines (these are <1MWth and therefore fall outside the regulations), which are able to generate small volumes of electricity appropriate to the current site load. Due to the well producing under its own pressure, there are no artificial lifting techniques onsite (i.e. pumpjack) that require power at this stage. The second phase will include the adoption of a gas engine with the capability to harness more of the natural gas and produce more electricity.

The facility is not located within an Air Quality Management Area (AQMA). The closest human health receptor is located at a distance of approximately 500 metres to the west of the site. The facility is within relevant air screening distance of the Broughton Far Wood SSSI (located approximately 720m west of the site), which has been assessed as part of this variation.

Existing activities on the permit specified in table S1.1 are unchanged and remain as currently permitted.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision-making process. It summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

Identifying confidential information

We have not identified information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

The regulated facility

We considered the extent and nature of the facilities at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN2 'Defining the scope of the installation', Appendix 1 of RGN 2 'Interpretation of Schedule 1', guidance on waste recovery plans and permits.

The operator has provided the grid reference for the emission point from the medium combustion plant/specified generator.

The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

The site

The operator has provided a plan which we consider to be satisfactory.

These show the extent of the site of the facility including the discharge point.

The plan is included in the permit.

Waste gas management plan

Phase 1 – Installation of up to 3 Microturbines.

The operator is proposing to install up to 3 microturbines at the site. The microturbines will be able to meet the current site demand (~80kWe) and the peak demand of ~170kWe (water heating for hot washing). The operation of turbines will replace the need to run a diesel generator at the site and reduce the amount of gas being flared.

The aggregated thermal input of the turbines is less than 1MWth therefore the microturbines will not fall withing the scope of the regulations relating to Medium Combustion Plant (MCP) or Specified Generators (SG) (Schedules 25A & 25B to EPR2016).

The utilisation of waste gas for power generation is preferred to flaring and therefore sits higher in the gas management hierarchy. We agree with the operator's conclusion that the Phase 1 proposal is BAT.

As the microturbines fall outside the scope of the MCP & SG regulations no emission limit values need to be applied. However, we have shown the emission points in Table S3.5 of the permit.

Phase 2 – Installation of a Medium Combustion Plant / Specified Generator (4.7MWth)

The operator has identified a private off-taker that's capable of receiving up to 1.75MWe from the Wressle 1 site.

The operator is proposing to install and operate a gas engine capable of meeting the third party business' demand. The operator is also intending that the MCP/SG will meet the future power demand of the Wressle site. Increased site demand is anticipated once formation pressure falls, and mechanical lifting is required.

The installation of MCP/SG (4.7MWth) will allow the operator to maximise gas utilisation at the site in accordance with the gas management hierarchy. We agree with the operator's conclusion that the Phase 2 proposal is BAT.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat

designations identified in the nature conservation screening report as part of the permitting process.

We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified.

The air quality assessment indicates no likely significant effect.

We have not consulted Natural England.

The decision was taken in accordance with our guidance.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility. The operator’s risk assessment is satisfactory.

The assessment shows that applying the conservative criteria in our guidance on environmental risk assessment, all emissions can be categorised as environmentally insignificant.

Operating techniques

We have reviewed the techniques proposed by the operator and compared these with the relevant technical guidance and we consider them to represent appropriate techniques for the facility.

The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.

Pre-operational conditions

Based on the information in the application, we consider that we need to include pre-operational conditions for future development, due to insufficient detail being available during the determination of the variation application.

PO6 in Table S1.4 requires the operator to provide an Engine Installation & Commissioning plan prior to the construction and installation of the proposed engines. The plan shall provide confirmation of the engine make, model, thermal input (MWth), electrical output (Mwe) and that these conform to those detailed in Table 3.4 of the Air Quality Assessment of hydrocarbon production – Wressle 1 Wellsite dated 24/01/2023.

Emission limits

Emissions limits have been added to Table S3.5 of the permit for the main point source emissions to air from the gas engine for oxides of nitrogen, carbon monoxide and sulphur dioxide.

We have included these limits based on the requirements for gas engines as specified under the Medium Combustion Plant Directive.

As the operator did not have a detailed specification of the engine during the determination of the application, we have built some flexibility into the permit in terms of the emissions limits. The operator has modelled the worst-case scenario and the chosen engine will be within those parameters.

If the engine to be installed is classed as existing in accordance with the Medium Combustion Plant Directive, regardless of the methane content of the gas, Emission Limit Values (ELVs) for Oxides of Nitrogen is 190 mg/Nm^3. However, if the chosen engine has been commissioned on or after 20th December 2018, and the engine is running on a natural gas (methane content >= 80% v/v) ELV for Oxides of Nitrogen is 95 mg/Nm^3.

In addition, if the combusted gas has a methane content of < 80% v/v, ELV for sulphur dioxide (15 mg/Nm^3) is applicable.

Monitoring

We have decided that monitoring should be amended under this variation to include the gas engine (4.7MWth) in accordance with the Medium Combustion Plant Directive parameters. This includes annual monitoring for Oxides of Nitrogen, Carbon monoxide and Sulphur Dioxide (subject to gas composition, see section Emission Limits above).

Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.

Reporting

We have added reporting in the permit for the following parameters:

Emissions to air from the MCP for Oxides of Nitrogen (NO and NO2 expressed as NO2), Carbon monoxide and Sulphur Dioxide. Reporting is required annually.

Management system

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit variation.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.