

Permitting decisions

Variation

We have decided to grant the variation for Minworth Sludge Digestion and Combined Heat and Power Plant operated by Severn Trent Water Limited.

The variation number is EPR/BP3631SW/V009.

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:

- highlights [key issues](#) in the determination
- summarises the decision making process in the [decision checklist](#) to show how all 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. The introductory note summarises what the variation covers.

Key issues of the decision

1. Assessment of Best Available Techniques (BAT) and impact on air quality

The operator proposes to use a membrane separation process to upgrade raw biogas to biomethane at the Installation. We consider the membrane separation technique to be BAT as outlined in the Environment Agency draft technical guidance, *How to comply with your environmental permit. Additional guidance for: Anaerobic Digestion, Reference LIT 8737, Report version 1.0 and November 2013* and in the Waste Treatment BAT Reference Document (August 2018).

The Operator submitted a H1 risk assessment to consider the impact of air emissions from the biogas upgrading plant (submitted 18/11/2019). The following table shows the H1 results of pollutants considered against the environmental quality standard (EQS):

Pollutant	EQS	Process Contribution (PC)		PC >1% LT EQS or >10% ST EQS?
	µg/m ³	µg/m ³	% of EAL	
Benzene (long term)	5	0.009	0.18	No
Benzene (short term)	195	0.231	0.12	No
Toluene (long term)	1,910	0.014	0.0007	No
Toluene (short term)	8,000	0.375	0.005	No
H ₂ S (long term)	140	0.027	0.02	No
H ₂ S (short term)	150	0.720	0.48	No
Xylene (long term)	4,410	0.028	0.0006	No
Xylene (short term)	66,200	0.749	0.001	No
Ammonia (long term)	180	0.008	0.005	No
Ammonia (short term)	2,500	0.216	0.009	No

From the table above, all emissions screen out as insignificant, in that the process contributions are <1% of the long term EQS and <10% of the short term EQS. The operator concludes that emissions are unlikely to have a significant impact on the environment and human health. We agree with this assessment.

We consider it appropriate to set an Improvement Condition (IC20) which requires the operator to undertake a monitoring survey following the commissioning of the biogas upgrading plant to obtain actual (real-time) operational monitoring data.

Additionally, an improvement condition (IC21) has been included which requires the operator to undertake an air emissions impact assessment (H1 software tool) using the results of the monitoring survey and compare the long term and short-term impacts of pollutants in accordance with the Environment Agency Guidance – Air emissions risk assessment for your environmental permit. Following the review of results from the monitoring survey and impact assessment, the Environment Agency shall consider whether or not to set emission limits at emission point A76. We have used this approach for biowaste treatment facilities with associated biogas upgrading plants across England.

2. Noise management

The Applicant submitted information to address the noise risk associated with the plant being added in this variation. All of the noise sources added in this variation will be fully enclosed, with the exception of the gas booster, gas chiller, desulphurisation unit and compressor serving the gas upgrading plant, for which the noise risk has been considered by the Applicant.

The Applicant included reference to a quantitative noise impact assessment which was submitted as part of the last permit variation (EPR/BP3631SW/V008) to demonstrate that the risk associated with this variation had been addressed. Although the impact assessment did not consider the noise sources added in this variation, the assessment considered the risk associated with sources which exhibit a higher noise rating and are located closer to the nearby sensitive receptors compared to the plant added in this variation. Since the plant being added in this variation will be located further away from the sensitive receptors, and will exhibit a lower noise rating compared to the noise sources previously assessed, we are satisfied that the risk associated with this variation was previously addressed.

Based on the information submitted, we are satisfied that the noise risk associated with this variation has been adequately addressed by the Applicant.

3. Odour management

The Applicant submitted an odour management plan (OMP) with their application. The aspects of the OMP relevant to the changes authorised in this variation were reviewed. However, we consider it prudent to include an improvement condition for the submission of an OMP at a later date to ensure that the other odour sources present on-site are adequately addressed in the OMP.

An improvement condition (IC22) has been included in the permit which will require the operator to submit an odour management plan to the Environment Agency for written agreement. The odour management plan will have to comply with the requirements of H4 Odour Management – How to comply with your environmental permit. The plan shall also take into account the appropriate measures for odour control specified in Environment Agency Draft Technical Guidance for Anaerobic Digestion (Reference LIT 8737, November 2013).

Once the Environment Agency has provided written agreement, the installation will be operated in accordance with the odour management plan.

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
The site	
Biodiversity, heritage, landscape and nature conservation	<p>The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat.</p> <p>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance.</p>
Environmental risk assessment	
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 may be categorised as environmentally insignificant (See key issues section).
Operating techniques	
General operating techniques	We have reviewed the techniques used by the operator and compared these with the relevant guidance notes 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.
Operating techniques for emissions that do not screen out as insignificant	Emissions of benzene, toluene, hydrogen sulphide, xylene and ammonia have been screened out as insignificant (See key issues section), and so we agree that the applicant's proposed technique is BAT for the Installation. We consider that the emission limits included in the Installation permit reflect the BAT for the sector.
Odour management	We have reviewed the odour management plan in accordance with our guidance on odour management. We have reviewed the aspects of the plan relevant to the changes made in this variation, and included an improvement condition to address the submission of an OMP for the site at a later date (See key issues section).

Aspect considered	Decision
Permit conditions	
Updating permit conditions during consolidation	We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permits.
Improvement programme	Based on the information on the application, we consider that we need to impose an improvement programme (See key issues section).
Emission limits	No emission limits have been added, amended or deleted as a result of this variation.
Monitoring	Monitoring has not changed as a result of this variation.
Reporting	Reporting has not changed as a result of this variation.
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Technical competence	Technical competence is required for activities permitted. The operator is a member of an agreed scheme. We are satisfied that the operator is technically competent.
Relevant convictions	The Case Management System and National Enforcement Database have been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	<p>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.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“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.”</p> <p>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</p>

Aspect considered	Decision
	<p>legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>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.</p>