



This form will report compliance with your permit as determined by an Environment Agency officer

Site	Emerald Biogas Energy Park EA/EPR/BP3133TC/A001			Permit Ref	BP3133TC		
Operator/ Permit holder	WARRENS EMERALD BIOGAS LTD						
Date	14/09/2023			Time in	10:15	Out	10:50
What parts of the permit were assessed	As per below:						
Assessment	Site Inspection	EPR Activity:	Installation	X	Waste Op	Water Discharge	
Recipient's name/position	Site manager/ TCM						
Officer's name	James Waddington			Date issued		03/10/2023	

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations (EPR). A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our [Compliance Classification Scheme](#) (CCS). CCS scores can be consolidated or suspended, where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your [local office](#).

Permit Conditions and Compliance Summary			Condition(s) breached
a) Permitted activities	1. Specified by permit	A	
b) Infrastructure	1. Engineering for prevention & control of pollution	A	
	2. Closure & decommissioning	N	
	3. Site drainage engineering (clean & foul)	A	
	4. Containment of stored materials	N	
	5. Plant and equipment	N	
c) General management	1. Staff competency/ training	N	
	2. Management system & operating procedures	N	
	3. Materials acceptance	N	
	4. Storage handling, labelling, segregation	A	
d) Incident management	1. Site security	N	
	2. Accident, emergency & incident planning	N	
e) Emissions	1. Air	N	
	2. Land & Groundwater	N	
	3. Surface water	N	
	4. Sewer	N	
	5. Waste	N	
f) Amenity	1. Odour	A	
	2. Noise	N	
	3. Dust/fibres/particulates & litter	N	
	4. Pests, birds & scavengers	N	
	5. Deposits on road	N	
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	N	
	2. Records of activity, site diary, journal & events	N	
	3. Maintenance records	N	
	4. Reporting & notification	N	
h) Resource efficiency	1. Efficient use of raw materials	N	
	2. Energy	N	

KEY: C1, C2, C3, C4 = CCS breach category (* suspended scores are marked with an asterisk),

A = Assessed (no evidence of non-compliance), **N** = Not assessed, **NA** = Not Applicable, **O** = Ongoing non-compliance – not scored

MSA, MSB, TCM = Management System condition A, Management System Condition B and Technically Competent Manager condition which are environmental permit conditions from Part 3 of schedule9 EPR (see notes in Section 5/6).

Number of breaches recorded	0	Total compliance score (see section 5 for scoring scheme)	0
If the Total No Breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response			

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training, combustion plant, etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- information on the compliance score accrued inc. details of suspended or consolidated scores.
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

Introduction:

Warrens Emerald Biogas Limited is an Anaerobic Digestion facility which operates under a consolidated permit EPR/BP3133TC. The address of the facility is Emerald Biogas Energy Park, Hurworth Road, Aycliffe Industrial Estate, Newton Aycliffe, County Durham, DL5 6UD and is also company's registered office address.

An Environment Agency Biowaste Treatment Sector review has been undertaken and on the 24.02.2022 the permit was varied and consolidated and issued to the operator.

Changes introduced by this variation notice/statutory review:

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. Article 21(3) of the IED requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. The BAT Conclusions for Waste Treatment (the BREF) was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018.

The scope of the permit review also covers the assessment of:

- the bioaerosols monitoring and compliance with M9 bioaerosols monitoring requirements;
- the design and construction of secondary containment and storage lagoons;
- the available storage facilities and measures to reduce ammonia emissions from storage; and
- information on existing medium combustion plant and/or specified generators on site.

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for biowaste treatment. The opportunity has also been taken to consolidate the original permit and subsequent variations.

Brief Description of the process (Introductory note):

The main features of the permit are as follows:

The operation is an anaerobic digestion facility at Newton Aycliffe in County Durham. The installation will treat up to 150,000 tonnes per annum of source segregated biodegradable wastes (food waste, liquid fat and oils, animal by-products) and non-wastes (grass silage).

The facility consists of an enclosed waste reception area for delivery of all feedstock except for grass silage which will be off-loaded to enclosed containers outside of the main raw material reception building. Manure will be delivered outside and directly into the pulp collection tanks. Unwanted materials will be removed from the feedstock prior to transfer of material to the pasteurising tanks. Pasteurised material is then transferred to four digester tanks and two post digestion tanks in which digestate and biogas is produced. The digestate is sent off-site for use as a fertiliser. The biogas is subject to a cleaning process via two upgrading plant to create a biomethane. The biomethane is then exported offsite to the gas National Grid. The installation also uses the biogas produced to provide energy to the facility via the combustion of biogas within two combined heat and power (CHP) engines. Each engine is classed as a medium combustion plant

(MCP), with a thermal input of 3.9 MWth and 2.9 MWth respectively.

The mass storage tanks (digestion tanks, process water collection tanks and digestate storage) are all located on an impermeable surface with a sealed drainage system. The tanks have localised concrete bunding, however, the main protection from tank failure is via an earth bund acting as tertiary containment which follows the perimeter of the main site area. Process gasses from the biogas upgrading plant are subject to abatement systems which clean the air prior to emission via stacks. Air between the inner and outer membrane of the gas domes are vented to atmosphere through a carbon filter to catch any gas leaks. Gases produced in the reception hall are extracted and treated currently using an abatement system not considered BAT. However, this permit requires the operator to install a recognised abatement technique to treat this air from the reception hall in line with the Waste Treatment BREF. There are two flares for burning biogas during periods of plant shutdown and maintenance. There are no discharges of process water from the site, any process waters generated are reused within the operations on site.

The permit also authorises a separate waste treatment operation not linked to the biowaste treatment installation. This waste treatment consists of storage, pre-treatment (de-packaging, shredding, sorting, screening, compaction, baling, mixing and maceration) and potentially pasteurisation before being exported of site for further treatment at alternate anaerobic digestion sites.

The purpose of the inspection was to conduct a routine compliance inspection of the facility and to discuss recent odour reports with the operator. To access compliance the issued permit was used and the approved Odour Management Plan (dated May 2019). It is understood that the operator uses an IMS and the EA are in receipt of a document control register.

The inspecting officer on arrival signed in and showed a personal authorisation to the site manager and the purpose of the visit explained. Prior to the on-site inspection a meeting was held in the site office. An update on progress with outstanding Improvement conditions as detailed in Table S1.3 Improvement programme requirements was requested. Please send any completed report to the EA for review. An extension of the deadline dates can be agreed if you can demonstrate you are actively working to achieve compliance with the requirements set in Table S1.3.

Please send all updates to james.waddington@environment-agency.gov.uk

The operator explained that the OMP is currently under review and will be submitted for approval in due course. Before an updated OMP can be used it must be reviewed and approved by the EA, until this point the current May 2019 OMP will continue to be used for regulatory purposes as the approved OMP. Permit condition 2.3.2 requires the operator to submit to the EA for approval a revised plan which identifies and minimises the risks of pollution relevant to that plan. Due to recent reports of odour pollution in the vicinity to the site and a previous non-compliance for odour being recorded during an inspection you are therefore notified that a revised OMP must be submitted to the EA by 06.11.2023. You have also explained that a new reception hall is to be constructed, any changes to operations must be incorporated into all management plans.

Weather conditions at the time of the inspection were recorded as dry with passing clouds, 15°C with a light breeze.

Permit breaches:

At the time of the inspection, there were no permit breaches identified on site.

Compliance Summary:

The following provides a summary of your activities which were assessed as compliant.

A1 – Permitted Activities:

The permitted activities include:

Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment. Storage of waste pending recovery or disposal, physical treatment for the purpose of recycling, steam and electrical power supply, emergency flare operation, gas upgrading, raw material storage, gas storage, digestate storage, storage, and conditioning of biogas for re-fuelling vehicles. Waste treatment and transfer operation R3: Recycling/reclamation of organic substances which are not used as solvents R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).

B1 – Engineering to control emissions:

The site infrastructure appeared to be in good physical condition with no areas of concern. There was no damage evident to buildings, tanks, impermeable concrete flooring, or other areas of the Anaerobic Digestion plant. No obvious signs of leaks or staining on tanks or the concrete surface.

During the visit it was noted that a door to the reception hall had become stuck in a semi open position. The manager explained that repairs had been started and the door would be closed as soon as possible. No further issues were noted with the operation of the roller doors.

Table S3.3 Process monitoring requirements states that digesters, tank capacity and sediment assessment should be carried out every 5 years from date of commission.

Action: Please provide me with the most recent assessment and the date of the next planned assessment.

B3. Infrastructure – Site Drainage Engineering (clean and foul):

The site benefits from an impermeable concrete surface which is well maintained with no signs of damage. The site has sealed drainage with surface drainage channels and a bunded area where the storage tanks are situated. The site has an effluent storage tank. The site is currently undergoing expansion, so once the works are completed a further inspection of these areas will be carried out.

It was observed that the site utilises a surface pond to the side of the reception hall that collects surface water from the site surface and buildings. It was explained that the pond has the potential to discharge to sewer, but all valves are currently closed with there being no immediate intention to discharge any effluent off site. All effluent stored in the pond is pumped back into the on-site process and utilised within the storage tanks. The pond water at the time of inspection appeared black in colour and had the appearance of being contaminated with dirty effluent/ digestate effluent. There was a slight odour at the edge of the pond, 2/6 but this was not detected away from the pond fence line. The pond also appeared to have no membrane and the effluent was being stored in an open pond directly on the soil. There was ample freeboard with the effluent sitting well below the top of the pond.

Further information is required regarding the use of the pond. Please provide evidence of compliance with the permit and the construction standard of the pond to minimise the risk of pollution. Please send a response to the inspecting officer.

Table S1.1 activities- AR11 sets out the conditions for the collection and storage of effluent:

AR11	Surface and process water collection and storage	Collection and storage of uncontaminated roof, site surface water and contaminated run-off	From the collection of uncontaminated water (roof and site surface water) and contaminated process
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Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
		(leachate and wash water) in one water storage tank.	water from the site drainage systems for re-use on site only. Effluent from the water storage tanks shall not be discharged off site.

Table S3.2 Point source emissions to water (other than sewer) and land- emission limits and monitoring requirements also sets out the below:

Table S3.2 Point source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 on site plan in schedule 7 emission to Demons Beck	Uncontaminated site surface water from roofs and non-operational areas	Oil and grease	No visible oil or grease	--	Weekly	Visual assessment
Note 1 – Clean surface water from roofs, or from areas of the site that are not being used in connection with storing and treating waste can be discharged directly to surface waters, or to groundwater by seepage through the soil via a soakaway.						

C4. Storage handling, labelling & segregation:

Was within the reception hall was observed as being well managed and there was ample space to handle and process what was currently being stored, currently below half the potential capacity of the bay. Effluent from this waste was seen to be entering the internal drains which lead directly to the wastewater storage tank.

It was observed that outside of the reception hall, a large quantity of palletted waste starch was being stored in preparation for processing. This waste was stored in sealed dumpy bags and was clearly labelled. There was no odour from this waste and the site manage explained that due to the low odour risk and lack of storage space in the reception hall, this waste remains outside until for a short period of time until it can be moved and processed.

Advice and guidance:

You are reminded of table S1.1 activities which states:

	Directly Associated Activity		
AR2	Storage of waste pending recovery or disposal	R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced)	From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site. Storage of residual wastes from pre-treatment to despatch off-site for recovery. Storage of waste in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with sealed drainage. Waste types suitable for acceptance are limited to those specified in Table S2.2

Action:

Ensure that all waste regardless of odour risk is stored in the correct location and appropriately in accordance with the permit.

It should be noted that site ground works are currently under way for the construction of a new, larger reception hall next to the current one. The completion date of this project is unknown to the EA.

F1. Odour:

During the inspection there was a localised odour in various locations within the site boundary. An odour rated 3/6 was noted in the reception hall which is typical of an area storing and handling odorous waste, the odour abatement system was working correctly at the time and no issues noted.

A slight odour was detected at the pond and again this was localised to this area.

Odour was noticed near to the digestate storage tank/ off loading point, 2/6.

During the inspection the site manager and officer conducted a sniff test at the entrance to the site and no off-site odour was detected.

It is noted that in a Compliance assessment form dated 11.09.2017 Report ID BP3133TC/0292464 a comment was made regarding the management of odour from the effluent storage tank.

“One aspect of odour management that requires improvement relates to the air discharge from the liquid waste storage tank. Currently this vents to atmosphere. ACTION - This discharge should be piped through the UV system or sent through an additional treatment system.”

Please provide me with an update on this action.

Section 3- Enforcement Response

Only one of the boxes below should be ticked

You must take immediate action to rectify any non-compliance and prevent repetition.

Non-compliance with your permit conditions constitutes an offence* and can result in criminal prosecutions and/or suspension or

revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.

**Non-compliance with MSA, MSB & TCM do not constitute an offence but can result in the service of a compliance, suspension and/or revocation notice.*

Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.

In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.

We will now consider what enforcement action is appropriate and notify you, referencing this form.

Section 4- Action(s)

Where non-compliance has been detected and an enforcement response has been selected above, this section summarises the steps you need to take to return to compliance and also provides timescales for this to be done.

Criteria Ref.	CCS Category	Action Required / Advised	Due Date
See Section 1 above			

Section 5 - Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- advise on corrective actions verbally or in writing
- require you to take specific actions in writing
- issue a notice
- require you to review your procedures or management system
- change some of the conditions of your permit
- decide to undertake a full review of your permit

Any breach of a permit condition is an offence* and we may take legal action against you.

● We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.

● Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and or suspension or revocation of the permit.

● A civil sanction Enforcement Undertaking (EU) offer may also be available to you as an alternative enforcement response for this/these offence(s).

See our Enforcement and Civil Sanctions guidance for further information

A breach of permit condition **MSA, **MSB** & **TCM** is not an offence but may result in the service of a notice requiring compliance and/or suspension or revocation of the permit.*

This report does not relieve the site operator of the responsibility to

- ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- ensure you comply with other legislative provisions which may apply.

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance which could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

MSA, MSB & TCM are conditions inserted into certain permits by Schedule 9 Part 3 EPR

MSA requires operators to manage and operate in accordance with a written management system that identifies and minimises risks of pollution.

MSB requires that the management system must be reviewed, kept up-to-date and a written record kept of this.

TCM requires the submission of technical competence information.

Section 6 – General Information

Data protection notice

The information on this form will be processed by the Environment Agency to fulfill its regulatory and monitoring functions and to maintain the relevant public register(s). The Environment Agency may also use and/or disclose it in connection with:

- offering/providing you with its literature/services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Information Regulations request.

The Environment Agency may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The Environment Agency will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within 28 days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

A permit holder can challenge any part of the CAR form by writing to the Environment Agency office local to the site within 28 days of receipt. If the issue cannot be resolved by the local office, a permit holder can raise a dispute through our official [complaints procedure](#).

If you are still dissatisfied, you can make a complaint to the Ombudsman. For advice on how to complain to the [Parliamentary and Health Service Ombudsman](#), phone their helpline on 0345 015 4033.