

Compliance Assessment Report CAR_NRW0039429

Permit being assessed: AP3139FT.

For: Five Fords WWTW Gas to Grid Facility, held by Dwr Cymru Cyfyngedig (Welsh Water)
At: Five Fords WWTW CHP Facility Cefn Road Cefn Road , Marchwiel, Wrexham, LL13 0PA.

Type of assessment carried out: Report/Data Review, Reason: Routine.

On 30/12/2021.

Parts of permit assessed: SEE NOTES

NRW Lead Officer: Emma Pierce.

Report sent to: Energy Operations Manager, Energy Operations Manager on 24/02/2022.

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
E1 - Emissions - Air	C3 Minor	3.1.1
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	Assessed (A)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Assessed (A)	
C2 - General Management - Management system and operating procedures	C3 Minor	1.1.1

Result types are explained in more detail in the 'Important Information' section below.

Total number of non-compliances recorded	Total non-compliance score
2	8

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

Criteria	Action needed	Complete by
E1	See Notes	18/03/2022
C2	See Notes	18/03/2022

Action criteria codes are listed in the 'Important information' section below.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

At this time, we do not intend to take any further action.

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

4. Details of our assessment

This CAR form is in relation to annual monitoring returns and Schedule 5 notifications submitted to NRW by DCWW during 2021

Review of Annual Monitoring Returns.

2021

Monitoring returns were emailed to NRW on the 31st January 2022 and was within the required time frames of the permit AP3139FT.

Following review of the information supplied:

Emission Point A1, A2 were not operating on the testing day and so no emission data was available. Emission Point A11 and A12 show that the monitoring results are compliant with the requirements of permit AP3139FT, specifically condition 3: Emissions and Monitoring and Schedule 3 Table S3.1.

Schedule 5 Notification: Part A and B:

Part A was received by NRW on the 16th April 2021 advising:

On the 15th April 2021 between 3pm and 8pm there was a biogas loss from digester sludge outlet weir boxes for approx. 5 hrs. The flow of this biogas was made up of approx. 992m³ from gas bag 1, 1699m³ from gas bag 2, there was a flow from the digesters at approximately 750m³/hr for 5hrs totalling approximately 6441m³ of biogas lost for this duration.

It appears to have been caused by a significant surge of sludge from digester 1 at Five Fords AAD facility. This sludge filled the post digestion storage tank and continued for approximately 4hrs. High level on the PDST inhibited the digester feed.

The stop in feed combined with continued antifoam dosing caused the level in digester 1 to drop below the high-level weir at approximately 3pm. This resulted in the biogas that was being produced in the digester to escape through the outlet weir box through the sludge line, and the biogas from the gas bags to flow back out of the weir box. This release of gas went into the atmosphere. This loss of gas occurred for approx. 5 hours (15:00-20:00) until the level within digester 1 was returned to above the level of the high-level weir, sealing the sludge outlet weir.

It has been calculated that substances potentially released would have had the composition of 60% Methane, and 40% Carbon Dioxide.

Part B was received by NRW on the 27th July 2021 advising:

Several measures are in place following this incident including:

1. Immediately added potable water to the digester to bring sludge levels back up to correct working limits and increase sludge density within the digester.
2. Adjusted and monitored digester feed dilution volume post Thermal Hydrolysis (THP) process to ensure stabilisation and reduction of digester organic loading rate and a reduction in dry solids content.

3. Appointed a consultant to carry out an in-depth analysis of root cause and subsequently a report of the findings (ongoing).

4. Developed operational procedures to be taken if early warning signs are noted e.g feed system adjustments, gas adjustments and isolations and additional process monitoring.

Permit condition 3.1.1 states:

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, S3.2 and S3.3.

The loss of biogas is a CCS3 (C3) non-compliance which could have a minor environmental effect.

Permit condition 1.1.1 states:

The operator shall manage and operate the activities... in accordance with a written management plan that identifies and minimises risk of pollution. The loss of biogas had the potential to result in an amenity impact relating to odour to nearby receptors. Whilst it is difficult to ascertain how high the impact from this loss was at the time, the amount lost (6441m³) had the potential to cause an impact.

The potential amenity impact is a CCS3 (C3) non-compliance which could have had a minor environmental effect.

ACTION: By the 18th March 2022

1. Provide a copy of the report carried out by your consultant on the root cause analysis into the biogas emission
2. Provide a copy of the operational procedures developed in relation to when early warning signs are noted e.g feed system adjustments, gas adjustments and isolations and additional process monitoring.
3. What other measures are in place to prevent a reoccurrence.

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

What are suspended scores?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

Full list of Industry and Waste action criteria (used in section 1 and 2):**A: Permitted activities**

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or 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
- assessing customer service satisfaction and improving our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within 20 working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 – 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.