

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

Site	Mona Anaerobic Digestion Plant	Permit Ref	AP3033HY		
Operator/Permit holder	Grays Biogas Limited				
Regime	Installations				
Date of assessment	23/08/2017	Time in	10:10	Out	13:50
Assessment type	Site Inspection				
Parts of the permit assessed	Various				
Lead officer's name	Ross, Stuart				
Accompanied by	Roberts, Anthony				
Recipient's name/position	Adam Archer / Site Manager	Date issued	06/09/2017		

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). 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	CCS Category	Condition(s) breached
A1 - Specified by permit	A	
C2 - General Management - Management system and operating procedures	C3	1.1.1
E3 - Emissions - Surface water	C3	3.2.2
F1 - Amenity - Odour	A	
F4 - Amenity - Pests/birds and scavengers	A	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	C3	4.3.1 & 4.3.2

KEY: See Section 5 for breach categories, suspended scores will be indicated as such.
A = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,
O = Ongoing non-compliance, not scored.

Number of breaches recorded	3	Total compliance score (see section 5 for scoring scheme)	12
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If the Number of breaches recorded is greater than zero, please see Section 3 for 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 (eg. 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 advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

This Compliance Assessment Report follows a routine site inspection 23/08/17.

1. Surface Water Drainage Contamination

4DAD have reported the ongoing contamination of surface water manhole chamber S4 which has been isolated from the surface water drainage system for several months. It was previously considered that contaminated water had been entering the chamber from an adjacent business via the French drain that runs along the AD plant boundary.

However, as part of recent phase 1 drainage improvement works the French drain was diverted away from SW4 (now soakaway only) but contaminated water has continued to accumulate in the base of chamber S4 below the level of the inlet and outlet, possibly through the ingress of contaminated water through the chamber walls. During the inspection a sample was lifted from the chamber and had a very pungent organic odour and was grey in colour.

A sample was then collected from a foul drain at the front of the clamps (within the clamp perimeter drain) that is known to contain silage leachate - it had a comparable but not identical odour and colour to that noted in S4. It was noted that the fresh leachate draining towards the ACO drain had a sweet odour and was straw coloured opposed to that within the foul drain. The change in odour and appearance of leachate in the foul drain is likely to be due to its de-composition and given the comparable odour and colour at S4 may indicate partially decomposed leachate is present in this drain also.

As part of their ongoing investigations 4DAD excavated trial pits along easterly edge of the clamps (in the adjacent field), one of which intercepted a land drain (running from under the clamp) around which there was a pool of discoloured brown/green liquid with foam on the surface. A sample was collected and had a more distinctive silage leachate odour.

In light of the findings noted above and the absence of any other obvious explanation, NRW is growing increasingly concerned that the source of contamination at S4, the trial pit and surface water manhole S12 is silage liquor from the silage clamps. It appears possible that leachate is escaping from a defect in the clamp base/sidewall or from defects in the leachate clamp foul drainage system and entering the engineered fill beneath the clamps. From here leachate may migrate into other site drains and historic land drains.

We acknowledge that 4DAD have been very proactive in investigating this issue including the installation of groundwater monitoring boreholes and soil and groundwater quality monitoring. It is understood that a report is to be compiled to report the findings of investigations carried out.

Further to communications 01/09/17, it is understood that samples are to be collected from the trial pit and S4 for targeted analysis to verify whether or not silage leachate is present – NRW supports this action.

Action - with respect to the issues detailed above, submit a report of your ground investigation findings (soil / groundwater sampling) and other investigatory work completed to date to NRW by no later than 29/09/17.

As a precautionary measure, 4DAD have proposed to grout the leachate collection systems installed beneath the clamps (excluding the ACO) with the objective of eliminating a potential pollution pathway. This will be followed by the physical examination of each clamp for any evidence of defects (following clamp emptying) that could be causing a release of leachate to ground.

We have the following comments;

1. It would be prudent to complete a CCTV survey of the silage clamp leachate drainage system to establish whether or not there are any obvious defects that could account for the contamination discussed above. The findings may also

be used to verify that grouting would be an effective remedial option.

2. 4DAD should carefully consider the consequences of grouting the drains before proceeding. This includes (but is not limited to) the potential long term impact of accumulated leachate on the integrity of the clamp and the ability of the ACO drain to cope with maximum predicted volumes of leachate. Whilst the drainage system on the yard is now entirely foul, leachate overtopping the ACO drain have implications for concrete corrosion on yard areas in the long term. Consideration of alternative options may be required (e.g. drain lining).

3. Should 4DAD decide to grout the drainage system careful consideration must be given to the specification of the grout to ensure it maintains its integrity throughout the lifetime of the plant. This is based on the presumption that the clamp drainage system is the source of contamination.

4. We agree with your proposal to inspect the clamps as they are emptied.

Please note that should ground and groundwater contamination be attributed to site operations then further permit non-compliances may apply (they are not covered in this report). This will be reviewed at a later date when further investigatory information is received by NRW.

2. Drier Hall Containment

The drier hall containment 'strip' has been installed around the perimeter of the building, with a different specification across the door opening. Whilst we appreciate that installation work may not yet be complete, the absence of any visible sealant applied to the plastic strips with their interface with the floor, building stanchions and intermediate joints raised the question as to whether the specification set out in the permit variation (phase 2) will be met.

Action – ensure the containment strip meets the requirements of the agreed design specification as set out in the phase 2 permit application before commencing operations within the drier hall building. Any deviations will require agreement with NRW / permit variation.

3. Surface Water Lagoon Liner Tie in

During the inspection doubts were raised as to whether or not an inspection has been made as to the integrity of the lagoon liner tie in within the discharge headwall.

The phase 2 permit variation application stated that;

'...the pre-cast concrete outlet headwall will be excavated to confirm that the welded uPVC pond lining has been tied into to the concrete headwall. If sealing of the lining to the headwall is found to be defective, this will corrected before the area is backfilled'.

During the inspection there was no evidence to suggest that soils around the headwall had been excavated and the geotextile overlying the liner appeared undisturbed.

Action – Fulfil the commitments of the phase 2 permit variation application by completing the inspection of the surface water lagoon headwall tie in.

4. Emission Limit Exceedance – Lagoon Outfall

On 24/07/17 the operator reported that the site's surface water discharge limit for ammoniacal nitrogen had been exceeded;

'Civil contractors were due to carry out remedial works on the outlet valve of the attenuation pond. To carry out this work the pond level needed to be lowered. Analysis of the water showed an ammonia concentration of 0.00mg/l. Additional monitoring procedures were put in place with analysis every 2 hours to ensure no contaminated water was released into the watercourse. The pond was emptied with no incident. 4DAD staff left site [20/07/17] as normal at 5pm. The contractors remained on site.'

Heavy overnight rainfall caused contaminated ground water to breach the surface water manhole housing (S12) up stream of the pond. Unfortunately, the contractors had failed to close the outlet valve thus allowing contaminated water to flow into the watercourse. 4D AD staff isolated the valve immediately on returning to site the following morning [21/07/17] and a sample was taken of the water.

Analysis of the attenuation pond outlet was carried out at 8am the ammonia trace within the watercourse was 9mg/l. The rain continued to pour down all day and the watercourse was diluting quickly, at 14:00 the watercourse ammonia trace was down 0.3 mg/l. Visuals were also taken of the watercourse further downstream where it meets the road

surface water system and no visual or odour of contamination could be identified. This morning (24/07/17) the watercourse ammonia trace is 0.01 mg/l.

Controls measures have been put in place whereas no keys will be issued unless authorised. A key register/permit has been procured and all keys will be issued with instructions. All keys will be returned at the end of the shift and the register will be signed off by a member of 4DAD services on their return.'

This discharge is in breach of permit condition 3.1.2 in so far that the discharge exceeded the permitted emission limit of 0.3ppm with a result of 9mg/l. This is likely to have resulted in a localised environmental impact on the receiving watercourse and attracts a non compliance score of 3.

To ensure effective pollution prevention measures are maintained and given the known issue of contaminated surface water entering S12, steps should have been taken to ensure the lagoon discharge valve was closed by either the site operator or contractors before the site was left unattended. This is a failure of the site's Environmental Management System and a breach of permit condition 1.1.1 attracting a noncompliance score of 3.

Action - Whilst we acknowledge your comments regarding the control of valve keys, the EMS should include controls to ensure the valve position is verified as being in the correct position and that contractors are adequately trained and supervised. Please address this issue as part of Part B notification to be submitted to NRW by 15/09/17.

The information quoted in the section above was received via a Part A notification 24/07/17 for an incident that occurred 21/07/17. The permit requires that this incident and incidents of this nature should be reported to NRW immediately and therefore the 3 day reporting delay is not acceptable and is in breach of permit conditions 4.3.1 & 4.3.2. This attracts a non compliance score of 3.

Action – all future 'Part A' notifications as required by conditions 4.3.1 and 4.3.2 shall be submitted in accordance with the timescales as set out in the permit. Procedures for submitting notifications to NRW must be reviewed and amended accordingly and key staff provided with awareness training. Training records shall be maintained. A summary of the steps you have taken to address this action shall be submitted to NRW by 15/09/17.

5. Auxiliary Boiler

During the inspection the potential requirement for an auxiliary biogas boiler was discussed. Please note that should a boiler be required then the permit may require variation to authorise a new emission point. You are entitled to pre application advice should it be required.

EPR Compliance Assessment Report

**Report ID:
CAR_NRW0032107**

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

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Operator/Permit holder	Grays Biogas Limited	Date	23/08/2017

Section 3 – Enforcement Response

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.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			
G4	C3	Refer Details Section	15/09/2017
E3	C3	Refer Details Section	15/09/2017
C2	C3	Refer Details Section	15/09/2017

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 verbally or 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.

See our Enforcement and Civil Sanctions guidance for further information

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 that 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.

Section 6 – General information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW 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 (eg. 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 its service
- Freedom of Information Act/Environmental Regulations request

The NRW 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 NRW 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 fifteen working 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?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with officer's line managers using the informal appeals procedure. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00 – 18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.