

Compliance Assessment Report CAR_NRW0041875

Permit being assessed: AB3697CN.

For: Radnor Hills, held by Radnor Hills Mineral Water Company Ltd

At: Radnor Hills Water, Heartsease Farm, Knighton, Powys, LD7 1LU.

Type of assessment carried out: Site Inspection, Reason: Routine.

On 24/05/2023 between 10:30 and 14:30.

Parts of permit assessed: SEE NOTES (Section 4)

NRW Lead Officer: Victoria Griffin, accompanied by Stuart Ross.

Report sent to: Radnor Hills, Environmental Co-ordinator on 05/06/2023.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
A1 - Specified by permit	Action only (X)	
E3 - Emissions - Surface water	C3 Minor	Condition 3.1.2
E3 - Emissions - Surface water	C3 Minor	Condition 3.1.2
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	C3 Minor	Condition 4.3.2

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

Total number of non-compliances recorded	Total non-compliance score
3	12

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
A1	See details below with regard to IC8	30/06/2023
E3	Investigate root cause of BOD breach and report to NRW	31/08/2023
E3	See details below regarding the investigation of the root cause of the breaches	30/06/2023
G4	Submit a Schedule 5 Notification Report for all breaches in accordance with the Permit	31/05/2023

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.

You are non-compliant with your permit.

At this time, we are issuing you with a warning for the non-compliance recorded above. Warnings may influence future enforcement response for continued or further non-compliance.

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

The following provides a review of the Q1 monitoring returns and a summary of a pre-arranged site meeting on 17 May 2023 with Ben Price, Rob Isaac and William Watkins.

Site Meeting Summary

The purpose of the meeting was primarily to discuss and review the proposals being implemented to address breaches of ammonia, phosphate and biological oxygen demand (BOD) at effluent discharge point W1. A brief tour of the external (non-production) areas of the installation was also undertaken.

Investigation of Breaches

The Operator confirmed that an investigation has been undertaken to determine the root cause of the recorded breaches. One of the primary causes has been identified as the use of a specific fructose syrup. This syrup is only used intermittently and pollution prevention guidelines have been amended by the Operator to prevent effluent generated during its use entering the drainage system and effluent treatment plant (ETP). Instead the syrup waste is stored before being disposed off-site by a waste contractor.

The Operator is continuing to investigate other contributing factors to the breaches and has been working with Aquabio Ltd to optimise the ETP via a number of technological trials, as follows:

- The trialling of new formulation antiscalant which comprises a lower phosphate concentration, 5% phosphate as opposed to 32% phosphate, has commenced. The new formulation has been trialled for several weeks without detrimental impact on the system.
- Ammonia and phosphate breaches may also be a result of nutrient overdosing of the bioreactor. Online monitoring of ammonia and phosphate is currently being trialled. If the trial is considered successful, inline probes will be installed and the system automatically dosed. This method will minimise the risk of future breaches by eliminating /reducing the time lag response to overdosing currently experienced by the existing manual dosing system.

- A ferric (iron) dosing trial is being considered as a method of removing excess phosphate from the system. The proposal is to use ferric dosing intermittently as and when required. Trials have yet to be implemented. Iron was not included as an assessment parameter in the surface water risk assessment (H1 tool) submitted as part of the original permit application. As a result, the potential impact of iron in surface water discharge on sensitive receptors has not been evaluated. An assessment of the risk(s) will need to be considered prior to commencing the trial phase and any subsequent implementation phase.
- The implementation of an automated sampler system, for sample recovery at the inflow and outflow of the ETP, is also being considered.
- A tertiary treatment system, comprising an ion exchange unit for the removal of ammonia and phosphate is also being considered. The Operator advised that one of the disadvantages of implementing such a system, is the potential to generate a granular waste which would require landfill disposal. A cost benefit analysis and suitability assessment of both a trial phase and future implementation is being undertaken by the Operator.

Improvement Conditions (IC)

IC1 & IC2: An email demonstrating compliance with IC1 and IC2 was issued to and agreed with the previous NRW Officer [email dated 12/01/2022].

IC7: Whilst elements of the installation plant have been upgraded since the original permit application, the Operator has stated there has been no change to the maximum capacity of the installation. This was confirmed to NRW in writing [email dated 21/03/2023].

IC8: A procedure describing how the requirements of BAT Conclusion 9 are or will be met has yet to be provided. The Permit states the date for submission as 4 June 2023. NRW have agreed an extension to this deadline with the Operator; submission is now required but the 30 June 2023.

Combustion Plant

The new LPG boiler has been installed and is confirmed to have a net thermal input of 9.9MW. The new boiler has yet to be commissioned but will be used as a duty boiler, with three of the existing boilers to be used as standby. *NRW officers reiterated that a permit variation must be in place prior to the new boiler being operated, the Operator acknowledged this.*

Monitoring of Emissions for January - March (Q1).

Emissions to water

Monitoring results were submitted to NRW in accordance with the timescales required by permit condition 4.2.3.

January 2023 - Returns did not report any exceedances of the emission limits specified in Condition 3.1.2 and Table S3.2 for emission point W1.

February 2023 - Returns reported the following exceedances of the emission limits

specified in Condition 3.1.2 and Table S3.2 for emission point W1:

1. Biological Oxygen Demand (BOD) recorded at 7.98mg/l against a limit of 5mg/l on 21 February 2023
2. Ammonia recorded at 32.6mg/l and 1.1mg/l against a limit of 0.5mg/l on 07 and 14 February 2023 respectively.

March 2023 - Returns did not report any exceedances of the emission limits specified in Condition 3.1.2 and Table S3.2 for emission point W1.

The reported exceedances for ammonia and BOD have each been scored C3

Schedule 5 Notifications

A Schedule 5 Notification was received on 27 March 2023 relating to a breach of BOD (7.98mg/l) in sample recovered from W1 on 21 February 2023. There is a delay between the sampling date and the receipt of the results from the laboratory. The Operator is undertaking a programme of detailed investigation with a view to implementing suitable mitigation measures to minimise the likelihood of future breaches.

The Operator is currently in the process of trialling mitigation options following an investigation of the root cause of previous Ammonia and Phosphate breaches. However, NRW were not notified of the ammonia breaches reported in February 2023. **This is in breach of Condition 4.3.2 and has been scored C3.**

Recommendations and Actions

1. **ACTION:** Provide NRW with a programme summarising the proposed trial dates and durations and the anticipated implementation dates for mitigation technology to minimise the risk of future Ammonia and Phosphate breaches. A programme is to be provided to NRW by **30 June 2023**.
2. **ACTION:** Submit a written report to NRW detailing how the BAT requirements will be met as outlined in IC8 of the Permit. The report is to be submitted to NRW by **30 June 2023**.
3. It is recommended that a permit variation application for the new boiler is submitted at the earliest opportunity to minimise any delay in operating the boiler.
4. **ACTION:** Investigate the root cause of the BOD breach and report findings to NRW by **31 August 2023**.
5. All permit breaches must be reported to NRW on a Schedule 5 notification, in accordance with Condition 4.3

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.