

Compliance Assessment Report CAR_NRW0043563

Permit being assessed: BR9383ID.

For: Queensferry Mineral Fibre Works , **held by:** Knauf Insulation Ltd

At: Chemistry Lane , Queensferry, Deeside, Flintshire, CH5 2DA.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 31/12/2023.

Parts of permit assessed: Q4 Returns and Annual Report.

NRW Lead Officer: Paul Challender.

Report sent to: Graham Jones, Environment & Compliance Manager, on 27/02/2024.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR3E - Emissions and monitoring - Monitoring	C3 Minor	Permit Condition 3.3.1(a), Schedule 3, Table S3.1. Score C3.
IR3E - Emissions and monitoring - Monitoring	C3 Minor	Permit Condition 3.3.1(a), Schedule 3, Table S3.1
IR3E - Emissions and monitoring - Monitoring	C3 Minor	Permit Condition 3.3.1(a), Schedule 3, Table S3.1.
IR1A - Management - General management	C3 Minor	Permit Condition 1.1.1(a)
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor	Permit Condition 3.1.2, Schedule 3, Table S3.1
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor	Permit Condition 3.1.2, Schedule 3, Table S3.1.
IR4B - Information - Reporting	Assessed (A)	
IR4C - Information - Notification	Assessed (A)	

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

Total non-compliances recorded	Total non-compliance score
6	24

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
IR3E	Action 1: Appoint an appropriate contractor to conduct a QAL2 campaign, apply derived calibration function and submit the report to NRW.	Already completed
IR3E	Action 2: Supply the revised start up check requirements procedure to NRW.	31/03/2024
IR3E	Action 3: Maintain observations on the pressure parameter to monitor for drift that may indicate a repeat component failure before loss of continuous monitoring data occurs.	30/06/2024
IR1A	Action 4: Conduct a review of the CEMS maintenance strategy with the objective of improving system reliability. Submit the review to NRW.	30/06/2024
IR3A	Action 5: Submit root cause analysis to NRW.	30/06/2024
IR3A	Action 6: Submit a permit variation application to NRW for the operation of an acid scrubbing abatement system at Emission Point G.	30/06/2024

Compliance 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

This Compliance Assessment Report (CAR) has been raised to review and comment upon the submitted Q4 Monitoring Returns, notifications and Annual Report.

Monitoring Returns

The Q4 Monitoring Returns were submitted to Natural Resources Wales (NRW) by email. A further email was received including data for parameters that required 6 monthly and

annual monitoring and reporting. This monitoring data covered monitoring points A, C, D, F, G & Y. Breaches of emission limits (ELVs) were notified to NRW during the reporting period via Schedule 5 notification and constant communication was maintained throughout the notified issues. Breaches of ELVs are discussed below.

Several issues were reported for Point A:

Readings for SO₂ by the continuous emissions monitoring system (CEMS) were a constant issue for the first two months of the quarter. This issue overlapped Q3 & Q4 and was raised in CAR_NRW0043102. This issue was highlighted to the regulating officer via a series of Schedule 5 notifications as the resolution was progressed.

Oxygen probes were changed and then subsequently believed to be over correcting for O₂, leading to higher than expected SO₂ values due to an incorrect calibration function. The operator believes that the SO₂ values are compliant as no other alterations were made to the CEMS system. A QAL2 campaign was scheduled for the earliest available timeslot in early October. Levels derived with the over correction in place suggest breaches occurred.

During this period of running with a non-valid calibration function other parameters suggest that SO₂ levels would have been within the normal range, though the actual levels are unknown. Non-compliance scores have been applied below due to the failure in the monitoring system. It is noted that the operator engaged immediately with NRW and service providers to resolve the situation.

The QAL2 campaign was been completed in mid-October and the report has been received by the operator and submitted to NRW. Newly derived calibration functions have been applied to the CEMS.

Score: IR3E - Monitoring. Permit Condition 3.3.1(a), Schedule 3, Table S3.1. Score C3.

Action 1: Appoint an appropriate contractor to conduct a QAL2 campaign, apply derived calibration function and submit the report to NRW. **Already completed.**

A notification was received concerning a failure of the AR600 analyser sweep wheel. This had become stuck upon start up following a power failure. This resulted in a six and a half hour period without measurement of NO_x and SO₂. It is estimated by the operator that the levels for these parameters did not breach their ELVs, however, a score for failure to monitor has been applied again. The operator remotely engaged with its service provider who instructed a site technician on how to restore functionality. The operator now has a written procedure for resolving this issue and has raised an action for the review of start-up check requirements post power loss to the CEMS.

Score: IR3E - Monitoring. Permit Condition 3.3.1(a), Schedule 3, Table S3.1. Score C3.

Action 2: Supply the revised start-up check requirements procedure to NRW.

A notification was received for a failure of transmission of pressure data from the new SICK instrument to the CEMS for reporting purposes. The new SICK instrument has replaced the

old DURAG. Pressure is a correction factor for SO₂, NO_x, CO and Dust. The failure was due to a faulty part which has been replaced. The process operated normally during this timeframe and visual observation of pressure at the instrument indicated that pressure was in the normal process range. Again, this represents a failure to continuously monitor as required by the standard and permit conditions. The engineering department will consider keeping a spare transmitter/amplifier in stores if the fault reoccurs.

Score: IR3E - Monitoring. Permit Condition 3.3.1(a), Schedule 3, Table S3.1. Score C3.

Action 3: Maintain observations on the pressure parameter to monitor for drift that may indicate a repeat component failure before loss of continuous monitoring data occurs.

Issues with the CEMS at this site are a regular occurrence, with different components within the CEMS failing. Running to failure has been identified as a failing of the operator's management system to conduct preventative maintenance (PM) of the CEMS system. Although the operator has taken remedial measures for discrete issues as they arise, NRW requires a comprehensive review of equipment reliability and options to improve it. A consolidated score has been applied for the root cause of the above failures.

Score: IR1A - General Management. Permit Condition 1.1.1(a). Consolidated Score C3.

Action 4: Conduct a review of the CEMS maintenance strategy with the objective of improving system reliability. Submit the review to NRW.

Point C 6 monthly returns indicated a particulate matter breach for which, a notification was received. Extractive testing indicated an average of 59.2 mg/Nm³ with an uncertainty of 3.1 mg/Nm³ against an ELV of 50 mg/Nm³. A root cause analysis incorporating historic data is underway.

Score: IR3A - Emission to air, water or land. Permit Condition 3.1.2, Schedule 3, Table S3.1. Score C3.

Action 5: Submit root cause analysis to NRW.

Point G's quarterly monitoring identified a breach for the ammonia parameter for which a notification was received. The result (derived from an average of 3 tests) for the ammonia parameter was 14.0 mg/m³ with uncertainty of +/-0.26 mg/m³ against and ELV of 10 mg/m³. The operator has previously discussed submitting a variation with the regulator for the installation of an acid scrubbing system to reduce emissions of ammonia at this emission point. The project is scheduled to be conducted in 2024 and operated upon determination of the permit variation. A score has been applied for this breach.

Score: IR3A - Emission to air, water or land. Permit Condition 3.1.2, Schedule 3, Table S3.1. Score C3.

Action 6: Submit a permit variation application to NRW for the operation of an acid scrubbing abatement system at Emission Point G.

6 monthly monitoring of emissions to water was conducted and reported with no issues identified.

Annual Report

The annual report containing the information required by Permit Condition 4.2.2(a), (b) and (c) was submitted in line with the required deadline. The operator has identified issues and highlighted solutions which have or are to be implemented.

A change from lime powder injection to bicarbonate powder injection has been running since 2019 to improve control and reduce emitted levels of chlorides (as HCL). This alteration of abatement system precipitated in a change of emissions monitoring from annually with lime to quarterly with bicarbonate. The operator is reporting chloride levels consistently within the elv and is considering engaging with NRW to return to annual testing of chlorides (as HCL). The operator is reminded that a variation will be required to effect this change.

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.

If your assessment result in Section 1 is suspended, what does this mean?

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 compliance criteria (used in section 1 and 2):

1. Management

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

2. Operations

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

3. Emission and Monitoring

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

4. Information

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

Enforcement response

Any non-compliance with a permit condition 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 twenty 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 to 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.