

Compliance Assessment Report CAR_NRW0037316

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 carried out: Site Inspection, Reason: Routine.

On 08/12/2020 between 13:00 and 16:30.

Parts of permit assessed: Various

NRW Lead Officer: Stuart Ross, accompanied by Berwyn Williams.

Report sent to: Graham Jones, Process & Energy Manager on 29/01/2021.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
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)	
E1 - Emissions - Air	C3 Minor	3.1.2
E1 - Emissions - Air	C3 Minor	3.1.2
E1 - Emissions - Air	C3 Minor	3.1.2
C2 - General Management - Management system and operating procedures	C2 Significant	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
4	43

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	Quarter 3 Ammonia Exceedance, Emission point G. Submit Part B notification by 19/02/21. Provide NRW with a report on the actions you have taken to progress options 1 and 2 for the mainline cooling zone abatement plant and any subsequent improvement works that have been identified to ensure ELV compliance. Submit your report by 31/03/21	31/03/2021
E1	Quarter 4 Emission Point C phenol exceedance 07/10/20. Submit Part B notification	19/02/2021

Criteria	Action needed	Complete by
E1	Quarter 4 Ammonia Exceedance, Emission point G. Submit Part B notification by 19/02/21. Provide NRW with a report on the actions you have taken to progress options 1 and 2 for the mainline cooling zone abatement plant and any subsequent improvement works that have been identified to ensure ELV compliance. Submit your report by 31/03/21	31/03/2021
C2	Review the options and feasibility for the use of process monitoring and associated alarms to detect and alert process operatives to the immediate failure of the environmentally critical components of the ceilcote abatement system. Provide NRW with a copy of your review by 31/03/21. Provide a copy of the ceilcote abatement checksheets and associated training records as amended following this incident. Please do so by 19/02/21.	31/03/2021

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.

We are currently considering taking enforcement action against you for the non-compliance recorded above. We will contact you in due course.

4. Details of our assessment

This Compliance Assessment Report follows a site inspection 08/12/20, a review of routine emissions monitoring returns for the period 1st July – 30th September 2020 (Quarter 3), 1st October – 31st December 2020 (Quarter 4), annual monitoring and notifications relating to the monitoring and control of emissions.

1. Routine Emissions Monitoring Data Review (Air)

Continuous and extractive monitoring completed as required by the permit.

Emissions were found to be compliant with the permitted emission limit values with the following exceptions;

Emission Point C (Mainline Forming Stack)

Quarter 3

08/07/20 – particulate, average 66.7 mg/Nm³ (ELV 50 mg/Nm³)

08/07/20 - phenol, average 12.8 mg/Nm³ (ELV 10 mg/Nm³)

The exceedance of the permitted emission limit values detailed above were found to be in breach of permit condition 3.1.2, attracting a CCS score of 3. This was previously applied in report reference NRW0036943 and is included here for completeness (no score applied in this report).

Quarter 4

07/10/20 – phenol, average 24.9 mg/Nm³ (ELV 10 mg/Nm³)

The exceedance of a permitted emission limit value is a breach of permit condition 3.1.2 and attracts a CCS score of 3.

Schedule 6 notification (EX_EP_254) received 09/11/20 and reported that;

'Cleaning the ceillcote abatement filters, entirely replacing the internal packing medium with new packing and replacing all the distribution sprays for the ceillcotes has not reduced measured phenol emission from stack C since the measurements taken on 8th July. (The work did reduce particulate emission to within the ELV). The very high result in the third run coincides with a production issue that required the mat taking off the forming drum for a while then going back on. The binder that is the source of phenol is stopped and restarted as forming the mat is stopped and restarted. Further investigation to follow.'

Action 1 - Submit the Part B notification for this incident by 19/02/21. Note, further permit non-compliance may be identified depending on the outcome of your investigation.

Emission Point G (Mainline Cooling Zone)

Quarter 3

15/09/20 – ammonia, average 18.8 mg/Nm³ (ELV 10 mg/Nm³).

Schedule 6 notification (EP_EX_252) received 13/10/20 and reported that;

Knauf Insulation are currently considering the preferred course of action following the receipt of a report commissioned from Wood into available options and associated costs. Action plan to be reported to NRW'

The exceedance of a permitted emission limit value is a breach of permit condition 3.1.2 and attracts a CCS score of 3.

Action 2 - Submit the Part B notification for this incident by 19/02/21.

Quarter 4

A further ammonia ELV exceedance was recorded 06/10/20 with an average of 13.2 mg/Nm³.

The exceedance of a permitted emission limit value is a breach of permit condition 3.1.2 and attracts a CCS score of 3.

Schedule 6 notification (EP_EX_253) received 09/11/20 and reported that;

'Knauf Insulation are currently considering the preferred course of action following the receipt of a report commissioned from Wood into available options and associated costs. Action plan to be reported to NRW in November as agreed in CAR'

On 25/11/20 Knauf Insulation submitted actions to be taken to improve the abatement of ammonia from this emission point. This comprised a table extracted from an options appraisal completed by Wood consultants to address previous noncompliance. Please provide NRW with a copy of the Wood Report.

Knauf Insulation have decided to progress two options (1) increase water flows and (2) increase water changes for the abatement system.

It is reported that increased water flows will be achieved January 2021 following the installation of a new motor drive during the December shutdown with emissions testing scheduled January/February.

To investigate the required water changes Knauf Insulation are to investigate ammonia concentrations in the pre-abated air steam and scrubbing waters.

Action 3 - Submit the Part B notification for this incident by 19/02/21.

Action 4 – Provide NRW with a report on the actions you have taken to progress options 1 and 2 for the mainline cooling zone abatement plant and any subsequent improvement works that have been identified to ensure ELV compliance. Submit your report by 31/03/21.

Please note that If the proposed remedial actions detailed above do not secure consistent emissions compliance then Knauf Insulation will need to escalate its response and implement additional abatement improvements without delay. Further non-compliance may result in enforcement action being taken against Knauf Insulation.

Emission Point A (Cupola)

Quarter 3

HCL result obtained 16/09/20 compliant for this quarter.

Quarter 4

08/10/20 – average hydrogen chloride recorded at 10.4 mg/Nm³ (ELV 10 mg/Nm³). The measurement had an uncertainty of +/- 0.78 and therefore this is not a breach of permit.

However, whilst compliance assessment relates on the average of the triplicate sample it should be noted that two of the three measurements were in excess of the permit limit,

As per the subsequent Part B notification Knauf report that;

'System performance has been monitored since the incident and a similar period of high and variable screw feed was evident between 24/11/2020 and 2/12/2020 again this stopped after changing to the next bag of lime. Further monitoring will take place going forward to see if there are further occurrences. If there are we will try to identify whether there is an issue with the lime powder in some of the big bags or whether there are improvements that need to be made in the process for putting a new bag on the lime

feeding unit'.

Action 5 - Knauf Insulation must ensure lime dosing remains effective to ensure consistent ELV compliance. Please continue to assess effectiveness of lime feeding unit and report back your observations and any necessary remedial action to NRW by 19/02/21.

Emission Points A, D, F, G & Y - Annual Extractives

Monitoring data for annual extractive monitoring provided for the above emission points as required, no emission limit exceedances recorded.

2. Routine Emissions to Surface Water Monitoring Data Review

Monitoring is completed 6 monthly with samples collected during quarter 4. Some alternative sample points were used owing to the flooding of the receiving surface watercourse due to a blockage - this is to be cleared.

The COD and suspended solids results are elevated for what would be surface water drainage. I note in the annual report that these levels are reportedly in range of historical data. We will review this issue separately.

3. Annual Reports

Reports received as per the requirement of permit conditions 4.2.2 and 4.2.3 - NRW will review these separately.

4. Ceilcote Abatement System Failure (Emission Point C)

Schedule 6 notification (EP_EX_251) received reporting that;

'the control transformer failed in the control panel for the 6 circulating pumps for the ceilcote abatement scrubber for emission point C, the mainline forming stack. This caused the pumps to stop'.

The failure was detected at 08:15 on 16/08/20 and had gone undetected since occurring at approximately 21:00 15/08/20.

Part B received 07/10/20 stating that;

'Power trends indicate that the circulation pumps were off from approx. 2100 hrs 15/8/2020. A temporary 110V control supply was established on 16/8/20 to enable the pumps to run and the plant restarted. A new transformer was fitted in the panel during the next planned downtime period 27/8 to 1/9/20.

The failure was considered age related, a wire inside the windings had failed. The panel containing the transformer is subject to monthly routine inspection. No other electrical issues were found when the system was checked.

The failure was missed during checks on the previous shift. The operator check routines have been reviewed and amended with more specific instructions for the content of the checks to be done.

Production was put on hold while control supplies for the pumps were established. This stops the creation of particulates, fume and binder droplets that are normally extracted through the ceilcote system'.

Permit condition 1.1.1 requires that '*the operator shall manage and operate the activities: (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and (b) using sufficient competent persons and resources.*

Failure to identify the failure of environmentally critical abatement plant in a timely manner has potential for significant environmental impact. This is a breach of permit condition 1.1.1 and attracts a CCS score of CCS 2, potential for significant environmental impact.

NRW will consider its enforcement response for this breach.

Action 6 - Review the options and feasibility for the use of process monitoring and associated alarms to detect and alert process operatives to the immediate failure of the environmentally critical components of the ceilcote abatement system. Provide NRW with a copy of your review by 31/03/21.

Action 7 - Provide a copy of the abatement check sheets and associated training records as amended following this incident. Please do so by 19/02/21.

5. Previous Actions (CAR NRW0036943)

Responses received to Actions 1 – 6 as requested.

Action 1 – Complete

Action 2 – Complete

Action 3 – Partially complete, please confirm when staff training has been completed as scheduled for end December 2020.

Action 4 – Partially complete, please confirm CEM pre-start check procedure and staff training is complete as scheduled end December 2020.

Action 5 – Complete upon completion of Action 4

Action 6 - Complete

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.