

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

Site	Queensferry Mineral Fibre Works	Permit Ref	BR9383ID		
Operator/Permit holder	Knauf Insulation Ltd				
Regime	Installations				
Date of assessment	05/11/2019	Time in	N/A	Out	N/A
Assessment type	Report/Data Review				
Parts of the permit assessed	Emissions monitoring 2019 Q2 and 3, Part A&B notifications, WIRS				
Lead officer's name	McGregor-Andrew, Sian				
Accompanied by					
Recipient's name/position	Claire Keouski/ Environmental manager	Date issued	28/11/2019		

### 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
B1 - Infrastructure - Engineering for prevention and control of emissions	C3	1.1.1
E1 - Emissions - Air	C3	3.1.2
	C3	3.1.2
	C3	3.1.2
	C3	3.1.2
	C3	3.1.2

**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.

<b>Number of breaches recorded</b>	<b>6</b>	<b>Total compliance score</b> (see section 5 for scoring scheme)	<b>24</b>
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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

### Environmental Monitoring - Q2 April to June, Q3 July to September 2019

All emissions monitoring was undertaken as required by condition 3.3.1 and Tables S3.1 and S3.2. All monitoring submissions were made within the timescales required by condition 4.2.3.

#### Emission Point A:

Particulate matter, NO<sub>x</sub> and CO emissions monitoring were compliant with the permitted limits for Q2 and Q3.

- EP-EX225 Part A and Part B notifications submitted on 15/04/19 and 24/04/19 respectively identified a fault with the Durag probe in April causing incorrect O<sub>2</sub> correction factors to be applied due to fresh air ingress during start-up of the enetex abatement system. The Part B notification indicated that a proposal to exclude this data in future would be submitted, this has not yet been received.

**Action: Provide details of procedures for managing CEMS data for start-up and shut down periods to ensure emissions to air are accurately recorded by 13/01/2020.**

SO<sub>2</sub> emissions monitoring.

- EP\_EX236 Part A and Part B notifications submitted on 10/09/19 and 28/10/19 respectively identified that elevated SO<sub>2</sub> emissions on 08/09/19 resulted in a minor exceedance of the permitted limit as a result of a failure of a limit switch on raw material silos filling system affecting the BFS feed. The switch was repaired and emissions returned to normal levels. Emission limit 1350mg/m<sup>3</sup>, measured results 1516.84mg/m<sup>3</sup>.
- **CCS Category 3 breach, criteria E1 emissions to Air, condition 3.1.2**

Chlorides emissions monitoring.

- EP\_EX232 Part A and B notifications received on 23/07/19 identified an elevated HCL result in April related to a blockage in the lime dosing pipework, however the average result with uncertainty value deducted was within the permitted limits, therefore NRW does not consider this result to be a breach of permitted limits.

**Action: please confirm by 20/12/19 whether modifications to the lime dosing pipework were successful during the most recent shut-down, or if further work is required to improve the reliability of this abatement system.**

#### Emission point C:

Particulate emissions monitoring.

- EP\_EX234 Part A notification submitted on 23/06/2019 identified an average result of 59.3mg/m<sup>3</sup>, in exceedance of the 50mg/m<sup>3</sup> permitted limit on 22/06/19. Initial investigations did not identify any defects in the abatement equipment. No Part B notification or root cause analysis has been supplied in relation to this notification.
- EP\_EX238 Part A notification submitted on 18/09/2019 identified an average result of 66.6mg/m<sup>3</sup> particulates in exceedance of the 50mg/m<sup>3</sup> permitted limit during monitoring undertaken on 06/08/2019. No root cause analysis has been supplied in relation to this notification.
- **CCS Category 3 breach, criteria E1 emissions to Air, condition 3.1.2**

Phenol emissions monitoring.

- EP\_EX234 Part A notification (as above) also identified an average phenol result of 14.3mg/m<sup>3</sup>, in exceedance of the 10mg/m<sup>3</sup> permitted limit on 22/06/19. No Part B notification has been received.

- **CCS category 3 breach, criteria E1 emissions to Air, condition 3.1.2**

**Action: Provide Part B notifications with details of root cause analysis for emission point C particulate and phenol exceedances, and measures taken or planned to prevent a recurrence by 20/12/2019.**

Emission point G:

Particulates emissions monitoring.

- EP\_EX233 Part A notification submitted on 23/06/2019 identified an average emission value of 11.7mg/m on 22/06/19 and EP\_EX239 Part A notification submitted on 18/09/2019 identified an average emission value of 12.8mg/m<sup>3</sup> on 08/08/19, in exceedance of the 10mg/m<sup>3</sup> limit. At the time of the Part A notifications no defects were found in the abatement system for this emission point and a root cause analysis was to be undertaken for this failure to comply with emission limit values. No Part B notification has been submitted to date.
- **CCS Category 3 breach, criteria E1 emissions to Air consolidated to a single score for Q2 and Q3 results, condition 3.1.2.**

Ammonia emissions monitoring.

- EP\_EX 233 and 239 Part A notifications as described above also identified average emissions values of 15.9mg/m<sup>3</sup> and 12.8mg/m<sup>3</sup> in Q2 and Q3 respectively, in exceedance of the 10mg/m<sup>3</sup> limit for ammonia. As above no root cause analysis has yet been received.
- **CCS Category 3 breach, criteria E1 emissions to Air consolidated to a single score for Q2 and Q3 results, condition 3.1.2.**

**Action: Submit Part B notifications and a report on root cause analysis for emission point G particulate and ammonia limit exceedances, identify what improvements are required to ensure compliance with the ELVs and the timescales for improvements to be implemented, by 13/01/2020.** Note that continued non-compliance with ELVs may escalate this score unless improvements are made to achieve compliance in line with an agreed programme based on the root cause analysis for these exceedances.

Emissions to water: Monitoring of emissions to water was undertaken on 02/05/19. point L5 was found to be blocked so was re-sampled on 17/05/19. No emission limits apply.

**Part A and B Notifications:**

EP-EX227 - Part A and B notifications both submitted on 08 and 09/05/2019 in relation to self-reported WIRS 1902940. Operator 2-hourly checks at 22:00 on 08/05 detected loss of flow to two ceilmate scrubber pumps. One was re-started immediately, the other required unblocking of distribution pipework the following day. Part B notification estimated a minor impact to the overall efficiency of the abatement system during that period, and stated that the feasibility of providing telemetry for these pumps was being investigated.

**Action: Confirm whether telemetry has, or will be installed on the mainline forming stack abatement system by 20/12/2019.**

EP\_EX228 - Part A and B notifications submitted 20/06/ and 20/07/2019 respectively reported low SO<sub>2</sub> readings from the Durag probe on cupola stack A. Uncorrected CEMS data indicated stable operation and emissions, raw material feed chemistry and abatement equipment operation was normal during the affected period, therefore no deterioration in actual emissions quality was expected. The failed instrument was replaced during the next shut-down on 17/07.

EP\_EX229 Part A/B notification submitted following a failure of a control valve on 04/07/19 which resulted in fixed gas flow to oven abatement systems to stack F. Temperature during the period of repair remained within the normal range for effective abatement of exhaust gases. No impact on emissions expected and the preventative maintenance for the valves has been improved to prevent recurrence.

EP\_EX230 - Part A/B notifications submitted 08/07 and 23/07 for blocked lime dosing pipework to abatement on stack A which could not be repaired until plant shut down due to the safety implications of the pipework location. HCl abatement was therefore not operational between 08/07 and 17/07/2019. Design of pipework and feedstock delivery systems are being reviewed to reduce potential for blockages. Action to confirm success of repairs to lime dosing plant is required above under emission point A quarterly monitoring review.

- **CCS Category 3 breach, criteria B1 engineering for prevention and control of emissions, condition 1.1.1**

EP-EX231 - Part A/B notifications submitted 21/06 and 23/07 respectively. Loss of CEMS data during routine maintenance. Cupola process and abatement operation during the maintenance and emissions before and after the period were stable. No impact on emissions.

EP\_EX235 - Part A/ B notification submitted 20/08 and 27/08/19 respectively. Positioning of Durag probe was incorrect, leading to low volumetric flow and elevated particulates readings on 16/08. Plant operations and bag filters checked and no indication of impact to emissions was found by the operator. Probe was cleaned and repositioned during shut-down on 22/08.

EP\_EX237 - Part A notification submitted 17/09/2019 following a fire on site in the oven which resulted in a short-term (<10minute) emission of dark smoke to air and minor firewater runoff to ground behind the factory within the site boundary. No Part B notification has been received.

**Action: Provide Part B notification with root cause analysis and preventative measures by 20/12/2019.**

EP\_EX240 - Part A notification submitted 19/09/19 reporting failure of cooling zone water recirculation system feeding the mainline cooling zone abatement system. The automated valve on the water tank had failed so was manually turned off, resulting in the tank falling below the required level to consistently supply the abatement impact jets. Potential impact on particulate and ammonia emissions from stack G. No Part B received.

**Action: Provide Part B notification with root cause analysis, details of the length of time that the abatement system was affected by the valve failure and preventative measures that have/ will be put in place to prevent a recurrence by 13/01/2019.**

#### **WIRS reports received by NRW Q2 and Q3 (April to September 2019)**

08/05/2019 - self-report - see EP\_EX227 above.

07 and 10/06/2019 - WIRS1903658 and 1903708 - report of aerial emissions affecting local school. Not attended or substantiated by NRW officers, operator investigation did not identify any potential source of emission or variation in operation of the process at the reported location on Monday, although wind direction was from Knauf towards the school.

10, 11 and 17/07/2019 - WIRS 1904487, 1904524 and 1904684 reports of acrid smell affecting a domestic property in Sealand. Not attended or substantiated by NRW. The Operator investigated and no changes in emissions or operations were noted during the reported periods. To determine the possibility of site operations impacting the reporter's location the operator has submitted a technical note for odour dispersion modelling of site emissions for these dates. The conclusions of the modelling were that odour concentrations from Knauf's point source emissions under the weather conditions on these dates were low and were below the relevant Air Quality Objective and Environmental Assessment levels. This report has been reviewed by NRW Air Quality Modelling and Risk Assessment Team advisors who accept the conclusions of the report.

16/07/2019 - WIRS 1904669/ 1906077 - report of hazy fumes affecting local school, Knauf was also contacted directly by the reporter prior to NRW receiving the report, and attended site within 5 minutes of speaking to the school. Not attended or substantiated by NRW. The operator's investigation did not identify odour at the school or any potential sources from site.

A meeting was held at Knauf on 31/07/2019 to discuss incident reports and potential odour sources. The operator reiterated their commitment to investigating reports relating to the site as required by their management system and installation permit, but to date has been unable to establish a potential source of odour complaints. They will continue to review operating data, continuous emissions monitoring, plume CCTV footage and local weather conditions in response to such reports and attend the reported locations whenever possible. NRW will liaise with Flintshire County Council to pass on details of odour complaints to aid investigation of any other potential sources in the locality, in addition to investigating reports with Knauf when they arise.

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### 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.

In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.

### 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			
B1	C3	Provide confirmation that maintenance work to lime dosing equipment has improved reliability.	20/12/2019
E1	C3	Provide Part B notifications with root cause analysis and details of remedial measures	20/12/2019
E1	C3	Failed limit switch was repaired. no further action.	28/11/2019
E1	C3	submit Part B notification with root cause analysis and proposed remedial measures	20/12/2019
E1	C3	Submit part B notifications with root cause analysis, measures to be taken to achieve compliance with point G ELVs and proposed timescales.	13/01/2020
E1	C3	Part B notifications with root cause analysis, measures to be taken to achieve compliance with point G ELVs and proposed timescales.	13/01/2020

## 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.