

**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	23/11/2018	Time in	N/A	Out	N/A
Assessment type	Report/Data Review				
Parts of the permit assessed	Quarterly Monitoring for Q3 (01/07 to 30/09 2018), Part A/B notifications, WIRS reports				
Lead officer's name	McGregor-Andrew, Sian				
Accompanied by					
Recipient's name/position	Graham Jones/ Process and Energy Manager	Date issued	29/11/2018		

### 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
B5 - Infrastructure - Plant and equipment	C3	1.1.1
C2 - General Management - Management system and operating procedures	C3	1.1.1
E1 - Emissions - Air	C3	3.1.2
	C3	3.1.2
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	C3	3.3.1

**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>5</b>	<b>Total compliance score</b> (see section 5 for scoring scheme)	20
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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

### Emissions monitoring report for Quarter 3 (01/07/2018 to 30/09/2018)

The Q3 emissions monitoring report for quarterly monitoring of emission point A, G and Y was received on 25/10/2018 in compliance with condition 4.2.3.

**Action:** The emission limit value for particulate matter at emission point A reduced from 30mg/m<sup>3</sup> to 20mg/m<sup>3</sup> in March 2016. Please update form Air1a to reflect the current emission limit and check that the lower limit is reflected in all relevant monitoring procedures.

#### Emission point A

**SO<sub>2</sub>:** The cause of elevated SO<sub>2</sub> readings during month 1 (July) was a faulty oxygen probe preventing emissions monitoring results being corrected to the standard reference conditions. This resulted in the CEMS data recording values in excess of the ELV of 1350mg/m<sup>3</sup>. Until repairs could be made to the probe a fixed O<sub>2</sub> value was used. All uncorrected SO<sub>2</sub> results and other parameters were monitored and were within normal range (as confirmed by CK in email 16/08/2018) during the period until the oxygen probe was replaced.

The month 1 (July) monitoring results are not considered to be a breach of emission limit values required by Condition 3.1.2. Results for months 2 and 3 (August and September) were compliant with the required limits.

**CO:** Carbon monoxide results for month 3 (September) exceeded the ELV of 1350mg/m<sup>3</sup> on five occasions. Breaches were notified to NRW under Part A notifications referenced EP\_EX204/ 205/ 211/ 212 and 213. **Score CCS3 against Condition 3.1.2 under criteria E1 Emissions to Air**

The elevated CO emissions were caused by incomplete oxidation of the cupola emission as a result of a faulty fan and insufficient gas supply within the Enetex afterburner system, which was repaired on 03/10/2018. **Score of CCS3 against Condition 1.1.1 under criteria B5 Plant and Equipment**

The Part A notifications for EP\_EX204 and 205 were received within 24 and 48 hours respectively of the breach occurring, both within 24 hours of detection of the breach.

Part A notifications for EP\_EX211, 212 and 213 were not made until more than a week after the breaches had occurred as the daily average data was not verified before that time.

**Action:** Review procedures for determining daily average compliance, including suitability of any trigger limits for further investigation and validation of initial data and review the frequency of validation being carried out. Knauf must ensure that raw data assessment is robust enough to allow prompt detection of emission limit breaches. Please provide a report on the review of these procedures for emission point A CEMS data **by 19/12/2018.**

#### Emission point Y

Following submission of monitoring results to date Knauf's request to move to annual monitoring for emission point Y was agreed for the 2019 monitoring campaign, following submission of those results the required frequency going forwards will be reviewed.

#### Emission point G

Monitoring results from 11/07/2018 were in excess of the 10mg/m<sup>3</sup> ELV for particulate matter and ammonia for one of the three spot samples collected, the averages of the three spot samples were 8.7mg/Nm<sup>3</sup> for particulates and

10.13mg/Nm for ammonia. Breach of Ammonia limit **scored CCS 3 against condition 3.1.2 criteria E1 Emissions to Air**

Part A notification was received on 19th September once the results had been provided by the monitoring contractor.

As noted in previous CAR form issued on 02/08/2018 emission point G has only complied with the required ELVs intermittently since 2013 and further action is required to address these breaches.

In Knauf's response to the previous CAR form (received from CK on 31/08/2018) it was stated that a feasibility study was being undertaken into improvements to the impact jets at point G.

In the longer-term Knauf are investigating the potential to combine emissions from point G with the main stack when it is replaced in 2020. This does not negate the requirement to comply with the existing ELVs in the interim period.

**Action:** Please provide an update on how Knauf intends to bring emission point G into compliance and the proposed short-term improvements to the impact jets in point G abatement system **by 19/12/2018**

**Additional Part A/B notifications: CEMS unit failure**

EP\_EX207 received on 15/10/18 notifying a failure of CEMS equipment caused by a faulty flash card in the AR600 unit which resulted in loss of monitoring data for NO<sub>x</sub>, SO<sub>2</sub> and CO from emission point A. The plant was operating normally, and the unit was replaced with the site's spare unit on 16/10/2018. Loss of monitoring for 28 hours 25 minutes.

EP\_EX208 received on 17/10/2018 notifying a loss of SO<sub>2</sub> data due to an internal communications fault which was corrected the same day. Loss of 22hrs 45 minutes data only, SO<sub>2</sub> was monitored and within normal range during this period but readings weren't recorded for daily averages.

EP\_EX209 received on 19/10/2018 notifying loss of NO<sub>x</sub> and SO<sub>2</sub> monitoring due to a fault within the optical grid of the spare AR600 unit that had been fitted on 16/10/2018. Primary unit reinstated on 24/10/2018. Loss of SO<sub>2</sub> and NO<sub>x</sub> monitoring for 5 days 7hours in total.

EP\_EX210 received 22/10/18 notifying that the spare AR600 unit was also being sent away for repair before the primary unit could be returned, resulting in loss of monitoring for CO and dust in addition to the SO<sub>2</sub> and NO<sub>x</sub> detailed in EP\_EX209. Loss of CO and dust monitoring for 45 hours.

The decision was made to send the spare unit away for repair as loss of CO and dust monitoring for a short period to restore full monitoring quickly was deemed preferable to operating without SO<sub>2</sub> and NO<sub>x</sub> monitoring for a more protracted period.

All part A/B notifications in relation to the CEMS failure were made promptly and updates by email were made throughout the period on progress with the proposed timescales for repairs, however the Part B notification does not identify a root cause for the failures of both the main and spare CEMS units.

The CEMS failures between 15th and 24th October 2018 amount to approximately 34% of that period and 10% of the whole month of October with either partial or total loss of monitoring data for emission point A. **Score CCS3 against Condition 3.3.1, criteria G1 Monitoring of Emissions**

**Action:** Provide a root cause analysis for the CEMS units failures and review the suitability of the current arrangements for maintenance and provision of repairs/ replacement of critical monitoring equipment on site **by 19/12/2018**.

Complaint reports 01/08/2018 to 14/11/2018:

- 01/08/18 – report of smoke/ odour affecting Factory Road
- 23/08/2018 – WIRS1805406 – noise at Church View – investigated by GJ, unable to establish source and checks on the following day did not identify any ongoing issue on site.
- 28/08/2018 – WIRS1805507 – particulates and dust at Rectors Lane – GJ investigated but unable to substantiate the report, however a vehicle was washed as a good faith gesture.
- 05/09/2018 – WIRS1805723 – smoke and odour at Sealand Road – no offsite investigation at the time, report was consistent with wind direction and coincided with a period of increased CO Daily Average values.
- 10/09/2018 – WIRS1805831 – excessive smoke and odour at Factory Road – GJ investigated, believed to be due to start-up period emission of blast air and combustion products via the syphon. This is mentioned in the fugitive emissions plan (under furnace waste gasses), however as part of the review of abatement for the proposed main stack replacement fugitive emissions control from the furnace building will be reviewed.

- 24/09/2018 – WIRS1806067 – odour and smoke impact at Factory Road, reporter indicated the shorter emission stack (which appears to be emission point G) to be the source. Site operations were stable at the time of the report, but no offsite verification of impact was undertaken.
- 09/10/2018 – WIRS1806416 – dust and plume grounding observed around Makro, not investigated off-site at the time of the report. On-site CCTV footage and the reporter's photographs showed plume moving horizontally with little rise.

Reports of off-site impact are not routinely attended by the operator, this has been attributed to lack of information on exact location or duration of complaints in the initial report, as noted in a response to the previous CAR form (response to CAR\_NRW0033728).

NRW does not expect that lack of an exact address would prevent a reasonable off-site investigation, postcode and/or local road name should be sufficient. As stated in previous CAR forms further detail to the initial report is available via NRW's incident communication centre 24 hours per day and the Industry Regulation team during working hours. Plume grounding or odours off site may not be apparent within the site boundary so it is imperative that the area of the report is visited to establish potential on and off-site sources of complaints.

**Action:** Ensure all odour complaints are investigated off-site as stated in the OMP. Substantiated complaints of new sources of odour should be added to the OMP source- pathway-receptor table and odour sources and control measures table updated accordingly.

**Action:** Please confirm that the start-up period fugitive emissions of furnace waste gas from the syphon will be reviewed as part of the furnace building abatement assessment for the main stack replacement project. To include an assessment of whether this emission is captured by the current abatement or mitigated by current preventative measures in the fugitive emissions plan, or if there are further feasible measures to prevent a recurrence of off-site impact during this operation.

Failure to undertake appropriate off-site investigations in response to odour complaints in line with the OMP **scored CCS 3 under Condition 1.1.1 criteria C2 Management Systems** .

Actions from previous CAR form:

1. Delayed receipt of monitoring results from contractor – results of the Q3 monitoring campaign were submitted as required, during the site meeting on 22/08/18 an email error was the cause of the previous delay for Q2 results.
2. Part B responses were received 31/08/2018. There has been an improvement in the amount of information included in subsequent Part B responses on how failures or exceedances have occurred which is encouraging, however further detail of the root causes of equipment failures or exceedances needs to be included (e.g. history of scheduled maintenance of failed equipment, training of staff monitoring critical equipment, appropriateness of EMS procedures etc.).
3. Scheduling of emissions to water sampling and the need to sample early to combat the logistical difficulties explained in the CAR response letter (received from CK on 31/08/2018) was discussed in the site meeting on 22/08/18.
4. Investigation of complaints, particularly with reference to emission point G is further discussed above. Long-term plans to review the main stack and other emission points is in progress, however short-term measures to address nuisance complaints are still required (see details under heading 'Emission point G' above).
5. Odour management plan updated version has not yet been sent to NRW. The CAR response letter (received from CK on 31/08/18) did not state whether tap-out fugitive emissions have yet been added to the OMP. As an off-site odour impact from emissions from the furnace building louvres was substantiated by an NRW officer on 27/07/2018 this should be sufficient to update the OMP accordingly. Abatement of fugitive emissions from the furnace building louvres are to be reviewed as part of the main stack renewal project.  
**Action:** Please send the updated OMP **by 19/12/2018**
6. Actions to address noise complaints were confirmed as being completed in July 2018
7. Dust ELV display in control room – improvements to the SCADA system were confirmed as having been completed in August 2018.
8. Details received from CK on 31/08/2018 of the circumstances of the operation of the emergency stack between 16:13 and 16:15 on 24/04/2018. The response noted that further training on internal incident reporting was completed on 31/08/18. **Action:** Please confirm that the set-point changes referred to in the response (deadline stated 7th September 2018) were made.

## EPR Compliance Assessment Report

**Report ID:  
CAR\_NRW0034249**

**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	Date	23/11/2018

### 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.

We will now consider what enforcement action is appropriate and notify you, referencing this form.

### 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			
G1	C3	Provide root cause analysis for the CEMs units failures and review the suitability of the provision of maintenance, repairs and replacement of critical monitoring equipment	19/12/2018
E1	C3	Update to be provided on how Knauf intend to bring emission point G into compliance.	19/12/2018
E1	C3	Review procedures for determining daily average compliance (see CAR form text for details)	19/12/2018
C2	C3	All odour complaints to be investigated in line with in line with OMP.	19/12/2018
B5	C3	fan replaced 03/10/2018	23/11/2018

## 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](mailto: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.