

Compliance Assessment Report CAR_NRW0041879

Permit being assessed: BL1096IB.

For: Padeswood Cement Works , held by Castle Cement Limited

At: PADESWOOD WORKS , PADESWOOD, MOLD, MOLD, CLWYD, CH7 4HB.

Type of assessment carried out: Report/Data Review, Reason: Routine.

On 31/03/2023.

Parts of permit assessed: See Below

NRW Lead Officer: Philip Harper.

Report sent to: David Quick, Plant Manager on 09/06/2023.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
C2 - General Management - Management system and operating procedures	C3 Minor	1.1.1
E1 - Emissions - Air	C3 Minor	3.1.2
E3 - Emissions - Surface water	Assessed (A)	
E1 - Emissions - Air	Assessed (A)	

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

Total number of non-compliances recorded	Total non-compliance score
2	8

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
C2	Already Completed	Already completed
E1	Actions already complete	Already completed

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

Review of emissions monitoring for period 1st January to 31st March 2023

Emissions to Water

Water emissions data for the period January - March 2023 were received on the 16th April 2023 as required by permit condition 4.2.3. No issues have been identified.

Emissions to Air

Continuous Monitoring (A3, A4, A5, A8, A9, A15)

Air monitoring data for the period January to March 2023 were received on the 16th April 2023 as required by permit condition 4.2.3.

Emission Point- A8

An emission breach for NO₂ was observed between 10th March and the 13th March 2023 with a maximum reported concentration of 882 mg/Nm³ compared to the permitted limit of 450 mg/Nm³. Parts A and B of a schedule 5 notification have been received from the operator. This will be discussed later in the report.

The daily average concentrations were reported as follows;

10th March 2023 – 743 mg/Nm³

11th March 2023 – 882 mg/Nm³

12th March 2023 – 842 mg/Nm³

13th March 2023 – 529 mg/Nm³

The breach of the Emission limit for NO₂ has attracted a category 3 score against permit condition 3.1.2. under section E1- Air.

Emission A15

Particulate data for A15 submitted using Form Air16. No issues noted.

ARM and WDF Reporting.

ARM/WDF usage reports received as required for the period of January – March 2023. Waste types have been reviewed against the environmental permit. No issues have been noted.

Summary of Schedule 5 Notifications Received During Quarter (January to March 2023)

Schedule 5 Notification 7th February 2023- Dust Release at Kiln 4.

On the 7th February 2023, Natural Resources Wales received a schedule 5 notification informing that there had been a dust release from the outlet seal area of kiln 4. Part of A of the notification provided the following information;

“2 unsuccessful kiln starts created poor kiln conditions. Outlet seal and fan struggling to prevent to emission.”

An accompanying investigation which satisfies part B of the schedule 5 notification was also received on the 20th February 2023. A summary of the investigation is shown below;

“Issues with the above equipment resulted in kiln false starts. The issues were rectified at the time, but the false starts meant that there was process instability when the kiln was subsequently restarted. Even with increased power on FN08 the Control Room Operator was unable to regain control and prevent the dust release and the kiln was stopped. The aim of the preventative actions above is reduce the likelihood of kiln false starts associated with this equipment.”

The report also provides that the root cause of the release was that an instrument was set up incorrectly and that a preventative maintenance schedule would be created to overhaul slide gate SG03 annually.

The investigation report shows that plans are not in place or being followed to provide preventative maintenance to environmentally critical equipment.

This represents a management failure. A **category 3 score** has been applied against permit condition 1.1.1 under subheading C2- Management System and Operating Procedures. No dust complaints were received.

The operator has already confirmed that preventative maintenance schedules for SG03 have been created. No further actions are required.

Schedule 5 Notification 13th March 2023

On the 13th March 2023, Natural Resources Wales received a schedule 5 notification informing a breach of emissions limit for NO₂ between the 10th March and the 13th March 2023 with a maximum reported concentration of 882 mg/Nm³ compared to the permitted limit of 450 mg/Nm³. The part A notification that was received from the operator stated the following;

“SNCR system not receiving an input signal to control NO_x concentration. System was changed to manual flow control at 10am on 13/03/23 whilst trying to restore the signal. Signal restored at approx. 12:30 on 13/03/23. System to remain in manual overnight. Investigation ongoing.”

Part B of the notification was received on the 27th March 2023. The report provide further details about the SCADA system;

“On 10th March 2023 at approx. 12:30 the signals from the CEMs gas analyser to the kiln software froze. All frozen values showed compliance with the permit ELV’s. This issue was not identified until approx. 08:30 on Monday 13th March whereby appropriate action was immediately taken.

The only ELV breached was NOx. This is because NOx emissions are controlled by the SNCR system which works on a control loop from information supplied by the gas analyser. This investigation covers the wider issue of loss of information for all parameters not just NOx.”

The report goes on to summarise the investigation as follows;

“There are 2 key elements from this investigation to prevent a reoccurrence:

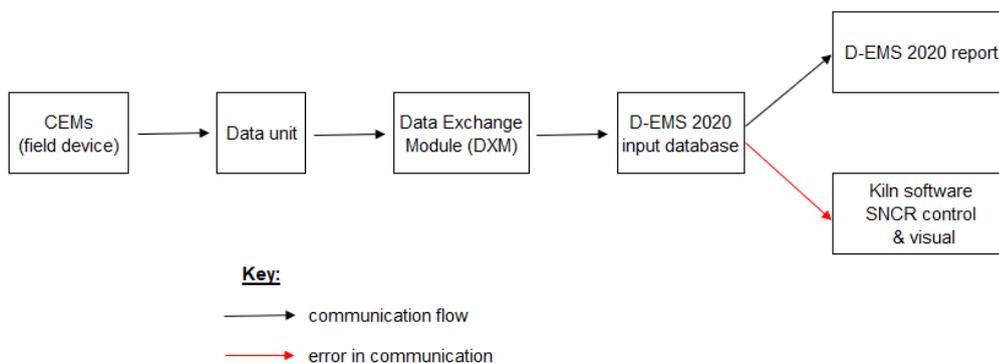
- 1. If it were known on the 10th March that the signal had frozen a breach could potentially have been prevented – action 1 of the preventative actions. This action is a check of the signal from sample point to end user not just the communication in question for this investigation.*

- 2. If the values are confirmed as frozen, what needs to be done – action 3 of the preventative actions. As well as writing a procedure, training will be delivered to shift managers on the content – action 5.*

Extract from manual:

The Data Exchange Module (DXM) obtains the raw data from the operator’s unit (e.g. power plant, refinery etc.) from the process control system or directly from the field device (e.g. via D MS 500 KE). The data is written from DXM to the D-EMS 2020 input database at one-second intervals. The Data Calculation Module (DCM) performs all further calculations based on the system configuration of the units concerned. All results or calculated values are stored in the D-EMS 2020 database.

Flow of information:



The communication error occurring after the database meant that there is a full set of data for reporting albeit, one parameter over the ELV.”

A **category 3 breach** has already been applied to this emissions limit breach under heading **Emission Point- A8**.

No further actions are required.

Schedule 5 Notification 20th March 2023- Mercury Emissions limit Breach

On the 20th March 2023, Natural Resources Wales received a schedule 5 notification informing that a breach of emissions limit for mercury had been detected at the K4 main stack on the 23rd February 2023. The schedule 5 notification provided the measured value at 0.054 mg/Nm³ compared to the permitted limit of 0.05 mg/Nm³. An uncertainty of the 0.013 mg/Nm³ was provided. When the uncertainty is considered, it is conceivable that a breach has not occurred.

No score has been applied.

The Operator's investigations have shown that the source of elevated mercury is likely to originate from the Ironbridge pulverised fuel ash (PFA).

The operator has already engaged an external party and submitted a report to NRW which will be reviewed in due course.

Kind Regards

Phil Harper

Industry and Waste Regulation Officer NW

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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.