

Compliance Assessment Report CAR_NRW0039929

Permit being assessed: WP3836ZF.

For: Wrexham Clinical Waste Treatment Facility (Incinerator), held by Tradebe Healthcare National Limited

At: Wrexham Clinical Waste Treatment Facility (Incinerator) Marlborough Road , Wrexham Industrial Estate, WREXHAM, Clwyd, LL13 9RJ.

Type of assessment carried out: Audit, Reason: Routine.

On 16/05/2022 between 09:30 and 17:40.

Parts of permit assessed: maintenance records

NRW Lead Officer: Rebecca Harwood, accompanied by Stuart Ross.

Report sent to: Lorna Steel / Peter Stunden, SHEQ Lead / Site Manager on 03/10/2022.

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	condition 1.3
G2 - Monitoring and Records, Maintenance and Reporting - Records of activity, site diary/journal/events	Action only (X)	
G3 - Monitoring and Records, Maintenance and Reporting - Maintenance records	Action only (X)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Action only (X)	

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

Total number of non-compliances recorded	Total non-compliance score
1	4

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	see text below	24/10/2022
G2	see text below	24/10/2022
G3	see text below	24/10/2022
G4	see text below	24/10/2022

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

Following an audit of emissions control and abatement at Wrexham Clinical Waste Incinerator on 28 April 2022 a subsequent visit was arranged to review maintenance arrangements in more detail. This CAR form reflects findings and observations from the visit on 16 May 2022. The Engineering Manager, Maintenance Supervisor and Electrical Supervisor were on site during the audit.

Maintenance Personnel

2 x Mechanical (1x Supervisor, 1x apprentice)

2x Electrical (1x Supervisor, 1x apprentice)

The maintenance team work 6am – 5pm Monday to Friday.

The site maintenance team report to the Engineering Manager.

Communication

The incoming and outgoing Shift Team Leaders reportedly meet to handover, but this is not a formal process and there is no established means to ensure key information is communicated, such as process conditions, plant defects, unplanned and planned maintenance, that may affect emissions control. The Shift Log proforma in use at the time was insufficient and does not prompt or capture in a structured means any of this information. There appeared to be a lack of communication between the maintenance and operations teams.

Recommendation: A formal shift handover process should be implemented to ensure, as a minimum, the effective communication of information as detailed above. The shift log proforma is being updated to enable the effective recording of information and to facilitate the handover. Shift Team Leaders should be provided with sufficient time for the handover to take place and given guidance on the type of information that should be recorded on the new proforma.

Preventative Maintenance

There does not appear to be an overarching policy or procedure(s) in place for the management of maintenance activities. Roles and responsibilities are not formally defined

other than via job descriptions.

There is currently no system in place for measuring or monitoring the performance of the maintenance system. The Operator could not demonstrate that site maintenance work was subject to any in house or independent auditing to ensure that maintenance work is completed as required.

It was reported that a SAP system is used elsewhere within Tradebe, however, the Operator believes this is overly burdensome for the scale of operations at the Wrexham plant. Instead preventative maintenance is managed via an excel spreadsheet for planning and tracking activities on a daily weekly, monthly basis etc.

The frequency of preventative maintenance has been determined by staff experience gained over years of service.

The spreadsheet was reviewed in the Supervisors office and an electronic copy of the checks emailed to NRW during the visit. On reviewing the spreadsheet with site personnel it became clear that there are not detailed maintenance work instructions for all of the activities to be undertaken, or what training operatives have had to ensure the checks were completed correctly.

Action 1: More detailed procedures / work instructions should be developed and trained out to maintenance staff to ensure maintenance activities are consistently completed to the required standard. These should be completed by 24 October 2022.

Action 2: Implement an audit plan and procedure for the periodic auditing of maintenance activities by 24 October 2022.

Corrective Maintenance

The Operator acknowledged that the management of corrective maintenance could be improved.

Current / recent practice has been that faults and issues are reported to the maintenance team on an ad hoc basis or recorded (where the Shift Team Leader has taken the initiative) in the shift log that are reportedly reviewed by the maintenance team.

At the time of the audit there did not appear to be a formal system for the logging, tracking and recording the completion of corrective maintenance tasks, nor for their prioritisation on a risk-based approach. There was no established mechanism for the provision of feedback to the individual raising the fault to confirm if the fault has been addressed - this could lead to Shift Team Leaders and process operatives making ill informed decisions on the operation of the plant with unintended consequences.

For example, on 19/3/22 the Shift Team Leader reported an issue relating to the silo hammer not working. Evidence was found that this had been investigated by the Electrical Supervisor on 28/3/22 and no issues were identified. After further discussion during the audit, maintenance staff were unclear if the system was currently functional and the Shift Team Leader was unaware as to whether the issue had been resolved. The PPM records reviewed by Officers showed that subsequent checks on the air hammer had been

completed and it was reported to be functional. During the inspection NRW asked Operatives to test the air hammer and it was defective.

This highlights the shortcoming in the Operator's approach to the management of corrective maintenance and the quality of checks being made by personnel when completing PPM tasks. **This has been scored a CCS3 breach of Condition 1.3.**

During the audit the operator reported that other sites within Tradebe have been using a system called 'Q Pulse' to address the above points. It was stated that the system was due to be rolled out imminently at Wrexham. A procedure for the implementation and use of the system at the Wrexham site needs to be put in place. The Q Pulse system will also allow for trend analysis to identify recurrent faults.

Action 3 (completed): A procedure is required for the implementation of the Q Pulse system, including roles and responsibilities, tracking and closing out of corrective maintenance, reporting and trending.

Out of hours there are no electrical or mechanical maintenance staff on site, but they are reportedly contactable via an informal arrangement and can attend site if available or they can remotely access the control systems to diagnose / remedy issues. The Shift Team Leader makes the judgement call as to whether they seek assistance and there are no pre-defined circumstance / priority issues for initiating call out or when the plant would cease operations due to defects with emissions control systems.

It was reported that an electrical contractor is available for 24/7 call out (on contract). No mechanical call out is available if site personnel are unavailable.

Recommendation: Review resilience of out of hours breakdown response.

Recommendation: Review the procedure relating to out of hours breakdown response and ensure all staff are aware of their roles and responsibilities. Define the circumstances when plant operations should cease due to defective environmentally critical equipment.

HCL, SO₂, PM Abatement System Maintenance

Lime / Carbon Dosing

There is no clear mechanism for determining the quantity of lime/carbon present in the bag filter/reactor circuit nor designated control points for the operation of the system.

The lime take off screw runs continuously at a fixed speed but thereafter the lime/carbon mix can be completely or partially recirculated or removed from the abatement system, the ratio of which is determined subjectively by the Shift Team Leader via manual operation of the recirculation valve. The valve position is not controlled, recorded or displayed on the PLC. Other than manual intervention, the system does not utilise live CEMS data to adjust the recirculation rate.

If the valve was set at 100% recirculation (0% APCr removal) then foreseeably the continued addition of fresh lime and carbon to the abatement system could potentially fill the bag filter hopper and lead to system blockages. There is no level control system in the

bag filter hopper.

An Operating procedure (including operational control points) does not appear to be in place to prevent the system becoming overloaded with lime/carbon and ensure the system emission abatement is optimised. The manual operation of the recirculation valve does not lend itself to optimisation given the variable process emissions.

It is also apparent that different Shift Team Leaders operate the incinerator based on their experience and not in line with a process operating procedure. For example, the Shift Team Leader at the time of the audit reported that he had manually adjusted the recirculation valve due to elevated emissions but this was not to a defined set point agreed by any procedure. It was also reported that the default position for the valve is to return APCr to the FIBC rather than to recirculation, this is unlikely to constitute Best Available Technique.

See Actions 3 and 6 in CAR_NRW0039868.

NRW will review the response to these actions - further non-compliance scores may be applicable.

Plastic pipework supplying lime and carbon to the reactors is laid on the factory floor and is not fixed into position. This was highlighted as part of a Part C notification received on the day relating to an incident over the weekend where the pipe had become detached. NRW subsequently queried whether this constitutes abnormal operations given this issue is potentially foreseeable and requested further information via email on 18/5/22. No further information has been provided.

Action 4: Please provide further details into this incident and any actions implemented to prevent a reoccurrence. This should be provided to NRW by 24 October 2022.

Checks are made on the system twice a week using the PPM spreadsheet. Level switches and blowers are not physically checked.

Recommendation: Level switches and blowers to be added to the PPM checklist.

A selection of shift logs were reviewed and it was identified that there was a recurring issue with the lime 'day bin' not filling. Upon further investigation and discussion with the maintenance team it was reported that the day bin does not always fill within the required time period thereby triggering alarms. It was reported that this does not impact the feed of lime to the abatement.

Recommendation: The operations team should continue to respond to alarms and report their observations and findings accurately to the maintenance team for action as necessary.

The alarms are stored electronically for a period of time but there is no evidence of any review of these or trend analysis to proactively look for recurrent problems or issues.

Recommendation: Review data to see if there is any correlation between day bin system alarms and elevated acid gas emissions.

Once per week the carbon dose is weighed to verify it meets the expected dose rate, these don't appear to be recorded. Lime dosing is not weighed to verify that the correct dose rate

is being achieved.

Action 5: Update procedures to include the measurement of lime dosing as per carbon dosing. Keep records of usage and monitor performance. Please do so by 24 October 2022.

Baghouse filter checks

Procedure WX002 was provided from the last shutdown (April 2022) when the Baghouse filter was last inspected. Some items were not completed during that inspection and it appeared that the procedure did not tie up with what actually happens in practice.

Action 6: Review and update the baghouse procedure by 24 October 2022.

In the comments section on the completed maintenance form it states that 'New blowdown solenoid units don't appear to be working properly - need more attention', however it is unclear when this will be actioned or by whom.

Action 7: Confirm reason for solenoid units not working properly and steps taken to remediate. Please do so by 24 October 2022.

Action 8: Confirm the procedure if PPM work is not carried out and how it is rescheduled. This should link to Action 1 above.

The Operator stated that the bags last about 20-24 months, and issues can be identified through continuous differential pressure monitoring alarms are set at 20mbar. A spare set of bags is kept on site.

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.