

Compliance Assessment Report CAR_NRW0038663

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: Report/Data Review, Reason: Routine.

On 01/07/2021 - 26/08/2021.

Parts of permit assessed: Various

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

Report sent to: Janine Scott, Site Manager on 05/01/2022.

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	C2 Significant	Condition 1.3.1
B5 - Infrastructure - Plant and equipment	C3 Minor	Condition 2.1.11
B5 - Infrastructure - Plant and equipment	C3 Minor	Condition 2.1.11
B5 - Infrastructure - Plant and equipment	C3 Minor	Condition 2.1.11
B5 - Infrastructure - Plant and equipment	C3 Minor	Condition 2.1.11
B5 - Infrastructure - Plant and equipment	C3 Minor	Condition 2.1.11
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Action only (X)	
C1 - General Management - Staff competency/training	C2 Significant	Condition 2.3.2
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	Action only (X)	
B5 - Infrastructure - Plant and equipment	Action only (X)	
C2 - General Management - Management system and operating procedures	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
7	82

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 Action 1 below	30/09/2021
B5	See Action 2 below	30/09/2021
B5	See Action 2 below	30/09/2021
B5	See Action 2 below	30/09/2021
B5	See Action 2 below	30/09/2021
B5	See Action 2 below	30/09/2021
G4	See Actions 3 & 6 below	01/09/2021
C1	See Action 4 below	30/09/2021
G1	See Action 5 below	30/09/2021
B5	See Action 7 below	30/09/2021
C2	See Actions 8, 9 & 10 below	30/09/2021

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

Further to previous correspondence with Tradebe Healthcare National Ltd (Tradebe) regarding the reporting of CEMS data at Wrexham Clinical Waste Incinerator please see our compliance assessment with comments, actions and guidance below.

Continuous Emissions Monitoring

The permit requires that Continuous Emissions Monitoring System (CEMS) data is assessed against the Emission Limit Values (ELV) during periods of normal operation. When compiling the half hourly and daily emission values, CEMS data shall only be excluded during periods of start-up, shutdown and abnormal operation (with the exception of TOC, particulate and CO data that should continue to be monitored and reported during periods of abnormal operation).

Definitions from the permit:

“Shutdown” is any period where the plant is being returned to a non-operational state and there is no waste being burned.

“Start-up” is any period, where the plant has been non operational, after igniting the auxiliary burner until waste has been fed to the incinerator to initiate steady-state conditions as described in the Application.

“Abnormal Operation” means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or measurement devices, during which the concentrations in

the discharges into air and the purified waste water of the regulated substances may exceed the normal emission limit values.

NRW has reviewed the 2020 CEMS data reports and associated shift logs and identified that Tradebe has excluded valid half hourly CEMS data from the ELV compliance assessment.

This occurs when an ELV has been exceeded and where the loading of waste into the incinerator has temporarily ceased during that same period. Examples are summarised in the table below (not exhaustive).

Date	Parameter	Half Hourly Result* (mg/Nm ³)	Half Hourly ELV Exceeded? (Y/N)	Start-up or Shutdown? (Y/N)	Abnormal Operation Reported (Y/N)	Waste Loading Ceased	Data Excluded? (Y/N)
18/01/20	HCL	77.4 (16:29)	Y	N	N	15:56-16:32	Y
09/02/20	VOC	20.5 (04:29)	Y	N	N	04:15-04:50	Y
26/02/20	HCL	134 (03:59)	Y	N	N	03:28-04:45	Y
		76.1 (04:29)					
18/06/20	SO ₂	432 (17:59)	Y	N	N	17:30-18:10	Y
27/08/20	Dust	46 (19:29)	Y	N	N	18:54-19:30	Y

* Time denotes the end of the half hour period.

This temporary cessation of waste loading occurs outside of periods of abnormal operation or plant shutdown (planned or unplanned), with waste continuing to be burned within the kiln.

With reference to procedure 'Tradebe Healthcare Wrexham CEMS Data Reporting', dated 22 May 2015, and recent correspondence dated 21/06/2021, Tradebe report that the cessation of waste loading constitutes a period of 'Other Than Normal Operating Conditions' (OTNOC) and as such considers that this data is 'non countable' and excluded from ELV compliance assessment.

In support of their approach, Tradebe refer to an email written by Amin Anjum of the Environment Agency dated 15/05/2015 regarding the interpretation of OTNOC as part of the Waste Incineration BREF review.

In particular, Tradebe point to the following statement;

'Similarly, when waste feed is stopped, combustion still goes on but the combustion conditions are not representative of normal operation. OTNOC should start when waste

feed is stopped'.

Tradebe's application of OTNOC to the current permit is incorrect. OTNOC is only relevant to the Waste Incineration BAT-Conclusions and specifically the BAT-AELs. The permit for this site has not been subject to a BAT-conclusions review or updated to include reference to OTNOC. Abnormal operation only applies to a problem with the CEMS or abatement system as currently defined in the permit.

NRW does not agree that the temporary cessation of waste feed (other than for the purposes of entering plant shutdown) constitutes OTNOC and believes that the content of the Environment Agency email of 15/05/2015 has been misconstrued.

Furthermore, examination of the reports has identified periods where CEMS data has been excluded from compliance assessment where the loading of waste ceased after the half hourly ELV had been exceeded. Examples are summarised in the table below (not exhaustive).

Date	Parameter	Half Hourly Result* (mg/Nm ³)	Half Hourly ELV Exceeded? (Y/N)	Start-up or Shutdown? (Y/N)	Abnormal Operation Reported (Y/N)	Waste Loading Ceased	Data Excluded? (Y/N)
08/01/20	HCL	66.5 (13:59)	Y	N	N	14:00 - ?	Y
11/03/20	HCL	64.7 (07:29)	Y	N	N	07:30 - ?	Y
24/10/20	VOC	21.2 (12:59)	Y	N	N	13:05 - ?	Y
11/12/20	HCL	64.2 (06:29) 65.9 (06:59) 118.8 (07:29) 97.4 (07:59)	Y	N	N	06:40 – 08:00	Y

* Time denotes the end of the half hour period.

NRW concludes that Tradebe is incorrectly editing CEMS data contrary to the requirements of the permit (and Chapter IV of the Industrial Emissions Directive) leading to avoidance of ELV non-compliance and the incorrect reporting of emissions data to NRW.

Condition 1.3.1 states *'Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a management system, organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.'*

This condition has been breached through Tradebe's incorrect interpretation of OTNOC and the subsequent implement of procedures that exclude valid emissions monitoring data. **This has been scored a CCS2 breach of permit.**

Action 1: Review and update CEMS Data Reporting procedure 'Tradebe Healthcare Wrexham CEMS Data Reporting', dated 22 May 2015 to meet permit requirements for emissions monitoring and reporting by 30/09/2021.

N.B, a separate CAR will be issued looking at any emission limit breaches.

Operating without CEMS

The Permit states that waste should stop being burnt if the CEMS is unavailable except when operating under abnormal operations. If under abnormal operating conditions the CEMS is out of service for more than 4 hours then waste should stop being burnt.

Condition 2.1.7 'Waste shall not be charged, or shall cease to be charged, into the incinerator if... monitoring results required to demonstrate compliance with any continuous emission limit value in Table 2.2.2 are unavailable other than under abnormal operating conditions.'

Condition 2.1.11 'Where, during abnormal operation, any of the following situations arise, the Operator shall, as soon as is practicable, cease the burning of waste until normal operation can be restored... continuous measurement shows that an emission exceeds any emission limit in Table 2.2.2, or continuous emissions monitor(s) are out of service, as the case may be, for a total of four hours uninterrupted duration.'

It also states that Particulate matter TOC (VOC) and CO CEMS must be available during abnormal operation. *Condition 2.2.1.3 'The limits for emissions to air for the parameter(s) and emission point(s) set out in Table 2.2.2 shall not be exceeded except during a period of abnormal operation. During a period of abnormal operation, the limits for emissions to air for the parameter(s) and emission point(s) set out in Table 2.2.2 (a) shall not be exceeded.'*

Tradebe have stated in their letter dated 25/06/2021 that they have identified two separate occasions where the VOC CEMS unit was not functional, and they continued to operate – 25 January and 8/9 November 2020. NRW have identified at least 10 days (5 separate incidents) where the CEMS was not operational for a period of over 4 hours, with no explanation in the shift logs and operations continued, see table below.

Date	Parameter	Hours offline	comments
24 January 2020	VOC	6 hours 17:29-23:59	2 readings in this period. Started loading after shutdown at 16:45
25 January 2020	VOC	18 hours 00:00-17:59	SICK on site 18:00-19:00
31 May 2020	VOC	4½ hours 19:30-23:59	
1 June 2020	VOC	9 hours 00:00-08:59	
8 October 2020	ALL CEMS (except dust)	5½ hours 09:00-14:29	
15 October 2020	VOC	7 hours 17:00-23:59	
16 October 2020	VOC	10 hours 00:00-09:59	QAL3 10:00 – after CEMS had been

			offline
7 November 2020	ALL CEMS	4 hours - 01:00-04:59	power cut – VOC remained offline after this
	VOC	18 hours 06:00-23:59	
8 November 2020	VOC	24 hours 00:00-23:59	
9 November 2020	VOC	11 hours 00:00-10:59	noted at 10:50 and stopped loading - SICK looking online

Condition 2.1.11 (above) has been breached as the plant continued to operate without CEMS monitoring, in addition Tradebe have not notified NRW under Condition 5.1.1.5 that they were operating under abnormal operations for any of these periods. Based on the table above, 5 separate instances have been noted where the plant continued to operate without the correct CEMS monitoring being in place. **Each instance has been scored separately and each attracts a CCS3 score.**

Action 2: Investigate why waste continued to be charged into the incinerator in breach of condition 2.1.11 and why the CEMS failures were not identified. Report back to NRW by 30/09/2021.

Action 3: NRW should be notified under Condition 5.1.1.5 when the plant enters abnormal operations (including a CEMS failure). Apply with immediate effect.

There are further occasions when the CEMS was unavailable for less than 4 hours, these will be reviewed and followed up separately.

The Tradebe UK Procedure 'Incineration Abnormal Operations' dated 1 February 2018 states that if the VOC, CO or particulate CEMS are not working then waste should cease to be charged. In addition the Tradebe Healthcare Wrexham Procedure 'CEMS Data Reporting' dated 22 May 2015 states in its definition that '*Waste must cease to be charged immediately if one or more of the CO, VOC or particulate matter (dust) readings are not available...*' Staff have failed to follow the procedures stated in both of these documents.

Condition 2.3 is an overarching management condition, specifically Condition 2.3.2 states '*The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of the Permit*' and Condition 2.3.3 '*All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to carry out their duties*'.

As a result of staff operating the facility contrary to Tradebe's internal procedure, and the plant has been operating without the correct CEMS in place NRW have concluded that **Condition 2.3.2 has been breached and has been scored a CCS2 breach of permit.**

Action 4: Review your procedures and training plans to ensure that all relevant staff are aware of Permit requirements and reporting to NRW. Provide NRW with the steps you have taken to meet the requirements of this action by 30/09/2021.

Particulate CEMS

Readings from the particulate CEMS appear to be at, or very close to 0 during the first half

of 2020. From 25/01/2020 – 28/05/2020 all the readings are below 1mg/m^3 . The first notable reading over 1mg/m^3 is seen on 29/05/2020, when readings seemingly start to be recorded. This indicates that there may have been an issue with the dust CEMS, however, the selection of shift logs reviewed in this period do not identify any issues.

Action 5: Investigate the reason for the low readings during this period and report findings to NRW by 30/09/2021.

Carbon Monoxide

When reporting Carbon Monoxide 10 min ELV results, the CEMS Data Acquisition and Handling System (DAHS) is reporting both the maximum figure and the 95%ile figure. It is unclear which figure Tradebe are reporting as it is inconsistent especially if data is amended.

The 10 minute average should always be reported at the 95%ile to avoid the need for any manual intervention and human error. When reporting the daily average, all data should be included.

N.B, a separate review of the data will be undertaken due to the inconsistencies with reporting.

Action 6: Tradebe should apply the 95%tile to all 10 minute CO data and ensure all data is included when calculating the daily average. Apply with immediate effect.

Action 7: Provide further information on the DAHS upgrade including timescales to NRW by 30/09/2021.

Excluded Data

Tradebe have stated that the 'No waste' comment on the DAHS is triggered automatically if the oxygen levels go above 18%. Any results when 'no waste' is recorded are excluded from the CEMS data automatically. Tradebe have stated in their letter dated 21/06/2021 that *'The Data Acquisition and Handling System (DAHS) has limited information on the plant's operational status and it determines whether the plant is online or not solely by oxygen values. It is configured to report half hourly averages as Other Than Normal Operating Conditions (OTNOC) or No Waste if the oxygen is higher than 18% for more than 10 minutes of the half hour average. This indicates that incineration had not been occurring in a normal operating condition for that period and therefore this period is determined as OTNOC. High Oxygen readings alone cannot identify all OTNOC conditions, therefore manual intervention is required where the plant has been in OTNOC and the DAHS would otherwise record as Normal Operating Conditions.'*

There is consistently a half hourly period (e.g. 07:29 between 01/01/2020 – 28/03/2020 and 08:29 between 29/03/2020 – 03/05/2020) where 'no waste' is recorded and oxygen levels are rarely above the 18% threshold so the exclusion should not apply.

Emission breaches have been noted during some of these half hour periods where the 'no waste' comment is shown. These half hourly readings are automatically excluded from the DAHS calculations.

If this half hourly reading is not recorded as 'no waste' it often shows as a CEMS invalid data half hour (with the ! next to the figures). E.g. 08/05/2020, 15/05/2020-21/05/2020, 02/08/2020-07/08/2020, intermittently 09/11/2020-30/11/2020.

Action 8: Investigate and explain why this half hour value is constantly reported as no waste or CEMS data is not available. Please do so by 30/09/2021.

Action 9: Provide Start-up / Shutdown procedure by 30/09/2021.

Action 10: Confirm how the 18% oxygen threshold was derived and evidence that this means that waste is not being burnt within the incinerator. Please do so by 30/09/2021.

Once we have received your responses to the actions above there may be further non compliances identified and this may influence our enforcement response.

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.