

Compliance Assessment Report CAR_NRW0044325

Permit being assessed: TP3639BH.

For: Tremorfa Melt Shop, **held by:** Celsa Manufacturing UK Ltd

At: Seawall Road, Tremorfa, Cardiff, South Wales, CF24 5TH.

Type of assessment: Report/Data Review,

Reason: Routine.

On: 16/05/2024.

Parts of permit assessed: Returns, reporting, notification.

NRW Lead Officer: Dale Padfield.

Report sent to: Hannah Powell, Environmental Manager, on 16/05/2024.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Installations - Management - General Management	C2 Significant	1.1.1
IR1A - Installations - Management - General Management	C3 Minor	1.1.1
IR3E - Installations - Emissions and monitoring - Monitoring	C3 Minor	3.7.1(a)
IR1A - Installations - Management - General Management	C3 Minor	1.1.1
IR3E - Installations - Emissions and monitoring - Monitoring	C3 Minor	3.5.1(b)

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

Total non-compliances recorded	Total non-compliance score
5	47

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
IR1A	Celsa to implement written procedures as part of their EMS to	30/06/2024

Criteria	Action needed	Complete by
	ensure the notification requirements as stated in section 4.3 of the permit are effectively managed. Ensure relevant staff are adequately informed of the notification requirements of the permit and the new procedures once they are implemented. Please provide NRW with copies of the notification procedures once complete.	
IR1A	Ensure adequate frequency of planned preventative maintenance on all abatement plant. Specific areas addressed: Ensure adequate inspection and maintenance on the quench tower and ancillary equipment. Ensure adequate inspection and maintenance on the Steelphalt plant abatement system.	Already completed
IR3E	Ensure continuous monitoring of particulates on the A1 stack. See Action 2 within report. Ensure Meltshop operations staff are aware of the updated procedure and the requirement of the CEM being switched on prior to operations start-up.	Already completed
IR1A	Action 2: Provide NRW with an update on the feasibility of ensuring the CEM cannot remain offline whilst the plant is operational.	30/06/2024
IR3E	No further action required: Celsa are awaiting new monitors to replace the existing unreliable and aging equipment currently in use. Please keep NRW updated with any progress.	Already completed

Compliance 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

Celsa Manufacturing Limited

EPR/TP3639BH

This Compliance assessment report details the following:

- Follow-up root cause investigations and scoring to non-compliance issued in CAR_NRW0043567.
- Quarter 1 – 2024 reporting returns.

- Site updates.

A discrepancy with Celsa's annual reporting returns for 2023 led to the discovery that Celsa had incorrectly reported a PCDD/F result and had failed to notify NRW of a PCDD/F exceedance, as detailed in CAR_NRW0043567. Celsa were tasked with reviewing historical emissions reporting returns between 01/01/2020 and 31/12/2023, to identify if there had been any other instances of misreporting.

Celsa identified several occasions where the first round of sampling resulted in an ELV exceedance, and the results of subsequent testing was reported to NRW, with no notification of the ELV exceedance communicated to NRW. The table below details the ELV exceedances.

Table 1 – Sampling Data

<p>Water Quality Sampling – S1</p> <p>2 x Fe Breach</p> <ul style="list-style-type: none"> • June 2022 - 6mg/l over limit of 5 mg/l • Sept 2022 - 6.4 mg/l over a limit of 5mg/l <p>1 x Arsenic Breach</p> <ul style="list-style-type: none"> • Nov 2021 - 0.237mg/l over limit of 0.01 mg/l <p>1 x Suspended Solids Breach</p> <ul style="list-style-type: none"> • Sept 2022 - 29 mg/l over limit of 20 mg/l <p>Air Quality Sampling – A5</p> <p>1x A5 Stack Emissions (Feb 2022 passed)</p> <ul style="list-style-type: none"> • Dec 2022 - 30.3 mg/m³ Particulates over a limit of 20 mg/m³ • Dec 2022 - 30.3 mg/m³ NO_x over a limit of 12 mg/m³

These are in addition to the PCDD/F ELV exceedance on the A1 stack in October 2023, and particulate matter and NO_x exceedances on the A5 stack in February 2023. A total of nine ELV exceedances have been identified where no schedule 5 notifications were submitted to NRW.

There are two separate issues to address, these are discussed as follows;

1. Reporting: The data submitted on the reporting forms has in some instances been incorrect, as the values reported have not been the maximum (or minimum where required) values obtained over the reporting period, this requirement is stated on the reporting return forms. Although Celsa took the approach to report data they viewed as representative, this has been done incorrectly. NRW would expect subsequent sampling to be conducted to ensure any elevated emissions have returned to permitted values, however the data reported on the various returns should conform to the reporting requirements stated within those forms.
2. Notification: As highlighted above, Celsa took the approach to report data they saw as representative, however, this does not explain why Celsa did not notify NRW of the ELV exceedances. Permit

condition 4.3.1 requires the operator to notify NRW when any condition within the permit has been breached. Furthermore, permit condition 4.3.2 requires the operator to submit a Schedule 5 notification immediately when a limit specified within the permit has been breached.

With regards to the PCDD/F exceedance, Celsa stated that the elevated result was caused by an operational fault. The fact that the plant was not operating as expected does not negate the fact that the permit had been breached. Although the permit only requires a single annual sample for PCDD/F, it is expected that the operator is always within compliance with any permitted ELVs, the annual spot check is to provide assurance that the plant is continuing to operate within permitted levels. The single result required to be reported on the annual returns should not be the 'best' result obtained from numerous sampling campaigns. If an operational fault results in an ELV exceedance, although the result may not be representative of normal operation it is still a breach of the permitted ELV, which should be communicated to NRW via a schedule 5 notification.

Celsa have stated that the reporting failure was "not a malicious intent to mislead but a failure to understand the reporting requirements of the permit". Celsa reported that this was caused by "a misunderstanding of the permit reporting requirements, with the intention of giving a more accurate representative result rather than providing both results."

As stated above, although the intention was to provide more representative data on the monitoring returns, this explanation does not address the failure to notify.

Copies of Celsa's notification procedures were requested on the 14/03/2024. Celsa stated that the permit is used directly for this aspect and were unable to provide any procedures covering the notification requirements of the permit, as no written procedures exist for this aspect.

It is expected that the operator should have written procedures detailing the notification requirements to manage permit breaches. This ensures the requirements of the permit are managed consistently and there are clear and unambiguous instructions to ensure permit condition 4.3 is complied with and the correct actions are taken in the event a permit condition is breached. Notifying NRW of an ELV exceedance allows NRW to conduct our own assessment of any potential impact and ensures measures are put in place to prevent a re-occurrence. A delay in notifying NRW will impair our ability to independently investigate an event promptly, especially where an actual impact occurs.

Celsa have been inconsistent in their approach to submitting schedule 5 notifications, where they failed to notify NRW of several ELV exceedances but have correctly notified of other ELV exceedances during the same period. Where we find non-compliance we must identify the root cause, the root-cause for these notification failures are seen a result of having no written procedures detailing the notification requirements of the permit as part of the EMS. In addition to the above, relevant staff have not been adequately trained or are unaware of permit conditions or management systems relating to notifications to regulatory bodies.

These failures are breaches of the following permit conditions:

- Permit Breach will be scored under condition 1.1.1 (a) under compliance criteria IR1A
- Permit Breach will be scored under condition 1.1.1 (b) under compliance criteria IR1A

Multiple breaches of the general management condition indicate a systematic failure of the operator to minimise the risk of pollution, and so constitute the issuing, as a minimum, a category two non-compliance. The non-compliances will be consolidated and scored as a single non-compliance under permit condition 1.1.1.

Category 2 non-compliance: A category 2 significant non-compliance is issued for the failure to have written notification procedures as part of the management system and the failure of staff to adequately understand the reporting and notification requirements of the permit. Permit condition 1.1.1.

When a category 2 or higher non-compliance has been issued, NRW must consider further enforcement action. In this instance, for the non-compliances detailed below, Celsa will be issued a Warning letter. A copy of the letter has been sent alongside this report.

- The category 2 non-compliance issued in CAR_NRW0043567 for failing to notify NRW of the PCDD/F exceedance and for the eight ELV exceedances later identified in which Celsa failed to provide notification.
- The category 2 non-compliance issued in this CAR form for the management system failures.

Action 1 – Celsa – 8th of May 2024: Celsa to implement written procedures as part of their EMS to ensure the notification requirements as stated in section 4.3 of the permit are effectively managed. Ensure relevant staff are adequately informed of the notification requirements of the permit and the new procedures once they are implemented. Please provide NRW with copies of the notification procedures once complete. **Due – 14th of June 2024.**

Root-cause of PCDD/F exceedance.

Celsa's investigation into the elevated PCDD/F result, from the monitoring that took place in October 2023, identified the exceedance to be a result of an excessive material build-up within the quench tower. It was reported that the material build-up likely had two negative effects, a reduced efficiency of the water sprays to effectively cool the extracted gasses and increased or excessive material being extracted through the system. NRW agrees with this conclusion, it is likely that a build of material in the extraction system has led to releases of PCDD/F due to 'memory effect' of trapped and deposited dust buildup which can subsequently release additional PCDD/F into the flue gas. The decreased efficiency of the water sprays may have also contributed to the issue due to the increased possibility of de-novo synthesis of PCDD/F.

Celsa reported that prior to the exceedance in October the quench tower had last been cleaned in April/May 2023. The cleaning frequency was on an ad hoc basis and was dependant on the extraction, build-up, refractory condition and water system condition. The water nozzles were subject to a weekly physical and visual inspection during shutdowns. The effectiveness of the quenching process is monitored via system pressure, with a trigger level of <100 Pa resulting in an investigation and subsequent corrective actions. A proactive physical maintenance task of high-pressure water jetting is conducted 4-weekly to remove excessive build-up. In the 'Part B' of the Schedule 5 notification, Celsa stated that a review of the frequency of the maintenance has been undertaken, and the duration between cleaning has now been reduced to prevent recurrence. It was also reported that the pressure monitors within the extraction system have been moved to improve access for maintenance and weekly visual inspections have been implemented since November 2023 to assess material build-up and water nozzle conditions.

The root-cause of the PCDD/F exceedance has been identified as inadequate planned preventative

maintenance on the quench tower, which allowed an excessive build-up of material to occur. No further actions are required as Celsa have identified and implemented measures to prevent a recurrence. A category 3 minor non-compliance will be issued, as there was a PPM regime in place, however, it had not been effective in maintaining the cleanliness of the quench tower and mitigating the potential for elevated PCDD/F concentrations arising from the process.

Category 3 non-compliance: A category 3 minor non-compliance is issued for the inadequate planned preventative maintenance regime of the quench tower, which has failed to identify and minimise the risk of pollution. Permit condition 1.1.1.

A1 Particulate CEM Schedule 5 notification

A schedule 5 notification was received on the 19th of January 2024 detailing a gap in the continuous monitoring occurring on the 17th which had been identified on the 19th. The following minor non-compliance will be issued for failing to continuously monitor the A1 particulate emissions.

Non-compliance: A category 3 minor non-compliance is issued for failing to continuously monitor the particulate emissions from the A1 stack. Permit condition 3.7.1(a).

The gap in the monitoring data was reportedly caused by operations staff failing to switch the monitor back on after recommencing operations. The Part 'B' of the notification was received on the 23/02/2024. Celsa identified several corrective actions to prevent a recurrence, these included and updating of environmental procedure 'ECP23 CEMS Management and Maintenance Procedure' to include the requirement to re-start the CEM digital system following any prolonged period where the plant has been offline. And re-issuing the updated procedure to all relevant Meltshop staff to ensure awareness within the operations teams. Celsa also intends to investigate a means of ensuring the CEM cannot remain offline while the plant is operational.

The root-cause is seen as inadequate detail in the CEMS management and maintenance procedure. If the CEMS are routinely deactivated during prolonged maintenance, then reactivation of the CEMS should form part of the start-up procedures. Continued operation of the CEM provides assurance that the abatement plant is operating as expected and allows for any issues with the bag plant to be promptly identified and rectified. The following non-compliance will be issued.

Non-compliance: A category 3 minor non-compliance is issued for failing to identify and minimise the risk arising from maintenance and operations. Permit condition 1.1.1.

Action 2 – Celsa – 3rd May 2024: Please provide NRW with an update on the feasibility of ensuring the CEM cannot remain offline whilst the plant is operational.

Root cause – A5 TPM and NO_x exceedances

A retrospective schedule 5 notification was received on the 27/02/2024 for the TPM and NO_x exceedances on the A5 stack which occurred during annual sampling for 2023. An investigation concluded that the cleaning

cycle on 'motor A' was catching, resulting in the filter bags being heavily coated with dust. A monthly inspection regime has been implemented on the cleaning cycle system (motor A and B). The root cause has been attributed to an inadequate inspection regime, resulting in the poor performance of the dust abatement plant. A minor non-compliance will be issued; however, this will be consolidated with the root cause of the PCDD/F exceedance. These root causes are deemed as inefficiencies from the same part of the EMS, although covering different sections of the plant, they address the same topic i.e., PPM and inspection frequencies.

Quarter 1 2024 reporting returns

-

A1 – Particulate emissions: The maximum daily average concentrations are within the permitted values for the quarter. Returns accepted.

A4 – Particulate emissions: Ringelmann shade assessment below ELV.

A5 – Process monitoring: A total of 465 hourly averaged results were recorded. Five hourly averages recorded over the 20 mg/m³ trigger level.

Action 3 – Celsa – 3rd May 2024: Please provide the following information. **Due – 30th of June 2024.**

- The hourly average results for the 5 hourly averages over the trigger level.
- The uncertainty value of the particulate CEM.
- Details of the investigations and corrective actions taken.

-

Topas Monitor

Ongoing issues have resulted in down time of both the primary and back-up TOPAS monitors. A schedule 5 Part A (01/01/2024) and Part B (08/03/2024) have been submitted by Celsa detailing the issues. The age of the TOPAS monitors has been highlighted as the likely cause of the frequent breakdown issues. Celsa is in the progress of acquiring new monitors to replace those situated at Baden Powell and Willows High School. Since there is a permit condition to continuously monitor ambient air at these locations, a minor Cat 3 non-compliance will be issued for the data gap covering quarter 1 of 2024.

Non-compliance: A category 3 minor non-compliance is issued for ambient air monitoring requirements failure. Permit condition 3.5.1(b).

Site Updates

-

Celsa's permit variation has been successful, the new metal shredder located within the mineral site has successfully been varied into the permit. The permit is currently version 10.

Harsco are investigating the possibility of extending the operating hours of the Steelphalt plant. The plant is currently permitted to operate between 07:00 and 17:00. A noise impact assessment (NIA) has been submitted, with the intention of conducting a nighttime trial to allow noise monitoring data to be gathered

to support a permit variation. The NIA is currently being reviewed to ensure a trial of nighttime operations is unlikely to have any impact on any of the nearby receptors. An update will be provided to Celsa once the NIA has been reviewed by NRW.

As part of an EMS audit, Celsa had identified an error within their maintenance system, which resulted in the calibration and service of the flow meters on abstractions licenses 21/57/25/0048 & 1/57/25/0078 being missed. Review of the previous compliance assessments for these abstraction meters has revealed that last inspection and audit conducted by NRW was during August 2018. A compliance check of both abstraction licences will be organised for 2024. For information: the compliance reports (CARS) for these checks will be issued under the relevant abstraction licence numbers and will not be reported as part of, or under any of the EPR permit numbers.

End.

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.

If your assessment result in Section 1 is suspended, what does this mean?

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 compliance criteria (used in section 1 and 2):

1. Management

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

2. Operations

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

3. Emission and Monitoring

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

4. Information

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

Enforcement response

Any non-compliance with a permit condition 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 twenty 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 to 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.