

Compliance Assessment Report CAR_NRW0041684

Permit being assessed: BP1772IZ.

For: Poeton Cardiff, held by Poeton (Cardiff) Limited

At: Poeton (Cardiff) Ltd, 283 Penarth Road, Cardiff, Cardiff, CF11 8UL.

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

On 18/04/2023.

Parts of permit assessed: Actions from previous compliance reports, Discharges to sewer

NRW Lead Officer: Dale Padfield.

Report sent to: Jason Hamling, HSE & Facilities Manager on 18/04/2023.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
E4 - Emissions - Sewer	C3 Minor	3.1.2
A1 - Specified by permit	Action only (X)	
H1 - Resource Efficiency - Efficient use of raw materials	Assessed (A)	
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	Assessed (A)	
H2 - Resource Efficiency - Energy efficiency	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
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
E4	Please see Action 1 (18th of April) in main body of report.	31/05/2023
A1	Please see Action 2 (18th of April) in main body of report.	31/05/2023

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

Poeton Cardiff Ltd

EPR/BP1772IZ

The Purpose of this compliance assessment report (CAR) is to capture the responses provided by Poeton to actions issued in CAR_NRW0041525 and CAR_NRW0041178 and provide an assessment of those responses. The breach of the cadmium emission limit value (ELV) to sewer during March 2023 is also captured.

Cadmium ELV breach.

NRW received a schedule 5 notification from Poeton on the 29th of March 2023. The notification stated that results for cadmium were in breach of the permitted ELV (ELV ~ 0.3 mg/l) in both the Dwr Cymru Welsh Water (DCWW) sample ~ 0.385 mg/l taken on the 22/03/2023, and the internal composite sample ~ 0.355 mg/l taken on the 23/03/2023. The following minor non-compliance will be issued for breaching the permitted cadmium ELV to sewer.

Non-compliance: A category 3 minor non-compliance is given for exceeding the emission limits values for cadmium on the 23/03/2023. Permit condition 3.1.2. **It is an offence under Regulation 38(2) of the Environmental Permitting Regulations (consolidated 2016) to breach a permit condition or emission limit. Non-compliance score CCS3.**

In the 'part B' of the notification Poeton stated that the drag-outs were to be pumped out, removed as waste and re-filled with fresh water as the cadmium concentrations appeared to be high.

As this breach appears to be a result of elevated cadmium due to drag-out, it would be pertinent to investigate the cause of the elevated cadmium levels within the rinse tanks.

Drag-out is influenced by a large variety of parameters, and although it is not possible to completely eliminate drag-out, reductions can be made when the drag-out process is undertaken correctly. Procedures should be in place that identify all the parameters that influence drag-out volume and how this can be effectively managed. As stated within the surface treatment of metals and plastics BAT reference document, reduction of this key step can only be achieved by close co-operation of all personnel involved, to improve the situation successfully adequate training for operations staff is paramount.

Reducing the quantity of process solutions lost through drag-out, particularly those arising from the cadmium plating lines, will help reduce the quantity of cadmium within the wastewater streams. Given the poor performance of the ETP, and the elevated cadmium concentrations seen within the effluent released by the facility, reducing the quantity of cadmium entering the effluent stream pre-treatment through mass drag-out reduction should aid in Poeton remaining compliant with permitted effluent ELVs.

Poeton should evaluate their current drag-put procedures against those specified within the surface treatment of metals and plastics BAT reference document, identify any areas that could be improved and put in place a plan to action any areas identified as deficient.

The following is not an exhaustive list, but some points Poeton may want to consider.

- Drag-out speed ~ the speed the jig/rack is withdrawn from the processing tank, slow withdrawal of the jigs considerably decreases drag-out volume.
- Duration of drainage (dwell) time above the process tanks – times are specified within the BAT document.
- Arrangement of the work pieces on the jig / rack / and additional measures such as tilting when withdrawn from the tank.
- Maintenance and inspection – such as conducting checks to ensure jigs / racks are free from damage, have smooth surfaces. Additional measures such as hydrophobic coatings applied to jig / racks.
- Utilising sprays or blowers to remove process solution on work pieces.
- Ensuring operations staff are adequately trained.

Action 1 - Poeton – 18th of April 2023. Poeton to conduct a gap analysis of their drag-out procedures against those stated within the surface treatment of metals and plastics BAT reference document. Poeton should use the results of this analysis and put in place a plan to improve any areas identified as being deficient. Please provide NRW with the results of the gap analysis and with any plan Poeton intend to implement as a result of their findings. **Due 31st May 2023.**

Question 1: Further to this, how often are the drag-out / rinse tanks tested? Does this form part of the preventative maintenance regime and at what concentration(s) of cadmium ect trigger an action / replacement of water?

Response to actions from CAR_NRW0041525

The actions issued are listed below for ease of reference.

Action 1 - Poeton – 10th of March 2023. Poeton to review their internal communication procedures to ensure ELV exceedances are reported to the relevant staff without delay. Consideration should be given to liaising with DCWW, to ensure early identification and notification of any issues identified when they are on site conducting the monthly spot sampling. Please provide NRW with the conclusion from the review and any associated SOP's. **Due 07th Of April 2023.**

Action 2 – Poeton 10th of March 2023: Poeton to determine the feasibility of installing a balancing tank to the ETP. If this is deemed unfeasible due to the new ETP being approved, then Poeton should investigate alternative means to achieve steady conditions within the neutralisation tank. Determine the average parameter conditions for each influent stream. Determine which on site operations cause the high variability in effluent parameters and assess a means to control effluent quality through work-load planning. Please provide NRW with the results of the investigation and a plan detailing how Poeton intend on achieving greater control over the ETP and final effluent discharge. **Due 30th of April 2023.**

Action 3 – Poeton 10th of March 2023: Given the susceptibility of the neutralisation tank to drift out of the correct operating range, what frequency of checks are Poeton currently using or intend to use going forward? **Due 07th Of April 2023.**

Responses

Action 1 – Poeton have appointed a new senior special projects manager who will oversee the laboratory, providing a direct line of communication and notification to the HSE and facilities manager of any ELV exceedances, who will then provide notification to NRW. As a schedule 5 notification was raised by Poeton and received by NRW on the 29th of March, this may be an indication that notification procedures are improving. **Action Complete.**

Action 2 – Poeton have stated that a new neutralisation stage tank is being installed to provide better control over the neutralisation stage, as an interim solution until the planned new ETP is in place.

Please provide more information regarding the new neutralisation tank

Question 2:

- (a) How will the new neutralisation tank provide better control over the effluent quality?
- (b) How does the tank differ to the existing tank?
- (c) When will the new tank be operational?

Question 3: Have Poeton considered determining the average parameter conditions of each influent stream, to gain a better understanding of how the onsite operations influence the effluent and the pH variability witnessed within the neutralisation tank?

Action 3 – Poeton have stated they will continue with their twice daily checks. **Action complete.**

Response to actions from CAR_NRW0041178

The actions issued are listed below for ease of reference.

Action 1 – Poeton – 15th of February 2023. Please investigate further to ascertain the reason for the decrease in water efficiency seen in 2022, Please use the results of this investigation to put in place a plan to improve water efficiency in 2023, please submit your findings and intentions to NRW. Due 31st March 2023.

Action 2 – Poeton – 15th of February 2023. Please investigate further to ascertain the reason for the decrease in energy efficiency seen in 2022. Please use the results of this investigation to put in place a plan to improve energy efficiency in 2023, please submit your findings and intentions to NRW. Due 31st March 2023.

Action 3 – Poeton – 15th February 2023. Please provide details on how Poeton are working towards improving stock control and reducing waste. As operations to remove hazardous waste have now been ongoing for two years, please provide an estimate of the remaining quantity of accumulated hazardous waste. Due 31st March 2023.

Action 4 – Poeton – 15th February 2023. Please provide details on how Poeton calculated the mass release of cadmium for 2022, include all figures (including analysis results) and calculations in the response. Due 31st March 2023.

Responses

Action 1 – Poeton’s investigation revealed that the discharge flow meter was providing inaccurate discharge flow rate readings, resulting in inaccurate total discharge volumes. Poeton identified the problem, and have created a new stilling well, which should prevent the formation of foam and ripples on the water surface, both of which affect the accuracy of the flow meter. Poeton have reported that the confidence level of the flow meter (measured out of 30) is now reading 29, when previously the meter had confidence levels between 5 and 17.

As a result of the above findings, Poeton have now reported a decrease in water usage for 2022 when compared to 2021 figures, using an estimation of 90% of the total water input volumes. Further to this, Poeton intend to invest in croffles for the heated process tanks, which will reduce heat loss and evaporation resulting in reduced energy and water usage. NRW welcomes the investments to reduce water and energy usage and is pleased to see that water use efficiency appears to be improving.

There is one point to highlight from Poeton’s response, the water usage has been reported using the water discharge figure, this figure should ideally be obtained from the measured incoming water to the facility opposed to the effluent discharge. As stated in Poeton’s response, due to the evaporation losses, the discharge volumes are approximately 90% of the input volumes. As such, using the discharge volume results in under reporting of the actual water use of the facility. However, looking at the ‘water in’ volume reported in the ‘review of water usage and cadmium discharge’ report, there still appears to be a decrease in water usage during 2022 when compared to 2021. **Action complete**, however, please ensure the figures used for future reporting of water usage are obtained from the incoming water to the facility.

Action 2 – Poeton have stated that although energy usage and efficiency (measured as MWh/ operating hour) have increased in 2022 from 2021, there is a significant improvement on those reported in 2019. Due to a decrease in select work streams and the impact of covid, both 2020 and 2021 are not truly representative of the facility operating as normal. Poeton have stated that the workload is now approaching similar levels are seen pre-covid, as such there does appear to be an increase in energy efficiency in 2022 when compared to 2019. NRW hope to this trend continues with the continued improvements planned at the facility. **Action complete**.

Action 3 – Poeton’s newly appointed senior special projects engineer will have responsibility of managing stock, with the aim of improving stock control resulting in less wasted stock. Poeton provided waste transfer notes for several pallets of waste removed in March 2023 and provided the quantities of waste remaining and a short-term projected estimation of waste to be generated. **Action complete**.

In Poeton’s waste minimisation report for 2022 under the ‘consigned waste and recycling’ heading it states that the zero waste was sent to landfill, however these figures do not appear to include figures for the hazardous waste generated at the facility. Although a 100% of the waste consigned through Biffa is recovered – either recycled or sent for energy recovery and this is certainly an achievement, the figures do not provide a true overview of the all the waste generated and removed from the facility.

As can be seen in the consignment notes provided by Poeton, most of the hazardous waste removed from the facility have a ‘D09’ waste management operation code assigned to them. This D09 code is a disposal code, specifically – Physical / physio-chemical treatment of waste prior to any other disposal operation, as such it is likely these waste streams end up at landfill or an alternative disposal route. Although the consignee return notes are for waste removed in February 2023, it is assumed that the waste removed in 2022 would be similar in description and is likely to undergo the same waste management operation.

Question 4: Is there any reason why Poeton have omitted the hazardous waste data in their 2022 waste minimisation report?

Question 5: Have Poeton conducted a duty of care audit on their waste carriers, and do Poeton know the fate of their hazardous waste? Have Poeton investigated possible recovery options for the hazardous waste generated at the site?

Cadmium discharges

There has been a significant increase in Cadmium releases from the installation, although the quantity is still within the annual permitted limit of 10.4 kg, the quantity has increased by almost 800% on 2021, and appear to be more than the total sum of releases from 2013 to 2021.

Question 6: Have Poeton investigated the root cause for the increased levels of cadmium being released from the facility? DCWW monthly spot sample analysis appears to indicate increased concentrations occurring from April 2022. Did anything change in April 2022?

Question 7: With regards to the formula that was provided that has historically been used to calculate total mass release of cadmium – can you provide some clarification on this formula; how does the formula provide an accurate estimation of the cadmium released, why is the sum of the monthly average concentrations divided by 50?

If this formula is used with the revised water usage figure it provides a result of 1.55 kg of cadmium, which is significantly below the estimate calculated using monthly average concentration with monthly discharge volume.

Poeton have used the monthly DCWW composite sample result data in their calculation of the annual mass release of cadmium from the facility, the samples taken by DCWW are often short of a full weekly composite sample. It's understood that Poeton collect and analyse weekly composite samples, using these results would likely provide a more accurate estimation of the annual mass release.

Question 8: Is there a reason Poeton have opted to use the monthly DCWW results opposed to the weekly internal cadmium analysis results?

Action 2 - Poeton – 18th of April 2023. Please provide responses to questions 1 – 8 raised within the report.
Due 31st of May 2023.

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.

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.