Cyfoeth Naturiol Cymru
Natural Resources Wales

Compliance Assessment Report CAR_NRW0039076

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: Audit, Reason: Routine.
On 28/09/2021 - 15/12/2021 between 10:00 and 12:00.
Parts of permit assessed: Effluent Treatment Plant

NRW Lead Officer: Geraint Harris, accompanied by Mostyn Wall.
Report sent to: Jason Hamling, Health, Safety and Environment Manager on 15/12/2021.

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

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
B1 - Infrastructure - Engineering for prevention and control of emissions	Ongoing (O)	permit condition 3.2.3
B4 - Infrastructure - Containment of stored materials	Ongoing (O)	Permit condition 3.2.3
C2 - General Management - Management system and operating procedures	Ongoing (O)	Permit condition 1.1.1

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

Total number of non-compliances recorded	Total non-compliance score
0	0

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
B1	Investigate the condition of the subsurface sumps and channels and make improvements to ensure they are impermeable and well constructed.	20/01/2022
B4	Improve the current containment infrastructure to ensure that it is impermeable to the liquid it is designed to hold.	20/01/2022
C2	Poeton need to incorporate the inspection and maintenance of the sumps and channels into their EMS.	20/01/2022

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.

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

Poeton Ltd

EPR/BP1772IZ

Original Action 1:

Undertake a full investigation into the condition of the sites subsurface infrastructure including the sumps and influent channels, highlighting any areas of erosion, cracks and unsuitable containment materials. Please undertake this and provide a report by the **20th January 2022.**

Poeton response – See borehole report and Quarterly preventive maintenance check.

You have not satisfactorily answered this action. The categorisation of potential and actual incidents allows us to use a risk-based approach to prioritise our work to ensure we secure the highest benefits to the environment, people, and economy of Wales. Notwithstanding the results of the groundwater monitoring, the potential risk to the environment of having ineffective containment is significant. During the audit it was witnessed that the subsurface pits were a concern. Since these pits provide a single layer of protection between the effluent and the surrounding environment it is essential that they are frequently inspected and maintained. During the audit it was unclear whether these areas are inspected and what level of scrutiny they are given.

Poeton must ensure that all appropriate measures are in place to protect the environment. This should include the use of the correct containment materials and the employment of a comprehensive preventive maintenance regime that captures all areas of the infrastructure to identify any deficiencies as fast as possible. The original application site report states the following:

“Poeton operates a maintenance management system, which is described in section 2.1.7 of the main IPPC application. The maintenance program includes quarterly visual inspection of;

All bunded areas and drainage channels to detect leaks, spillage or any signs of deterioration or blockage.

Annual testing of bunded areas and drainage channels is carried out including leak testing of bunded areas and detailed inspection of the integrity of drainage channels and pits.

The effluent plant and the bund are inspected every quarter to detect any signs of

deterioration, cracking and spillage. The pits are examined when the effluent plant is emptied to ensure they are in good condition. "

Furthermore your Site Protection and Monitoring Plan states under section 4.2.5

"annual testing of bunded areas is also carried out including:

- *Leak testing of bunded areas and effluent pit sumps.*
- *Detailed inspection of integrity of drainage channels."*

As mentioned above there is only a single layer of protection and due to the infrastructure being submerged it is important that the structural integrity of the containment is maintained. Therefore, it is important to employ routine inspections. The Quarterly Preventative Maintenance Check Sheet was provided as part of the evidence that the above investigation was carried out. This check sheet list's the areas that were inspected and scores them according to their condition. The Bunding/pits was given a score of 2 which equates to 'repair ASAP' the comment for this area states "bunding is cracked". Such cracked bunding was witnessed during the audit. What is not clear is whether the subsurface pits and channels were inspected for corrosion and cracks and if so, what was the outcome.

New Action 1:

Please explain when the last leak test was carried out and what the outcome was? Please advice when you will be conducting the next leak tests? If no leak test or significant inspection as mentioned in the original Action1 has been undertaken, please undertake the original action 1 by **20th January 2022**. For the quarterly inspections please give details of what occurs during this quarterly inspection, are the pits emptied out and all areas examined? **Due date 20th January 2022.**

New Action 2:

As mentioned in above the appropriate containment materials should be used. Within Poeton's application it states "The chrome pits are sunk into the floor, which act as a bund in case of leaks or spill. This pit is constructed of concrete an impermeable membrane and acid proof bricks".

It is unclear what materials the effluent treatment pits are constructed with and whether its suitably impermeable to the effluents varying pH levels. Is this area constructed of the same materials as the chrome pits? Other sites in Wales which utilise subsurface pits in their effluent treatment tank are constructed of acid proof pits and a unique motor and employ a strict monitoring regime to prevent or reduce leaks.

Please can you investigate what material is used for containment in your effluent treatment plant. **Due date 20th January 2022.**

Original Action 2:

Provide a plan for how you intend to investigate if any Relevant Hazardous Substances have leaked into the surrounding soil and water. Due date is one month following your

investigations in action 1.

Poeton response – See borehole report.

Original Action 3

Review the past groundwater monitoring results to investigate if there has been any elevated levels of Chromium, Cadmium and Cyanide in the groundwater surrounding the treatment plant. Please provide evidence this was completed by **20th November 2021.**

Poeton response – See borehole report.

Many thanks for producing the borehole report. The borehole report provided by Poeton trends the groundwater analysis results for the years 2006, 2007, 2014 and 2021. These analysis suites are part of a 5 yearly (IED) permit requirement for groundwater monitoring. The boreholes are situated up and down gradient of the site as well as in relative proximity to the treatment plant. According to the Borehole report 'The samples were collected in accordance with the instructions provided by ALS Environmental ltd'.

New Action3:

Please can you provide me with the details of this sample collection instruction. With regards to the two new boreholes, were they were dug to the same depth and constructed in the same way as the original two boreholes? **Due date 20th January 2022.**

Original Action 4:

Provide a plan on how you intend to improve the subsurface infrastructure including providing suitable impermeable containment throughout. Due date is one month following your investigations in action 1.

Poeton response – Engineering design works currently being done by Allwater Technologies Ltd, with a plan to bring most of the plant above ground. Necessary collection points that remain subsurface will be double walled with inspection points.

It is still essential to ensure the current containment system has not had any breaches and that it remains impermeable until the new system is operational. Therefore, it is important that Action 1 is undertaken to identify any weakness in the current infrastructure and make improvements to prevent any potential future leaks.

New action4:

With regards to the work being undertaken by Allwater Technologies Ltd Is there a rough timeline for the above work? Do you intend to try and operate the existing system while the new one is being installed and commissioned? **Due date 20th January 2022.**

Original Action 5:

Improve your management system to include the inspection, maintenance and monitoring of all containment including above ground and subsurface infrastructure. **Please complete and provide evidence by 20th December 2021**.

Poeton response – Highlighted on quarterly preventive maintenance sheets, any issues identified outside of this check can be reported on a maintenance requisition form for action. Further updates to EPPI 01 (Preventive Maintenance) to follow. EPPI01 received 14th December 2021.

EPPI01 details some of the preventative maintenance of all plant and equipment whose breakdown is likely to cause an environmental impact. However, it is still unclear what occurs in these quarterly and periodic maintenance procedures. As mentioned under Action 1, Poeton, in their application stated "The effluent plant and the bund are inspected every quarter to detect any signs of deterioration, cracking and spillage. The pits are examined when the effluent plant is emptied to ensure they are in good condition." And that "annual leak testing of bunded areas and effluent pit sumps" will take place. Such details and the leak testing is not mentioned in EPPI01.

New Action4:

Please provide details on what the quarterly preventive maintenance of the effluent pits actually involves? When was the last Leak test conducted? Are all areas below the surface inspected? is the effluent removed prior to inspection? Are all the inspections mentioned under action1 (taken from Poeton's application) still being undertaken? Has the condition of the pits and subsurface infrastructure been highlighted in the past and what was the outcome? Where in the management system is the leak testing mentioned? **Due date 20th January 2022.**

Original Action 6:

Repair the support structure under the sulphuric acid tank as a matter of urgency and provide evidence that this has been completed. **Please complete and provide evidence by 20th November 2021.**

Poeton response – Sulphuric acid tank has been made safe (picture attached), and loose material removed. Area under Sodium Metabisulphate found to be sound. Regular monitoring of this area to be undertaken by Lab staff. See also action 9.

Action complete.

Original Action 7:

A number of cracks were seen on bunding. Please inspect the bunding for cracks and holes and repair any deficiencies. Incorporate routine bund inspections into your planned preventative maintenance schedule. Provide evidence that this was undertaken. **Please complete and provide evidence by 20th December 2021.**

Poeton response – Maintenance to repair and seal this area (Materials have been ordered) - Pictures to be sent on completion.

Pictures provided on the 14th December. Action Complete.

Original Action 8:

The bunded area has become a storage area for a number of containers and bags. These

should be removed and stored in a more appropriate location. Storing items in a bund reduced the bunds capacity to store spillages or leaks and may exacerbate a potential incident. **Please complete by 20th November 2021**.

Poeton response – Rubbish has been removed from bund area; remaining containers are in use (picture attached).

Action complete.

Original Action 9:

Modify the bunding adjacent to the sulphuric and sodium hydroxide tanks so that any leaks or toppling of tanks are directed into the treatment plant pits and not onto the adjacent road. **Please complete by 20th December 2021.**

Poeton response – Quote received and order raised for modifications to tank stands.

Pictures provided on the 14th December. Action Complete.

Original Action 10:

The Zinc/nickel tank does not have appropriate bunding for the size of the tank. It is currently stored above the treatment pits which in the event of a leak would capture the majority of liquid. However, there is a risk that the liquid run off the current base and onto the adjacent road. Please review the location of this tank and provide a plan to ensure that any leak can be contained within the bunded area. **Please complete by 20th December 2021.**

Poeton response – Zinc/Nickel treatment tank has not been commissioned, therefore is not in use. We have reviewed the position of this unit with AllWater since the audit and agree that the position of this is not ideal. The position of this will be taken into consideration with the new ETP design works. This unit will remain out of use until it is relocated with adequate bunding.

Action completed.

Monitoring

Original Action 11:

Please provide the original or a new validation of the current continuous controls (pH/Redox) for maintaining compliance with the weekly average permit. **Please provide evidence this was completed by 20th November 2021.**

Poeton response – Calibration certs from AWE Ltd attached for March & September 2021, next calibration visit due March 2022.

Original Action 12:

In-house or contractor pH slope and offset checks should normally be used to ensure that pH probes are functioning correctly. Please review the manufactures guidelines for calibration of the pH and Redox probes to see if the current calibration routine is sufficient.

Investigate whether more regular in-house calibration should be undertaken. Please provide evidence this was completed by **20th November 2021.**

Poeton response – Checked with AWE Ltd & current routine is sufficient.

New Action5:

Please can you provide me with the make and model of the pH and Redox probes used within the ETP. **Due date 20th January 2022.**

Original Action 13:

Since the operation of the treatment plant is reliant on the correct functioning of the pH and redox probes please provide details on what would happen in the event the each of the probes were to become faulty. For example what would happen to effluent treatment if the neutralisation pH probe was to become faulty? Would the plant and hence site operations shut down for the length of time it took to get a replacement? **Please complete by 20th November 2021.**

Poeton response – Replacement probes are kept on site to change over in the event of a failure, with calibration visit to be booked ASAP based on engineer availability. New probes to be calibrated by the Lab upon installation and increased monitoring will take place by the until the calibration visit has been completed by service engineer and CofC provided.

If any on the pH or REDOX probes are found to be faulty/broken the probe must immediately be replaced with the spare that is kept on site. The new probe must be calibrated internally IAW manufacturers instructions before being put into service. A calibration visit is to be arranged ASAP with the company that hold the service contract. Until the calibration visit, the probe is to be verified weekly. A new spare probe is to be ordered immediately.

If any of the instrument displays are found to be faulty, an engineer visit is to be arranged ASAP. Until the visit, it is the responsibility of the laboratory staff to frequently assess the efficacy of the reaction taking place and if required, manually adjust the dosing rate of chemicals to ensure the risk of an escape is minimised as much as is reasonably possible.

New Action6:

Please explain the procedure for calibrating internally and for undertaking the weekly verification mentioned above. Please provide Poeton's Analytical Procedure 63 and 20 and Process Control Document 15 and any other relevant documents pertaining to pH and redox calibration.

How will the Lab test the efficacy of the reaction taking place? Please provide details. **Due date 20th January 2022.**

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.