

Compliance Assessment Report CAR_NRW0043009

Permit being assessed: BL4567IZ.

For: Clydach Nickel Refinery, **held by:** Vale Europe Limited

At: CLYDACH REFINERY, Clydach, Swansea, Swansea, SA6 5QR.

Type of assessment: Audit,

Reason: Routine.

On: 26/09/2023 between 09:30 and 16:30.

Parts of permit assessed: Nickel Emissions.

NRW Lead Officer: Gary Evans, accompanied by Lee Mills.

Report sent to: Richard De Filippo, Safety, Health & Environment, on 13/12/2023.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR1A - Management - General management	Assessed (A)	
IR1E - Management - Avoidance, recovery and disposal of wastes produced by the activities	Assessed (A)	
IR2E - Operations - Improvement programme	Assessed (A)	
IR3A - Emissions and monitoring - Emissions to water, air or land	Assessed (A)	
IR3G - Emissions and monitoring - Air quality management plans	Assessed (A)	
IR3E - Emissions and monitoring - Monitoring	Assessed (A)	
IR4A - Information - Records	Assessed (A)	
IR4B - Information - Reporting	Assessed (A)	

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

Total 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?

No action required.

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.

At this time, we do not intend to take any further action.

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

Introduction

This Compliance Assessment Report (CAR) is a written record of a site visit on the 26th of September 2023 by Gary Evans and Lee Mills as a routine inspection under the EPR Permitting regime.

EPR Permit Variation

Vale Europe Limited applied for permit variation on the 30th of November 2022, to incorporate the cooling water project and subsequent reduction in water consumption and lower discharge volumes into the river Tawe. The variation application outlines a change to the discharge temperature of the final effluent; however the volume will be decreased by approximately 50%. The permit was in determination at the time of the EPR visit, however subsequently the permit variation was issued on the 27th of September 2023.

The permit variation contains improvement conditions IC12 and IC13

IC12 - The Operator shall agree in writing with Natural Resources Wales the location of the River Tawe temperature monitoring point. Within three months of 27/09/2023

IC13 - The Operator shall install and commission a temperature monitoring device at the location agreed upon in IC12. Within six months of the date of completion of IC12

The permit variation incorporates the cooling water system and the company may choose to review their water abstraction licences following a review of the stability of the cooling water system.

Medium Combustion Plant

Vale submitted a permit variation on the 17th of May 2022 changes to A30 & A31 Table S3.2(a) EPR/BL4567IZ and incorporate the new boilers under the Medium Combustion Plant Directive (MCPD). The permit variation application is associated with the New Package Boiler installation at the Process Gas plant.

Vale Europe Limited outlined that the change would improve the performance of its existing Hydrogen Plant Ruston Boilers points A30 & A31 on Environmental Permit - EPR/BL4567IZ. By replacing the current boilers with new units. Given the thermal input of the new units exceeds 1 megawatt thermal a permit variation was required to incorporate them into Medium Combustion Plant Directive (MCPD) requirements.

Each of the new units have a rated thermal input of 4.45 MW and are in a similar location with associated new stacks. Ref A30 & A31 Table S3.2(a) EPR/BL4567IZ

At the time of the inspection both boilers were commissioned and operating with one already having had emission monitoring carried out with the other due within the week. Initial monitoring data show that the new unit are operating approximately at 60mg/m³ NO_x which is well within permitted limits (100mg/m³).

EPR Emission Performance

The company are required to complete mass emissions released from the installation annually under the EPR reporting requirements. The main parameter under review at the visit was specifically nickel releases. The main release point A54 has continuous emission monitoring system (CEMS) and has been consistently operating below the 5mg/m³ particulate limit, with majority between 1-2 mg/m³.

The company produces an annual report quantifying the annual mass releases of particulate and nickel compounds. The company have continued with their approach of continual improvement and the 2022 Nickel total is 262 kg compared with a 2015 figure of 1938 kg. The Air Quality Target for the Nickel has been exceeded within the Pontardawe area and there will be an increased vigilance on nickel emissions within the valley by regulators and businesses alike.

Emission Modelling

In conjunction with Vale Europe Limited NRW are proposing to revisit an emission modelling assessment carried out in 2015 to re-evaluate the emission profile from the installation. NRW will be requesting detailed emission/process data over the coming months to enable our Air Quality and Noise Assessment Team to carry out a modelling assessment that can help support and target interventions.

Welsh Government Nickel in Air Meetings

It was outlined during the visit that Welsh Government are planning on a future face to face to meeting on the nickel air quality target. The Air Quality Standards Regulations outlines a target value (TV) for nickel (Ni) as an annual mean concentration of 20 nanograms per cubic metre of ambient air or lower. The regulation requires the UK to report on measures in place to address the exceedance of the TV and that all reasonable measures that do not entail disproportionate cost should be taken to ensure this target is not exceeded.

NRW are working with Welsh Government, Local Authority and industries in improving compliance with the air quality target. In recent years the target level has been achieved, however in the last year there have been increased events in the Swansea Valley. Welsh Government are therefore re introducing the Nickel in Air programme which involves several stakeholders working together to minimise nickel air quality aspects.

Regulatory Lead

Gary Evans outlined that due to a change in role within NRW, Michael Launder (Lead Specialist Industry Regulation) will take over the EPR Regulation of the Vale site in Clydach. Andi Kemp will be the NRW COMAH Regulation contact for the site.

Site Inspection

As part of the visit NRW inspected the installation and processes. The visit to the Gas Plant area highlighted the recent installation of the new MCPs and outlined a good operating performance. The company are actively reviewing performance of the cooling water project and the positive impact on the effluent reduction. Within the effluent plant area the company have been carrying out maintenance activity on the bobby filters (sand filters) changing out the filter media. The company needs to review the storage and removal of material.

Recommendation: Provide a plan for the removal of excess filter media stored in the ETP area by March 2024.

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.