

Natural Resources Wales permitting decisions

Vale Euro Limited Decision Document (Clydach Nickel Refinery)

Contents

Natural Resources Wales permitting decisions	1
Vale Euro Limited Decision Document	1
(Clydach Nickel Refinery)	1
Variation	3
The permit/variation number is: EPR/BL4567IZ/V007	3
The operator is: Vale Euro Limited	3
The Installation is located at: Clydach Nickel Refinery, Clydach, Swansea, SA6 5QR	3
Purpose of this document	4
Key issues of the decision	5
Receipt of application	5
Confidential information	5
Identifying confidential information	5
Consultation	5
Operator	5
The facility	5
Legislation	6
The site	6
Biodiversity, Heritage, Landscape and Nature Conservation	6
Environmental Risk Assessment	7
Air	7
Emission limits	7
Water	7
Odour	8
Noise	8
Fugitive emissions	8
Monitoring	8
Reporting	8
Operating techniques	9
The permit conditions	9
Improvement conditions	9
Incorporating the application	10
OPRA	10
ANNEX 1: Improvement Conditions	11

Variation

The permit/variation number is: **EPR/BL4567IZ/V007**

The operator is: **Vale Euro Limited**

The Installation is located at: **Clydach Nickel Refinery, Clydach, Swansea, SA6 5QR**

Vale Europe Ltd operates a nickel refinery producing approximately 40,000 tonnes per annum of nickel pellets, powders and coated products using the 'nickel carbonyl' process. The nickel refinery plant operates continuously

The variation is to allow the use of a coagulant agent to improve the effluent treatment process and reduce the accumulation of fine sediment and nickel in the water discharge from emission point W1. The variation will incorporate the operating techniques for a trial period of 1 month and include an improvement condition for an agreement between Vale and NRW if the trial is successful and the operator wishes to continue using the coagulant in their effluent treatment process.

We have decided to issue the variation for Clydach Nickle Refinery operated by Vale Euro Limited.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

Unless the decision document specifies otherwise we have accepted the applicant's proposals.

Key issues of the decision

Receipt of application

The Application was accepted as duly made on 08/02/2021. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete that determination.

Confidential information

The Applicant made no claim for commercial confidentiality. We have not received information in relation to the Application that appears to be confidential in relation to any party.

Identifying confidential information

We have not identified information provided as part of the application to be confidential.

Consultation

There was no requirement to carry out a consultation on this minor technical variation. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.

Operator

There are no changes to the operator of the installation as a result of this variation

The facility

The regulated facility is an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations and the following directly associated activities.

- S2.2 A(1)(a) Producing nickel pellets and powder by the nickel carbonyl process.
Receipt of raw materials to nickel powder and pellets being transported off-site.
- S4.2 A(1)(a)(v) Producing nickel carbonyl gas for directly associated processes
Receipt of raw materials to material being transferred to nickel coating process.

- S4.2 A(1)(a)(i) Producing of gasses including hydrogen and oxides of carbon.
Gases for use within boundaries of site

Directly associated activities.

- Gaseous effluent plant Burning and filtering waste gases: gaseous waste as generated within boundaries of site
- Water discharges to foul sewers: discharge of ammonia from the installation.
From interceptors to point of entry to sewer
- Main effluent plant : discharge of process water
- Site drainage from the installation: from interceptors to point of entry to controlled waters.

Legislation

NRW is satisfied that this decision is compatible with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources

All applicable European directives have been considered in the determination of the application.

The site

There is no change to the site boundary as a result of this variation. As such there was no requirement for a updated site plan.

Biodiversity, Heritage, Landscape and Nature Conservation

The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat .

Although there are SAC and Ramsar sites are within the 10 km screening distance of the site none of these are hydrologically connected 10 km downstream of the water discharge point W1 therefore these site were screened out. As such there was no habitats regulatory assessment was done.

A local wildlife site (Tawe Corridor) and a SSSI (Glais Moraine) are hydrologically connected to the discharge within 2000 meters. While the discharge is within screening distance of the local wildlife site and SSSI, no appendix 4 assessment was done as there are no expected changes to emission limit values (ELV) or emissions to water that would impact these protected sites. The aim of the variation is to allow the operator to improve the effluent treatment process to reduce the amounts of nickel and fine suspended solids being discharged into the water course and allow the site to meet the ELVs that have already been set. The additional monitoring requirements are to ensure that no coagulant is discharged into the river.

Environmental Risk Assessment

Air

There are no changes to emissions to air as a result of this variation.

Emission limits

There are no changes to emission limits to air as a result of this variation

Water

The coagulant will be used in the effluent treatment process to reduce the amount of fine suspended solids discharging into the watercourse. The operator have put in measures to detect and prevent coagulant from being discharge into the watercourse.

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of ground and surface water.

Emission limits

There are no changes to emission limits to water as a result of this variation. The use of coagulant is to trial a possible improvement to the effluent treatment process to allow the installation to reach the emission limits for suspended solids and nickel already in place on the permit.

Odour

There is no change to the operations that would affect the odour from the site.

Noise

There is no change to the operations that would affect the noise from the site.

Fugitive emissions

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise fugitive emissions and to prevent pollution from fugitive emissions.

The applicant has stated in form C2 of application, that they will test the discharge for phosphorus and BOD as an indication of residual coagulant in the water course. This is enforced by table S3.5 Process monitoring requirements. The operator will stop the process if there are any values increase during the trial. Limits on BOD and ammonia are already present in the permit.

There are no limits on phosphorus present in the permit and setting ELVs are beyond the scope of this variation.

Monitoring

We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.

These monitoring requirements have been imposed in order to ensure that the operator monitors for any traces of coagulant in the final effluent.

Reporting

There are no changes to the reporting format as part of this variation.

Operating techniques

There are no changes to the overall operations of the plant as a result of this variation.

The permit conditions

Updating permit conditions during consolidation

We have updated previous permit conditions to those in the new generic permit template as part of permit consolidation. The new conditions have the same meaning as those in the previous permit.

Schedule 3a was removed as this section only applicable until 29th June 2020, which has since passed by the issue date of this variation.

Improvement conditions

Based on the information on the application, we consider that we need to impose improvement conditions. Details of the improvement conditions used can be found at Annex 1

Incorporating the application

We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.

Among these descriptions are

- SDS of Nalco 77135 that is used as the coagulant
- The modifications that are to be carried out to the effluent treatment works to allow the use of the coagulant process.
- Tests that are to be carried out to monitor the effluent for residual coagulant.

These descriptions are specified in the Operating Techniques table in the permit.

OPRA

The OPRA score at variation issue remains at 225

ANNEX 1: Improvement Conditions

‘Submit a written procedure to Natural Resources Wales for approval. The procedure must contain the results of the review of the coagulant dosing to the effluent treatment during the trial period including any indications of coagulant in the final effluent. The proposal should include the permanent set up of the effluent treatment process and any changes (as agreed by NRW) to the process after the trial period and monitoring for the effluent.

The plan/procedure must contain dates for the implementation of individual measures
The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the plan.

You must implement the plan as approved, and from the date stipulated by Natural Resources Wales.

- Inform NRW in writing when the operator are to use the coagulant in the main effluent treatment process .
- Review the trial to use the coagulant in the effluent treatment process and submit a report highlighting the outcomes of the trial.
- An agreement in writing between Operator and Natural Resources Wales to continue the use of the coagulant on a permanent basis. If agreed the operator must submit to Natural Resources Wales an updated operating technique, highlight if any changes are made (with the agreement of Natural Resources Wales).