

Natural Resources Wales permitting decisions

Envirowales Ltd

Non-ferrous metals sector BAT review

Decision Document

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Variation and consolidation of a bespoke permit

We have decided to issue a Natural Resources Wales initiated variation for the Rassau Recycling Facility installation, operated by Envirowales Limited.

The variation number is EPR/EP3230BW/V007.

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 is a decision document, which accompanies a variation notice being issued following a review of the permit.

It explains:

- **how** we have carried out our statutory review of the operator's permit;
- **why** we have decided to vary the permit as a result of that review; and
- **why** we have included the specific conditions in the revised permit through the variation notice we are issuing.

It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position. It explains how we have reviewed and considered the techniques used by the operator in the operation and control of the plant and activities of the installation. This review has been undertaken with reference to the decision made by the European Commission establishing best available techniques (BAT) conclusions ('BAT Conclusions') for the non-ferrous metals industries, which were published as a Commission Implementing Decision (EU) 2016/1032 in the Official Journal of the EU on the 30th June 2016. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position. This decision document also provides a justification for the inclusion of any specific conditions in the permit that are in addition to those included in our generic permit template.

The consolidation and variation notice takes into account and brings together in a single document all previous variations that relate to the original permit. It also modernises the entire permit to reflect the conditions contained in our current permit template. The introduction of the new permit format makes the permit consistent with other permits issued to installations in this sector. In this document we address only our determination of substantive issues relating to the new BAT Conclusions. This variation is considered to be a normal variation because along with the administrative changes i.e. consolidating previous variations and moving to the new template, some detailed technical evaluation is required. This is a more complex variation than the norm, because it is doing three different things at the same time:

- **First**, it gives effect to our decisions following the statutory review of the existing permit, following the implementation of the IED and the publication of BAT Conclusions covering the non-ferrous metal industries. That is what this variation is principally about;
- **Second**, it takes the opportunity to bring earlier variations into an up-to-date, consolidated permit. These changes have already taken place and we are not re-explaining them, but the consolidated permit should be easier to understand and use; and
- **Third**, it modernises the entire permit to reflect our current template. The template reflects our modern regulatory permitting philosophy and was introduced because of a change in the governing legislation. This took place when the Pollution Prevention and Control (England and Wales) Regulations 2000 were replaced in 2008 by a new statutory regime under the Environmental Permitting Regulations (EPR) 2010 (as amended in 2013) to effectively introduce the IED. The Environmental Permitting (England and Wales) Regulations 2016 were made on 11th December 2016 and consolidated EPR 2010 and its subsequent amendments.

The introduction of new template conditions makes the permit consistent with our current general approach and philosophy. Although the wording of some conditions has changed, while others have disappeared because of the new regulatory approach, it does not affect the level of environmental protection achieved by the permit in any way. We therefore explain only the statutory review in this document. As the variation will not have any negative effects on the environment it is not a substantial variation and so does not require external consultation. A fee for a normal variation based on the operator's OPRA score has been invoiced to the operator.

Structure of this document

- Summary of our decision
- The legal framework
- How we took our decision
- Key issues/Regulation 60 response
- Changes we have made
- Conclusion
- Annex 1 – Decision Checklist regarding relevant BAT Conclusions

1 Our decision

We have issued a variation, which will allow the operator to operate the installation, subject to the conditions in the varied permit.

The variation does three things:

- it consolidates the original permit to reflect changes made through earlier variations;
- it brings the permit into line with our modern regulatory template; and
- it varies the permit where appropriate to reflect the outcome of our statutory review and incorporate Best Available Techniques (BAT) and associated Emission Limit Values (ELVs).

We consider that, in reaching this decision, we have taken into account all relevant considerations and legal requirements and that the permit will continue to ensure that a high level of protection is provided for the environment and human health.

The original permit, issued on the 24th April 2005, ensured that the installation employed BAT and ensured a high level of protection for human health and the environment. We have altered the permit as a result of the statutory review, and we are confident that the new requirements will deliver a superior level of protection to that which was previously achieved.

2 The legal framework

The consolidation and variation notice will be issued under Regulation 20 of the Environmental Permitting Regulations 2016. The environmental permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED; and
- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the consolidation and variation notice, it will ensure that the operation of the installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

3 How we reached our decision

Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 60(1) of the Environmental Permitting (England and Wales) Regulations 2010 (as amended) on 27th July 2016 requiring the operator to provide information to demonstrate how the operation of their installation currently meets, or will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

- Describes the techniques that will be implemented before 30th June 2020, which will then ensure that operations meet the revised standard, or
- Justifies why standards will not be met by 30th June 2020, and confirmation of the date when the operation of those processes will cease within the installation or an explanation of why the revised BAT standard is not applicable to those processes, or
- Justifies why an alternative technique will achieve the same level of environmental protection equivalent to the revised standard described in the BAT Conclusions.
- Where their permitted activity involves the use, production or release of relevant hazardous substance, as defined in Article 3(18) of the Industrial Emissions Directive, Envirowales Limited were required to carry out a risk assessment considering the possibility of soil and groundwater contamination at the permitted installation with such substances. Where risk of such contamination is established, the operator is required to prepare a baseline report containing information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definite cessation of the activity. Envirowales Limited were required to provide a copy of the risk assessment and any consequent baseline report.
- Where their permitted activity involves the use, production, storage or release of priority hazardous substances, as defined by the Water Framework Directive, Envirowales Limited were required to carry out a risk screening assessment considering the presence of priority hazardous substances at the permitted installation. Where a risk of these substances is established, the operator is to sample the effluent and screen for the priority hazardous substances. If these substances are found to be present in the effluent stream then assessment using the H1 tool and potential detailed dispersion modelling will be required to demonstrate that the effluent discharge will not have a significant impact to the receiving water. Envirowales Limited were required to provide a copy of the sampling results and any subsequent screening or modelling reports.

- Where the compliance with the BAT conclusions leads to the substantial refurbishment or installation of new combustion plant with an aggregate thermal input of greater than 20MWth, which generates more than 100kWth of heat, Envirowales Limited must provide sufficient technical and commercial evidence to demonstrate compliance with Article 14, Paragraph 5 of Directive 2012/27/EU on Energy Efficiency. This must include an assessment of the technical feasibility and costs of installing a combined heat and power (CHP) system or providing district heating and, where this assessment shows that the costs are not disproportionate to the benefits, proposals to incorporate these measures into their plant.

Where the operator proposed that they were not intending to meet a BAT standard that also included a BAT Associated Emission Level (BAT-AEL) described in the BAT Conclusions Document, the Regulation 60 Notice requested that the operator make a formal request for derogation from compliance with that AEL (as provisioned by Article 15(4) of IED). In this circumstance, the Notice identified that any such request for derogation must be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 60 Notice response from the operator was received on 20th October 2016.

We considered that the response contained sufficient information for us to commence determination of the permit review. The operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 60 Notice response that appears to be confidential in relation to any part.

4 Key issues/Regulation 60 response

BAT Conclusions for the non-ferrous metals industries were published as a Commission Implementing Decision ((EU) 2016/1032) in the Official Journal of the EU on 30th June 2016. There are 184 BAT Conclusions. Annex 1 provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the permit/variation notice issued.

A detailed response was received from Envirowales Limited. Where the operator has concluded that they have achieved BAT, and we are in agreement, no further information/justification has been sought by Natural Resources Wales.

5 Changes we have made

Improvement Conditions

Based on the information provided in the Regulation 60 response, we consider that we need to set an improvement condition. This condition is set out below. We are using these conditions to require the operator to provide Natural Resources Wales with details that need to be established or confirmed during operations.

“The operator shall submit, for approval by Natural Resources Wales, a report setting out progress towards achieving compliance with BAT Conclusions and BAT-AELs where BAT is currently not achieved, but will be achieved by the 30th June 2020. The report shall include, but not be limited to, the following:

- 1) Current performance against the BAT Conclusions and BAT-AEL.
- 2) Methodology for reaching the AELs.
- 3) Associated targets / timelines for reaching compliance by 30th June 2020.”

5 Conclusion

We consider that the installation has already employed what used to be BAT, and that the operator has achieved significant improvements in performance since the permit was originally granted. The revised BREF and its BAT-AELs provide the opportunity to consider further environmental improvements.

Coupled with the consolidation and modernisation of the permit, we believe this variation provides a sound basis for ongoing regulation of the installation and we are satisfied that the operator is currently achieving or will be achieving all relevant BAT by the 30th June 2020.

We believe that we have ensured compliance with all relevant legal requirements in carrying out this review and making our determination on the variation.

Annex 1: Decision Checklist regarding relevant BAT Conclusions.

BAT Conclusions for the Non-Ferrous Metal Industries, were published as a Commission Implementing Decision ((EU) 2016/1032) in the Official Journal of the EU on 30th June 2016. There are 184 BAT Conclusions. This checklist provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the consolidated variation notice.

General BAT Conclusions

BAT Conclusion No	Summary of BAT Conclusion requirement	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
The BAT mentioned in this section apply to all installations covered by these BAT conclusions (Non-Ferrous Metals Industries)		
1.	BAT is to implement and adhere to an environmental management system (EMS).	Currently compliant.
2.	BAT is to use energy efficiently on-site.	Currently compliant.
3.	BAT is to improve overall environmental performance by ensuring stable operation using a process control system.	Currently compliant.
4.	BAT is to apply a maintenance management system which especially addresses the performance of dust abatement system as part of the EMS.	Currently compliant.
5.	BAT is to collect diffuse emissions as much as possible nearest to the source and treat them.	Currently compliant.
6.	BAT is to set-up and implement an action plan on diffuse dust emissions as part of the EMS that incorporates the following measures; identify the most relevant diffuse dust emissions sources, define and implement	Currently compliant.

BAT Conclusion No	Summary of BAT Conclusion requirement	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	appropriate actions and techniques to reduce diffuse emissions over a given time.	
7.	BAT is to reduce diffuse emissions from the storage of raw materials.	Currently compliant.
8.	BAT is to reduce diffuse emissions from the handling and transport of raw materials.	Currently compliant.
9.	BAT is to reduce diffuse emissions from metal production, by optimising the efficiency of off-gas collection and treatment.	Currently compliant.
10.	BAT is to monitor the stack emissions to air with a specific frequency and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	Compliant in the future (within 4 years of the publication of BAT conclusions)
11.	BAT is to reduce mercury emissions to air (other than those that are routed to the sulphuric acid plant) from a pyrometallurgical process by using one or both of the following; use raw materials with a low mercury content, use adsorbents.	Compliant in the future (within 4 years of the publication of BAT conclusions)
12.	BAT is to recover sulphur by producing sulphuric acid or liquid sulphur.	Not applicable.
13.	BAT is to prevent NO _x emissions to air from a pyrometallurgical process by using one of the following; low NO _x burners, oxy-fuel burners, flue-gas recirculation.	Not applicable.
14.	BAT is to prevent or reduce the generation of waste water.	Currently compliant.
15.	BAT is to segregate uncontaminated waste water streams from waste water streams requiring treatment.	Currently compliant.

BAT Conclusion No	Summary of BAT Conclusion requirement	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
16.	BAT is to use ISO 5667 for water sampling and to monitor the emissions to water at the point where the emissions leaves the installation at least once per month and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.	Compliant in the future (within 4 years of the publication of BAT conclusions)
17.	BAT is to treat the leakages from the storage of liquids and the waste water from non-ferrous metal production, including from the washing stage in the Waelz kiln process, and to remove metals and sulphates.	Not applicable.
18.	BAT is to reduce noise emissions by using one or a combination of the following; use of embankments, enclose noisy plant, use anti-vibration supports, orientation of noise emitting machinery, change the frequency of the sound.	Currently compliant.
19.	BAT is to reduce odour emissions by using one or a combination of the following; appropriate storage, minimise use of odorous materials, careful design, operation and maintenance, afterburners or filtration techniques.	Currently compliant.

BAT Conclusions for Lead and / or Tin Production

BAT Conclusion No	Summary of BAT Conclusion requirement	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
The BAT mentioned in this section apply to all installations covered by these BAT conclusions (Non-Ferrous Metals Industries)		
90.	BAT is to prevent or reduce diffuse emissions from preparation of primary and secondary materials (excluding batteries) by using one or a combination of the following; enclosed conveyors, enclosed equipment, mixing of raw materials in an enclosed building, dust suppression systems, pelletisation of raw materials).	Currently compliant.
91.	BAT is to prevent or reduce diffuse emissions from material pre-treatment in primary lead and secondary lead/tin production by using one or both of the following; enclosed conveyor or pneumatic transfer system, enclosed equipment.	Currently compliant.
92.	BAT is to prevent or reduce diffuse emissions from charging, smelting and tapping operations in lead and/or tin production and from pre-decoppering operations in primary lead production.	Currently compliant.
93.	BAT is to prevent or reduce diffuse emissions from re-melting, refining and casting in primary and secondary lead and/or tin production	Currently compliant.
94.	BAT is to reduce dust and metal emissions to air from raw material preparation in primary and secondary lead and/or tin production, by using a bag filter.	Currently compliant.
95.	BAT is to reduce dust and metal emissions to air from battery preparation by using a bag filter or wet scrubber	Currently compliant.
96.	BAT is to reduce dust and metal emissions to air (other than those routed to the sulphuric acid or liquid SO ₂ plant) from charging, smelting, and tapping in primary and	Compliant in the future (within 4 years of the publication of BAT conclusions)

BAT Conclusion No	Summary of BAT Conclusion requirement	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	secondary lead and/or tin production, by using a bag filter.	
97.	BAT is to reduce dust and metal emissions to air from re-melting, refining & casting in primary and secondary lead and/or tin production, by using the following; For pyrometallic processes maintain the temperature of the melt bath at the lowest possible level according to the process stage in combination with a bag filter, for hydrometallic processes use a wet scrubber.	Compliant in the future (within 4 years of the publication of BAT conclusions)
98.	BAT is to reduce the emissions of organic compounds to air from the raw material drying and smelting process in the secondary lead and/or tin production.	Compliant in the future (within 4 years of the publication of BAT conclusions)
99.	BAT is to reduce PCDD/F emissions to air from the smelting of secondary lead and/or tin raw materials.	Currently compliant.
100.	BAT is to prevent or reduce SO ₂ emissions to air (other than those routed to the sulphuric acid or liquid SO ₂ plant) from charging, smelting and tapping in primary and secondary lead and/or tin production.	Currently compliant.
101.	BAT is to prevent the contamination of soil and groundwater from battery storage, crushing, screening and classifying operations, by using an acid-resistant floor surface and a system for the collection of acid spillages.	Currently compliant.
102.	BAT is to prevent the generation of waste water from the alkaline leaching process, by re-using the water from the sodium sulphate crystallisation of the alkali salt solution.	Currently compliant.
103.	BAT is to reduce emissions to water from battery preparation when the acid mist is sent to the waste water treatment plant by operating an adequately designed waste water treatment plant to abate the pollutants contained in this stream.	Currently compliant.

BAT Conclusion No	Summary of BAT Conclusion requirement	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
104.	BAT is to reduce the quantities of waste sent for disposal from primary lead production, by organising operations on-site to facilitate the re-use or recycling of process residues.	Currently compliant.
105.	BAT is to allow the recovery of polypropylene and polyethylene content of the lead battery, by separating it from the batteries prior to smelting.	Currently compliant.
106.	BAT is to re-use or recover the sulphuric acid collected from the battery recovery process, by organising operations on-site to facilitate internal or external recycling.	Currently compliant.
107.	BAT is to reduce the quantities of waste sent for disposal from secondary lead and/or tin production, by organising operation on-site to facilitate the re-use or recycling of process residues.	Currently compliant.