

## **Environment Agency**

### **Review of an Environmental Permit for an Installation subject to Chapter II of the Industrial Emissions Directive under the Environmental Permitting (England & Wales) Regulations 2016**

#### **Decision document recording our decision-making process following review of a permit**

The Permit number is: EPR/PP3233RS  
The Operator is: G.C. Metals Limited  
The Installation is: Unit C Bilton Way  
This Variation Notice number is: EPR/PP3233RS/V002

#### **What this document is about**

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication by the European Commission of updated decisions on BAT Conclusions.

We have reviewed the permit for this installation against the revised BAT Conclusions for the non-ferrous metals industries sector published on 30 June 2016 in the Official Journal of the European Union. Where appropriate, we also considered other relevant BAT Conclusions published prior to this date but not previously included in a permit review for the installation. In this decision document, we set out the reasoning for the consolidated variation notice that we have issued.

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 (BATc) for the non-ferrous metals industries as detailed in the Official Journal of the European Union (L174) following a European Union, implementing decision (EU) 2016/1032 of 13 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.

As well as considering the review of the operating techniques used by the operator for the operation of the plant and activities of the installation, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue. Where this has not already been done, it also modernises the entire permit to reflect the conditions contained in our current generic permit template.

The introduction of new template conditions makes the permit consistent with our current general approach and with other permits issued to installations in this sector. Although the wording of some conditions has changed, while others have been deleted because of the new regulatory approach, it does not reduce the level of environmental protection achieved by the permit in any way. In this document we therefore address only our determination of substantive issues relating to the new BAT Conclusions.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future.

## **How this document is structured**

1. Our proposed decision
2. How we reached our decision
3. The legal framework
4. Annex 1- Review of operating techniques within the installation against BAT Conclusions
5. Annex 2a - Review and assessment of derogation request(s) made by the operator in relation to BAT Conclusions which include an Associated Emission Level (BAT-AEL) value
6. Annex 2b - Consultation responses
7. Annex 3 - Improvement conditions
8. Annex 4 - Review and assessment of changes that are not part of the BAT Conclusions derived permit review
9. Annex 5 – Priority compliance issues & detailed assessment of Regulation 60 notice responses where future action is likely

# 1 Our decision

We have decided to issue the variation notice to the operator. This will allow it to continue to operate the installation, subject to the conditions in the consolidated variation notice that updates the whole permit.

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

The consolidated variation notice contains many conditions taken from our standard environmental permit template including the relevant annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of the Environmental Permitting Regulations and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the notice, we have considered the techniques identified by the operator for the operation of their installation, and have accepted that the details are sufficient and satisfactory to make those standard conditions appropriate. This document does, however, provide an explanation of our use of “tailor-made” or installation-specific conditions, or where our permit template provides two or more options.

## 2 How we reached our decision

### 2.1 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 (a Regulation 60 notice) on 16 December 2016 requiring the operator to provide information to demonstrate where the operation of their installation currently meets, or how it will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The notice required that where the revised standards are not currently met, the operator should provide information that

- Describes the techniques that will be implemented before 30 June 2020, which will then ensure that operations meet the revised standard, or
- justifies why standards will not be met by 30 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 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 required 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 12 May 2017.

We considered it was in the correct form and contained sufficient information for us to begin our determination of the permit review but not that it necessarily contained all the information we would need to complete that determination.

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 party.

## 2.2 Review of our own information in respect to the capability of the installation to meet revised standards included in the BAT Conclusions document

Based on our records and previous experience in the regulation of the installation we have no reason to consider that the operator will not be able to comply with the techniques and standards described in the BAT Conclusions.

## 2.3 Requests for further information during determination

Although we were able to consider the Regulation 60 notice response generally satisfactory at receipt, we did in fact need more information in order to complete our permit review assessment, and issued a further information request in the form of a Regulation 61 notice on 29 March 2018. A copy of the further information request was placed on our public register.

## 2.4 Surface Water Pollution Risk Assessment

As part of our delivery of the Water Framework Directive (WFD) requirements, we need to identify and assess the impact of all sources of hazardous pollutants to surface waters from regulated industry. We use the term

'hazardous pollutants' to collectively describe substances covered by the EQSD<sup>1</sup> (priority hazardous substances, priority substances and "other pollutants"). It also applies to the specific pollutants listed in the 2015 Directions<sup>2</sup>, and substances which have operational (non-statutory) Environmental Quality Standards (EQS).

For all installations with discharges to surface water and/or sewer we required the operator, via our Regulation 60 notice, to undertake a surface water pollution risk assessment, in two stages, as follows:

- a) Provide emissions data for the following hazardous pollutants: silver, arsenic, cadmium, cobalt, chromium (total), chromium (VI), copper, mercury, nickel, lead and zinc. The BAT Conclusions for the Non-Ferrous Metals Industries specify BAT-AELs associated with the direct discharge of these substances to surface water. We therefore considered that these substances potentially posed the highest risk from industry and listed them in our Regulation 60 notice. In addition, operators were required to identify and assess any other hazardous pollutants that may be present in their effluent. A full list of hazardous pollutants is included in our surface water pollution risk assessment guidance, which we 'signposted' operators to via the Regulation 60 notice.
- b) Undertake a risk assessment using the above emissions data to determine whether any hazardous pollutants were liable to cause pollution of the downstream receiving waters. The WFD requires Member States to prior regulate, all substances in a discharge which are "liable to cause pollution". Previously discharges from the Non-Ferrous Metals Industries were controlled on a "liable to contain" approach set by the Dangerous Substances Directive through either numeric limits, or descriptive conditions. Under the "liable to cause pollution" approach we would only consider applying numeric emission limits to those pollutants calculated to have the potential to cause pollution.

The risk assessment methodology uses a number of sequential screening steps to determine if a substance warrants detailed modelling and hence any emission limits being required, namely:

- Screen out insignificant emissions that do not warrant further investigation;
- Determine if significant load test is failed (for priority hazardous substances only);
- Decide if detailed modelling is needed;
- Assess emissions against relevant standards and set permit limits where considered necessary.

---

<sup>1</sup> Environmental Quality Standards Directive (EQSD) (2008/105/EC, as amended by 2013/39/EU)

<sup>2</sup> The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015

The methodology provides for undertaking assessments of both direct and indirect discharges to surface water, 'indirect' meaning that the effluent is discharged to foul sewer from the installation and is treated at a sewage treatment works (STW) prior to discharge to surface water. Treatment at the STW will remove a proportion of a discharged substance from the final effluent discharged to the environment. This removal needs to be taken into account when calculating the concentration of a hazardous pollutant which will be discharged to a receiving water via the sewage works. This is achieved by applying STRFs (sewage treatment reduction factors) within the screening steps.

During the determination of permit application EPR/PP3233RS/A001 the operator demonstrated to us that the installation meets the low impact criteria as set out in our guidance. This includes not being reliant upon active abatement for releases to the environment outside of any buildings. As such we are satisfied that there is no likelihood of a release to the environment of any particular substance from the whole installation at a rate greater than that determined as insignificant.

Based on our knowledge of the installation we are satisfied that the operator's response is an accurate reflection of the situation at the site. We therefore consider that no further action is necessary.

## 2.5 Condition of Soil and Groundwater

Articles 16 and 22 of the Industrial Emissions Directive (IED) require that a quantified baseline is established for the level of contamination of soil and groundwater with hazardous substances, in order that a comparison can be made on final cessation of activities.

We have used the non-ferrous metals permit review to regulate against the above IED requirements. Our Regulation 60 notice required operators, where the activity of the installation involved the use, production or release of a relevant hazardous substance (as defined in Article 3(18) of the Industrial Emissions Directive), to carry out a risk assessment considering the possibility of soil and groundwater contamination at the installation with such substances. Where any risk of such contamination was established we requested that the operator either:

- prepare and submit a baseline report containing information necessary to determine the current state of soil and groundwater contamination; or
- provide a summary report referring to information previously submitted where they were satisfied that such information represented the current state of soil and groundwater contamination

so as to enable a quantified comparison to be made with the state of soil and groundwater contamination upon definitive cessation the activity.

Where operators concluded that there were no risks of soil or groundwater contamination (due to there not being any release of hazardous substances), they were required to provide a copy of the risk assessment.

On 07 July 2015 the operator submitted document, 'Baseline Report', document reference: Appendix 3, April 2015 in support of the original permit application EPR/PP3233RS/A001. The operator has confirmed that this report is still representative of current conditions on site and that no additional hazardous substances have been introduced since the original baseline assessment

In addition, the installation meets the low impact criteria as set out in our guidance. This includes not being reliant upon active abatement for releases to the environment outside of any buildings. As such we are satisfied that there is no likelihood of a release to the environment of any particular substance from the whole installation at a rate greater than that determined as insignificant.

Based on our knowledge of the installation we are satisfied that the operator's response is an accurate reflection of the situation at the site. We therefore consider that no further action is necessary.



### 3 The legal framework

The consolidated variation notice will be issued, under Regulations 18 and 20 of the EPR. 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;
- subject to aspects of other relevant legislation which also have to be addressed.

We consider that, in issuing the consolidated 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.

## **Annex 1**

### **Review of operating techniques within the installation against BAT Conclusions**

BAT Conclusions for the non-ferrous metals industries, were published by the European Commission on 30 June 2016. There are 184 BAT Conclusions. This annex 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.

The overall status of compliance with the BAT conclusion is indicated in the table as:

- NA Not applicable
- CC Currently compliant
- FC Compliant in the future (within 4 years of publication of BAT conclusions)
- NC Not compliant

**Table 1: Decision checklist for relevant BAT Conclusions**

Summary of BAT Conclusion requirement for Non-Ferrous Metals Industries	Status NA / CC / FC / NC	Assessment of the installation capability to demonstrate compliance with the BAT Conclusion requirement Type of process: <b>PRECIOUS METALS PRODUCTION</b>
BAT Conclusions that are not applicable to this installation.	<b>NA</b>	<p><b>General BAT Conclusions for Non-Ferrous Metals Industries: 4, 5, 6, 9, 10, 11, 12, 13, 16 and 17.</b></p> <p>BAT Conclusions for copper production: 20-54 inclusive            BAT Conclusions for alumina production: 55-57 inclusive            BAT Conclusions for anode production: 58-63 inclusive            BAT Conclusions for primary aluminium production: 64-73 inclusive            BAT Conclusions for secondary aluminium production: 74-86 inclusive            BAT Conclusions for salt slag recycling process: 87-89 inclusive            BAT Conclusions for lead and/or tin production: 90-107 inclusive            BAT Conclusions for primary zinc production: 108-120 inclusive            BAT Conclusions for secondary zinc production, 121-130 inclusive            BAT Conclusions for cadmium production: 131-133 inclusive</p> <p><b>BAT Conclusions for precious metals production: 134, 135, 136, 138, 139, 140, 141, 142, 143, 144, 145 and 146.</b></p> <p>BAT Conclusions for ferro-alloys production: 150-162 inclusive            BAT Conclusions for nickel and/or cobalt production: 163-176 inclusive            BAT Conclusions for carbon and/or graphite production: 177-184 inclusive</p>

**Table 1: Decision checklist for relevant BAT Conclusions**

Summary of BAT Conclusion requirement for Non-Ferrous Metals Industries	Status NA / CC / FC / NC	Assessment of the installation capability to demonstrate compliance with the BAT Conclusion requirement Type of process: PRECIOUS METALS PRODUCTION
BAT Conclusions where we accept the operator's Reg 60 notice response that they are currently compliant and no further explanation is required.	<b>CC</b>	<b>General BAT Conclusions for Non-Ferrous Metals Industries: 1, 2, 3, 7, 8, 14, 15, 18 and 19.</b> <b>BAT Conclusions for precious metals production: 137, 147, 148 and 149.</b>
BAT Conclusions where improvements will be undertaken on site within the 4 year period in order to achieve compliance with the narrative and/or BAT-AEL prior to the 4 year deadline.	<b>FC</b>	<b>General BAT Conclusions for Non-Ferrous Metals Industries: None.</b> <b>BAT Conclusions for precious metals production: None.</b>
BAT Conclusions where the operator has responded that they are not compliant and have not submitted any plans to become compliant.	<b>NC</b>	<b>General BAT Conclusions for Non-Ferrous Metals Industries: None.</b> <b>BAT Conclusions for precious metals production: None.</b>

## **Key Issues**

### **Assessment of a low impact installation against the BAT Conclusions**

During the determination of permit application EPR/PP3233RS/A001 the operator demonstrated to us that the installation meets the low impact criteria as set out in our guidance. This includes not being reliant upon active abatement for releases to the environment outside of any buildings. As such we are satisfied that there is no likelihood of a release to the environment of any particular substance from the whole installation at a rate greater than that determined as insignificant.

In their response the operator describes emissions abatement systems on site (filter system to abate emissions from the furnace and a scrubber to abate emissions from the dissolving, refining and precipitation processes). These measures are in operation for the protection of the health of the workers as required by the Health and Safety at Work legislation. Whilst we acknowledge that these abatement systems will enhance the protection of the environment by reducing emissions from the installation, the operator demonstrated during the determination of permit application EPR/PP3233RS/A001 that they would meet the low impact criteria even if the abatement systems were not in operation.

It is our view therefore that BAT Conclusions that specify measures to control emissions to the environment, such as the use of extraction and abatement and associated emission limits, are not applicable to this low impact installation and we have not set emission limit values in the consolidated variation notice.

## Annex 2a

### **Assessment, determination and decision where an application(s) for Derogation from BAT Conclusions with associated emission levels (AEL) has been requested.**

The IED enables a competent authority to allow derogations from BAT-AELs stated in BAT Conclusions under specific circumstances as detailed under Article 15(4):

‘By way of derogation from paragraph 3, and without prejudice to Article 18, the competent authority may, in specific cases, set less strict emission limit values. Such a derogation may apply only where an assessment shows that the achievement of emission levels associated with the best available techniques as described in BAT Conclusions would lead to disproportionately higher costs compared to the environmental benefits due to:

- (a) the geographical location or the local environmental conditions of the installation concerned; or
- (b) the technical characteristics of the installation concerned.

The competent authority shall document in an annex to the permit conditions the reasons for the application of the first subparagraph including the result of the assessment and the justification for the conditions imposed.’

A summary of any derogations granted is also recorded in an Annex of the consolidated variation notice in accordance with the requirement of IED Article 15(4) as described above.

The operator did not request derogation from compliance with any AEL included within the BAT Conclusions as part of their Regulation 60 notice response.

## **Annex 2b**

### **Advertising and Consultation on the draft decision**

This section is not applicable as no derogations from BAT-AELs have been considered, nor is the installation a site of high public interest.

## **Annex 3**

### **Improvement Conditions**

Based on the information in the operator's Regulation 60 notice response and our own records of the capability and performance of the installation at this site, we do not consider that we need to set improvement conditions to ensure compliance with the BAT conclusions.



## **Annex 4**

### **Review and assessment of changes that are not part of the BAT Conclusions derived permit review.**

#### **Changes to conditions to reflect low impact status of installation**

When the installation was originally permitted in 2015, conditions which specifically relate to the low impact status of the installation were omitted from the permit in error. As part of this review we have taken the opportunity to correct this.

The main change is in the reporting required by the permit: the operator is now required to report on the performance of the installation against the low impact criteria issued by the Environment Agency at the time of the permit review (condition 4.2.2).

Table S2.1 Operating Techniques has been removed in the consolidated variation notice. This reflects the low impact nature of the facility; our guidance states that all of the low impact criteria must be met without having to rely on significant management effort. The installation intrinsically must have only a low environmental impact, including under start up, shut down, or abnormal operating conditions. Condition 2.3.1 has been added which requires the installation to be operated in accordance with the low impact criteria.

#### **Clarification of processes occurring on site**

During communications with the operator (email 12/04/2018) and a visit to the site by the Environment Agency on 01/05/2018, the processes occurring on site have been clarified to be:

- pyrolysis (thermal decomposition of materials in the absence of air)
- crushing, milling and bulking up
- stripping: shot blasting and electrolysis
- refining: dissolving, precipitation, electrolysis, filtration and ion exchange
- drying of materials prior to melting in induction furnace.

The introductory note of the consolidated variation notice has been updated.

### **Clarification of site boundary**

During the determination of the BAT Review it became apparent that an error was made when the site plan was submitted as part of the original permit application in 2015. The green boundary line shown in the existing permit cuts across the warehouse building within which all activities take place. The operator has provided a revised plan which shows the boundary to include the full extent of the building. This revised plan is included at Schedule 7 of the consolidated variation notice.

## Annex 5

### Priority compliance issues & detailed assessment of Regulation 60 notice responses where future action is likely

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
	<b>BAT 1-19: General requirements</b>					
1	In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the features given.	1.1	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 1; the operator has implemented an EMS that incorporates the features specified in the BAT Conclusion.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	Confirm future compliance or IC by Inspection.
2	In order to use energy efficiently, BAT is to use a combination of the techniques given.	1.2	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 2. The following techniques are in use at the installation:</p> <p>BAT2a: energy efficiency management system (e.g. ISO 50001).</p> <p>BAT 2i: dry concentrates and wet raw materials at low temperatures.</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>BAT 2l: suitable insulation for high temperature equipment such as steam and hot water pipes.</p> <p>The low impact criteria specify that the installation will not consume energy at a rate greater than 3 MW.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	
3	In order to improve overall environmental performance, BAT is to ensure stable process operation by using a process control system together with a combination of the techniques given.	1.1	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 3. A written process control system is in place that ensures stable process operation. The following techniques are in use at the installation:</p> <p>BAT 3a: inspect and select input materials according to the process and the abatement techniques applied.</p> <p>BAT 3c: feed weighing and metering systems.</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.	
4	In order to reduce channelled dust and metal emissions to air, BAT is to apply a maintenance management system which especially addresses the performance of dust abatement systems as part of the environmental management system (see BAT 1).	NA	CC	NA	<p>As described in the Key Issues section above, this installation meets the low impact criteria and as such all emissions from the installation have been demonstrated to be insignificant without having to rely on active abatement for releases to the environment.</p> <p>This BAT Conclusion is therefore not applicable to this installation because it refers to a maintenance management system which especially addresses the performance of dust abatement systems which are designed to reduce the environmental impact of channelled dust and metal emissions to air.</p> <p>In their response the operator stated compliance with BAT 4 because there are emissions abatement systems on site, although these are in operation for solely for the protection of workers.</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					We acknowledge that the operation of these abatement systems will enhance environmental protection through reduction of emissions to air. The operator has confirmed that regular maintenance is a part of standard operating procedures at the site.	
5	In order to prevent or, where this is not practicable, to reduce diffuse emissions to air and water, BAT is to collect diffuse emissions as much as possible nearest to the source and treat them.	NA	CC	NA	<p>As described in the Key Issues section above, this installation meets the low impact criteria and as such all emissions from the installation have been demonstrated to be insignificant without having to rely on active abatement for releases to the environment.</p> <p>This BAT Conclusion, and the requirement to collect and treat diffuse emissions to air and water, is therefore not applicable. However we note the following techniques which are in operation at the site that prevent and reduce diffuse emissions to air and water.</p> <p>The operator confirmed in application EPR/PP3233RS/A001 that all operations, including storage, occur inside the building.</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>All processing likely to produce dust emissions is carried out in enclosed cabinets. The operator refers to emissions abatement systems on site which are in operation for the protection of the health of workers. We acknowledge that these abatement systems will enhance the protection of the environment through the reduction in emissions to air.</p> <p>Application EPR/PP3233RS/A001 also confirms that treatment and storage operations are entirely contained on an impermeable surface. Liquids are stored in bunded areas/containers or bunded pallets.</p> <p>Rainwater is discharged to combined sewer.</p>	
6	<p>In order to prevent or, where this is not practicable, to reduce diffuse dust emissions to air, BAT is to set up and implement an action plan on diffuse dust emissions, as part of the environmental management system (see BAT 1), that incorporates both of the following measures:</p>	NA	NA	NA	<p>In their response the operator confirms that this BAT Conclusion is not applicable.</p> <p>As described in the Key Issues section above, this installation meets the low impact criteria and as such all emissions from the installation have been demonstrated to be insignificant without</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
	<p>(a) identify the most relevant diffuse dust emission sources (using e.g. EN 15445);</p> <p>(b) define and implement appropriate actions and techniques to prevent or reduce diffuse emissions over a given time frame.</p>				<p>having to rely on active abatement for releases to the environment.</p> <p>This BAT Conclusion, and the requirement to set up and implement an action plan on diffuse dust emissions, is therefore not applicable. However we note the operator has identified potential sources of dust. The operator confirmed in application EPR/PP3233RS/A001 that all operations, including storage, occur inside the building. All processing likely to produce dust emissions is carried out in enclosed cabinets.</p> <p>The Environment Agency has not received complaints regarding dust at the installation.</p>	
7	In order to prevent diffuse emissions from the storage of raw materials, BAT is to use a combination of the techniques given.	3.2	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 7. The following techniques are in use at the installation:</p> <p>BAT 7a: enclosed buildings or silos/bins for storing dust-forming materials such as concentrates, fluxes and fine materials.</p>	None.



BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>BAT 7b: covered storage of non-dust-forming materials such as concentrates, fluxes, solid fuels, bulk materials and coke and secondary materials that contain water-soluble organic compounds.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	
8	In order to prevent diffuse emissions from the handling and transport of raw materials, BAT is to use a combination of the techniques given.	3.2	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 8. The following techniques are in use at the installation:</p> <p>BAT 8g: minimise transport distances.</p> <p>BAT 8p: segregate incompatible materials (e.g. oxidising agents and organic materials).</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
9	In order to prevent or, where this is not practicable, to reduce diffuse emissions from metal production, BAT is to optimise the efficiency of off-gas collection and treatment by using a combination of the techniques given.	NA	CC	NA	<p>The operator confirmed in their response that they are currently compliant with BAT 9. However, as described in the Key Issues section, above this installation meets the low impact criteria and as such all emissions from the installation have been demonstrated to be insignificant without having to rely on active abatement for releases to the environment.</p> <p>Whilst there are air emission abatement measures in operation at the installation, these are in operation solely for the protection of the workers. This BAT Conclusion is therefore not applicable to this installation because it refers to off-gas collection and treatment in order to prevent or reduce diffuse emissions to the environment. Although we acknowledge that these abatement systems will enhance the protection of the environment through the reduction in emissions to air.</p>	None.
10	BAT is to monitor the stack emissions to air with at least the given frequency and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other	NA	NC	NA	The operator has stated in their response that they are not compliant with BAT 10. However, as described in the Key Issues section above, this installation meets the low impact criteria and as such all	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
	international standards that ensure the provision of data of an equivalent scientific quality.				emissions from the installation have been demonstrated to be insignificant without having to rely on active abatement for releases to the environment.  It is our view therefore that BAT Conclusions that refer to the use of extraction and abatement, and associated emission limit values, to prevent and reduce emissions, are not applicable. BAT 10, which specifies the frequency of such monitoring and the standard by which the monitoring would be undertaken, is also therefore not applicable.	
11	In order to reduce mercury emissions to air (other than those that are routed to the sulphuric acid plant) from a pyrometallurgical process, BAT is to use one or both of the techniques given.  BAT-AEL for Hg.	NA	NA	NA	The operator has confirmed in their response that BAT 11 is not applicable because mercury is not present in raw materials used on site. The operator uses X-ray fluorescence to ensure that any items containing mercury are rejected. This ensures that these items are not processed at the installation.  The Environment Agency is satisfied that this BAT Conclusion is not applicable.	None.
12	In order to reduce emissions of SO <sub>2</sub> from off-gases with a high SO <sub>2</sub> content	NA	NC	NA	In their response the operator stated non-compliance with BAT 12. However, as	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
	and to avoid the generation of waste from the flue-gas cleaning system, BAT is to recover sulphur by producing sulphuric acid or liquid SO <sub>2</sub> .				described in the Key Issues section above, this installation meets the low impact criteria and as such all emissions from the installation have been demonstrated to be insignificant without having to rely on active abatement for releases to the environment.  This BAT Conclusion, which refers to the reduction of SO <sub>2</sub> from off-gases with a high SO <sub>2</sub> content, is therefore not applicable.	
13	In order to prevent NO <sub>x</sub> emissions to air from a pyrometallurgical process, BAT is to use one of the techniques given.	NA	NA	NA	In their response the operator stated that BAT 13 is not applicable because electrically powered induction furnaces are used on site.  The Environment Agency is satisfied that this BAT Conclusion is not applicable.	None.
14	In order to prevent or reduce the generation of waste water, BAT is to use one or a combination of the techniques given.	3.1	CC	CC	The operator has confirmed in their response that they are currently compliant with BAT 14.  The low impact criteria specify that the installation will not release more than 50m <sup>3</sup> per day of water from process activities conducted at the installation giving rise to effluent.	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>Nevertheless the operator has identified the following technique, which is in use at the installation:</p> <p>BAT 14a: measure the amount of fresh water used and the amount of waste water discharged.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	
15	In order to prevent the contamination of water and to reduce emissions to water, BAT is to segregate uncontaminated waste water streams from waste water streams requiring treatment.	3.1	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 15.</p> <p>The operator confirmed in application EPR/PP3233RS/A001 that process water is discharged to sewer, whilst rainwater is discharged to combined sewer.</p> <p>Whilst not currently in operation, the operator states that waste water from the dissolution process will be neutralised and particles will be precipitated and ultra-filtered through a filter bed before discharge</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>to sewer. This will remove all particles greater than 10 nm.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	
16	<p>BAT is to use ISO 5667 for water sampling and to monitor the emissions to water at the point where the emission 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.</p> <p>The monitoring frequency may be adapted if the data series clearly demonstrate sufficient stability of the emissions.</p>	NA	CC	NA	<p>The operator has confirmed in their response that they are currently compliant with BAT 16. However the operator has also confirmed that process water is discharged to sewer under trade effluent consent from the sewerage undertaker. The Environment Agency has determined that this BAT Conclusion is not generally applicable for installations which only discharge wastewater to sewer.</p> <p>We do not require operators to routinely monitor discharges of wastewater to sewer where the discharge is already regulated (and monitored) by the sewerage undertaker via a trade effluent consent, unless there is a site-specific environmental need for additional monitoring, e.g. if there was a ELV on the environmental permit to protect water quality, in which case we</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>would require monitoring to be undertaken in accordance with BAT 16.</p> <p>The above position is consistent with how we regulate other industrial sectors through the permitting process.</p>	
17	<p>In order to reduce emissions to water, BAT is to treat the leakages from the storage of liquids and the waste water from non-ferrous metals production, including from the washing stage in the Waelz kiln process, and to remove metals and sulphates by using a combination of the techniques given.</p>	NA	CC	NA	<p>The operator has confirmed in their response that they are currently compliant with BAT 17. However the Environment Agency has determined that this BAT Conclusion is not applicable for installations which only discharge wastewater to sewer.</p> <p>The BAT-AELs for BAT 17 relate to direct emissions to receiving waters (as opposed to indirect emissions made via the foul sewer).</p> <p>It is our view that the intention of BAT 17 is to ensure that surface waters are appropriately protected, through the prevention of direct discharges which may otherwise have been made without (or with minimal) treatment.</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
18	In order to reduce noise emissions, BAT is to use one or a combination of the techniques given.	3.4	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 18.</p> <p>The low impact criteria specify that will be only a low potential for causing offence due to noise.</p> <p>The operator stated any machinery used in the process that is likely to produce higher noise levels will all be situated within sound-proofed enclosures. This is technique (b) enclose noise plants or components in sound-absorbing structures.</p> <p>The Environment Agency has not received complaints regarding noise at the installation.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	None.
19	In order to reduce odour emissions, BAT is to use one or a combination of the techniques given.	3.3	CC	CC	The operator has confirmed in their response that they are currently compliant with BAT 19.	None.



BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>The low impact criteria specify that will be only a low potential for causing offence due to odour.</p> <p>The operator states that the installation produces little odour; any odour that is produced is managed under standard operating procedures such as appropriate storage and handling. This is technique (a) of the BAT Conclusion.</p> <p>The Environment Agency has not received complaints regarding odour at the installation.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	
<b>BAT 134-149: Precious metals production</b>						
134	In order to reduce diffuse emissions to air from a pretreatment operation (such as crushing, sieving and mixing), BAT is to use one or a combination of the techniques given.	3.2	CC	NA	The operator has confirmed in their response that they are currently compliant with BAT 134, however our view is that this BAT Conclusion is not applicable to the installation.	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>The BAT techniques refer to the use of containment, collection, extraction and filtering (abatement) systems, and such abatement systems are not required at low impact installations.</p> <p>As described in the Key Issues section above, this installation meets the low impact criteria and as such all emissions from the installation have been demonstrated to be insignificant without having to rely on active abatement for releases to the environment.</p> <p>We acknowledge that there are abatement measures in operation at the installation but that these are for the protection of the health of the workers.</p> <p>The operator has confirmed that the following technique is in use at the site:</p> <p>BAT 134a: enclose pretreatment areas and transfer systems for dusty materials.</p>	

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					The operator stated in their application EPR/PP3233RS/A001 that the metal crushing process will only be carried out in sealed machinery.	
135	In order to reduce diffuse emissions to air from smelting and melting (both Doré and non-Doré operations), BAT is to use all of the techniques given.	NA	NC	NA	<p>The operator has confirmed in their response that they are not compliant with BAT 135, however our view is that this BAT Conclusion is not applicable to the installation.</p> <p>The techniques specified in the BAT Conclusion work in combination, through the use of extraction and abatement equipment, to reduce diffuse emissions from smelting and melting. Such abatement systems are not required at low impact installations.</p> <p>As described in the Key Issues section above, this installation meets the low impact criteria and as such all emissions from the installation have been demonstrated to be insignificant without having to rely on active abatement for releases to the environment.</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>The operator states that the following techniques are in use at the installation:</p> <p>BAT 135a: enclose building and/or smelting furnace areas.</p> <p>BAT 135b: perform operations under negative pressure.</p> <p>BAT 135c: connect furnace operations to dust collectors or extractors via hoods and a ductwork system.</p> <p>We note, however that these measures are in operation solely for the protection of the workers.</p> <p>The operator also states that whilst technique (d) is not complied with the operating procedure at the site is to switch on the dust extractor at the same time as the furnace cooling system and the furnace itself. All staff that operate the equipment are trained and are required to abide by the procedure.</p>	

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
136	In order to reduce diffuse emissions to air from leaching and gold electrolysis, BAT is to use one or a combination of the techniques given.	3.2	CC	NA	<p>The operator has confirmed in their response that they are currently compliant with BAT 136, however our view is that this BAT Conclusion is not applicable to the installation.</p> <p>The BAT techniques refer to the use of containment, collection and extraction systems. We would consider an extraction system to connect to abatement, and such abatement systems are not required at low impact installations.</p> <p>As described in the Key Issues section above, this installation meets the low impact criteria and as such all emissions from the installation have been demonstrated to be insignificant without having to rely on active abatement for releases to the environment.</p> <p>The operator has identified the following techniques which are in use at the installation:</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>BAT 136a: closed tanks/vessels and closed pipes for transfer of solutions.</p> <p>BAT 136b: hood and extraction systems for electrolytic cells.</p> <p>However we acknowledge that these measures are for the protection of the health of the workers.</p>	
137	In order to reduce diffuse emissions from a hydrometallurgical operation, BAT is to use all of the techniques given.	3.2	CC	CC	<p>The operator has confirmed in their response that they are compliant with BAT 137, which requires the use of all of the techniques specified.</p> <p>However as a low impact installation there is no reliance on extraction and abatement for environmental protection and therefore it is our view that BAT 137b (reaction vessels and tanks connected to a common ductwork system with off-gas extraction) is not applicable (we would consider an extraction system to include abatement).</p> <p>Whilst the operator, in their response, refers to technique (b) with respect to hoods and extractions systems, we note that the</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>emissions abatement measures are solely for the protection of the workers.</p> <p>The operator has confirmed that closed tanks/vessels and closed pipes are in use at the installation. Maintenance forms part of their standard operating procedures. This is in line with technique (a).</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	
138	In order to reduce diffuse emissions to air from incineration, calcining and drying, BAT is to use all of the techniques given.	NA	NC	NA	<p>The operator has confirmed in their response that they are currently not compliant with BAT 138, which requires the use of all of the techniques specified.</p> <p>The techniques work in combination to ensure efficient operation of abatement systems. However as a low impact installation there is no reliance on abatement for environmental protection and therefore our view is that this BAT Conclusion is not applicable to the installation.</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
139	In order to reduce diffuse emissions to air from the melting of final metal products during refining, BAT is to use both of the techniques given.	NA	CC	NA	<p>The operator has confirmed in their response that they are compliant with BAT 139, which requires the use of both of the techniques specified. However, the measures specified in the techniques work in combination to reduce diffuse emissions to air from the melting of final metal products during refining. As a low impact installation there is no reliance on abatement for environmental protection and therefore it is our view that the BAT Conclusion is not applicable to the installation.</p> <p>Whilst the operator, in their response, confirms that the following techniques are in use at the installation:</p> <p>BAT 139a: enclosed furnace with negative pressure; and  BAT 139b: appropriate housing, enclosures and capture hoods with efficient extraction/ventilation,</p>	None.



BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					we note that the emissions abatement measures are solely for the protection of the workers.	
140	In order to reduce dust and metal emissions to air from all dusty operations, such as crushing, sieving, mixing, melting, smelting, incineration, calcining, drying and refining, BAT is to use one of the techniques given. BAT-AEL for Dust.	NA	CC	NA	<p>The operator has confirmed in their response that they are compliant with BAT 140, which requires the abatement of dust and metal emissions to air of all dusty operations.</p> <p>However as a low impact installation there is no reliance on abatement for environmental protection and therefore this BAT Conclusion and BAT-AEL is not applicable.</p> <p>Whilst the operator, in their response, confirms that the following technique is in use at the installation:</p> <p>BAT 140a: bag filter.</p> <p>we note that the filter is in operation solely for the protection of the workers.</p>	None.
141	In order to reduce NO <sub>x</sub> emissions to air from a hydrometallurgical operation	NA	CC	NA	The operator has confirmed in their response that they are compliant with	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
	involving dissolving/leaching with nitric acid, BAT is to use one or both of the techniques given. BAT-AEL for NO <sub>x</sub> .				<p>BAT 141, which requires the abatement of NO<sub>x</sub> emissions to air from hydrometallurgical operations involving dissolving/leaching with nitric acid.</p> <p>However as a low impact installation there is no reliance on abatement for environmental protection and therefore this BAT Conclusion and BAT-AEL are not applicable.</p> <p>Whilst the operator, in their response, confirms that a scrubber is in use at the installation we note that it is in operation solely for the protection of the workers.</p>	
142	In order to reduce SO <sub>2</sub> emissions to air (other than those that are routed to the sulphuric acid plant) from a melting and smelting operation for the production of Doré metal, including the associated incineration, calcining and drying operations, BAT is to use one or a combination of the techniques given. BAT-AEL for SO <sub>2</sub> .	NA	NA	NA	The operator has stated that this BAT Conclusion, which requires the use of abatement to reduce SO <sub>2</sub> emissions to air, is not applicable. As a low impact installation there is no reliance on abatement for environmental protection and therefore we agree that the BAT Conclusion and BAT-AEL are not applicable.	None.
143	In order to reduce SO <sub>2</sub> emissions to air from a hydrometallurgical operation,	NA	CC	NA	The operator has confirmed in their response that they are compliant with	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
	<p>including the associated incineration, calcining and drying operations, BAT is to use a wet scrubber.</p> <p>BAT-AEL for SO<sub>2</sub>.</p>				<p>BAT 143, which requires the use of a wet scrubber to reduce emissions of SO<sub>2</sub> from a hydrometallurgical operation.</p> <p>As a low impact installation there is no reliance on abatement for environmental protection and therefore it is our view that the BAT Conclusion and BAT-AEL are not applicable.</p> <p>Whilst the operator, in their response, confirms the operation of a scrubber to abate emissions from the dissolving, refining and precipitation processes we note that the measures are solely for the protection of the workers.</p>	
144	<p>In order to reduce HCl and Cl<sub>2</sub> emissions to air from a hydrometallurgical operation, including the associated incineration, calcining and drying operations, BAT is to use an alkaline scrubber.</p> <p>BAT-AELs for HCl and Cl<sub>2</sub>.</p>	NA	CC	NA	<p>The operator has confirmed in their response that they are compliant with BAT 144, which requires the use of an alkaline scrubber to reduce emissions of HCl and Cl<sub>2</sub> from a hydrometallurgical operation.</p> <p>As a low impact installation there is no reliance on abatement for environmental protection and therefore it is our view that</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>the BAT Conclusion and BAT-AEL are not applicable.</p> <p>Whilst the operator, in their response, confirms the operation of a scrubber to abate emissions from the dissolving, refining and precipitation processes we note that the measures are solely for the protection of the workers.</p>	
145	<p>In order to reduce NH<sub>3</sub> emissions to air from a hydrometallurgical operation using ammonia or ammonium chloride, BAT is to use a wet scrubber with sulphuric acid</p> <p>BAT-AEL for NH<sub>3</sub>.</p>	NA	NA	NA	<p>The operator has confirmed in their response that this BAT Conclusions is not applicable because ammonia and ammonium chloride are not used in the process at this installation.</p> <p>The Environment Agency is satisfied that this BAT Conclusion is not applicable.</p>	
146	<p>In order to reduce PCDD/F emissions to air from a drying operation where the raw materials contain organic compounds, halogens or other PCDD/F precursors, from an incineration operation, and from a calcining operation, BAT is to use one or a combination of the techniques given.</p>	NA	NA	NA	<p>The operator has confirmed in their response that BAT 146, is not applicable because there are no emissions of dioxins. Whilst the drying process is not currently installed the operator has confirmed that drying will only involve the evaporation of water from gold precipitate prior to the sampling procedure, which involves melting</p>	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
	BAT-AEL for PCDD/F.				<p>the material. The material must be dry before melting to ensure health and safety.</p> <p>We agree that this BAT Conclusion is not applicable to the installation.</p>	
147	In order to prevent soil and groundwater contamination, BAT is to use a combination of the techniques given	3.2	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 147. The following techniques are in use at the installation:</p> <p>BAT 147a: use of sealed drainage systems.</p> <p>BAT 147b: use of double-walled tanks or placement in resistant bunds.</p> <p>BAT 147c: use of impermeable and acid-resistant floors.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	None.
148	In order to prevent the generation of waste water, BAT is to use one or both of the techniques given.	3.1	CC	CC	The operator has confirmed in their response that they are currently compliant with BAT 148. The following technique is in use at the installation:	None.

BATc Number	Compliance Issue  Priority BAT indicated in <b>Bold Text</b>	Relevant permit condition	Compliance stated by Operator  NA / CC / FC / NC	Compliance assessment conclusion  NA / CC / FC / NC	Summary of Permitting Officer assessment against BATc techniques	Compliance Action to implement BATc
					<p>BAT 148b: recycling of solutions from leaching, extraction and precipitation operations.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	
149	<p>In order to reduce the quantities of waste sent for disposal, BAT is to organise operations on site so as to facilitate process residues reuse or, failing that, process residues recycling, including by using one or a combination of the techniques given.</p>	2.3	CC	CC	<p>The operator has confirmed in their response that they are currently compliant with BAT 149. Process residues are inherently valuable and so the following technique is in use at the installation:</p> <p>BAT 149h: recovery of metals from the treatment of process end liquors.</p> <p>The Environment Agency is satisfied that the operator meets the requirements of this BAT Conclusion.</p>	None.