

Permitting Decisions - Environment Agency Initiated Variation

We have issued an Environment Agency initiated variation for Cleveland IBA Facility operated by Blue Phoenix Limited following a review of the permit in accordance with Environmental Permitting (England and Wales) Regulations 2016, regulation 34(1).

The variation number is EPR/TP3438EG/V005.

We consider in reaching this 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.

Permit Review

This Environment Agency has a duty, under the Environmental Permitting (England and Wales) Regulations 2016 (EPR), regulation 34(1), to periodically review permits.

Article 21(3) of the Industrial Emissions Directive (IED) also requires the Environment Agency to review conditions in permits to ensure that they deliver compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions.

We have reviewed the permit for this activity and varied the notice to make a number of changes to reflect relevant standards and current best practice. These changes principally relate to the implementation of our technical guidance <u>Nonhazardous and inert waste: appropriate measures for permitted facilities</u> and the relevant requirements of the <u>BAT Conclusions for Waste Incineration</u>, which have been incorporated into our guidance.

In this decision document, we set out the reasoning for the variation notice that we have issued.

It explains how we have reviewed and considered the techniques used by the operator against our technical guidance.

As well as considering the review of the operating techniques used by the operator, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue.

Purpose of this document

This decision document provides a record of the decision-making process. It:

- explains how the Environment Agency initiated variation has been determined;
- summarises the decision making process in the <u>decision considerations</u> section to show how the main relevant factors have been taken into account;
- highlights key issues in the determination.

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

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

Key issues of the decision

Environment Agency led variation – permit review

We have carried out an Environment Agency initiated variation to the permit following a permit review as required by legislation to ensure that permit conditions deliver compliance with relevant legislative requirements and appropriate standards to protect the environment and human health.

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. Article 21(3) of the IED requires us to review conditions in permits issued and to ensure that the permit delivers compliance with relevant standards. This must be within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions.

The BAT Conclusions for Waste Incineration (the BATC) was published on 12 November 2019 following a European Union wide review of BAT, implementing decision (EU) 2019/2010. Relevant existing facilities must be in compliance with the BAT Conclusions within 4 years.

Our technical guidance <u>Non-hazardous and inert waste: appropriate measures</u> <u>for permitted facilities</u> explains the standards that are relevant for regulated facilities with an environmental permit to treat or transfer non-hazardous wastes. We issued a notice under regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 14/04/2023. The notice required the operator to provide information to confirm that the operation of their facility currently meets, or how it will subsequently meet, the standards in the Waste Incineration BAT Conclusions.

The notice required the operator to:

- 1. Confirm whether or not they are currently complying with the standards described in the relevant BAT Conclusion reference document providing a description of how they are meeting the standard.
- 2. Describe how and when they intend to comply with those standards that they are not meeting, as identified in paragraph 1, to ensure that they are fully compliant with relevant BAT Conclusions by 03/12/2023, being the date, referred to as the 'compliance date'.
- 3. Confirm:
 - a) If they intend to cease operating any activity which would be in breach of the relevant new BAT Conclusion (BATC) after the compliance date, and the date by which they intend to cease operation;

or,

- b) if they intend to continue operating in a manner which would fail to comply with the relevant new BAT Conclusion after the compliance date, what their justification for being allowed to do so is; and by what date they intend to come into full compliance, or a description of alternative measures to be adopted that will provide equivalent environmental protection.
- c) Where there is a BAT-Associated Emission Level (BAT-AEL) specified in the BAT conclusion, with which they will not comply with by the compliance date and they wish to continue operating, they should request a derogation. To do that, they must provide sufficient technical and commercial information to demonstrate that achieving these emissions levels would lead to disproportionately higher costs, compared to the environmental benefits, due to:
 - i. the geographical location of their installation; or
 - ii. the local environmental conditions around their installation; or
 - iii. the technical characteristics of their installation.

The operator is required to explain which of these criteria is relevant and why, refer to the relevant Defra's published guidance. Their justification of cost and benefits should use a methodology equivalent to that outlined in the Environment Agency Guidance risk assessment guidance.

4. Complete the WI BATCs operator returns spreadsheet and the accompanying tab titled "IBA AMs".

The <u>Non-hazardous and inert waste: appropriate measures for permitted facilities</u> guidance was published on 12 July 2021. This technical guidance explains the standards that are relevant to regulated facilities with an environmental permit to store, treat or transfer non-hazardous waste, providing relevant standards (appropriate measures) for those sites. The operators were notified about the new guidance and were advised to consider them in their submissions.

The standards described in our technical guidance are split into chapters:

- General management appropriate measures
- Waste pre-acceptance, acceptance and tracking appropriate measures
- Waste storage, segregation and handling appropriate measures
- Waste treatment appropriate measures
- Emissions control appropriate measures
- Emissions monitoring and limits appropriate measures
- Process efficiency appropriate measures

Our assessment of the responses received from the operator are summarised in Table 1.

The Regulation 61 Notice required the operator to confirm whether they could comply with the standards described in <u>BAT Conclusions for Waste Incineration</u>. Table 1 below provides a summary of the response received and our assessment of it. The overall status of compliance with the standards (appropriate measures) is indicated in the table as:

NA – Not Applicable

- CC Currently Compliant
- FC Compliant in the future (through improvement conditions set in permit)
- NC Not Compliant; Improvement/New Condition included.

Regulation 61 Response

The Regulation 61 notice response from the operator was received on 15/03/2023.

We considered that the Regulation 61 notice response did not contain sufficient details for us to commence the determination of the permit review and we needed further information to complete the permit review assessment.

These responses are available on our public register.

The documents submitted by the operator which now form part of the operating techniques that the operator must implement are specified in table S1.2 in the environmental permit. These include:

Documents titled:

- "BPUK Cleveland 220220 BATC returns spreadsheet V1.5 IBA BA AMs BPL responses"
- "BPL QMS P002 Storage and Handling of IBA-IBAA"
- *"BPL EMS P005 Waste Acceptance Criteria needs all sites storage capacity adding"*
- "Cleveland Process flow"
- "Cleveland Site Drainage Plan"
- "Regulation 61 Notice Request for Further Information Cleveland TP3438EGV005."
- "Cleveland Storage Volumes"
- "Current Cleveland Dust Monitoring Locations"

Changes to the permit conditions

Following the assessment of the information provided by the operator in response to the Regulation 61 Notice, summarised in table 1 and the additional information received in response to the request further information, we have made the following changes to the permit conditions:

Conditions	Amendment
Condition 1.1.4	Added in line with modern template.
Condition 1.5	Multi-operator permit condition removed.
Condition 2.3.3	Added in line with modern template.
Condition 2.3.5	Condition removed as not relevant to the site's operations. Subsequent conditions re-numbered.
Condition 2.5	Pre-operational conditions removed.
Condition 3.1.1	Condition amended to reflect that there are no point source emissions.
Condition 3.5	Monitoring conditions added alongside ambient air and process monitoring requirements.
Condition 3.6	Pest conditions added in line with modern template.
Table S1.1 as referenced in condition 2.1.1	Activities table updated in-line with modern standards and current site activities.
Table S1.2 as referenced in condition 2.3.1	Operating techniques updated with documents received in response to the regulation 61 review.
Table S1.3 as referenced in condition 2.4	Improvement conditions added.

Table S2.1 as referenced in condition 2.3.3	Raw materials table added.
Table S2.2 as reference in condition 2.3.4	List of waste table updated.
Tables S3.1 as referenced in condition 3.5.1	Process monitoring added in line with modern template.
Table S3.2 as referenced in condition 3.5.1	Ambient air monitoring added in line with modern template.
Table S4.1 as referenced in condition 4.2.3	Reporting added in line with the required monitoring.
Table S4.2 as referenced in condition 4.2.2	Annual treatment and production reporting updated in line with the modern template.
Table S4.4 as referenced in condition 4.2.3	Reporting forms updated.
Schedule 5	Updated in line with modern template.
Schedule 6	Interpretations updated.
Schedule 7	New site plan

Appropriate measures	Compliance status	Assessment of the installation's compliance with relevant standards (appropriate measures) and any alternative techniques proposed by the operator
General management appropriate measures and brief non-technical description of the regulated facility	CC	 The operator confirmed that they are compliant with BAT 1 and the site operates ISO 14001 and ISO 9001 management systems that are externally audited annually to maintain standards. The site activities include: S5.4 A(1) (b) (iii) - Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving treatment of slags and ashes. Storage of waste prior to treatment. Storage of waste following treatment Process water collection and storage for re-use on site Raw material storage Blending of IBAA with non-waste materials The facility is located at Haverton Hill Road, Teesside EFW, Billingham. The centre of the installation is approximately at National Grid Reference NZ4811522406. The nearest residential housing is at Limetrees Close approx. 800m east of the site boundary. The site is approximately 350 from the Teesmouth and Cleveland SSSI and SPA. Treatment activities are undertaken inside a processing building and this was confirmed in the RFI response, where it was stated that the screening of IBA no longer takes place outdoors. The initial Regulation 61 response detailed that all other treatments were already taking place within a processing building. There are no channelled emissions to air or discharges to foul sewer or surface water. The site is equipped with an impermeable surface and a sealed drainage system. The collected water is used for dust suppression or tankered off site if excessive rainfall results in an exceedance of the storage capacity of the lagoons.
Waste pre-acceptance, acceptance and tracking appropriate measures	СС	The operator provided a waste acceptance procedure. This procedure outlined that they follow the voluntary industry protocol to provide reliable classification and assessment of the incinerator bottom ash. In addition Incinerator Bottom Ash will only be accepted on site if there is sufficient storage capacity.

Table 1 – Summary of our assessment of the operator's Reg 61 response

		The stocks of IBA that are waiting for classification results are stockpiled in one batch. Sample dates and the source is recorded to show the origin from the four incinerator lines. Batch signs will be posted indicating the stockpile position and ID. The EFW plant will inform Blue Phoenix when it is going to take the sample from its raw ash. Once a sample is taken by the EFW and the raw ash is delivered to the Blue Phoenix; a new batch will be started, and its location and name added to the site ESA Protocol Board. A new batch will only be started when the EFW take a new sample of raw ash.
Waste storage, segregation and handling appropriate measures	FC	The operator has provided a storage and handling procedure " <i>BPL QMS P002 Storage and Handling of IBA-IBAA</i> ". It describes the segregation of coarse IBAA, fine IBAA, blends etc. This also shows that IBA is stored separately in batches pending test results. These are signposted with stockpile position and ID. If test results classify the waste as hazardous this is removed from the
		site by the EFW and taken to a suitably authorised facility. Unprocessed IBA is stored outside for 3 to 6 weeks prior to treatment. The resulting IBAA after treatment is also stored outside for 4 to 30 weeks. The operator confirmed that waste will only be accepted on site if there is sufficient storage capacity. Currently, IBA and IBAA stored outside are not protected from prevailing winds on all sides and therefore there is a potential risk of dust generation. There is also a potential for dust to be generated from conveyors when they are discharging material as the drop height of these conveyors cannot be adjusted.
		Given this, we have added improvement conditions IC3/IC4 which require the operator to review and implement any improvements to the existing waste treatment, storage and handling equipment at the site to ensure that they are in accordance with the requirements specified in the Non-hazardous and inert waste: appropriate measures for permitted facilities guidance and BAT 24 of the Waste Incineration BAT Conclusions.
Waste treatment appropriate measures	FC	The treatment processes involve the receipt of raw unprocessed incinerator bottom ash (IBA), separation of ferrous and non-ferrous metals from the IBA, production of different fractions of IBAA (coarse IBAA 40mm and fine IBAA 14mm) and blending of IBAA fractions with aggregates.
		The moisture content of the IBA will need to be optimal to enable efficient and effective processing. However, the operator has not identified the optimal moisture range or how this will be monitored. Given this, IC5 requires the operator, to review and update the DEMP so that optimal moisture can be managed going forward.
		The IBA is tested to ensure that it complies with WM3 and the permitted waste codes, as detailed in document " <i>BPL QMS P002 Storage and Handling of IBA-IBAA</i> ".

		The operator has identified potential emissions and the measures they are taking to control them. There are no channelled emissions to air and no direct or indirect emissions to water. Waste waters are recirculated for use in dust suppression or tankered off site if the capacity of the lagoon may be exceeded. The processing plant is made up of conveyors, screens and magnetic separation. We have added an improvement conditions IC3/IC4 which require the operator to review the existing waste treatment, storage and handling equipment at the site to ensure that they are in accordance with the requirements specified in the Non-hazardous and inert waste: appropriate measures for permitted facilities guidance and BAT 24 of the Waste Incineration BAT Conclusions. Where improvements are identified IC4 requires the implementation of these measures.
Emissions control appropriate measures	FC	The operator has indicated there are no channelled emissions to air. This site does have a lagoon for the storage of water but there are no emissions to surface water or sewer. When necessary excess waters are removed from site via tanker.
		The area officer has indicated that there are no issues with fugitive emissions at the site. However, the reg 61 response has stated that the storage area does not have protection on all sides from prevailing winds.
		We have added improvement conditions IC3/IC4 which require the operator to review the existing waste treatment, storage and handling equipment at the site to ensure that they are in accordance with the requirements specified in the Non-hazardous and inert waste: appropriate measures for permitted facilities guidance and BAT 24 of the Waste Incineration BAT Conclusions. Where improvements are identified IC4 requires the implementation of these measures.
		The Regulation 61 response also highlighted that the operator needs to undertake integrity testing of their impermeable surface to ascertain if is suitable to CIRIA 736 standard. We have included Improvement Condition IC1 for the operator to undertake a review of the site surfacing and drainage to ensure they are in line with or equivalent to the standards required in CIRIA Report C736. IC2 follows on requiring the operator to implement any improvements identified.
Emissions monitoring and limits appropriate measures	FC	The operator has indicated there are no channelled emissions to air. This site does have a lagoon for the storage of water but there are no emissions to water. When necessary excess waters are removed from site via tanker. A daily visual assessment of dust in the ambient air is required to be monitored and also a monthly assessment of deposited dust is required by the permit. This monitoring is carried to be carried out against the Monitoring emissions to air, land and water (MCERTS) - GOV.UK (Technical guidance notes for monitoring ambient air.) guidance.
		We have also asked for a revised Dust Management Plan (DMP). The revised plan shall include an assessment of the risk of dust pollution associated with the permitted site operations and a proposal for optimum moisture ranges and details of the moisture monitoring method and frequency for the IBA and IBAA. The monitoring methods may include for example, the use of moisture probes or

		dry/wet analysis or any other alternative methods that are suitable for establishing the optimum moisture range for effective dust emission control.
Raw Material, Process efficiency and Water Use appropriate measures	CC	Raw materials and water are not being used in the treatment process, but water generated from the site is being used on site for dust emission control. The operator is complying with appropriate measures associated with process efficiency and water use.

Table 1 – Summary of our assessment of the operator's Reg. 61 response

Appropriate measures	Compliance status	Assessment of the installation's compliance with relevant standards (appropriate measures) and any alternative techniques proposed by the operator
BAT 1 - EMS	CC	The operator confirmed that the site operates ISO 14001 and ISO 9001 management systems that are externally audited annually to maintain the standards.
BAT 3 - monitoring of specified process parameters	СС	The site doesn't have any discharges to surface water or sewer. Waters are tankered off site when necessary.
BAT 6 - monitor emissions to water from FGC and/or bottom ash treatment with at least the frequency given below and in accordance with EN standards	СС	The site doesn't have any discharges to surface water or sewer. Waters are tankered off site when necessary.
BAT 10 - quality output management system part of EMS where bottom ash treatment is carried out	СС	The operator has stated that they have a quality management system in place at the site. The site operates ISO 14001 and ISO 9001 management systems that are externally audited annually to maintain standards.
BAT 12 - in order to reduce the environmental risks associated with the reception, handling and storage of waste, BAT is to use both of the techniques listed in the corresponding table	FC	The operator stated that measures in line with BAT 12 will be in place by 03/12/23. They have stated that currently there are no integrity checks in place on the site surface. The operator has not provided any evidence that the impermeable surface is designed to meet the standards outlined in the CIRIA 736 report.
		We have included Improvement Conditions IC1 and IC2 which require the operator to review and ascertain the design and construction of the impermeable surface and sealed drainage systems are in line with or equivalent to the standards required in CIRIA Report C736.
		The report of the review shall be certified by a suitably qualified engineer and submitted to the Environment Agency or approval together with details of any improvements.

		An adequate waste storage capacity at any one point in time has been established with justification.
BAT 23 - in order to prevent or reduce diffuse dust emissions to air from the treatment of slags and bottom ashes, BAT is to include in the environmental management system (see BAT 1) the diffuse dust emissions management features	FC	The operator has stated that their EMS includes the features listed under BAT 23 to identify, reduce and monitor diffuse dust emissions.
		Based on the information the operator has supplied; treatment is inside a processing shed and water sprayers are used to keep the waste moist. However, stockpile protection is not in place on all sides of waste storage bays and the conveyors do not adjust to vary the height of discharge.
		We have included improvement conditions which require the operator to carry out a detailed review of the existing waste treatment, storage and handling equipment at the site to ensure that they are in accordance with the requirements specified in the Non-hazardous and inert waste: appropriate measures for permitted facilities guidance and BAT 24 of the Waste Incineration BAT Conclusions.
		This review shall include but not be limited to an assessment of:
		Stockpile protection.Discharge height of conveyors
		Following the review, the operator is required to submit a written report to the Environment Agency for approval outlining the results of the review and measures and procedures that are in place to prevent fugitive emissions of dust.
		The report shall include recommendations for improvements and installation of new infrastructure, including timescales for implementation of the identified improvements.
BAT 24 - In order to prevent or reduce diffuse dust emissions to air from the treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques in the corresponding table	FC	The operator confirmed that measures listed under sub-section a, d and e of BAT 24 table are in use at the site. They have also stated that the measures listed under sub-section f of BAT 24 table are not in use. They indicated that measure f is not in use because the IBA is delivered with a moisture content of around 20%. Whilst onsite IBA is monitored for dust emissions following their dust management plan. They also stated sub atmospheric conditions are generally required for sites that have potential issues with dust and odour. They have said that they have a Dust Management Plan in place to prevent any fugitive emissions.
		The operator stated that b and c of the BAT 24 table are not in use. As stated above we have included IC3 and IC4 detailed above, for the operator to review existing waste treatment, storage and handling measures.
		Further to this monitoring of the moisture content of the IBA and IBAA has been included within the permit. The frequency and method of this monitoring is to be agreed in line with the submission of a new DEMP and as such we have included IC5 which requires the submission of an updated DEMP.

BAT 26 - use a bag filter if treating air from treatment of IBA under sub- atmospheric conditions.	NA	The operator stated that this BAT is not applicable because the IBA is not being treated under sub-atmospheric conditions at the site.
BAT 32 - in order to prevent the contamination of uncontaminated water, to reduce emissions to water, and to increase resource efficiency, BAT is to segregate waste water streams and to treat them separately, depending on their characteristics	NA	The operator stated that all run off water is collected in a site lagoon and then used in dust suppression. Given that all water is collected for reuse, segregation of wastewater streams is not deemed applicable.
BAT 34 - in order to reduce emissions to water from FGC and/or from the storage and treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques in the corresponding table, and to use secondary techniques as close as possible to the source in order to avoid dilution	FC	The operator responded stating that's this BAT was not applicable as "Not applicable to our site as water is not discharged. It's taken by tanker for treatment." Water is collected in a lagoon where it undergoes settlement and then reused in dust suppression systems. This BAT is not applicable and BAT AEL's have not been applied within the permit.
BAT 36 - in order to increase resource efficiency for the treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques in the corresponding table based on a risk assessment depending on the hazardous properties of the slags and bottom ashes.	CC	The following measures listed in the table of BAT 36 are used: a , b , c , d and e . The operator indicated that they are currently not using technique f . The site does not have the capability to wash the IBA.
BAT 37 - in order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a combination of the techniques in the corresponding table	СС	The operator confirmed that techniques a , b , c , d and e are all utilised to reduce noise. There have been no issues with noise at the site.
Reg. 61 Request for Further Information (RFI)	Assessment	of response received

Confirm what materials are being blended with processed IBAA.	The operator responded stating "IBAA is blended with virgin aggregate for various products. IBAA is not blended with any waste." The relevant activities are included within the permit.
Provide written confirmation from a competent engineer that the site surface, sealed drainage and lagoon have been constructed to CIRIA 736 or an equivalent approved standard.	The operator responded stating " <i>Please add this as an improvement action. We will need consultants to help create a report confirming we are compliant with CIRA 736.</i> " This action has been included within improvement conditions.
Confirm if integrity checks are in place for site surfacing and site drainage	The operator responded stating "Please add this as an improvement action. Any check required for the site's surface integrity will be included in the report confirming we are compliant with CIRA 736." This action has been included within improvement conditions.
Confirm if any screening of IBA is taking place externally at the Cleveland site	The operator responded stating "We no longer carry out this process outside." No action has been taken.
Confirm the maximum storage capacity for IBA, IBAA and recovered metals	The operator responded stating: Cleveland max storage capacity Typical product stored Tonnes Density IBA 82,651 1.89 Finished 24,856
Provide a plan detailing the dust monitoring locations used within the ambient air monitoring carried out	The operator responded stating "See attached plan – Current Cleveland- Dust Monitoring Locations". These locations have been included within the monitoring in the permit.