

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/FP3935KL
The Operator is: Tradebe Fawley Limited
The Installation is: Fawley High Temperature Incinerator
This Variation Notice number is: EPR/FP3935KL/V010

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 of updated decisions on best available techniques (BAT) conclusions.

We have reviewed the permit for this installation against the revised BAT Conclusions for waste incineration published on 3rd December 2019.

This is our decision document, which explains the reasoning for the consolidated variation notice that we are issuing. This review has been undertaken with reference to the decision made by the European Commission establishing best available techniques (BAT) conclusions ('BAT conclusions') for incineration as detailed in document reference C(2019) 7987. It explains how we will ensure that the installation complies with the BAT conclusions by 3rd December 2023. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position. It also provides a justification for the inclusion of any specific conditions in the permit that are in addition to those included in our generic permit template.

As well as ensuring that the Installation complies with the BAT conclusions the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issued. 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 philosophy and with other permits issued to installations in this sector. Although the wording of some conditions has changed, while others have been removed 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 mainly our determination of substantive issues relating to the new BAT Conclusions.

Throughout this document we will use a number of expressions. These are as referred to in the glossary.

We try to explain our decision as accurately, comprehensively and plainly as possible. We would welcome any feedback as to how we might improve our decision documents in future. The use of technical terms and acronyms are inevitable in a document of this nature: we provide a glossary of acronyms near the front of the document, for ease of reference.

How this document is structured

Contents

1	Glossary of acronyms used in this document	4
2	Our decision	5
3	How we reached our decision.....	5
3.1	Requesting information to demonstrate compliance with BAT Conclusions for incineration Plant.....	5
3.2	Review of our own information in respect to the capability of the installation to meet revised standards included in the BAT Conclusions document	6
4	The legal framework.....	7
5	The key issues.....	8
5.1	Ensuring the Installation complies with the BAT conclusions	8
5.2	Emissions to air and the emission limits applied to the plant	8
5.3	Energy efficiency.....	9
5.4	Monitoring	9
6	Issues not directly relating to the BAT conclusions.....	9
6.1	Appropriate measures for permitted facilities	9
6.1.1	Chemical waste	9
6.1.2	Healthcare waste.....	10
6.1.3	Appropriate measures and permit conditions	10
6.1.4	Site drainage	11
6.2	Emissions to water or sewer	11
6.3	Emergency release valve (ERV)	12
6.4	Abnormal operation.....	12
7	Review and assessment of derogation requests made by the operator in relation to BAT Conclusions which include an associated emission level (AEL) value.....	13
8	Summary checklist	14
	Annex 1	16
	Decision checklist regarding relevant BAT Conclusions.....	16

1 Glossary of acronyms used in this document

(Please note that this glossary is standard for our decision documents and therefore not all these acronyms are necessarily used in this document.)

APC	Air Pollution Control
BAT	Best Available Technique(s)
BAT-AEEL	BAT Associated Energy Efficiency Level
BAT-AEPL	BAT Associated environmental performance level
BAT-AEL	BAT Associated Emission Level
BATc	BAT conclusion
BREF	Best available techniques reference document
CEM	Continuous emissions monitor
CHP	Combined heat and power
CV	Calorific value
DAA	Directly associated activity – Additional activities necessary to be carried out to allow the principal activity to be carried out
ELV	Emission limit value derived under BAT or an emission limit value set out in IED
EMS	Environmental Management System
EPR	Environmental Permitting (England and Wales) Regulations 2016 (SI 2016 No. 1154)
EWC	European waste catalogue
FSA	Food Standards Agency
IC	Improvement Condition
IED	Industrial Emissions Directive (2010/75/EU)
NOx	Oxides of nitrogen (NO plus NO ₂ expressed as NO ₂)
PHE	Public Health England
SAC	Special Area of Conservation
SGN	Sector guidance note
TGN	Technical guidance note
TOC	Total Organic Carbon
WFD	Water Framework Directive (2000/60/EC)

2 Our decision

We have decided to issue the consolidated variation notice to the operator. This will allow it to continue to operate the Installation, subject to the conditions in the consolidated variation notice.

We consider that, in reaching that 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 consider that those conditions are appropriate.

3 How we reached our decision

3.1 Requesting information to demonstrate compliance with BAT Conclusions for incineration Plant

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 08/07/22 requiring the Operator to provide information to demonstrate how the operation of their installation currently meets, or will subsequently meet, the revised standards described in the incineration BAT Conclusions document. The Notice also required that where the revised standards are not currently met, the operator should provide information that:

- Describes the techniques that will be implemented before 3rd December 2023, which will then ensure that operations meet the revised standard, or
- Justifies why standards will not be met by 3rd December 2023, 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 61 Notice requested that the Operator make a formal request for derogation from compliance with that AEL (as provisioned by Article 15(4) of IED). In this circumstance, the Notice identified that any such request for derogation must

be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 61 Notice response from the Operator was received on 19/01/23.

We requested further information from the operator on 15/06/23, the operator provided a response on 07/07/23. We also received comments on the draft permit from the operator that we used to finalise the varied permit conditions.

We have not received any information in relation to the Regulation 61 Notice response that appears to be confidential in relation to any party.

3.2 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 regulatory activities with the facility we have no reason to consider that the operator will not be able to comply with the conditions that we include in the permit.

4 The legal framework

The consolidated variation notice will be issued under Regulation 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 the consolidated variation notice 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.

5 The key issues

The key issues arising during this permit review are:

- Ensuring the Installation complies with the BAT conclusions.
- Setting emission limits (including BAT AELs) for emissions to air,
- The energy efficiency levels associated with the Best Available Techniques (BAT-AEELs)

5.1 Ensuring the Installation complies with the BAT conclusions

We have reviewed the operator's response to the regulation 61 notice and we are satisfied that the Installation will meet the requirements of the BAT conclusions by 3rd December 2023. Further detail on our assessment is in annex 1 of this decision document.

Based on our records and previous regulatory activities with the Installation we have no reason to consider that the operator will not be able to comply with the conditions that we have included in the permit.

5.2 Emissions to air and the emission limits applied to the plant

The consolidated permit includes new emission limits for emissions to air, and water. These limits ensure that the installation will comply with the relevant BAT-AELs, as specified in the BAT conclusions, and the relevant limits from IED Annex VI.

A number of general principles were applied during the permit review, including those set out in the UK Waste Incineration BAT Conclusions Interpretation Document . These included:

- The upper value of the BAT-AELs ranges specified were used unless use of the tighter limit was justified.
- The principle of no backsliding where if existing limits in the permit were already tighter than the upper end of the BAT-AEL ranges, the existing permit limits were retained.
- Where a limit was specified in both IED Annex VI and the BAT Conclusions for a particular reference period, the tighter limit was applied and in the majority of cases this was from the BAT Conclusions.

We have set the emissions limit values at the top end of the BAT-AEL range in line with section 4.35 of Defra's Industrial emissions Directive EPR Guidance on Part A installations which states: *Where the BAT AELs are expressed as a range, the ELV should be set on the basis of the top of the relevant BAT-AEL range – that is to say, at the highest associated emission level - unless the*

installation is demonstrably capable of compliance with a substantially lower ELV, based on the BAT proposed by the operator, or exceptional environmental considerations compel a tighter ELV.

We are satisfied that environmental considerations do not require tighter ELVs to be set, and the operator has not proposed any lower ELVs, and so we have set the ELVs at the top end of the BAT-AEL ranges.

5.3 Energy efficiency

The BAT conclusions specify an energy efficiency level associated with the best available techniques (BAT-AEEL). The BAT AEEL is based on gross electrical efficiency, gross energy efficiency or boiler efficiency depending on the type of plant. This installation does not have energy recovery and so the BAT AEEL is not relevant.

5.4 Monitoring

The monitoring requirements for mercury and dioxins/furans are dependent on whether the waste has low a low and stable mercury content and whether emissions of dioxins are stable respectively. For dioxins, improvement condition IC22 require the operator to submit information to enable us to require the correct monitoring. We have set the requirement for the plant to have mercury CEMS. Our view is that hazardous waste incineration plants will need to have CEMS for mercury monitoring as the waste feed will not have low and stable mercury content.

6 Issues not directly relating to the BAT conclusions

6.1 Appropriate measures for permitted facilities

6.1.1 Chemical waste

The operator's pre-acceptance and acceptance procedures are not fully in line with our chemical waste appropriate measures guidance.

Pre-acceptance is mostly by materials acceptance questionnaire with a customer declaration, sampling is not usually required. Some wastes such as prohibited carcinogens and cresol can't be received. The operator asks the customer if these are present in the waste at pre-acceptance and accepts the answer given by the customer because they will be incinerated even if present. The operator does not necessarily need to know the concentration of the substance in the container specifically, but the acceptance checks are to ensure the waste in the container is what they expect it to be from the pre-acceptance.

For example they would need to confirm the waste solvent contains aniline not how much aniline is in there.

Lab chemicals are not checked in line with our guidance. The operator checks a list of contents and some match. They have offered to properly QA 1 in 100 drums i.e getting all the contents out and cross-matching all wastes.

The operator does not check oily rags in the way we require. They want to keep waste in reception for 7 days; waste that needs to be segregated is done quickly, other wastes are kept for this longer period.

The operator stated that tanks and bunds that predate CIRIA C736 have not been designed to this code.

We have set improvement conditions IC23, IC24 and IC27 to address the deficiencies.

6.1.2 Healthcare waste

As well as chemical wastes, the site also takes healthcare wastes. We have set improvement conditions IC25 and IC26 to ensure that the operator also complies with the healthcare appropriate measures. Conditions is table S1.1 of the permit control storage times of healthcare wastes in line with our guidance.

6.1.3 Appropriate measures and permit conditions

We have specified several requirements for how and how long wastes are stored in table S1.1 of the permit. These requirements are based on our appropriate measures guidance and best practice and are achievable for this site. Where the site does not currently comply, and needs time to comply, we have linked the wording in table S1.1 to an improvement condition.

The operator questioned some of the conditions and we have included some extra explanation below where required:

Storage of aerosols cannister and storage of oxidisers

The operator stores these in segregated storage bays, area 38 on their site plan. The amounts of each waste type stored are flexible within the total storage capacity of the bays. Rather than set storage limits of the waste types we have specified the capacity of area 38 in the permit.

Healthcare waste storage times

The operator stated that they expect to be able to comply with this under normal operation, but exceptions are likely for unexpected shutdowns or when overall healthcare disposal capacity is tight.

We have not amended the standard wording in the permit. However, if an emergency scenario occurred as described above it would be dealt with through

the site's management system and our regulation of the site rather than making extra provisions in the permit.

6.1.4 Site drainage

During periods of high rainfall, the site is not able to contain rainwater prior to discharge. This means that in the event of a spillage or a leaking container that there is a risk of contaminated rainwater being discharged. We have set improvement condition IC37 for measures to be reviewed against appropriate measures and improvements made where required.

6.1.5 Combustion temperature

The permit requires wastes to be burned at a minimum of 1,000°C. This temperature was agreed with the Environment Agency as allowed under IED. We think it appropriate for this to be reviewed and have set improvement condition IC36a and 36b to require the review.

6.2 Emissions to water or sewer

A wet scrubber is used for acid gas abatement, with effluent treated and emitted to controlled water (Southampton Water Estuary). We have set improvement condition IC34 for the operator to carry out monitoring and do a full impact assessment of the emission. IC35 requires the operator to review and carry out any improvements to the effluent treatment taking into accounts results of the impact assessment from IC34.

Emission limits for emissions to water have been set. These are based on BAT AELs, IED chapter IV limits and limits from current permit. We have added condition 3.1.3 which prevents the operator from diluting or mixing batches of effluent for the purpose of meeting a permit emission limit.

This is supported by legislation:

Section 3.3.2.3.4.2 of the common waste water treatment BREF:

- In the case of heavy metals, precipitation is generally carried out as close as possible to the source in order to avoid dilution.
- Precipitation can be applied at different stages of the waste water stream, for example: directly at the source to remove heavy metals most effectively to avoid dilution by unloaded streams

Industrial emissions directive, Article 46:

- Under no circumstances shall dilution of waste water take place for the purpose of complying with the emission limit values set out in Part 5 of Annex VI

6.3 Emergency release valve (ERV)

During an emergency, gases by-pass the cleaning plant and exit via the main stack. The emergency venting is not used during start-up except the mercury abatement is by-passed during warm up on product fuels.

We are requiring plants that have ERVs to carry out improvements to reduce the frequency of use. Our starting position is that any site where the ERV has operated more than once in a two year period should be looking to install back-up power to reduce ERV usage. Our records show that the Fawley site has had over 10 activations over the last two years.

We have set improvement conditions IC28 to IC33 for the operator to review and put measures in place to minimise its use.

6.4 Abnormal operation

The plant does not have activated carbon injection but has carbon filters for mercury abatement. The mercury abatement system is purely there for mercury abatement when mercury loading is high. The plant runs on a low mercury feed when there are issues with the mercury abatement plant (generally blockages). Whilst these are being sorted the plant runs on mercury abatement bypass (either full or partial). Compliance with the mercury limits is still monitored by the CEMS. The permit condition relating to carbon abatement and abnormal operation was removed, but we have incorporated the operator's statement about running on low mercury feed into table S1.2 of the permit.

7 Review and assessment of derogation requests made by the operator in relation to BAT Conclusions which include an associated emission level (AEL) value

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.

As part of their Regulation 61 Note response, the operator has not requested a derogation from compliance with any AEL values.

8 Summary checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on confidentiality.
Operating techniques	
General operating techniques	We have reviewed the techniques used by the operator where they are relevant to the BAT Conclusions and compared these with the relevant guidance notes. The permit conditions ensure compliance with the relevant BREF, BAT Conclusions. The ELVs deliver compliance with the BAT-AELs.
Permit conditions	
Updating permit conditions during consolidation	We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide at least the same level of protection as those in the previous permit and in some cases will provide a higher level of protection to those in the previous permit.
Changes to the permit conditions due to an Environment Agency initiated variation	We have varied the permit as stated in the variation notice.
Improvement programme	Based on the information on the application, we consider that we need to impose an improvement programme. See key issues section for more details We have also removed the completed improvement conditions from the permit.
Emission limits	We have decided that emission limits should be set for the parameters listed in the permit. These are described in the relevant BAT Conclusions in Section of this document. It is considered that the ELVs/equivalent parameters or technical measures described above will ensure that significant pollution of

Aspect considered	Decision
	the environment is prevented and a high level of protection for the environment is secured.
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These are described in the relevant BAT Conclusions section of this document.</p>
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.</p>

Annex 1

Decision checklist regarding relevant BAT Conclusions

This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation.

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

NA - Not Applicable

CC - Currently Compliant

FC - Compliant in the future (by 3rd December 2023)

NC - Not Compliant

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
1	EMS	Improve overall performance via use of a compliant EMS.	There is an EMS in place that complies with all the points listed in BAT 1. The operator stated the above, but the EMS will need to include an OTNOC management plan as required by the permit – see BAT 18 below	FC
2	Energy efficiency	Determine gross electrical efficiency, gross energy efficiency or boiler efficiency (depending on plant type).	Not applicable - hazardous waste incinerator with no heat recovery	NA

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
3	Process Monitoring	Monitor key process parameters for emissions to air and water specified in the corresponding table.	Process monitoring is carried out in line with BAT 3 requirements for the following relevant parameters: 1. Flue Gas - Flow, oxygen content, temperature, pressure, water vapour content 2. Combustion chamber - temperature 3. Waste water from wet FGC - flow, pH, temperature	CC
4	Air emissions monitoring	Monitor emissions to air with at least the frequency in the corresponding table and in accordance with the EN standards.	Monitoring is carried out in line with BAT 4 requirements except for PBDD/F which will be in place by 03/12/23	FC
	PBDD/F	Monitor emissions to air of brominated dioxins and furans periodically if waste streams are known to contain brominated flame retardants are burned	The following waste types could contain brominated flame retardants: mixed hazardous wastes and so PBDD/F monitoring will be carried out from 01/01/23 where possible.	CC
	PCDD/F	Monitor emissions to air of dioxins and furans using a continuous sampler unless emissions are sufficiently stable.	Attempts will be made to demonstrate via the PCCD/F Monitoring Protocol that emissions to air of PCDD/F are sufficiently stable and that a continuous sampler (long-term monitoring) is not required by 03/12/23; if these are unsuccessful, continuous sampling will be installed as soon as reasonably practical.	FC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
	Mercury	Monitor emissions to air of mercury using continuous monitoring if required.	<p>Continuous mercury monitoring is already installed and is operational. Current mercury CEMS is not reliable enough for continuous CEMS. Agreement with the Environment Agency on sampling protocols in the absence of a working mercury monitor will be required.</p> <p>We require mercury CEMS for hazardous waste plants.</p>	FC
5	OTNOC monitoring	<p>Appropriately monitor emissions during OTNOC. Monitor PCCD/F and dioxin-like PCB mass emissions during a planned start-up and shut-down following the successful commissioning of the plant; already-operational plants must carry out this monitoring every 3 years; emissions profiles of continuously monitored pollutants must also be established following successful commissioning and for existing plants; consider further monitoring for plants that use abatement-system bypasses during start-up and/or shut-down.</p>	<p>Plant has been successfully commissioned, or is likely to be before 03/12/23. Emissions profiles of continuously monitored pollutants have been established during start-up and shut-down or will be established by 03/12/23. Monitoring of PCCD/F and dioxin-like PCB mass emissions during a planned start-up and shut-down will be carried within 3 years of 03/12/23</p>	FC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
6	Water emissions monitoring	Monitor emissions from FGC and/or bottom ash treatment. Monitor to frequencies and standards in corresponding table.	Monitoring is carried out in line with BAT 6 requirements for bottom ash treatment. Bottom ash treatment is not carried out at the site, monitoring for FGC effluent is though	CC
		Reduced monitoring frequency permitted if emissions can be shown to be sufficiently stable.	Emissions are sufficiently stable based on historic monitoring data and will be monitored at reduced frequency.	CC We added the following wording to table S3.2 of the permit: Monthly, or otherwise bi-annually if agreed in writing with the Environment Agency that emissions are sufficiently stable as demonstrated by a suitable methodology
7	Ash monitoring	Monitor LOI or TOI content of bottom ash to the frequencies and standards in corresponding table .	Monitoring carried out for LOI	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
8	POP monitoring	For hazardous waste containing POPs, monitor POP content of waste streams (applicable to dedicated hazardous waste incinerators only). After commissioning and then after significant change that could affect POP content.	<p>Not applicable - plant is a dedicated hazardous waste incinerator, but POP content determination is not required because of the criteria listed under BAT 8 (see attached evidence).</p> <p>No evidence was included. We have set this requirement in the permit. But the permit states dependent of BAT 8 requirements which gives the operator the opportunity to justify not carrying it out.</p>	FC
9	Waste input controls	Pre-acceptance / acceptance procedures. Use all techniques (a) to (c) in corresponding table, and where relevant (d), (e) and (f).	<p>Techniques set out in BAT 9 (a)-(c) are in place. Additionally, the following relevant techniques are in place: d, e, f</p> <p>Although the operator stated that they comply with these points, we have some concerns over current plant procedures. See section 6 of this decision document for more details.</p>	FC
10	Bottom ash treatment	Quality output management system part of EMS where bottom ash treatment is carried out.	Not applicable - bottom ash treatment is not carried out.	NA

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
11	Waste delivery, storage and handling	Monitor waste deliveries in line with corresponding table, depending on the risk posed by the waste type.	Measures in line with BAT 11 are in place	CC
		Radioactivity detection	Not required - no increased risk identified	CC
12	Waste delivery, storage and handling	Storage and handling. Use both techniques listed in corresponding table.	Measures in line with BAT 12 are in place. Although the operator stated that they comply, we have some concerns over current plant procedures. See section 6 of this decision document for more details.	FC
13		Storage and handling of clinical waste. Combination of techniques listed in corresponding table.	The following techniques are used in line with BAT 13: a, b, c	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
14	Overall environment performance	Reduce unburnt substances in slags / bottom ash and reduce emissions. Use a combination of techniques listed in corresponding table	The following measures listed in the table of BAT 14 are used: a, b, c	CC
		BAT-AEPL for TOC or LOI	The installation meets the BAT-AEPL for TOC or LOI as shown by historic monitoring data	CC
15		Control plant settings to reduce emissions to air. Use techniques such as an advanced control system.	An advanced control system is in place to achieve the requirements of BAT 15.	CC
16		Procedures to limit shutdown and start-up. Set up and implement procedures such as continuous rather than batch operation	Start-up and shut-down is minimised by continuous supply chain, waste and fuel storage, continuous process	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
17	Emission to air and water	Design of FGC system and waste water treatment plant. Appropriate design, operated in design range, maintained to ensure optimal availability.	Flue gas system and waste water treatment plant is designed appropriately and is operated within those design parameters	CC
18	OTNOC	Reduce frequency of OTNOC by setting up and implementing an OTNOC management plan.	An OTNOC management plan which meets the requirements of BAT 18 will be implemented by 03/12/23. A description of how critical equipment has been designed to minimise occurrence of abnormal operation (AO) and minimise impacts from AO and start-up and shut-down periods is included with this submission	CC
19	Energy efficiency	Increase efficiency by using a heat recovery boiler.	A heat recovery boiler is not applicable because the site burns hazardous waste	NA
20		Increase efficiency by using a combination of techniques listed in corresponding table.	Not applicable - no heat recovery	NA

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		BAT-AEEL is within the BAT – AEEL range	Not applicable - no heat recovery	NA
21	Diffuse emissions to air	Prevent or reduce diffuse emissions (including odour) using the listed techniques.	Measures in line with BAT 21 are in place	CC
22		Prevent diffuse emissions of VOCs from gaseous and liquid wastes by direct feed to furnace.	Measures in line with BAT 22 are in place	CC
23		Prevent or reduce diffuse emissions to air from treatment of slags and bottom ashes by including listed measures in the EMS.	Not applicable - bottom ash treatment is not carried out.	NA

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
24		Prevent or reduce diffuse emissions to air from treatment of slags and bottom ashes. Use one or a combination of techniques in corresponding table	Not applicable - bottom ash treatment is not carried out.	NA
25	Channelled emissions to air	Reduce emissions of metals and metalloids from incineration of waste. Use one or a combination of techniques in corresponding table.	The following measures listed in the table of BAT 25 are used: b, d, e,	CC
		BAT-AELs for dust and metals	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range. Higher end of the BAT-AEL range for hazardous waste applies 7mg/m ³ for particulates	CC
26		Reduce emissions of dust from treatment of slags and bottom ashes. Use a bag filter if treating air from treatment of IBA under sub-atmospheric conditions.	Not applicable - bottom ash treatment is not carried out.	NA

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		BAT-AEL for dust from IBA treatment. Applies if using a bag filter to treat air from treatment of IBA under sub-atmospheric conditions	Not applicable - bottom ash treatment is not carried out.	NA
27		Reduce emissions of HCl, HF and SO ₂ using one or a combination of techniques in corresponding table.	The following measures listed in the table of BAT 27 are used: a	CC
28		Reduce peak emissions of HCl, HF and SO ₂ and amount of residue produced, using technique (a) or both techniques in corresponding table.	The following measures listed in the table of BAT 28 are used: a	CC
		BAT-AELs for HCl, HF and SO ₂	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range.	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
29		Reduce emissions of NOx while limiting emissions of CO, N ₂ O and NH ₃ using appropriate combination of techniques in corresponding table.	The following measures listed in the table of BAT 29 are used: a, g Trials to utilise SNCR to reduce NOx emissions will continue as currently emissions are higher than 180mg/m ³ on a regular basis.	FC
		BAT-AELs for NOx, CO and NH ₃	A derogation from the BAT-AEL for NOx daily limit may be requested. We hope to avoid this through the SNCR trials being undertaken. The permit includes the BAT AEL for NOx, no derogation was requested. IC21 requires the SNCR system to be optimised.	FC
30		Reduce emissions of organic compounds including PCDD/F and PCBs using techniques (a), (b), (c), (d) and one or a combination of techniques (e) to (i) in corresponding table	The following measures listed in the table of BAT 30 are used: a, b, d, f (c not applicable (no boiler))	CC
		BAT-AELs for PCDD/F	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range.	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
31		Reduce mercury emissions using one or a combination of techniques in the corresponding table.	The following measures listed in the table of BAT 31 are used: e	CC
		BAT-AEL for mercury	The plant is currently able to achieve an emission limit value set at the top end of the BAT-AEL range.	CC
32	Emissions to water	Reduce contamination of uncontaminated water, reduce emissions to water and increase resource efficiency. Segregate waste water streams and treat them separately.	The measures listed under BAT 32 are used.	CC
33	Water usage	Reduce water usage, prevent waste water generation using one or a combination of techniques in the corresponding table	The following measures listed in the table of BAT 33 are used: c	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
34	Emissions to water	Reduce emissions to water from FGC and/or from storage and treatment of slags and bottom ashes using one or a combination of techniques in the corresponding table and use secondary techniques as close to source as possible to avoid dilution.	The following measures listed in the table of BAT 34 are used: a, b, c, d, e, f, g, k, l, m	
		BAT-AELs	The plant will be able to achieve an emission limit value set at the top end of the BAT-AEL range by 03/12/23. We are still unsure of the precise averaging requirements for these BAT-AELs. Based on monthly averages we are able to achieve these values, but dependant on the implementation of daily averages some difficulties may be experienced.	FC
35	Resource efficiency	Resource efficiency. Handle and treat bottom ashes separately from FGC residues.	Bottom ashes are handled and treated separately from FGC residues.	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
36		Resource efficiency for treatment of slags and bottom ashes. Use appropriate combination of techniques in corresponding table depending on hazardous properties of the slags and bottom ashes.	Not applicable - bottom ash treatment is not carried out.	NA
37	Noise	Reduce noise emissions using one or a combination of techniques in the corresponding table.	The following measures listed in the table of BAT 37 are used: a, b, c, d, e.	CC