

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/ VP3997NK
The Operator is: SUEZ Recycling and Recovery Surrey Ltd
The Installation is: Charlton Lane Eco Park
This Variation Notice number is: EPR/VP3997NK/V008

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 and the waste treatment. 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; and BAT conclusions for waste treatment detailed in document reference C(2018) 5070. 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.

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

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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 02/12/2022 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 06/04/2023.

We considered that the response did not contain sufficient information for us to commence the permit review. We therefore issued further information requests to the Operator on 10/10/23 and 02/11/23. Suitable further information was provided by the Operator on 12/10/23, 19/10/23, and 17/11/23.

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. 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, with the exception of NO_x which already has a limit of 100mg/m³ (the ELV is 180mg/m³).

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.

The relevant BAT AEEL for this installation is gross electrical efficiency.

The operator stated that the gross energy efficiency has not yet been calculated. We have set improvement condition IC3 that requires the operator to calculate the efficiency and assess opportunities to improve energy efficiency in the event that gross energy efficiency is below the BAT AEEL range.

5.4 Monitoring (Incineration)

The monitoring requirements for mercury and dioxins/furans are dependent on whether the waste has low and stable mercury content and whether emissions of dioxins are stable respectively. Improvement conditions IC1 and IC2 require the operator to submit information to enable us to require the correct monitoring.

5.5 Containment and bunding (Waste Treatment Activities)

The Operator submitted a report detailing the suitability of the of the existing primary and secondary containment for the waste treatment activities on site, including a comparison with relevant standards including CIRIA 535 and CIRIA 736. Based on the report we are satisfied that the existing containment infrastructure for waste treatment activities are appropriate.

However, in order to confirm this we have included improvement condition IC4 in the permit requiring the Operator to submit a written 'secondary and tertiary containment plan' to detail the results of an inspection and program of works carried out by a competent structural engineer in accordance with relevant standard (CIRIA 736). The plan shall be implemented in accordance with the Environment Agency's written approval.

5.6 Abatement (Waste Treatment Activities)

We have included improvement condition IC5 in the permit requiring the Operator to review the waste treatment activities abatement and ventilation systems. The Operator shall implement any improvements identified in the review as approved by the Environment Agency.

5.7 Emissions from gas engines (Waste Treatment Activities)

We have included improvement condition IC6 in the permit requiring the Operator quantify methane emissions from the gas engines utilising the biogas produced by the AD treatment process to ensure that they are within benchmark levels. If they are found not be within benchmark levels the Operator will be required to take corrective actions to reduce the methane emissions.

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.

Activity Reference A1 : Gasification [S5.1 Part A(1)(b)]

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.	The EMS meets the requirements of BAT1 with the exception of The OTNOC Management Plan and the EMS will be updated by 03/12/23 to ensure that it meets BAT1	FC
2	Energy efficiency	Determine gross electrical efficiency, gross energy efficiency or boiler efficiency (depending on plant type).	Energy efficiency has not been calculated. A test will be carried out before 03/12/23 using long term data derived using Ricardo R1 guidance on 5-year boiler efficiency reassessment. Note we have included an improvement condition (IC3) in the permit requiring the Operator to carry out the Gross Electrical Efficiency calculation.	FC

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 BAT3 requirements for the following relevant parameters Flue gas - flow, oxygen content, temperature, pressure and water vapour content. Combustion chamber - 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 BAT4 requirements	CC
	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 plant burns municipal waste or similar and therefore PBDD/F monitoring will be carried out from 01/01/23 where possible.	FC
	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 PCDD/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.	Attempts will be made to demonstrate via the Mercury Monitoring Protocol that emissions to air of mercury are low and stable and that a continuous sampler is not required by 03/12/23; if these are unsuccessful, continuous monitoring will be installed as soon as reasonably practical.	FC
5	OTNOC monitoring	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.	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.	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.	Not applicable as no emissions to water from FGC or bottom ash treatment.	NA
		Reduced monitoring frequency permitted if emissions can be shown to be sufficiently stable.	Not applicable as no emissions to water from FGC or bottom ash treatment.	NA
7	Ash monitoring	Monitor LOI or TOC content of bottom ash to the frequencies and standards in corresponding table .	Monitoring carried out for TOC	CC
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.	Not applicable - plant is not a dedicated hazardous waste incinerator	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
9	Waste input controls	Pre-acceptance / acceptance procedures. Use all techniques (a) to (c) in corresponding table, and where relevant (d), (e) and (f).	Techniques set out in BAT 9 (a)-(c) are in place. Techniques (d)-(f) are not relevant.	CC
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.	CC
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		Storage and handling. Use both techniques listed in corresponding table.	Measures in line with BAT 12 are in place	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
13		Storage and handling of clinical waste. Combination of techniques listed in corresponding table.	Not applicable as clinical waste not received at the installation	NA
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 and c	CC
		BAT-AEPL for TOC or LOI	The installation meets the BAT-AEPL for TOC 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 a continuous waste supply from the RDF bunker	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 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 BAT18 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	FC
19	Energy efficiency	Increase efficiency by using a heat recovery boiler.	A heat recovery boiler is used to generate electricity and/or steam and/or hot water	CC
20		Increase efficiency by using a combination of techniques listed in corresponding table.	The following measures listed in the table of BAT 20 are used: b, c and d	CC
		BAT-AEEL is within the BAT – AEEL range	The gross energy efficiency has not yet been calculated. See response to BAT 2 above. Note we have included an improvement condition (IC3) in the permit requiring the Operator to carry out the Gross Electrical Efficiency calculation.	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
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.	Not applicable - gaseous or liquid waste are not accepted	NA
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
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

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
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: a and c	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.	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-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

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
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: b	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 will be able to achieve an emission limit value set at the top end of the BAT-AEL range by 03/12/23. Tests/trials have been completed and we believe the site will be able to comply with the BAT AELs	FC
29		Reduce emissions of NO _x 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, b and c	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		BAT-AELs for NO _x , CO and NH ₃	<p>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 for Nox and CO. See attachment for detail on NH₃</p> <p>Following completion of projects intended to optimise SNCR operation, the daily average for ammonia has been within 15mg/m³. SUEZ are confident, that while the gasifier is running at normal operating conditions, that the anticipated ELV for ammonia of 15mg/m³ and for NO_x of 100mg/m³ will both be complied with.</p>	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, c, d, and e	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
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: b	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
		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: a and c	CC
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.	Not applicable - no direct or indirect emissions to water from FGC or bottom ash treatment	NA
		BAT-AELs	Not applicable - no direct or indirect emissions to water from FGC or bottom ash treatment	NA

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
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
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: b, d and e	CC

Activity Reference A2 : Anaerobic Digestion [S5.4 Part A(1)(b)(i)]

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.	SUEZ EMS is accredited to ISO14001. Refer to section 2.7 of the Review of Operating Techniques December 2022 for Residues Management Plan information.	CC
2	Waste pre-acceptance, acceptance and tracking	Improve overall performance via use of all of techniques	ISO14001 accredited management system includes procedures for waste pre-acceptance and acceptance. Waste tracking is managed via SUEZ's electronic materials management (MM) system.	CC
3	Inventory of waste water and waste gas streams	Improve overall performance : establish and to maintain an inventory of waste water and waste gas streams, as part of the environmental management system (see BAT 1), that incorporates all of the following features	Site trade effluent stream is periodically measured and recorded for volume discharged, pH, Total Suspended Solids, Total Chemical Oxygen Demand, Phosphorus and Ammonia. Facility emissions to air from the CHP engines are periodically monitored in line with requirements of the permit.	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
4	Storage procedures	Improve overall performance via use of all of techniques	Waste received is stored internally in the Waste Reception Hall. The storage capacity is 1-2 days of input material (up to 250 Tns). Excess material is diverted to 3rd party facilities if this storage capacity is full. Techniques a, b, & c. D is not applicable.	CC
5	Handling and transfer procedures	Improve overall performance via use of handling and transfer procedures	Current procedures are being reviewed and updated and will comply prior to 03/12/2023	FC
6	Monitor key process parameters	For relevant emissions to water monitor key process parameters at key locations.	Monitoring is undertaken inline with the existing trade effluent consent	CC
7	Monitor emissions to water	Monitor emissions to water with at least the frequency stated, and in accordance with EN standards (or ISO, national or other international standards, where EN not available).	Not relevant due to nature of waste treatment process and destination of discharge.	NA
8	Monitor channelled emissions to air	Monitor channelled emissions to air with at least the frequency stated, and in accordance with EN standards (or ISO, national or other international standards, where EN not available).	Need to instigate 6 monthly Odour Unit testing of the Odour Control System Exhaust. OMP will be updated to include this requirement and monitoring to be undertaken prior to 03/12/2023	FC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
9	Monitor diffuse emissions of organic compounds to air	Monitor diffuse emissions of organic compounds to air from the regeneration of spent solvents, the decontamination of equipment containing POPs with solvents, and the physico-chemical treatment of solvents for the recovery of their calorific value, at least once per year using one or a combination of the techniques listed	The site does not recover solvents and therefore has no diffuse emissions from these sources	NA
10	Monitor odour	Periodically monitor odour emissions.	Need to instigate 6 monthly Odour Unit testing of the Odour Control System Exhaust. OMP will be updated to include this requirement and monitoring to be undertaken prior to 03/12/2023	FC
11	Monitor consumption of water, energy and raw materials, and generation of residues and waste water	Monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water, with a frequency of at least once per year.	Annual consumption of water, energy and raw materials and the annual generation of residues and waste water is monitored by SUEZ and reported to EA.	CC
12	odour management plan	Set up, implement and regularly review an odour management plan, as part of the environmental management system	Need to instigate 6 monthly Odour Unit testing of the Odour Control System Exhaust. OMP will be updated to include this requirement and monitoring to be undertaken prior to 03/12/2023	FC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
13	reduce odour emissions	In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques listed.	Waste is processed on site within at most 48 hrs of receipt, In addition, ionised air is pumped into the AD Facility Halls to destroy odours in situ. Techniques a & b are used.	CC
14	reduce diffuse emissions to air	To reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques listed.	A range of techniques detailed in a, c, d, f and g are used	CC
15	Minimise use of flaring	To use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques listed.	The emergency flare is only used in the following situations: -1 or more CHP engines are offline for maintenance and gas yield exceeds remaining engine capacity. -gas quality is poor and unable to be burnt in the CHP engines. Techniques a & b.	CC
16	Reduce emissions to air from flares	To reduce emissions to air from flares when flaring is unavoidable, use both of the techniques listed.	Performance of the flare and the resulting emissions are monitored in accordance with the requirements of the permit. Gas quality and volume sent to the flare is monitored continuously. Techniques a & b.	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
17	Noise and vibration management plan	To prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the environmental management system.	A noise management plan is included in the site Environmental Risk Assessment	CC
18	Reduce noise and vibration emissions	To prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques listed.	Techniques a, b, c, d and e are used	CC
19	Optimise water consumption, reduce waste water and prevent or reduce emissions to soil and water	To optimise water consumption, to reduce the volume of waste water generated and to prevent or, where that is not practicable, to reduce emissions to soil and water, BAT is to use an appropriate combination of the techniques listed.	The AD process is a net water producer with excess water being discharged to sewer. Within the process, recovered water is used for diluting and washing the food waste coming into the process. It is also used for washing down floors and equipment. All process tanks are secondary contained and surface water is collected in a site drainage system and passes through oil/water separators before being discharged to an infiltration pond. Techniques a, b, c, d, e, f, g, h & i.	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
20	Waste water treatment	To reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques listed.	Waste water from the process is treated through an activated sludge and membrane bio reactor process that corrects pH, reduces COD, removes solids and converts ammonia to nitrate. Techniques c, l, m n and q are used.	CC
21	Prevent or limit the environmental consequences of accidents and incidents	To prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques listed, as part of the accident management plan.	The site has an Accident Management Plan	CC
22	Substitute materials with waste	To use materials efficiently, BAT is to substitute materials with waste.	Waste water from the process is treated and then recycled to provide dilution liquid for the food waste coming in as well as washing water within the buildings and process.	CC
23	Energy efficiency plan, energy balance record	To use energy efficiently, BAT is to use both of the techniques listed.	The site has an Energy Efficiency Plan.	CC
24	Maximise reuse of packaging	To reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging, as part of the residues management plan	Refer to section 2.7 of the Review of Operating Techniques December 2022 for Residues Management Plan information.	CC

Mechanical Treatment of Waste

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
25	General - Emissions to air	To reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin-like PCBs, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	Section 2 only applies to mechanical treatment of waste when not combined with biological treatment	NA
26	Metal shredders	To improve the overall environmental performance, and to prevent emissions due to accidents and incidents.	Section 2 only applies to mechanical treatment of waste when not combined with biological treatment	
27	Deflagrations	Prevent deflagrations and reduce emissions when deflagrations occur, BAT is to use technique a. and one or both of the techniques b. and c. listed.	Section 2 only applies to mechanical treatment of waste when not combined with biological treatment	
28	Energy efficiency	In order to use energy efficiently, BAT is to keep the shredder feed stable.	Section 2 only applies to mechanical treatment of waste when not combined with biological treatment	
29	WEEE containing VFCs and/or VHCs	In order to prevent or, where that is not practicable, to reduce emissions of organic compounds to air, BAT is to apply BAT 14d, BAT 14h and to use technique a. and one or both of the techniques b. and c. listed.	Section 2 only applies to mechanical treatment of waste when not combined with biological treatment	
30	Explosions when treating WEEE	In order to prevent emissions due to explosions when treating WEEE containing VFCs and/or VHCs, BAT is to use either of the techniques listed.	Section 2 only applies to mechanical treatment of waste when not combined with biological treatment	

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
Mechanical Treatment of Waste with Calorific Value				
31	Emissions to air	In order to reduce emissions to air of organic compounds, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	Section 2 only applies to mechanical treatment of waste when not combined with biological treatment	NA
32	WEEE containing mercury	To reduce mercury emissions to air, BAT is to collect mercury emissions at source, to send them to abatement and to carry out adequate monitoring.	Section 2 only applies to mechanical treatment of waste when not combined with biological treatment	
Biological Treatment				
33	Odour emissions	In order to reduce odour emissions and to improve the overall environmental performance, BAT is to select the waste input.	Details are in the Site Waste Acceptance Protocol	CC
34	Emissions to air	To reduce channelled emissions to air of dust, organic compounds and odorous compounds, including H ₂ S and NH ₃ , BAT is to use one or a combination of the techniques listed.	Air is extracted from the AD Halls and wet scrubbed to remove ammonia before passing through activated carbon filters to remove odours. Biogas from the process is thermally oxidised by combustion in a gas engine. Techniques a, d & e. BAT AEL set for ammonia in line with BAT conclusions document.	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
35	Emissions to water	To reduce the generation of waste water and to reduce water usage, BAT is to use all of the techniques listed.	Leachate from the food waste delivered to site is collected in a sump and pumped into the process. Treated water from the end of the process is used to turn the food waste into a slurry. Techniques a & b are used.	CC
36	Aerobic treatment	To reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps, BAT is to use one or both of the techniques listed.	The site does not undertake aerobic treatment of waste	NA
37		To reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps, BAT is to use one or both of the techniques listed.		NA
38		To reduce emissions to air and to improve the overall environmental performance, BAT is to monitor and/or control the key waste and process parameters.	The process is fully monitored to ensure: -stable digester operation (pH, alkalinity, VFAs,DS%, °C, OLR, HRT etc) -reduce foaming by the automatic application of anti-foam (liquid level and foam level continuously monitored). -early identification of equipment failure. -biogas production rate, header pressure and quality (%CH4, %H2S)	CC

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
39	Mechanical biological treatment	In order to reduce emissions to air, BAT is to use both of the techniques listed.	The site does not undertake MBT	NA
Physico-chemical treatment of Solid and/or Pasty Waste				
40	Environmental performance	To improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).	The site does not undertake this activity	NA
41	Emissions to air	To reduce emissions of dust, organic compounds and NH3 to air, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	The site does not undertake this activity	
42	Re-refining of waste oil	To improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).	The site does not undertake this activity	
43	Waste sent for disposal	To reduce the quantity of waste sent for disposal, BAT is to use one or both of the techniques listed.	The site does not undertake this activity	
44	Emissions to air	To reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	The site does not undertake this activity	

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
Physico-chemical treatment of Waste with Calorific Value				
45	Emissions to air	To reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	The site does not undertake this activity	NA
46	Regeneration of spent solvents	To improve the overall environmental performance of the regeneration of spent solvents, BAT is to use one or both of the techniques listed.	The site does not undertake this activity	
47	Emissions to air including AEL	To reduce emissions of organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	The site does not undertake this activity	
48	Thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil	To improve the overall environmental performance of the thermal treatment of spent activated carbon, waste catalysts and excavated contaminated soil, BAT is to use all of the techniques listed.	The site does not undertake this activity	
49	Emissions to air	To reduce emissions of HCl, HF, dust and organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	The site does not undertake this activity	

BAT No.	Topic	Brief Description	Operator response	Complies with BAT? (NA, CC, FC, NC)
50	Water washing of excavated contaminated soil	To reduce emissions of dust and organic compounds to air from the storage, handling, and washing steps, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	The site does not undertake this activity	
51	Decontamination of equipment containing PCBs	To improve the overall environmental performance and to reduce channelled emissions of PCBs and organic compounds to air, BAT is to use all of the techniques listed.	The site does not undertake this activity	
Treatment of Waste-Based Liquid Waste				
52	Environmental performance	To improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).	The site does not accept liquid waste	NA
53	Emissions to air	To reduce emissions of HCl, NH3 and organic compounds to air, BAT is to apply BAT 14d and to use one or a combination of the techniques listed.	The site does not accept liquid waste	

6 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.

7 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. We have imposed an improvement programme; de key issues section for further 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 5 of this document.

Aspect considered	Decision
	It is considered that the ELVs/equivalent parameters or technical measures described above will ensure that significant pollution of 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 in Section 5 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: “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>