Natural Resources Wales permitting decisions

Variation and Consolidation of a bespoke Permit – Tradebe Healthcare National Limited

We have decided to issue a Natural Resources Wales initiated variation and consolidated permit for the Wrexham Clinical Waste Treatment Facility in Wrexham operated by Tradebe Healthcare National Limited.

The permit number is EPR/WP3636ZG.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

The permit has been varied following the publication of the revised Best Available Techniques (BAT) Reference Documents (BREF) for Waste Treatment. The associated BAT conclusions to this document were published on 17 August 2018 in the Official Journal of the European Union.

This variation incorporates the changes required by the Industrial Emissions Directive following a statutory review of permits in the Waste Treatment sector. These include the amendment of the wording of several permit conditions relating to notifications, changes to emissions limits and monitoring requirements.

We are satisfied that the operator will be compliant with the published BAT conclusions which will apply from 17 August 2022.

Purpose of this document

This decision document:

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

It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position.

Structure of this document

- Assessment of Wrexham Clinical Waste Treatment Facility against the published BAT conclusions for Waste Treatment.
- Annex 1 – Decision Checklist regarding relevant BAT Conclusions

Assessment of Wrexham Clinical Waste Treatment Facility against the published BAT conclusions for Waste Treatment

1. Our decision

We have issued a variation, which will allow Tradebe Healthcare National Limited to operate the installation, subject to the conditions in the varied permit.

The variation does three things:

- it consolidates the original permit to reflect changes made through earlier variations;
- it brings the permit into line with our modern regulatory template; and

- it varies the permit where appropriate to reflect the outcome of our statutory review and incorporate Best Available Techniques (BAT) and Associated Emission Limit Values (BAT-AELs).

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

The original permit, issued on the 23 March 2006 ensured that the installation, employed Best Available Techniques (BAT) and ensured a high level of protection for human health and the environment. We have altered the permit as a result of the statutory review, and we are confident that the new requirements will deliver a superior level of protection to that which was previously achieved. Where a site is not currently compliant with BAT, Improvement Conditions have been included to bring the site up standard by 17 August 2022.

2. The legal framework

The Variation and Consolidation Notice (which includes the consolidated permit as Schedule 2) will be issued under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 (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 Industrial Emissions Directive (IED);
- a waste operation subject to Environmental Permitting Regulations, however this review only applies to the installation activity as described by the Industrial Emissions Directive; and
- subject to aspects of other relevant legislation which also have to be addressed.

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

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

3. How we reached our decision

Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a Notice under Regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 on 5 April 2019 requiring the operator to provide information to demonstrate how the operation of their installation currently meets, or will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Regulation 61(1) Notice required the operator to:

- Describe the techniques that will be implemented before 17 August 2022, which will then ensure that operations meet the revised standard, or

- Justify why standards will not be met by 17 August 2022, 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

- Justify why an alternative technique will achieve the same level of environmental protection equivalent to the revised standard described in the BAT Conclusions.

- Where their permitted activity involves the use, production or release of a hazardous substance, as defined in Article 3(18) of the Industrial Emissions Directive, Tradebe Healthcare National Limited were required to carry out a risk assessment considering the possibility of soil and groundwater contamination at the permitted installation with such substances. Where risk of such contamination is established prepare a baseline report containing information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definite cessation of the activity. Tradebe Healthcare National Limited have a copy of a consequent baseline report.

- Where their permitted activity involves the use, production, storage or release of priority hazardous substances and any other relevant substances., as defined by the Water Framework Directive, the Tradebe Healthcare National Limited were

required to carry out a risk screening assessment considering the presence of priority hazardous substances at the permitted installation. Where a risk of these substances is established the operator is to sample the effluent and screen for the priority hazardous substances. If these substances are found to be present in the effluent stream, then assessment using the H1 tool and potential detailed modelling will be required to demonstrate that the effluent discharge will not have a significant impact to the receiving water.

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 Waste Treatment BAT Conclusions Document, the Regulation 61(1) 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(1) Notice response from the operator was received on the 3 December 2019 and additional information received on the 20 August 2020.

We considered that the response contained sufficient information for us to commence determination of the permit review. The operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 61(1) Notice response that appears to be confidential in relation to any part.

4. Key issues/Regulation 61(1) response

BAT Conclusions for the Waste Treatment were published as Commission Implementing Decision EU 2018/1447 in the Official Journal of the EU on 17 August 2018. There are 53 BAT Conclusions. This annex provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This should be read in conjunction with the permit/variation notice issued.

A response was received from Tradebe Healthcare National Limited. Following assessment of the Regulation 61(1) response, further information was requested from Tradebe Healthcare National Limited. Where the operator has concluded that they have achieved BAT, and we are in agreement, no further information/justification has been sought by Natural Resources Wales.

5. Changes we have made

Improvement Conditions

Based on the information provided in the Regulation 61(1) response, we consider that we need to set improvement conditions. These conditions are set out below. We are using these conditions to require the operator to provide Natural Resources Wales with details that need to be established or confirmed during operations. The improvement conditions ensure compliance by 2022.

Reference	Requirement	Date
IC25	The Operator shall submit to Natural Resources Wales for written approval information to evidence compliance with the following BAT requirements in accordance with the requirements specified within the BAT Conclusions of the Waste Treatment BREF Document (EU 2018) in relation to: • BAT 1 – confirmation that all requirements, such as sector specific (sectoral benchmarking, residues management etc.) requirements are included within the installations Environmental Management System.	17 February 2022 or otherwise agreed in writing with Natural Resources Wales

IC26	The Operator shall submit to Natural Resources Wales for written approval information to evidence compliance with the following BAT requirements in accordance with the requirements specified within the BAT Conclusions of the Waste Treatment BREF Document (EU 2018) in relation to: • BAT 3 - in order to facilitate the reduction of emissions to water and air, BAT is to establish and to maintain an inventory of waste water and waste gas streams, as part of the Environmental Management System, that incorporates all of the following features: o Information about the characteristics of the waste to be treated and the waste treatment processes; o Information about the characteristics of the waste water streams; and o Information about the characteristics of the waste gas streams. • BAT 6 – for relevant emissions to water as identified by the inventory of waste water streams (see BAT 3), BAT is to monitor key process parameters (e.g. waste water flow, pH, temperature, conductivity, BOD) at key locations (e.g. at the point where the emission leaves the installation). BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality. • BAT 7 – is to monitor emissions to water with at least the frequency given within the table of BAT 7 and the relevant treatment type, in accordance with EN standards. • BAT 8 – is to monitor emissions to air with at least the frequency given within the table of BAT 8 and the relevant treatment type, in accordance with EN standards. • BAT 20 – in order to reduce emissions to water, BAT is to treat waste water using an appropriate	17 February 2022 or otherwise agreed in writing with Natural Resources Wales

	combination of the techniques described within the table of BAT 20. • BAT 41 – in order to reduce emissions to air of dust, organic compounds and NH3, BAT is to apply BAT 14d and to use one or a combination of the techniques listed within the table of BAT 41. BAT-AELs for channelled emissions of dust to air should comply with table 6.8 of BAT 41. Information resulting from these improvement conditions will be used to assess the relevance of the BAT-AELs and monitoring requirements as set in Schedule 3 and 4 of this permit. The Operator shall submit for written approval a methodology for meeting the relevant process parameters listed in Schedule 3b Table S3.1 and S3.3, following completion of BAT 3 and the other applicable items listed. The methodology shall identify each of the relevant process parameters and detail the frequency and techniques in place to record the data. Where a process parameter cannot be monitored justification should be provided and/or a suitable alternative proposed. The methodology should include trigger levels for each of the relevant parameters identified with associated procedures in place if trigger levels are exceeded.	
IC27	The Operator shall submit to Natural Resources Wales for written approval information to evidence compliance with the following BAT requirements in accordance with the requirements specified within the BAT Conclusions of the Waste Treatment BREF Document (EU 2018) in relation to: • BAT 4 – details of how adequate storage capacity is provided and maintained at the site. • BAT 14 – details of the techniques to prevent, or where practicable reduce diffuse emissions to air, in particular of dust, organic compounds and odour. This	17 February 2022 or otherwise agreed in writing with Natural Resources Wales

	is in reference to items a to d of the applicable table within BAT 14.	
IC28	The Operator shall complete and submit for approval a Phase 1 screening test report for priority hazardous pollutants and any other relevant priority hazardous substances discharged to sewer. For any substance which is not screened out by the screening tests, further modelling (as described in the risk assessment guidance "Surface water pollution risk assessment for your environmental permit") should be undertaken, and the results of the modelling submitted to NRW for approval.	17 February 2022 or otherwise agreed in writing with Natural Resources Wales
IC29	The operator shall submit a written Fire prevention and mitigation plan to Natural Resources Wales. The Fire prevention and mitigation plan must be produced in line with the standards set out in Fire prevention and mitigation plan guidance – Waste.	3 months after permit issue or otherwise agreed in writing with Natural Resources Wales

IC25 – An effective Environmental Management System (EMS) will enable the Operator to manage compliance with the standards and outcomes required by the permit and any other legal requirements to protect the environment. IC25 has been included within the permit to confirm that the EMS for the site contains all of the general and sector specific conditions within BAT Conclusion 1 of the Waste Treatment BREF Document.

IC 26 – The Operator needs to review their waste water and gas stream inventory in regard to BAT Conclusion 3 in order to facilitate the reduction of emissions to water and air which will form part of the installation's EMS. With the relevant emissions identified, BAT Conclusion 6 is to monitor the key process parameters within the waste water (e.g. waste water flow, pH, temperature, conductivity, BOD) at key monitoring locations (e.g. at the point where the emission leaves the installation). BAT is to use ISO, national or other international standards that ensure the provision of data of an

equivalent scientific quality. The monitoring requirements and frequency for the relevant treatment type are outlined within BAT Conclusion 7 for relevant parameters. In order to reduce emissions to water, BAT Conclusion 20 is to treat waste water using an appropriate technique for compliance with the BAT-AELs outlined within the table of BAT Conclusion 20.

Upon completion of BAT Conclusion 3 and the inventory of waste gas streams, BAT Conclusion 8 outlines the monitoring and requirements for relevant parameters. In order to reduce emissions to air, BAT Conclusion 41 is to apply a combination of techniques listed within the table of BAT Conclusion 41 and BAT-AELs for channelled emissions of dust to air.

The information resulting from these improvement conditions will be used to assess the relevance of the BAT-AELs and monitoring requirements as set out in Schedule £ and 4 of the permit.

The Operator shall then submit for written approval a methodology for meeting the relevant process parameters listed in Schedule 3b Table S3.1 and S3.3, following completion of BAT 3 and the other applicable items listed. The methodology shall identify each of the relevant process parameters and detail the frequency and techniques in place to record the data. Where a process parameter cannot be monitored justification should be provided and/or a suitable alternative proposed. The methodology should include trigger levels for each of the relevant parameters identified with associated procedures in place if trigger levels are exceeded.

IC27 – The Operator also needs to provide more detail for how adequate storage capacity is provided and maintained at the site and how this complies to BAT Conclusion 4 of the Waste Treatment BREF Document. Additional information is also required in regard to BAT Conclusion 14 and the details of techniques in place to prevent, or where practical reduce diffuse emissions to air. In particular, emissions to air of dust, organic compounds and odour.

IC28 – The Operator shall complete and submit for approval a Phase 1 screening test report for priority hazardous pollutants and any other relevant priority hazardous substances discharged to sewer. For any substance which are not screened out by the screening tests, further modelling (as described in the risk assessment guidance “Surface water pollution risk assessment for your environmental permit”) should be

undertaken, and the results of the modelling submitted to Natural Resources Wales for approval.

IC29 – As per Natural Resources Wale's Fire Prevention and Mitigation Guidance, if an operator has an environmental permit that authorises the storage of combustible waste, or an existing permit with a permit condition requiring you to have a Fire Prevention Mitigation Plan (FPMP), the operator must adhere to this guidance.

Our guidance does not apply to hazardous waste storage. Therefore, any regulated facility storing hazardous waste shall include a section for waste storage and fire prevention techniques and reference the relevant guidance for this as part of the facilities Environmental Management System (EMS). This could be the Health and Safety Executive guidance.

Operational Changes

There are no operational changes.

Emissions to Water

As part of our delivery of the Water Framework Directive requirements, we need to identify and assess the impact for all discharges to surface waters and/or sewer from the site for priority hazardous substances and any other relevant substances. The emissions monitoring for these substances should be carried out using the methods and standards described in the M18 guidance on "Monitoring of discharges to water and sewer".

With reference to the risk assessment guidance on the gov.uk website entitled "Surface water pollution risk assessment for your environmental permit" (accessible via: https://www.gov.uk/guidance/surface-water-pollution-risk-assessment-for-your-environmental-permit) the company has not carried out the assessments and needs to complete the following:

- Screening tests for priority hazardous pollutants and any other relevant priority hazardous substances.
- For any substance which is not screened out by the screening tests further modelling, as described in the risk assessment guidance "Surface water pollution risk assessment for your environmental permit".

The Operator therefore needs to complete this assessment which has been incorporated into IC28.

Emissions to Water – Article 15(4) Derogations

No derogations were requested.

Emissions to Air

There was changes to the Emission Limit Values (ELV's) for emissions to air taking into account the BAT conclusions from the Waste Treatment BREF. This was the additional requirement for dust, NH3 and TVOC monitoring to be undertaken and subject to IC26.

The tables below outline the parameters and limits set to implement the BAT-AELs:

Effective until 16 August 2022

Release point	Parameter	Limit/ BAT AEL	Effective until
A1	Total aerobic bacteria	1,000 cfu/m^3	16 August 2022
	Total coliform bacteria	300 cfu/m^3	
	Total fungi	1,000 cfu/m^3	
A2	Total aerobic bacteria	1,000 cfu/m^3	
	Total coliform bacteria	300 cfu/m^3	
	Total fungi	1,000 cfu/m^3	
A3	None set	None set	

Effective from 17 August 2022

Release point	Parameter	Limit/ BAT AEL	Effective from
A1	Dust	5 Mg/Nm^3	17 August 2022
	NH3	None set	
	TVOC	None set	
	Total aerobic bacteria	1,000 cfu/m^3	
	Total coliform bacteria	300 cfu/m^3	
	Total fungi	1,000 cfu/m^3	
A2	Dust	5 Mg/Nm^3	
	NH3	None set	

	TVOC	None set	
	Total aerobic bacteria	1,000 cfu/m^3	
	Total coliform bacteria	300 cfu/m^3	
	Total fungi	1,000 cfu/m^3	

Emissions to Air – Article 15(4) Derogations

No derogations were requested.

Other IED BREFs relevant to the permit review

There are no specific listed activities within Table S1.1 of the permit that are within scope of other published BREFS.

6. Conclusion

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

Coupled with the consolidation and modernisation of the permit, we believe this variation provides a sound basis for ongoing regulation of the installation and we are satisfied that the operator is currently achieving or will be achieving all relevant BAT by 17 August 2022.

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

Annex 1: Decision checklist regarding relevant BAT Conclusions

BAT Conclusions for the Waste Treatment Bref were published as Commission Implementing Decision EU 2018/1147 in the Official Journal of the EU on 17 August 2018. There are 53 BAT Conclusions. This checklist provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the consolidated variation notice.

All BAT Conclusions arising are listed by number in order below;

BATc number		**Summary of BAT Conclusion requirement**	**Status/comment** **One of the following:** Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
OVERALL ENVIRONMENTAL PERFORMANCE			
1	**Environment Management System (EMS) – <u>ALL</u> of the following:**		
	I.	Management commitment	Compliant in the future – through the request for additional information the operator provided their SHEQ Policy statement. Whilst this was stated to cover the requirements of BAT 1 there was no sufficient information to demonstrate that all of the requirements for BAT 1 are included within the policy. An improvement condition (IC25) has therefore been included within the permit to ensure that all of the requirements and sector specific features of BAT 1 are incorporated within the sites EMS.
	II.	Environmental policy development including CI of performance	
	III.	Planning and implementing procedures & targets in conjunction with financial planning & investment	
	IV.	***Implementation of procedures***	
		(a) Structure & responsibility	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
		(b) Recruitment, training, awareness & competence	As above.
		(c) Communication	
		(d) Employee involvement	
		(e) Documentation	
		(f) Effective process control	
		(g) Maintenance programmes	
		(h) Emergency preparedness & response	
		(i) Safeguarding compliance with environmental legislation	
	V.	***Checking performance and taking corrective action***	
		(a) Monitoring & measurement	
		(b) Corrective and preventive action	
		(c) Maintenance of records	
		(d) Independent (where practicable) internal or external EMS auditing	
	VI.	Senior management review of EMS	
	VII.	Following development of cleaner technologies	
	VIII.	Whole life cycle considerations when designing a new plant i.e. impacts from eventual decommissioning and throughout its operating life	
	IX.	Regular sectoral bench marking	
	X.	Waste stream management (BAT 2)	
	XI.	Inventory of waste water & waste gas streams (BAT 3)	

BATc number			Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	XII.		Residues Management Plan – S6.5	As above.
	XIII.		Accident Management Plan – S6.5	
	XIV.		Odour Management Plan (BAT 12)	
	XV.		Noise & Vibration Management Plan (BAT 17)	
2	**Improving overall environmental performance – <u>ALL</u> of the following:**			
	a.		Set up and implement waste characterisation & pre-acceptance procedures	Currently Compliant - waste characterisation and pre-acceptance is completed following pre-acceptance procedures as described within the Bref.
	b.		Set up and implement waste acceptance procedures	Currently Compliant - waste acceptance is completed following acceptance procedures and non-conformance procedures.
	c.		Set up and implement a waste tracking system & inventory	Currently Compliant - a SAP system tracks waste from collection to delivery to the site and then through the process to release of the container back into the system for reuse. This tracking is made possible by barcoding the bins the waste is collected in.
	d.		Set up and implement an output quality management system	Currently Compliant – procedures are in place with inspections and use of external consultants for analysing efficacy of the process outputs. The site is externally accredited to ISO 9001 standard
	e.		Ensure waste segregation	Currently Compliant – wastes are not stored separately due to hazardous properties and are segregated through the collection bin system and storage on site.
	f.		Ensure waste compatibility prior to mixing or blending	Currently Compliant – informed by waste characterisation and pre-acceptance procedures, compatibility is not often required as the waste is stated as having no hazardous properties and only biological properties.

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	g.	Sort solid incoming waste – S6.4	Currently Compliant - sorting incoming solid waste is not applicable to the site. Visual inspections are made and if there is any extraneous matter this can be removed before processing. EPR 5.07 advises that clinical waste bags should not be opened.
3	**Establish and maintain a waste water and waste gas inventory as part of the EMS - <u>ALL</u> of the following:**		
	Information on characteristics of waste and waste treatment processes		
	(i)(a)	simplified process flow sheets showing emission sources	Currently Compliant – the site has a process flow diagram.
	(i)(b)	Process-integrated and waste water/waste gas treatment descriptions including performance	Currently Compliant – there is a procedure for plant operation and monitoring of outputs from the process.
	Information on characteristics of waste water streams		
	(ii)(a)	*Mean and variability of:*	Compliant in the future - the site has a waste water stream from the bin wash activity only and is discharged from emission point S1. Wash water is recycled and discharged weekly. Current usage is measured as required by the permit with the amount of discharge approximately 200 lts. An independent consultant report monthly on COD, pH, chromium, copper, lead, nickel, suspended solids and zinc. The results are said to be compliant with the discharge consent. The site needs to further assess the waste water inventory in regard to the Bref requirements and subject to IC26.
		Flow	
		pH	
		Temperature	
		Conductivity	
	(ii)(b)	*Mean concentration, load and variability of:*	
		Total suspended solids	
		COD/TOC	
		Nitrogen species	As above.
		Phosphorous	
		Metals	
		Priority substances/micropollutants	
		Any other relevant compounds	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	(ii)(c)	*Bioeliminability data (see BAT 52):*	As above.
		BOD	
		BOD to COD ratio	
		Zahn-Wellens test	
		Biological inhibition potential	
	Information on characteristics of waste gas streams		
	(iii)(a)	*Mean and variability of:*	Compliant in the future – the Operator needs to identify the characteristics of any waste gas streams.
		Flow	
		temperature	
	(iii)(b)	*Mean concentration, load and variability of relevant substances:*	
		Organic compounds	
		POPs e.g. PCBs	
		Any other relevant compounds	
	(iii)(c)	Flammability	
		Lower and Higher Explosive Limits	
		Reactivity	
	(iii)(d)	*Presence of other substances that may affect the gas treatment system or plant safety:*	
		O2	
		N2	
		Water vapour	
		Dust	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
4	**Reducing environmental risk associated with waste storage – <u>ALL</u> of the following:**		
	a.	Optimised storage location	Currently Compliant - the storage of waste on site is optimised as far as practicable with all wastes stored on impermeable concrete mainly in 770 lts certified bins.
	b.	Adequate storage capacity	Compliant in the future – the response states that there are no defined storage areas but that waste is not allowed to accumulate. An Improvement Condition (IC27) has been included within the permit to provide more detail on how waste storage capacity is provided and maintained.
	c.	Safe storage operation	Currently Compliant - material in bins arrive at the site on tail lift vehicles which are inspected in line with statutory lifting equipment requirements and are checked daily before the first movement of the vehicle. Waste arriving on tautliners is unloaded using FLT which is inspected and checked as described above. Bins or containers are inspected both as they are received and despatched to ensure they are fit for storage purposes.
	d.	Separate area for storage & handling of packaged hazardous waste	Not Applicable – there is no handling of packaged waste.
5	**Set up and implement procedures to reduce the environmental risk associated with handling and transfer of waste - include following elements:**		
	Carried out by competent staff		Currently Compliant – staff have a training matrix which includes both internal and external training. This ensures operations are undertaken by competent staff.

BATc number	Summary of BAT Conclusion requirement	Status/comment **One of the following:** Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Duly documented, validated and verified	Currently Compliant – there are procedures in place to ensure documentation is validated and verified such as for waste transfer notes. Records of waste movements are recorded in SAP and are fully traceable.
	Spill prevention, detection and mitigation measures	Currently Compliant - there is a spill procedure in place to manage spills, daily checks are made of the site and condition of containers. In the event of a spillage there is a procedure which describes the actions to be taken and operators are trained in its use.
	Take precautions when mixing or blending wastes	Not Applicable – there is no blending of waste.
	Procedures are risk-based and consider likelihood of accidents, incidents and their environmental impact	Currently Compliant - there is a fully documented risk assessment process which forms part of the basis for written instructions, they consider the severity and likelihood of both safety and environmental impacts.
MONITORING		
6	**Relevant emissions to water: monitor key process parameters at key locations**	
	Key process parameters	
	Waste water flow	Compliant in the future - an independent consultant reports monthly on COD, pH, chromium, copper, lead, nickel, suspended solids and zinc. The results are reviewed for compliance with the discharge consent. The Operator needs to review the key process
	pH	
	Temperature	
	Conductivity	
	BOD	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Other process parameters		parameters to ensure they are up to date with the waste water inventory (BAT 3).
	Key monitoring locations		
	Pre-treatment inlet and/or outlet		Currently Compliant - the interceptor located at the western boundary is the final release point for foul water. This interceptor remains closed in routine operations and is inspected before release.
	Final treatment inlet		
	Discharge point (to the environment)		
	Other location		
7	Monitoring emissions to water (refer to table) Monitoring parameters depend on waste treatment process(es) involved		Compliant in the future – monitoring needs to be confirmed once the waste water inventory has been confirmed for BAT 3.
8	Monitoring emissions to air (refer to table) Monitoring parameters depend on waste treatment process(es) involved		Compliant in the future – monitoring needs to be confirmed once the gas inventory has been undertaken and confirmed for BAT 3.
9	**Monitoring diffuse emissions of organic compounds to air from processes involving solvents. Use one or a combination of the following:**		
	a	Measurement – S6.2 descriptions	Not Applicable – the site does not process solvents.
	b	Emissions factor calculation	
	c	Mass balance calculation	
10	**Periodically monitor odour emissions where nuisance is expected and/or has been substantiated (monitoring frequency is outlined in BAT 12)**		
	Use EN standards e.g. 13725 or 16841		Not Applicable – there has been no odour issues with the site. A boundary walk of the site is undertaken daily to ensure there are no odour issues.
	Use equivalent methods e.g. ISO / national / international monitoring standards		
11	**Annual monitoring for:**		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	-	**Water, energy and raw materials**	Currently Compliant - monitoring and reporting of the annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water is already undertaken.
	-	**Generation of residues and waste water**	
EMISSIONS TO AIR			
12	**Set up, implement and review an Odour Management Plan (as part of the site EMS) where nuisance is expected and/or has been substantiated. Include <u>ALL</u> of the following:**		
	Protocol containing actions and timelines		Not Applicable – there have been no odour issues with the site and the wastes processed are almost exclusively non-odorous.
	Protocol for conducting odour monitoring (BAT 10)		
	Protocol for response to odour incidents/complaints		
	Odour prevention and reduction programme		
13	**Techniques to prevent, or where not practicable reduce odour emissions. Use one or a combination of the following:**		
	a.	Minimising residence times (open systems only)	Not Applicable – there are no odour issues at the site so there is no requirement to reduce odour emissions.
	b.	Use chemical treatment (N/A if desired output is hampered)	
	c.	Optimising aerobic treatment – see examples. Refer to BAT 36 for wastes other than water-based liquid waste.	
14	**Techniques to prevent, or where not practicable reduce diffuse emissions to air, in particular of dust, organic compounds and odour. Use one or a combination of the following:**		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	a.	Minimising potential diffuse emission sources – see examples	Compliant in the future – the Operator needs to provide more detail and is subject to IC27.
	b.	Select and use high-integrity equipment – see examples	
	c.	Corrosion prevention – see examples	
	d.	Containment, collection and treatment of diffuse emissions – see examples	
	e.	Dampening (with water or fog)	Currently Compliant – dampening is not required as there is no dust generation through regular housekeeping and inspections to ensure standards are maintained.
	f.	Maintenance – see examples	Currently Compliant – there is a PPMS system for managing and repairing equipment.
	g.	Cleaning of waste treatment and storage areas – see examples	Currently Compliant – this is undertaken through daily inspections.
	h.	Leak Detection And Repair (LDAR) programme for organics – S6.2	Not Applicable – the site does not process organic material.
15	**Use flaring only for safety reasons or non-routine operating conditions (OTNOC). Use <u>both</u> of the following:**		
	a.	Correct plant design – see examples	Not Applicable
	b.	Plant management including gas system balancing and advanced process control	
16	**Reduce emissions to air when flaring is unavoidable. Use <u>both</u> of the following:**		
	a.	Correct design of flaring devices – see examples	Not Applicable
	b.	Monitoring and recording as part of flare management – see examples	

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
NOISE AND VIBRATIONS			
17	**Set up, implement, and regularly review a Noise and Vibration Management Plan (as part of the EMS) where nuisance is expected and/or has been substantiated. Include <u>ALL</u> of the following:**		
	I.	Protocol with actions and timelines	Not Applicable – there are no noise or vibration issues at the site. A noise survey was carried out in 2018 which identified an issue with the internal building which has now been addressed.
	II.	Noise and vibration monitoring plan/protocol	
	III.	Noise & vibration complaint response plan/protocol	
	IV.	Noise and vibration reduction programme	
18	**Techniques to prevent, or where not practicable reduce noise and vibration emissions. Use one or a combination of the following:**		
	a.	Appropriate location of equipment and buildings	Currently Compliant – there are no noise or vibration issues at the site with techniques in place to reduce noise and vibration. As an example a noise survey was carried out in 2018 which identified an issue with the internal building which has now been addressed.
	b.	Operational measures – see examples	
	c.	Low-noise equipment – see examples	
	d.	Noise & vibration control equipment – see examples	
	e.	Noise attenuation – see examples	
EMISSIONS TO WATER			
19	**Optimise water consumption, reduce waste water generation and prevent or where not practicable reduce emissions to soil and water. Use one or a combination of the following:**		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	a.	Water management – see examples	Currently Compliant - water consumption is reported and reviewed on a monthly basis.
	b.	Water recirculation	Currently Compliant - water recirculation is carried out where possible. The bin washer recycles water on a weekly basis before discharges.
	c.	Impermeable surface	Currently Compliant - the entire site is on an impermeable surface to prevent emissions to the environment.
	d.	Reduce likelihood and impact of tank/vessel overflows and failures – see examples	Currently Compliant - the only tank on site is a break tank associated with the function of this tank to ensure that the incoming clean supply cannot be contaminated by back flow from the process. The tank is inspected and cleaned annually to reduce the likelihood of any failures.
	e.	Roofing of waste storage and treatment areas	Currently Compliant - the treatment building is under a roof and wastes are stored within bins.
	f.	Segregation of water streams (being mindful of existing plant constraints)	Currently Compliant - rainwater from the roof is sent straight to surface drain and is kept separate.
	g.	Adequate drainage infrastructure	Currently Compliant - the site is on an impermeable surface. All rainwater on site is directed to a point W1 on the site drainage plan for clean uncontaminated surface water.
	h.	Design and maintenance provisions to allow risk-based leak detection and repair. Minimise use of underground components.	Currently Compliant - the sites surface is regularly checked for cracks and this is documented in site inspection schedules. Drains are visually inspected daily. All wastes received are stored above ground.

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	i.	Appropriate buffer storage capacity (being mindful of existing plant constraints)	Not Applicable - there is no requirement for buffer storage as waste water levels are minimal. In the event of a fire, the site procedures require that the Penstock valve is closed to contain water in the drains and on site.
20	**Treat waste water using a combination of:**		
	Preliminary, primary and general treatment		
	a.	Equalisation	Compliant in the future – the operator needs to state how they are compliant to BAT 20 which is included as an improvement condition (IC26) in the permit.
	b.	Neutralisation	
	c.	Physical separation	
	Physico-chemical treatment		
	d.	Adsorption	As above.
	e.	Distillation/rectification	
	f.	Precipitation	
	g.	Chemical oxidation	
	h.	Chemical reduction	
	i.	Evaporation	
	j.	Ion exchange	
	k.	Stripping	
	Biological treatment		
	l.	Activated sludge process	As above.
	m.	Membrane bioreactor	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Nitrogen removal		
	n.	Nitrification/denitrification (where biological treatment used)	As above.
	Solids removal		
	o.	Coagulation and flocculation	As above.
	p.	Sedimentation	
	q.	Filtration (sand, micro, ultra)	
	r.	Flotation	
	BAT-AELs for DIRECT discharges to a receiving waterbody (mg/l) *Table 6.1 and its supporting notes. Monitoring requirements are outlined in BAT 7*		
	TOC	10.0-60 10-100 for water-based liquid waste	Not Applicable – the site does not discharge directly to a receiving water body.
	COD (TOC is preferred)	30-180 30-300 for water-based liquid waste	
	Suspended solids	5.0-60	
	HOI	0.5-10 applying to specific waste treatments	
	Total N	1-25 for biological treatment and waste oil re-refining 10-60 for water-based liquid waste	
	Total P	0.3-2 for biological treatment	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
		1-3 for water-based liquid waste	
	Phenol	0.05-0.2 for waste oil re-refining and physio-chemical treatment of waste with CV 0.05-0.3 for water-based liquid waste	As above.
	Free CN-	0.02-0.1 for water-based liquid waste	
	AOX	0.2-1 for water-based liquid waste	
	Metals & Metalloids – specific waste treatments as listed in Table 6.1		
	As	0.01-0.05	
	Cd	0.01-0.05	
	Cr	0.01-0.15	
	Cu	0.05-0.5	
	Pb	0.05-0.1	
	Ni	0.05-0.5	
	Hg	0.5-5	
	Zn	0.1-1	
	Metals & Metalloids – treatment of water-based liquid waste		
	As	0.01-0.1	
	Cd	0.01-0.1	
	Cr	0.01-0.3	

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Hexavalent Cr [Cr(VI]	0.01-0.1	Not Applicable.
	Cu	0.05-0.5	
	Pb	0.05-0.3	
	Ni	0.05-1	
	Hg	1.0-10	
	Zn	0.1-2	
	BAT-AELs for INDIRECT discharges to a receiving waterbody (mg/l) *Table 6.2 and its supporting notes. Monitoring requirements are outlined in BAT 7*		
	HOI	0.5-10 applying to specific waste treatments	As above (subject to IC26).
	Free CN-	0.02-0.1 for water-based liquid waste	
	AOX	0.2-1 for water-based liquid waste	
	Metals & Metalloids – specific waste treatments as listed in Table 6.2		
	As	0.01-0.05	
	Cd	0.01-0.05	
	Cr	0.01-0.15	
	Cu	0.05-0.5	
	Pb	0.05-0.1	As above.

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Ni	0.05-0.5	As above.
	Hg	0.5-5	
	Zn	0.1-1	
	Metals & Metalloids – treatment of water-based liquid waste		
	As	0.01-0.1	
	Cd	0.01-0.1	
	Cr	0.01-0.3	
	Hexavalent Cr [Cr(VI]	0.01-0.1	
	Cu	0.05-0.5	
	Pb	0.05-0.3	
	Ni	0.05-1	
	Hg	1.0-10	
	Zn	0.1-2	
EMISSIONS FROM ACCIDENTS AND INCIDENTS			
21	**Techniques to prevent or limit the environmental consequences of accidents and incidents, as part of the Accident Management Plan. Use <u>ALL</u> of the following:**		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	a.	Protection measures – see examples	Currently Compliant – the site has a CCTV system and fences to monitor 24 hours to prevent malevolent acts. The site is manned 24hrs 365days/year. There are alarm points strategically placed around the site and fire extinguishers are located based on the fire risk assessment.
	b.	Management of incidental or accidental emissions	Currently Compliant - spill procedure and accident management plans are in place to manage emissions from accidents and incidents.
	c.	Incident/accident registration and assessment system – see examples	Currently Compliant - a computer system (Q Pulse) records all accidents, incidents and near misses and also manages the outcomes and tasks as a result.
MATERIAL EFFICIENCY			
22	**Use materials efficiently by substituting materials with waste e.g. waste acids/alkalis for pH adjustment, fly ashes for binders**		Not Applicable.
ENERGY EFFICIENCY			
23	**Use energy efficiently by using <u>both</u> of the following techniques:**		
	a.	Energy efficiency plan	Currently Compliant - energy consumption is measured on a monthly basis and reviewed as kWh/tonne of waste processed. Periodic reviews are carried out on what improvements could be

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
			made to increase energy efficiency. When replacing plant and equipment it is stated as a requirement to source more energy efficient systems.
	b.	Energy balance record	Currently Compliant - the site has installed a heliex system which recovers heat from the process and produces electricity for use on site and potentially export to the National Grid.
REUSE OF PACKAGING			
24	**Maximise the reuse of packaging as part of a Residues Management Plan (see BAT 1 XII.)**		Currently Compliant - the 770lt containers for the carriage of waste are washed and reused multiple times and are discarded when damaged via a plastic recycling waste management provider. There are no other packaging waste types as such.
MECHANICAL TREATMENT OF WASTE (GENERAL BAT)			
25	**Reduce emissions to air of dust, particulate-bound metals, PCDD/F and dioxin-like PCBs by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:**		
	a.	Cyclone – see S6.1	Not Applicable.
	b.	Fabric filter – see S6.1	Not Applicable.
	c.	Wet scrubbing – see S6.1	
	d.	Water injection into the shredder	
	BAT-AEL for channelled dust emissions to air from the mechanical treatment of waste (mg/Nm3)		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Table 6.3 and its supporting note. Monitoring requirements are outlined in BAT 8		
	Dust	2.0-5.0	Not Applicable.
MECHANICAL TREATMENT OF METAL WASTE BY SHREDDING			
26	**Improve overall environmental performance and prevent emissions due to accidents and incidents. Use BAT 14g AND ALL of the following techniques:**		
	(a)	Detailed inspection procedure for baled waste before shredding	Not Applicable.
	(b)	Remove dangerous items from waste inputs and dispose of them in a safe manner	
	(c)	Treatment of containers accompanied by a declaration of cleanliness	
27	**Prevent deflagrations and reduce emissions from deflagrations. Use technique a. AND ONE OR BOTH of techniques b. and c.**		
	a.	Deflagration management plan with reduction programme, incident review and response protocol	Not Applicable.
	b.	Pressure relief dampers	
	c.	Pre-shredding (device)	Not Applicable.
28	**Use energy efficiently by keeping the shredder feed stable**		
MECHANICAL TREATMENT OF WEEE CONTAINING VFCS AND/OR VHCS			

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
29	**Techniques to prevent, or where not practicable reduce emissions of organic compounds to air. Apply BAT 14d <u>AND</u> BAT14h <u>AND</u> technique a. <u>AND ONE OR BOTH</u> of techniques b. and c.**		
	a.	Optimised removal and capture of refrigerants and oils	Not Applicable.
	b.	Cryogenic condensation	
	c.	Adsorption	
	BAT-AELs for channelled TVOC and CFC emissions to air from treatment of WEEE containing VFCs and/or VHCs (mg/Nm3) *Table 6.4. Monitoring requirements are outlined in BAT 8*		
	TVOC	3.0-15	Not Applicable.
	CFCs	0.5-10	
30	**Prevent emissions due to explosions when treating WEEE containing VFCs and/or VHCs. Use <u>EITHER</u> of the following techniques:**		
	a.	Inert atmosphere e.g. N2	Not Applicable.
	b.	Forced ventilation	
MECHANICAL TREATMENT OF WASTE WITH CALORIFIC VALUE			
31	**Reduce emissions to air of organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:**		
	a.	Adsorption – see S6.1	Not Applicable.
	b.	Biofilter – see S6.1	
	c.	Thermal oxidation – see S6.1	
	d.	Wet scrubbing – see S6.1	
	BAT-AEL for channelled TVOC emissions to air from the mechanical treatment of waste with calorific value (mg/Nm3) *Table 6.5 and its supporting note. Monitoring requirements are outlined in BAT 8*		
	TVOC	10.0-30.0	Not Applicable.

BATc number	Summary of BAT Conclusion requirement		Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	MECHANICAL TREATMENT OF WEEE CONTAINING MERCURY		
32	**Reduce mercury emissions to air by collecting them at source, sending them to abatement and carrying out adequate monitoring. This includes <u>ALL</u> of the following:**		
	Equipment is enclosed, under negative pressure and connected to a LEV system		Not Applicable.
	Waste gas treated using dedusting techniques – see examples – followed by adsorption on activated carbon		
	Monitoring of waste gas treatment efficiency		
	Mercury levels measured at least weekly within treatment and storage areas		
	BAT-AEL for channelled mercury (Hg) emissions to air from the mechanical treatment of WEEE containing mercury (µg/Nm3) *Table 6.6. Monitoring requirements are outlined in BAT 8*		
	Hg	2.0-7.0	Not Applicable.
	BIOLOGICAL TREATMENT OF WASTE (GENERAL BAT)		
33	**Reduce odour emissions and improve overall environmental performance by selecting the waste input (to ensure its suitability for biological treatment). See also BAT 2**		Not Applicable.
34	**Reduce emissions to air of dust, organic compounds and odorous compounds (including H2S & NH3) by using one or a combination of the following techniques:**		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	a.	Adsorption – see S6.1	Not Applicable.
	b.	Biofilter – see S6.1	
	c.	Fabric filter – see S6.1.	
	d.	Thermal oxidation – see S6.1	
	e.	Wet scrubbing – see S6.1	
	BAT-AEL for channelled NH3, odour, dust and TVOC emissions to air from the biological treatment of waste (mg/Nm3) (ou_E/m3) *Table 6.7 and its supporting notes. Monitoring requirements are outlined in BAT 8*		
	NH3	0.3-20	Not Applicable.
	Odour	200-1000	
	Dust	2.0-5.0	
	TVOC	5.0-40	
35	**Reduce the generation of waste water and reduce water usage by using <u>ALL</u> of the following:**		
	a.	Segregation of water streams (see also BAT 19f)	Not Applicable.
	b.	Water recirculation	
	c.	Minimisation of the generation of leachate	
BIOLOGICAL TREATMENT OF WASTE: AEROBIC METHODS			
36	**Reduce emissions to air and improve overall environmental performance by monitoring and/or controlling key waste and process parameters. Include following elements:**		
	Waste input characteristics e.g. C to N ratio, particle size		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Temperature and moisture content within windrows (Moisture monitoring not needed for enclosed processes where H&S issues have been identified)		Not Applicable.
	Aeration of the windrow		
	Windrow porosity, height and width		
37	**Reduce diffuse emissions to air of dust, odour and bioaerosols from open-air treatment steps. Use <u>ONE OR BOTH</u> of the following techniques:**		
	a.	Use of semi-permeable membrane covers	Not Applicable.
	b.	Adaptation of operations to the meteorological conditions	
BIOLOGICAL TREATMENT OF WASTE: ANAEROBIC METHODS			
38	**Reduce emissions to air and improve overall environmental performance by monitoring and/or controlling key waste and process parameters. Include following elements:**		
	Implement a manual and/or automatic monitoring system to:		
	Ensure a stable digester operation		Not Applicable.
	Minimise operational difficulties and associated odour emissions		
	Provide sufficient early warning of system failures		
	Windrow porosity, height and width		
	Monitoring and/or control of key waste and process parameters – examples below:		
	pH and alkalinity of the digester feed		Not Applicable.
	Digester operating temperature		
	Hydraulic and organic loading rates of the digester feed		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Volatile fatty acids and NH3 concentrations within digester & digestate		As above.
	Biogas quantity, composition (e.g. H2S) and pressure		
	Liquid and foam levels in the digester		
MECHANICAL BIOLOGICAL TREATMENT (MBT) OF WASTE			
39	**Reduce emissions to air. Generally applicable to new plants, existing plants may have layout constraints. Use <u>BOTH</u> of the following techniques:**		
	a.	Segregation of the waste gas streams (refer to inventory described in BAT 3)	Not Applicable.
	b.	Recirculation of waste gas. Waste gas treatment is described in BAT 34 and recirculation in BAT 35.	
PHYSICO-CHEMICAL TREATMENT OF SOLID AND/OR PASTY WASTE			
40	**Improve overall environmental performance by monitoring the waste input as part of the waste pre-acceptance and acceptance procedures. See also BAT 2.**		
	Monitoring the waste input		
	Content of organics, oxidising agents, metals, salts, odorous compounds		Currently Compliant - waste pre acceptance audits are received from customers which are required to demonstrate clear segregation of wastes in line with HTM07-01 and EPR 5.07. Prior to contract start these audits are reviewed internally for completeness.

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
			Waste received is visually inspected in line with the above guidance and any material found to be non-conforming is reported back to the customer. As the site handles clinical waste, there is no opening of waste bags, boxes or sample the waste.
	H2 formation potential upon mixing of flue-gas treatment residues/ashes with water		Not Applicable.
41	**Reduce emissions to air of dust, organic compounds and NH3 by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:**		
	a.	Adsorption – see S6.1	Compliant in the future – subject to IC26.
	b.	Biofilter – see S6.1	
	c.	Fabric filter – see S6.1.	
	d.	Wet scrubbing – see S6.1	
	BAT-AEL for channelled NH3, odour, dust and TVOC emissions to air from the physico-chemical treatment of solid and/or pasty waste (mg/Nm3) *Table 6.8. Monitoring requirements are outlined in BAT 8*		
	Dust	2.0-5.0	Compliant in the future – subject to IC26.
RE-REFINING OF WASTE OIL			
42	**Improve overall environmental performance by monitoring the waste input as part of the waste pre-acceptance and acceptance procedures. See also BAT 2.**		
	Monitoring the waste input		
	Chlorinated compounds e.g. solvents or PCBs		Not Applicable.

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
43	**Reduce quantity of waste sent for disposal by using <u>ONE OR BOTH</u> of the following techniques:**		
	a.	Material recovery e.g. organic residues in asphalt products	Not Applicable.
	b.	Energy recovery	
44	**Reduce emissions to air of organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:**		
	a.	Adsorption – see S6.1	Not Applicable.
	b.	Thermal oxidation – see S6.1	
	c.	Wet scrubbing – see S6.1	
	The BAT-AEL for TVOC emissions to air set in Section 4.5 (below) applies. *Monitoring requirements are outlined in BAT 8*		
PHYSICO-CHEMICAL TREATMENT OF WASTE WITH CALORIFIC VALUE			
45	**Reduce emissions to air of organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:**		
	a.	Adsorption – see S6.1	Not Applicable.
	b.	Cryogenic condensation – see S6.1	
	c.	Thermal oxidation – see S6.1	
	d.	Wet scrubbing – see S6.1	
	The BAT-AEL for TVOC emissions to air set in Section 4.5 (below) applies. *Monitoring requirements are outlined in BAT 8*		
REGENERATION OF SPENT SOLVENTS			

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
46	**Improve overall environmental performance by using <u>ONE OR BOTH</u> of the following techniques:**		
	a.	Material recovery (by evaporation from distillation residues)	Not Applicable.
	b.	Energy recovery e.g. using distillation residues	
47	**Reduce emissions to air of organic compounds by applying BAT 14d <u>AND</u> using <u>a combination of</u> the following techniques:**		
	a.	Recirculation of process off-gases in a steam boiler. Avoid generating PCBs and/or PCDD/Fs	Not Applicable.
	b.	Adsorption – see S6.1	
	c.	Thermal oxidation – see S6.1. Avoid generating PCBs and/or PCDD/Fs	
	d.	Condensation or cryogenic condensation	
	e.	Wet scrubbing – see S6.1	
	The BAT-AEL for TVOC emissions to air set in Section 4.5 (below) applies. *Monitoring requirements are outlined in BAT 8*		
BAT-AEL FOR EMISSIONS OF ORGANIC COMPOUNDS TO AIR – SECTION 4.5 (RE-REFINING OF WASTE OIL) (PHYSICO-CHEMICAL TREATMENT OF WASTE WITH CV) (REGENERATION OF SPENT SOLVENTS)			
	BAT-AEL for channelled TVOC emissions to air from the re-refining of waste oil, physico-chemical treatment of waste with calorific value and regeneration of spent solvents (mg/Nm3)		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Table 6.9 and its supporting note. Monitoring requirements are outlined in BAT 8		
	TVOC	5.0-30	Not Applicable.
THERMAL TREATMENT OF SPENT ACTIVATED CARBON, WASTE CATALYSTS AND EXCAVATED CONTAMINATED SOIL			
48	**Improve overall environmental performance by using ALL of the following techniques:**		
	a.	Heat recovery from the furnace off-gas e.g. for preheating combustion air or steam generation	Not Applicable.
	b.	Indirectly fired furnace i.e. avoids contact between the furnace contents and the burner flue-gases. Note applicability constraints.	
	c.	Process-integrated techniques to reduce emissions to air – see examples	
49	**Reduce emissions to air of HCl, HF, dust and organic compounds by applying BAT 14d AND using one or a combination of the following techniques:**		
	a.	Cyclone – see S6.1	Not Applicable.
	b.	Electrostatic precipitator (ESP) – see S6.1	
	c.	Fabric filter – see S6.1	
	d.	Wet scrubbing – see S6.1	
	e.	Adsorption – see S6.1	
	f.	Condensation – see S6.1	
	g.	Thermal oxidation – see S6.1	Not Applicable.
	Note supporting text for BAT 49g (thermal oxidation)		

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	Monitoring requirements are outlined in BAT 8. No BAT-AELs have been set for this BATc.		
WATER WASHING OF EXCAVATED CONTAMINATED SOIL			
50	**Reduce emissions to air of dust and organic compounds from the storage, handling and washing steps by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:**		
	a.	Adsorption – see S6.1	Not Applicable.
	b.	Fabric filter – see S6.1	
	c.	Wet scrubbing – see S6.1	
	Monitoring requirements are outlined in BAT 8. No BAT-AELs have been set for this BATc.		
Decontamination of equipment containing PCBs			
51	**Reduce emissions to air of PCBs and organic compounds and improve overall environmental performance by using <u>ALL</u> of the following techniques:**		
	a.	Coating of the storage and treatment areas – see examples	Not Applicable.
	b.	Implementation of staff access rules to prevent dispersion of contamination – see examples	
	c.	Optimised equipment cleaning and drainage – see examples	Not Applicable.
	d.	Control and monitoring of emission to air – see examples	
	e.	Disposal of waste treatment residues – see examples	

BATc number		Summary of BAT Conclusion requirement	Status/comment One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
	f.	Recovery of solvent when solvent washing is used	
	Monitoring requirements are outlined in BAT 8. No BAT-AELs have been set for this BATc.		
TREATMENT OF WATER-BASED LIQUID WASTE			
52	**Improve overall environmental performance by monitoring the waste input as part of the waste pre-acceptance and acceptance procedures. See also BAT 2.**		
	Monitoring the waste input		
	Bioeliminability e.g. BOD, BOD-COD ratio, Zahn-Wellens test, biological inhibition potential		Not Applicable.
	Feasibility of emulsion breaking e.g. lab testing		
53	**Reduce emissions to air of HCl, NH3 and organic compounds by applying BAT 14d <u>AND</u> using one or a combination of the following techniques:**		
	a.	Adsorption – see S6.1	Not Applicable.
	b.	Biofilter – see S6.1	
	c.	Thermal oxidation – see S6.1.	
	d.	Wet scrubbing – see S6.1	
	BAT-AELs for channelled HCl and TVOC emissions to air from the treatment of water-based liquid waste (mg/Nm3) *Table 6.10 and its supporting notes. Monitoring requirements are outlined in BAT 8*		
	HCl	1.0-5.0	Not Applicable.
	TVOC	3.0-20	

Annex 2: Consultation on the draft decision where an Article 15(4) derogation has been applied

Not applicable.