Natural Resources Wales permitting decisions

Variation and Consolidation of a bespoke Permit – Tradebe Gwent Limited

We have decided to issue a Natural Resources Wales initiated variation and consolidated permit for the Bridgend Waste Management Centre operated by Tradebe Gwent Limited.

The permit number is NP3233XX.

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 the Bridgend Waste Management Centre against the published BAT conclusions for Waste Treatment.
- Annex 1 – Decision Checklist regarding relevant BAT Conclusions

Assessment of the Bridgend Waste Management Centre against the published BAT conclusions for Waste Treatment

1. Our decision

We have issued a variation, which will allow Tradebe Gwent 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 19 May 2003, 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);
- 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 05 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 Gwent 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 Gwent Limited have a copy of a consequent baseline report.

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

No derogations were applied for by Tradebe Gwent Limited.

The Regulation 61(1) Notice response from the operator was received on the 30 September 2019 and additional information received on the 29 July 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 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 Gwent Limited. Following assessment of the Regulation 61(1) response, further information was requested from Tradebe Gwent 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
IC5	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 – The Operator shall confirm that a Residues Management Plan, Accident Management Plan, Odour Management Plan and Noise & Vibration Management Plan have been finalised and are	17 February 2022 or otherwise agreed in writing by Natural Resources Wales

	formal documents within the sites Environmental Management System. • 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 8 – Monitoring of relevant emissions to air is to be reviewed once completion of the waste gas inventory has been undertaken (BAT 3). Upon completion of this review, the Operator will confirm that there remains no emission source to air in regard to BAT 53. • The Operator shall submit for written approval a methodology for meeting the relevant process parameters listed in Schedule 3b Table S3.3. The methodology shall identify each of the relevant process parameters listed and identified in the waste water inventory (BAT 3) and detail the frequency and techniques in place to record the data (outlined in BAT 7 and BAT 20). 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.	

IC6	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 Natural Resources Wales for approval.	17 February 2022 or otherwise agreed in writing by Natural Resources Wales

IC5 – The Operator is currently developing a Residues Management Plan, Accident Management Plan, Odour Management Plan and Noise and Vibration Management Plan. Whilst these management plans are currently in development or draft format, this improvement condition is to ensure that the management plans are formally incorporated into the sites Environmental Management System. This is to ensure compliance against BAT Conclusion 1 of the Waste Treatment BREF from the 17 February 2022.

The site currently has little data on emissions to air. Therefore, in order to facilitate the reduction of emissions to water and air, BAT Conclusion 3 is to establish and to maintain an inventory of waste water and waste gas streams. This will form part of the Environmental Management System and incorporate all of the following features:

- Information about the characteristics of the waste to be treated and the waste treatment processes;
- Information about the characteristics of the waste water streams; and
- Information about the characteristics of the waste gas streams.

Upon completion of this review of the waste gas inventory, the Operator will review any relevant monitoring requirements outlined in BAT Conclusion 8. The Operator within their response to the Regulation 61 Notice stated that there are no emissions to air from the installation. This will be confirmed to Natural Resources Wales that this is still the case regarding the review of BAT Conlusions 3 and 8 so that any emission values with BAT Conclusion 53 do not apply.

The Operator shall submit for written approval a methodology for meeting the relevant process parameters listed in Schedule 3b Table S3.3 for emissions to sewer. The methodology shall identify each of the relevant process parameters listed and identified in the waste water inventory and detail the frequency and techniques in place to record the data (emission limits and monitoring frequency). 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.

Operational Changes

There are no operational changes due to this variation or change in activities discussed further within this document.

Emissions to Water

There are no emissions to water associated with the permitted activity.

Emissions to Air

There are no emissions to air associated with the permitted activity subject to confirmation upon review of the waste gas stream and BAT Conclusion 3 (IC5).

Emissions to Sewer

Emissions to sewer see a change from the current monitoring being undertaken from the 17 August 2022 to reflect the new standards within the Waste Treatment BREF.
The new emissions to sewer are listed in Schedule 3(b) of the permit and outline the parameters, limits and monitoring frequency and standards required. Certain parameters have also been removed from the new monitoring requirements as these are not required through the Waste Treatment BREF, such as Total Suspended Solids (TTS) and Chemical Oxygen Demand (COD). However, these parameters are still a requirement of the sites Trade Effluent Consent and their removal reduces the need for double regulation.

Change in Activities

During the review process it was identified that the listed activities in Schedule 1 do not truly reflect the activities being carried out at the installation. It is understood that when the permit was varied to incorporate the Industrial Emissions Directive (IED) the

activities were not interpreted correctly. The change in activities are shown in the following tables.

Current Listed Activities within the Permit

Reference	Listed Activity in Schedule 1
A1	S5.3 A(1)(a)(i) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving biological treatment
A2	S5.3 A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment
A3	S5.3 A(1)(a)(v) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving solvent reclamation or regeneration

New Listed Activities within the Permit

Reference	Listed Activity in Schedule 1
A1	S5.3 A(1)(a)(ii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment
A2	S5.3 A(1)(a)(iii) Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving blending or mixing
A3	S5.4 A(1)(a)(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment

Permit Consolidation

During the review process it was discovered that the installation still operates under an old Waste Management Licence (WML). Due to the changes in activities being undertaken it was decided to consolidate and incorporate the WML into the permit and its modern format rather than apply for a separate variation.

Other Changes

Other changes made to the permit include new reporting requirements for the performance parameters of the generation of residues and waste water.

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 significant 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 a Commission Implementing Decision ((EU 2018/1147) in the Official Journal of the EU on 10 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	Currently Compliant – the relevant sections are outlined in the sites SHEQ Policy Statement which forms part of 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***	Currently Compliant – the following sections all form part of the sites EMS, in Tradebes IMS Framework Statement.
		(a) Structure & responsibility	
		(b) Recruitment, training, awareness & competence	

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
		(c) Communication	As above.
		(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	Currently Compliant - All treated waste water (effluent) is stored in a tank. Basic testing is carried out prior to discharge and this basic testing is validated weekly.
		(b) Corrective and preventive action	Currently Compliant - All incidents and events are captured and managed on a management program called Q pulse. This system logs and sets time dependant actions for close out. Regular audits of site are undertaken to identity any potential issues, all audits are captured on the Q pulse system.
		(c) Maintenance of records	Currently Compliant – All treated waste records are kept for at least 5 years.
		(d) Independent (where practicable) internal or external EMS auditing	Currently Compliant - Internal Audits are carried out by SHEQ team and are known as Proud audits these are carried out on an annual basis where the results are compiled to measure compliance and

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
			help identify any short comings along with an action plan to correct. Monthly Inspections are carried out by SHEQ which incorporate any EMS findings. Any findings are then electronically recorded on a system called Q-Pulse which assigns personnel with actions within a time frame. All personal on site have access to Q-Pulse where they can rise SHEQ concerns. External Audits are carried out by SIRA for compliance with MCERTs along with IS014001.
	VI.	Senior management review of EMS	Currently Compliant – Reviewed annualy as per the IMS Framework Statement.
	VII.	Following development of cleaner technologies	Currently Compliant – Tradebe hold a bi annual global knowledge sharing platform at which new technologies are proposed and discussed. This is to be supplemented in the future by a new UK innovation committee expected in 2021.
	VIII.	Whole life cycle considerations when designing a new plant i.e. impacts from eventual decommissioning and throughout its operating life	Currently Compliant - Any future developments on sites that include new design for plant and equipment will have incorporated a HAZID and HAZOP study which considers their environmental aspects and impacts. A closure plan was also attached to the response.
	IX.	Regular sectoral bench marking	Currently Compliant – Tradebe state that they are active members of the Environmental Services Association, together with the

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
			Environment Agency Hazardous Waste Institute holder forum, allowing them to stay engaged with regulators.
	X.	Waste stream management (BAT 2)	Currently Compliant – More detail is under each item within BAT 2.
	XI.	Inventory of waste water & waste gas streams (BAT 3)	Compliant in the Future – All data and information on input waste streams are stored on the SAP system, this includes all pre-acceptance and acceptance analysis. Information regarding waste water outputs, effluent, are recorded daily and include pH, flow, temperature, conductivity and other parameters all managed using procedure PGTR 102. Information regarding waste gases is not currently recorded but will be reviewed following an air monitoring survey.
	XII.	Residues Management Plan – S6.5	Compliant in the future – This is currently in a draft format and will be completed in 2021.
	XIII.	Accident Management Plan – S6.5	Compliant in the future – All accidents are recorded on the Q-Pulse system and if required reported to the necessary government body e.g Environmental Agency, Health, Safety Executive. A new incident occurrence management plan is under final development.
	XIV.	Odour Management Plan (BAT 12)	Compliant in the future – This is currently being developed.
	XV.	Noise & Vibration Management Plan (BAT 17)	Compliant in the future – This is currently being developed.
2	**Improving overall environmental performance – <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.	Set up and implement waste characterisation & pre-acceptance procedures	Currently Compliant - Waste characterisation and pre-acceptance is completed following pre-acceptance procedures and material assessment questionnaire along with analysis of pre-acceptance samples.
	b.	Set up and implement waste acceptance procedures	Currently Compliant - Waste acceptance is completed following the acceptance procedures and acceptance testing of samples.
	c.	Set up and implement a waste tracking system & inventory	Currently Compliant - A SAP system tracks and maintains all waste arriving to site with analysis, routing, nature, quantity etc.
	d.	Set up and implement an output quality management system	Currently Compliant - There are procedures and testing for analysing outputs from site and use this to manage quality, this is externally accredited to ISO 9001 standard.
	e.	Ensure waste segregation	Currently Compliant - Wastes are segregated on site and with procedures to manage this.
	f.	Ensure waste compatibility prior to mixing or blending	Currently Compliant - There are procedures and testing is carried out on compatibility before mixing wastes on site
	g.	Sort solid incoming waste – S6.4	Not Applicable - Sorting incoming solid waste is not applicable to this site.
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	Compliant in the future - The site will produce a process flow diagram and description prior to the 2022 deadline.
	(i)(b)	Process-integrated and waste water/waste gas treatment descriptions including performance	
	Information on characteristics of waste water streams		

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)(a)	*Mean and variability of:*	Currently Compliant - Analysis of waste streams are done on a regular basis and include pH, temperature, conductivity and effluent flow.
		Flow	
		pH	
		Temperature	
		Conductivity	
	(ii)(b)	*Mean concentration, load and variability of:*	Currently Compliant – Tradebe analyse waste streams and outputs for the relevant substances (metals, COD, ammonia etc). Some of this analysis is carried out offsite at the Tradebe Newport facility. Further details of the characteristics of the waste water stream are within the document titled 'Bridgend BAT 3 2018-2019 effluent analysis'.
		Total suspended solids	
		COD/TOC	
		Nitrogen species	
		Phosphorous	
		Metals	
		Priority substances/micropollutants	As above
		Any other relevant compounds	
	(ii)(c)	*Bioeliminability data (see BAT 52):*	Currently Compliant – Spot samples of BOD are undertaken however as the site is an inorganic process, the levels are consistently low and not considered significant. This analysis is carried out offsite.
		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 – please see response to BAT 8.
		Flow	

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	As above.
	(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	As above.
		N2	
		Water vapour	
		Dust	
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 possible, all wastes are stored within bunded areas and on impermeable concrete. When waste arrives on site and directed to the offloading point, the waste is offloaded directly to storage tanks in readiness for treatment, from storage the wastes are

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
			directed to the treatment reactors and on treatment directed on to effluent storage tanks before discharge.
	b.	Adequate storage capacity	Currently Compliant - The maximum storage of areas is limited by tank size and this is not exceeded. Daily volumes of tank levels are recorded and from the levels, input levels can be calculated.
	c.	Safe storage operation	Currently Compliant – In addition to the measures described above all offloading points are identified with signage.
	d.	Separate area for storage & handling of packaged hazardous waste	Not Applicable – There is no 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 - Site complies with BAT 5 having the following procedures and processes in place. Site supervisor supervise all offloads is technically trained (WAMITAB COTC). All procedures and training needs are managed by a training database software program. All Incoming wastes follow pre-acceptance (PGCS 101) and acceptance procedures (PBRH 100) which cover the analysis of waste samples before arrival on site and the validation of wastes, against pre-acceptance analysis, on arrival. All of the above is captured and managed on SAP.
	Duly documented, validated and verified		
	Spill prevention, detection and mitigation measures		
	Take precautions when mixing or blending wastes		
	Procedures are risk-based and consider likelihood of accidents, incidents and their environmental impact		

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
		Controls around the physical offload are outlined in the offloading procedures PBRH100. Any spillages are dealt with following the Spill Response Procedure PBHS 106. The entire site is a bunded area, any material that is spilt on the floor is contained within the confines of the site. All storage tanks are contained within bunds. The blending of wastes is carried out in the site's tanks. The process is managed following the acceptance procedure PBRH 100 and the compatibility procedure (PGLA 132). Any incidents or accidents within this process are managed utilising the site emergency response procedure (PBHS 101) and reported on Q pulse management system.
MONITORING		
6	**Relevant emissions to water: monitor key process parameters at key locations**	
	Key process parameters	
	Waste water flow	Currently Compliant – Key process parameters involve testing on incoming waste streams and the final effluent leaving the site including flow, pH, temperature, conductivity, COD.
	pH	
	Temperature	
	Conductivity	
	BOD	
	Other process parameters	

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
	Key monitoring locations		
	Pre-treatment inlet and/or outlet		Currently Compliant – Site generated effluent is discharged to sewer, via an M certified flowmeter, with linked autosampler at the discharge point prior to entering the sewer.
	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 – The site has identified the relevant emissions and is subject to an improvement condition to provide a methodology to record the date for the relevant parameters.
8	Monitoring emissions to air (refer to table) Monitoring parameters depend on waste treatment process(es) involved		Compliant in the future – The site has no data for emissions to air, and will undertake a review in addition to inform BAT 3. This is subject to IC5.
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	As above.
	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.
	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 – The site already monitors and report the annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water.
	- 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 has been no odour issues with the site.
	Protocol for conducting odour monitoring (BAT 10)		
	Protocol for response to odour incidents/complaints		
	Odour prevention and reduction programme		As above
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 site so no requirement to reduce odours.
	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	Currently Compliant - Pipe run length is minimised where possible, gravity transfer is used where possible, traffic speed is limited.
	b.	Select and use high-integrity equipment – see examples	Currently Compliant - Appropriate equipment is used for the relevant material.
	c.	Corrosion prevention – see examples	Currently Compliant - Construction materials are appropriate, and corrosion resistant where needed.
	d.	Containment, collection and treatment of diffuse emissions – see examples	Not Applicable - There is low risk of diffuse emissions from the material processed on site.
	e.	Dampening (with water or fog)	Not Applicable - Dampening is not required as there is no dust generation.
	f.	Maintenance – see examples	Currently Compliant - There is a PPMS system for managing and repairing equipment and a WRN system supported by a health and safety reporting system.
	g.	Cleaning of waste treatment and storage areas – see examples	Currently Compliant - The site is regularly cleaned and checked on a daily basis.
	h.	Leak Detection And Repair (LDAR) programme for organics – S6.2	Not Applicable - No organic material is processed at the site so LDAR is not applicable.
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

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.	Monitoring and recording as part of flare management – see examples	
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 - The site has been established for 18 years with no complaints of noise or vibration pollution from neighbours. The site has a noise & vibration procedure is currently being developed (under BAT 1).
	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 - The site is surrounded by well-established trees and bushes that dampen sound generated on site added to this there is a 10ft fence along the perimeter of the site, along the fence line which faces the nearest residents. Blowers and compressor are stored with a housing. All pumps and other operational equipment are maintained under the site PPMS system to ensure that they run efficiently and quietly.
	b.	Operational measures – see examples	
	c.	Low-noise equipment – see examples	
	d.	Noise & vibration control equipment – see examples	
	e.	Noise attenuation – see examples	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
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:**		
	a.	Water management – see examples	Currently Compliant – The site uses minimal water when carrying out the processes.
	b.	Water recirculation	Not Applicable – Water recirculation is not applicable for the process.
	c.	Impermeable surface	Currently Compliant - The entire site is on an impermeable surface and bunded to prevent emissions to the environment.
	d.	Reduce likelihood and impact of tank/vessel overflows and failures – see examples	Currently Compliant - The waste tanks have overflow pipes. The tanks are situated in bunds which are greater than their volume, tanks may be isolated by valves.
	e.	Roofing of waste storage and treatment areas	Currently Compliant - The site is not roofed although the tanks are enclosed and sited in bunds on an impermeable surface.
	f.	Segregation of water streams (being mindful of existing plant constraints)	Currently Compliant - Wastes are kept segregated and there are individual bunds to prevent incompatible wastes mixing.
	g.	Adequate drainage infrastructure	Currently Compliant - The site is bunded and impermeable, all rainwater on site will be directed to bunds and then pumped to the treatment process to prevent emissions off site.
	h.	Design and maintenance provisions to allow risk-based leak detection and repair. Minimise use of underground components.	Currently Compliant - The site is regularly checked for leaks and this is documented. 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
			Underground components are minimised and restricted to sumps. All components containing waste are above ground.
	i.	Appropriate buffer storage capacity (being mindful of existing plant constraints)	Currently Compliant - The site has a large buffer capacity to allow for waste during other than normal operations.
20	**Treat waste water using a combination of:**		
	Preliminary, primary and general treatment		
	a.	Equalisation	Compliant in the future - The operator will provide a methodology for meeting the relevant process parameters and detail the frequency and techniques in place to record the data. As per IC5.
	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.

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
	m.	Membrane bioreactor	As above.
	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.
	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	

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
		10-60 for water-based liquid waste	As above.
	Total P	0.3-2 for biological treatment 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	
	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	
	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	Compliant in the future - The operator will provide a methodology for meeting the relevant process parameters and detail the frequency and techniques in place to record the data. As per IC5.
	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	

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 as a preventative measure.
	b.	Management of incidental or accidental emissions	Currently Compliant - Spill procedure and accident management plan in place to manage emissions from accidents and incidents, there are bunds to protect the environment from spills.
	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 - The process carried out on site does not have suitable waste materials to use as reagents, additionally reagent use is extremely low on the site.
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 review this as kWh/tonne of waste processed. Periodic reviews are carried out on what improvements could be made to increase energy efficiency.
	b.	Energy balance record	Not Applicable – The site does not generate energy.

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
	REUSE OF PACKAGING		
24	**Maximise the reuse of packaging as part of a Residues Management Plan (see BAT 1 XII.)**		Not Applicable – No packaging is on site as all waste to site is tankered.
	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	
	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) *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 <u>AND ALL</u> 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)	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	Not Applicable.
	(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)	
28	**Use energy efficiently by keeping the shredder feed stable**		
MECHANICAL TREATMENT OF WEEE CONTAINING VFCS AND/OR VHCS			
29	**Techniques to prevent, or where not practicable reduce emissions of organic compounds to air. Apply BAT 14d AND BAT14h AND technique a. AND ONE OR BOTH 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*		

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
	TVOC	3.0-15	Not Applicable.
	CFCs	0.5-10	Not Applicable.
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.
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:**		

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
	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:**		
	a.	Adsorption – see S6.1	Not Applicable.
	b.	Biofilter – see S6.1	
	c.	Fabric filter – see S6.1.	
	d.	Thermal oxidation – see S6.1	

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
	e.	Wet scrubbing – see S6.1	Not Applicable.
	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		Not Applicable.
	Temperature and moisture content within windrows (Moisture monitoring not needed for enclosed processes where H&S issues have been identified)		
	Aeration of the windrow		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
	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		
	Volatile fatty acids and NH3 concentrations within digester & digestate		
	Biogas quantity, composition (e.g. H2S) and pressure		Not Applicable.
	Liquid and foam levels in the digester		

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 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		Not Applicable.
	H2 formation potential upon mixing of flue-gas treatment residues/ashes with water		
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	Not Applicable.
	b.	Biofilter – see S6.1	

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
	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	Not Applicable.
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
43	**Reduce quantity of waste sent for disposal by using ONE OR BOTH 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 AND 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.		

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		
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			
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	

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
	c.	Thermal oxidation – see S6.1. Avoid generating PCBs and/or PCDD/Fs	As above.
	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) *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 <u>ALL</u> of the following techniques:**		
	a.	Heat recovery from the furnace off-gas e.g. for preheating combustion air or steam generation	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
	b.	Indirectly fired furnace i.e. avoids contact between the furnace contents and the burner flue-gases. Note applicability constraints.	As above.
	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 <u>AND</u> 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) *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	

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.	Fabric filter – see S6.1	Not Applicable.
	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	
	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			

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
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		Currently Compliant - COD levels of the waste streams are monitored when accepted to site, and as part of the pre-acceptance, tests are carried out to mimic the reduction of COD expected during treatment in the plant. BOD of the trade effluent has been carried out.
	Feasibility of emulsion breaking e.g. lab testing		Currently Compliant - Feasibility of emulsion breaking is assessed by acidifying samples with HCl and centrifuging. FOG (fats/ oil/ greases) will separate as a top layer. Samples with organic layers/ FOGs are not accepted for treatment.
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	Compliant in the future – The operator stated that this is not applicable as there is no point source emissions from the site. However this should be confirmed upon completion of the waste gas stream (BAT 3) and any relevant monitoring requirements (BAT 8).
	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)		

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 6.10 and its supporting notes. Monitoring requirements are outlined in BAT 8		
	HCl	1.0-5.0	Compliant in the future – The operator stated that this is not applicable as there is no point source emissions from the site. However this should be confirmed upon completion of the waste gas stream (BAT 3) and any relevant monitoring requirements (BAT 8).
	TVOC	3.0-20	

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

No derogation has been applied for and therefore this is not required.