



ENVIRONMENTAL PERMIT VARIATION APPLICATION

BAT CONCLUSIONS ASSESSMENT

**MYTUM AND SELBY WASTE RECYCLING FACILITY
MORLEY STREET
HULL
HU8 8DN**

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**Project Quality Assurance
Information Sheet**

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BAT CONCLUSIONS ASSESSMENT - MYTUM AND SELBY WASTE RECYCLING
FACILITY, MORLEY STREET, HULL***

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BAT Conclusions Assessment

The following presents a review of the relevant BAT for the increase in the aggregated daily treatment and storage capacities for all hazardous waste types at Hull Waste Recycling Facility. The review considers the updated BAT conclusions presented in the Commission Implementing Decision (EU) 2018/1147 following publication of the revised BREF Document for Waste Treatment in 2018.

BAT Conclusion	Assessment Review
1.1 Overall Environmental Performance	
<p>BAT 1. In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS).</p>	<p>The Facility will operate under the effective system of management procedures in accordance with their own EMS. The EMS incorporates all the features listed under this BAT conclusion.</p>
<p>BAT 2. In order to improve the overall environmental performance of the plant, BAT is to use all of the specified techniques.</p> <ul style="list-style-type: none"> a) Set up and implement waste characterisation and pre-acceptance procedures b) Set up and implement waste acceptance procedures c) Set up and implement a waste tracking system and inventory 	<p>Mytum & Selby Limited have developed hazardous and clinical waste characterisation and pre-acceptance procedures that will be employed at the site to ensure the relevant information is provided to establish the properties of incoming wastes in order to determine if they are permitted to be accepted at the facility.</p> <p>Mytum & Selby Limited have developed hazardous and clinical waste acceptance procedures to ensure that the wastes received correspond with the pre-acceptance characterisation information. Acceptance checks will principally comprise visual checks to confirm that only the permitted wastes are received and do not contain any significant levels of contamination.</p> <p>A record is kept of the date and time of hazardous and clinical waste deliveries, quantities and the nature of the waste deposited at the site, the name of the company and their representative delivering (if applicable) each load of waste and the vehicle registration number.</p> <p>Hazardous and clinical wastes accepted at the site will be stored in designated areas based on the waste type and characteristics pending treatment. First in, first out principles will be employed at the waste facility reception areas to ensure good management of waste and to prevent excessive storage times. Maximum waste storage time appropriate to each waste type will be adhered to.</p>

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<p>d) Set up and implement an output quality management system</p> <p>e) Ensure waste segregation</p> <p>f) Ensure waste compatibility prior to mixing or blending of waste</p> <p>g) Sort incoming solid waste</p>	<p>All hazardous and clinical wastes will undergo visual assessment during the treatment process. Strict waste pre-acceptance and acceptance procedures will help ensure that the respective outputs from each hazardous waste treatment process is of high quality and in line with regulatory requirements.</p> <p>All wastes will be stored separately and appropriately according to their waste types. The wastes handled at the site are subject to strict pre-acceptance and acceptance checks, where all waste onsite will be compliant.</p> <p>Waste received will be sorted and stored in separate storage areas according to each waste type.</p> <p>Wastes are bulked, blended and mixed with wastes of the same hazardous category and characteristics.</p>
<p>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 (see BAT 1).</p>	<p>Emissions to air and water associated with the clinical waste sterilisation process are known and appropriate procedures in place to ensure that associated abatement systems are operating efficiently.</p> <p>Procedures have been developed to manage potentially contamination surface water, including impermeable concrete surfaces with sealed drainage systems and storage of wastes in appropriate contained vessels.</p>
<p>BAT 4. In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of techniques specified.</p>	<p>Adequate capacity is available to manage the predicted waste inputs and processing rates. Adequate procedures are also in place to ensure safe storage operations onsite.</p>
<p>BAT 5. in order to reduce the environmental risk associated with the handling and transfer of waste, BAT is to set up and implement handling and transfer procedures.</p>	<p>Waste handling and transfer procedures form part of Mytum & Selby's EMS.</p>
<p>1.2 Monitoring</p>	
<p>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 inlet and/or outlet of the pre-treatment, at the inlet to the final treatment, at the point where the emission leaves the installation).</p>	<p>Discharge of surface water to sewer will be monitored in line with the monitoring requirements set out in Table S1.3 of the Environmental Permit.</p>

BAT Conclusion	Assessment Review
<p>BAT 7. BAT is to monitor emissions to water with at least the frequency given below, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	<p>Relevant Point Source emissions to water testing is carried out at the site in line with the monitoring requirements set out in Table S3.1 of the Environmental Permit.</p> <p>Any process effluents discharged to sewer will be subject to testing against the parameters listed in the discharge consent.</p> <p>Microbial testing of clinical waste sterilisation process effluents will also be undertaken if discharge is to be made to sewer.</p>
<p>BAT 8. BAT is to monitor channelled emissions to air with at least the frequency given below, and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.</p>	<p>Monitoring procedures and limits in place to ensure the efficacy of the HEPA filter in line with the monitoring techniques specified in the EA guidance.</p>
<p>BAT 9. BAT is to monitor diffuse emissions of organic compounds to air from the regeneration of spent solvents, the decontamination of equipment containing POPs with solvents, and the physico-chemical treatment of solvents for the recovery of their calorific value, at least once per year.</p>	<p>Not applicable.</p>
<p>BAT 10. BAT is to periodically monitor odour emissions.</p>	<p>Precautionary olfactory monitoring will be carried out daily, as stipulated in the OMP.</p>
<p>BAT 11. BAT is to monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and waste water, with a frequency of at least once per year.</p>	<p>The annual consumption of water, energy and raw materials form part of Mytum & Selby's EMS. These are reported in accordance with the Environmental Permit.</p>
<p>BAT 12. In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to set up, implement and regularly review an odour management plan, as part of the environmental management system (see BAT 1).</p>	<p>The site will operate strictly in accordance with their Odour Management Plan, which is reviewed annually.</p>
<p>BAT 13. In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the specified techniques.</p>	<p>All treatment, transfer and storage of potentially odorous wastes will be undertaken internally in enclosed treatment buildings.</p> <p>All hazardous waste will be sealed in primary packaging prior to treatment.</p>

BAT Conclusion	Assessment Review
<p>BAT 14. In order to prevent or, where that is not practicable, to reduce diffuse emissions to air, in particular of dust, organic compounds and odour, BAT is to use an appropriate combination of the techniques.</p>	<p>All treatment, transfer and storage of hazardous and clinical wastes that may generate diffuse emissions will be undertaken internally in enclosed treatment buildings.</p> <p>All hazardous and clinical waste treatment processes will be sealed processes with enclosed transfer systems.</p> <p>Fugitive emissions will be managed at source.</p> <p>The control of diffuse emissions at the site will also be achieved through the implementation of good management practices and housekeeping e.g. maintaining haul roads free of debris, loads will be sheeted, use of water sprays to clean vehicles, cleaning of treatment areas and storage bays, processing will be carried out during ambient conditions.</p>
<p>BAT 15 – BAT 16</p>	<p>Not applicable.</p>
<p>BAT 17. In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to set up, implement and regularly review a noise and vibration management plan, as part of the environmental management system (see BAT 1), that includes all of the following elements</p> <ol style="list-style-type: none"> I. a protocol containing appropriate actions and timelines; II. a protocol for conducting noise and vibration monitoring; III. a protocol for response to identified noise and vibration events, e.g. complaints; IV. a noise and vibration reduction programme designed to identify the source(s), to measure/estimate noise and vibration exposure, to characterise the contributions of the sources and to implement prevention and/or reduction measures. 	<p>The site is located within an extensive industrial area with an elevated baseline environment. Hazardous and clinical waste treatment plant are located internally.</p> <p>Noise monitoring will be undertaken if necessary. Should unacceptable emissions of noise or vibration occur, the incident will be noted, and a record made.</p>
<p>BAT 18. In order to prevent or, where that is not practicable, to reduce noise and vibration emissions, BAT is to use one or a combination of the techniques given below.</p>	<p>Noise and vibration generated by the waste recycling facility do not pose significant risk to nearby receptors. Where appropriate measures will be implemented to further reduce the risk.</p>

BAT Conclusion	Assessment Review
1.5 Emissions to water	
<p>BAT 19. In order to optimise water consumption, to reduce the volume of waste water generated and to prevent or, where that is not practicable, to reduce emissions to soil and water, BAT is to use an appropriate combination of the techniques given below.</p>	<p>The consumption figures for water use will be reviewed and assessed on an annual basis as part of the Environmental Permit reporting requirements. All wastes are stored and treated on impermeable surfaces. Tanks containing liquids will be within an appropriately sized storage bund to act as a secondary containment measure in the event of tank failure. Surface water run-off will be managed as potentially contaminated water and routed over impermeable concrete surfacing to a sealed sump / combined sewer.</p>
<p>BAT 20. In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given below.</p>	<p>Sealed drainage system is fitted with a Full Retention Class 1 Separator and Bypass Separator for suspended solids.</p> <p>Any effluents that are not suitable for discharged to sewer will be transferred off-site for treatment.</p>
1.6 Emissions from accidents and incidents	
<p>BAT 21. In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the techniques given below, as part of the accident management plan (see BAT 1).</p>	<p>Accident risks and associated management procedures are included in the Environmental & Accidents Risk Assessment (<i>Doc. Ref.: MS1037/07</i>).</p>
1.7 Material Efficiency	
<p>BAT 22. In order to use materials efficiently, BAT is to substitute materials with waste</p>	<p>Processes don't rely on extensive use of raw materials with the exception of oils and greases for plant involved with treatment processes. Therefore, there is no inherent need to substitute materials with waste.</p>
1.8 Energy Efficiency	
<p>BAT 23. In order to use energy efficiently, BAT is to use both of the techniques given below</p>	<p>The facility will be managed to ensure that basic energy efficiency measures are undertaken during normal operations. The energy efficiency of the facility will be reviewed and recorded every four years to assess whether there are suitable opportunities to improve the energy efficiency of the activities.</p>
1.9 Reuse of packaging	
<p>BAT 24. In order to reduce the quantity of waste sent for disposal, BAT is to maximise the reuse of packaging, as part of the residues management plan (see BAT 1).</p>	<p>Waste packaging removed manually and mechanically from the materials treated and stored will be treated on site to enable recovery off-site where appropriate.</p> <p>Storage containers will be reused.</p>

BAT Conclusion	Assessment Review
2 BAT conclusions for the mechanical treatment of waste	
<p>BAT 25. In order to reduce emissions to air of dust, and of particulate-bound metals, PCDD/F and dioxin-like PCBs, BAT is to apply BAT 14d and to use one or a combination of the techniques given.</p>	<p>The hazardous waste repackaging process is fully enclosed to prevent significant emissions to air.</p> <p>Depackaging plant has two exhaust points which are fitted with activated carbon filters for the abatement of VOC gasses emitted from the mechanical depackaging process.</p>
BAT 26 – BAT 33.	Not applicable.
3 BAT conclusions for the Biological Treatment of Waste	
BAT 34 – BAT 39.	Not applicable.
4 BAT conclusions for the physico-chemical treatment of waste	
<p>BAT 40. In order to improve the overall environmental performance, BAT is to monitor the waste input as part of the waste pre-acceptance and acceptance procedures (see BAT 2).</p>	<p>All wastes are fully characterised prior to acceptance at the site for treatment. Waste acceptance procedures will be implemented on site to verify and characterise the waste as it arrives at the waste facility.</p>
<p>BAT 41. In order to reduce emissions of dust, organic compounds and NH₃ to air, BAT is to apply BAT 14d and to use one or a combination of the techniques given below.</p>	<p>The clinical waste sterilisation process is fully enclosed with all emissions to air treated via a HEPA filter prior to discharge to air internally.</p>
BAT 42 – BAT 53.	Not applicable.