

Best Available Techniques (BAT) Reference Document for Waste Treatment (2018)

BAT 1. In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS). The scope (e.g. level of detail) and nature of the EMS (e.g. standardised or non-standardised) will generally be related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and amount of wastes processed).

Condition 2 of the current licence specifies the scope of the EMS that must be implemented at the installation. In addition Rilta is certified to ISO 18001 and ISO 14001.

BAT 2. In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below.

(a) Set up and implement waste characterisation and pre-acceptance procedures

(b) Set up and implement waste acceptance procedures

Waste characterisation and acceptance procedures are in place, as required by Condition 5.3 of the current licence and additional procedures will be prepared prior to the acceptance of air pollution control residues (APCR), boiler ash and fly ash. This will also satisfy the requirements of BAT 40, BAT 42 and BAT 52 that apply to physico-chemical treatment, oil refining and the treatment of water based wastes.

(c) Set up and implement a waste tracking system and inventory

Condition 5.3.6 of the current licence requires Rilta to maintain a site specific tracking system to cater for all materials being accepted at the facility. Condition 10.2 of the licensee requires Rilta to maintain a written record for each load of waste arriving at and departing from the facility.

(d) Set up and implement an output quality management system

Condition 5.16 of the current licence requires Rilta to ensure all waste sent off site for recovery or disposal meet the input requirements of the facilities to which the materials are consigned.

(e) Ensure waste segregation

Condition 3.8 of the licence requires Rilta to provide a waste inspection and a waste quarantine area. Condition 5.3.3 of the existing licence requires that waste arriving at the facility is processed only after it is inspected at the point of entry.

(f) Ensure waste compatibility prior to mixing or blending of waste

Condition 3.11.7 of the current licence requires Rilta to ensure that no mixing of incompatible substances takes place.

(g) Sort incoming solid waste

Upon arrival all wastes are inspected and then directed to designated processing/storage areas. Operational procedures will be prepared prior to the acceptance of air pollution control residues

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(APCR), boiler ash and fly ash to ensure that appropriate compatibility and blending requirements are implemented.

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).

The scope (e.g. level of detail) and nature of the inventory is generally related to the nature, scale and complexity of the installation, and the range of environmental impacts it may have (determined also by the type and amount of wastes processed).

Rilta has established an inventory of wastewater generated by the treatment process.

BAT 4. In order to reduce the environmental risk associated with the storage of waste, BAT is to use all of the techniques given below:

- (a) Optimised storage location
- (b) Adequate storage capacity
- (c) Safe storage operation
- (d) Separate area for storage and handling of packaged hazardous waste.

Rilta has prepared a Waste Storage Plan for the installation, as required by Condition 5.9 of the existing licence, and this will be revised and updated before the acceptance of the APCR, boiler ash and fly ash.

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.

Rilta has prepared handling and transfer procedures, as required by Conditions 5.7.11 (asbestos) and 5.15.5 of the existing licence. These will be revised and updated to address the the handling and transfer of the APCR, boiler ash and fly ash.

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).

Not applicable. There are no waste water emissions to water.

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.

Not applicable. There are no waste water emissions to water.

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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.

Not applicable. There are no current channelled emissions to air.

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 using one or a combination of the techniques given below.

Not applicable. Solvents are neither regenerated nor treated for the recovery of their calorific value at the installation.

BAT 10. BAT is to periodically monitor odour emissions.

The applicability is restricted to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

The current licence (Condition 8.9) requires weekly monitoring for odours.

BAT 11. BAT is to monitor the annual consumption of water, energy and raw materials as well as the annual generation of residues and wastewater, with a frequency of at least once per year.

The annual consumption of water, raw material as well as the generation of residues and wastewater is monitored annually and reported in the Annual Environmental Report (AER).

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).

The applicability is restricted to cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

Current operations are not a source of odour nuisance and an odour management plan has not been prepared.

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 techniques given below

- (a) Minimising residence times
- (b) Using chemical treatment
- (c) Optimising aerobic treatment

Not Applicable.

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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 given below.

Current operations are not a source of odour nuisance.

Rilta implements the control measures specified in the current licence that are designed to ensure waste activities do not give rise to negative impacts on air quality and these will continue to be applied.

The transfer of the APCR will be managed by a silo control system that will also control the safety system which will include a top air vent jet filter, pressure sensor, level sensors and pinch valves on the delivery hoses. Fast acting doors will be fitted on the building and these will only be opened and closed when the APCR is being delivered and the bagged APCR is being transferred. In the unlikely event of a failure in the powder transfer resulting in the release of the contents on the building floor, the APCR will be collected using a dedicated industrial cleaning unit which will vacuum up the material and fill it into an FIBC.

BAT 15. BAT is to use flaring only for safety reasons or for non-routine operating conditions (e.g. start-ups, shutdowns) by using both of the techniques given below.

Not Applicable.

BAT 16. In order to reduce emissions to air from flares when flaring is unavoidable, BAT is to use both of the techniques given below.

Not Applicable.

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**)

The applicability is restricted to cases where a noise or vibration nuisance at sensitive receptors is expected and/or has been substantiated.

Not Applicable.

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.

(a) Appropriate location of equipment and buildings

Rilta implements the control measures specified in the licence that are designed to ensure waste activities do not give rise to noise emissions that will be a cause of nuisance or impairment outside the facility boundary. All waste processing and storage is carried out inside the buildings. The doors are only opened to allow vehicles to enter and exit the buildings.

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The proposed APCR bagging plant, which will use an air compressor to transfer the APCR from the bulk tankers to the silos and reverse jet air filters fitted to each silo, will also be located within the processing buildings.

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 techniques.

All operational areas are paved. Rainwater from the building roof and paved open yards discharges to the foul sewer.

BAT 20. In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of techniques.

The current licence (Condition 3.12) requires the provision of silt traps and oil interceptors on the surface water drains upstream of the connections to the foul sewer that serve the business park.

- **Table 6.1 BAT-associated emission levels (BAT-AELs) for direct discharges to a receiving water body**

Not applicable as there is no direct discharge to a receiving water body.

- **Table 6.2: BAT-associated emission levels (BAT-AELs) for indirect discharges to a receiving water body**

Not Applicable: Rainwater from the building roof and paved open yards discharges to the foul sewer.

BAT 21. In order to prevent or limit the environmental consequences of accidents and incidents, BAT is to use all of the specified techniques as part of the accident management plan (see BAT 1)

- (a) Protection measures
- (b) Management of incidental/accidental emissions
- (c) Incident/accident registration and assessment system.

RILTA has prepared and adopted an Accident Prevention Policy and an Emergency Response Procedure (ERP) as specified in Condition 9.2 of the current licence. The ERP specifies the roles, responsibilities and actions required to deal quickly and efficiently with all foreseeable major incidents and to minimise environmental impacts. Condition 12.2 requires the completion of an Environmental Liability Risk Assessment that identifies and describes time impacts of accidents/incidents.

In the unlikely event of a failure in the powder transfer resulting in the release of the contents on the building floor, the APCR will be collected using a dedicated industrial cleaning unit which will vacuum up the material and fill it into a Flexible Intermediate Bulk Container (FIBC).

BAT 22. In order to use materials efficiently, BAT is to substitute materials with waste.

Not applicable.

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BAT 23. In order to use energy efficiently, BAT is to use both of the following techniques

- (a) Energy efficiency plan
- (b) Energy balance record

Rilta completed an assessment of energy usage and potential measures to improve efficiency at the installation in 2015. The control designs on the air compressor used to transfer the APCR from the bulk tankers to the silos will include airflow and air pressure diagnostics monitoring to maximize the efficiency and reliability the compressed air systems. The fans on the reverse jet filters on the APCR bagging plant will be designed to give high-energy efficiency for the volume being handled while still delivering the required external pressure.

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).

Some applicability restrictions derive from the risk of contamination of the waste posed by the reused packaging.

Given the nature of the activity opportunities to re-use packaging is restricted.

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