

WASTE TREATMENT BREF (EU) 2018/1147

EMR Newmarket

BAT Compliance

1. GENERAL BAT CONCLUSIONS

1.1. Overall environmental performance

BAT 1. In order to improve the overall environmental performance, BAT is to implement and adhere to an environmental management system (EMS) that incorporates all of the following features:

EMR Newmarket is accredited under ISO14001 which relies on all of the features specified by BAT 1.

Yes

I. commitment of the management, including senior management;

As above. Also Section 8.1 of EMR Newmarket's Environmental Management Plan

Yes

II. definition, by the management, of an environmental policy that includes the continuous improvement of the environmental performance of the installation;

As above. Also Section 8.1 of EMR Newmarket's Environmental Management Plan

Yes

III. planning and establishing the necessary procedures, objectives and targets, in conjunction with financial planning and investment;

As above. Also Section 8.1 of EMR Newmarket's Environmental Management Plan

Yes

IV. implementation of procedures paying particular attention to:

As above. Also Section 8 of EMR Newmarket's Environmental Management Plan

Yes

(a) structure and responsibility,

As above. Also Sections 1.5 to 1.7 of EMR Newmarket's Environmental Management Plan

Yes

(b) recruitment, training, awareness and competence,

As above. Also Sections 1.5 and 8.3 of EMR Newmarket's Environmental Management Plan

Yes

(c) communication,

As above

Yes

(d) employee involvement,

As above

Yes

(e) documentation,

As above. Also Section 8 of EMR Newmarket's Environmental Management Plan

Yes

(f) effective process control,

As above. Also Section 4 of EMR Newmarket's Environmental Management Plan

Yes

(g) maintenance programmes,

As above. Also Sections 3.1.5, 4.1.5, 4.1.6 and 4.1.7 of EMR Newmarket's Environmental Management Plan

Yes

(h) emergency preparedness and response,

As above. Also EMR Newmarket's Emergency Plan.

Yes

(i) safeguarding compliance with environmental legislation;

As above

Yes

V. checking performance and taking corrective action, paying particular attention to:

As above. Also Section 8.4 of EMR Newmarket's Environmental Management Plan

Yes

(a) monitoring and measurement (see also the JRC Reference Report on Monitoring of emissions to air and water from IED installations – ROM),

As above. Also Section 8.4 of EMR Newmarket's Environmental Management Plan. EMR Newmarket will implement the new monitoring requirements once the new installation permit is issued

Yes

(b) corrective and preventive action,

As above. Also Sections 3.1.5, 4.1.5, 4.1.6 and 4.1.7 of EMR Newmarket's Environmental Management Plan

Yes

(c) maintenance of records,

As above. Also Section 7 of EMR Newmarket's Environmental Management Plan

Yes

(d) independent (where practicable) internal or external auditing in order to determine whether or not the EMS conforms to planned arrangements and has been properly implemented and maintained;

As above. Also Section 8.4 of EMR Newmarket's Environmental Management Plan and annual external audit of ISO14001 accreditation

Yes

VI. review, by senior management, of the EMS and its continuing suitability, adequacy and effectiveness;

As above. Also Section 8.4 of EMR Newmarket's Environmental Management Plan and annual external audit of ISO14001 accreditation

Yes

VII. following the development of cleaner technologies;

As above

Yes

VIII. consideration for the environmental impacts from the eventual decommissioning of the plant at the stage of designing a new plant, and throughout its operating life;

As above

Yes

IX. application of sectoral benchmarking on a regular basis;

As above

Yes

X. waste stream management (see BAT 2);

As above. Also Sections 4 and 7.2 of EMR Newmarket's Environmental Management Plan

Yes

XI. an inventory of waste water and waste gas streams (see BAT 3);

As above. Also regular monitoring of surface water discharge undertaken and results retained

Yes

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XII. residues management plan (see description in Section 6.5);	As above. Also regular testing of waste residues coordinated by EMR's Waste and Environmental Impacts Manager (Section 4.2 of EMR Newmarket's Environmental Management Plan).	Yes
XIII. accident management plan (see description in Section 6.5);	As above. Also EMR Newmarket's Emergency Plan [Accident Management Plan].	Yes
XIV. odour management plan (see BAT 12);	The permitted activities at EMR Newmarket are not expected to give rise a significant odour nuisance at sensitive receptors. The EA has therefore never requested an odour management plan. BAT 12 would therefore not apply.	N/A
XV. noise and vibration management plan (see BAT 17).	The permitted activities at EMR Newmarket are not expected to give rise a significant noise and vibration nuisance at sensitive receptors. The EA has therefore never requested a noise and vibration management plan. BAT 12 would therefore not apply.	N/A
BAT 2. In order to improve the overall environmental performance of the plant, BAT is to use all of the techniques given below.		Yes
a. Set up and implement waste characterisation and pre-acceptance procedures	All wastes are received internally from EMR and are therefore well understood, trusted and undergo regular analysis overseen by EMR's Waste and Environmental Impacts Manager.	Yes
b. Set up and implement waste acceptance procedures	Section 4.1 of EMR Newmarket's Environmental Management Plan and EPPs 1.1 to 1.3 and 1.17	Yes
c. Set up and implement a waste tracking system and inventory	Sections 4.1.1 and 7.2 of EMR Newmarket's Environmental Management Plan	Yes
d. Set up and implement an output quality management system	Regular testing of outputs and waste residues coordinated by EMR's Waste and Environmental Impacts Manager. EMR Newmarket is accredited under quality management system ISO9001	Yes
e. ensure waste segregation	All wastes are segregated by grade and stored in separate bays. See section 4.4 of EMR Newmarket's Environmental Management Plan.	Yes
f. Ensure waste compatibility prior to mixing or blending of waste	No mixing or blending of wastes occurs at EMR Newmarket	N/A
g. sort incoming solid waste	Principle aim of EMR Newmarket is to sort and recover recyclable materials. See section 4 of EMR Newmarket's Environmental Management Plan	Yes
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), that incorporates all of the following features:	Regular monitoring of surface water discharge undertaken and results retained. EMR Newmarket will implement the new monitoring requirements once the new installation permit is issued	Yes
(i) information about the characteristics of the waste to be treated and the waste treatment processes, including:	Regular testing of waste residues coordinated by EMR's Waste and Environmental Impacts Manager. Information on waste treatment processes contained in Section 4 of EMR Newmarket's Environmental Management Plan.	Yes
(a) simplified process flow sheets that show the origin of the emissions;	Process Flow Chart forms part of the EMR Newmarket's EMS and was provided with application	Yes

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(b) descriptions of process-integrated techniques and waste water/waste gas treatment at source including their performances	Regular monitoring of surface water discharge undertaken and results reported. EMR Newmarket will implement the new monitoring requirements once the new installation permit is issued	Yes
(ii) information about the characteristics of the waste water streams, such as:	As above	Yes
(a) average values and variability of flow, pH, temperature, and conductivity;	As above	Yes
(b) average concentration and load values of relevant substances and their variability (e.g. COD/TOC, nitrogen species, phosphorus, metals, priority substances/micropollutants);	As above	Yes
(c) data on bioeliminability (e.g. BOD, BOD to COD ratio, Zahn-Wellens test, biological inhibition potential (e.g. inhibition of activated sludge)) (see BAT 52);	As above	Yes
(iii) information about the characteristics of the waste gas streams, such as:	No waste gas streams emitted	N/A
(a) average values and variability of flow and temperature;	As above	N/A
(b) average concentration and load values of relevant substances and their variability (e.g. organic compounds, POPs such as PCBs);	As above	N/A
(c) flammability, lower and higher explosive limits, reactivity;	As above	N/A
(d) presence of other substances that may affect the waste gas treatment system or plant safety (e.g. oxygen, nitrogen, water vapour, dust).	As above	N/A
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.		Yes
a. Optimised storage location	Section 4.4 of EMR's Environmental Management Plan	Yes
b. Adequate storage capacity	Section 4.4 of EMR's Environmental Management Plan	Yes
c. safe storage operation	Section 4.4 of EMR's Environmental Management Plan	Yes
d. Separate area for storage and handling of packaged hazardous waste	Packaged hazardous waste is not received.	N/A
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.		Yes
Handling and transfer procedures aim to ensure that wastes are safely handled and transferred to the respective storage or treatment. They include the following elements:	Section 4 of EMR Newmarket's Environmental Management Plan	Yes
— handling and transfer of waste are carried out by competent staff;	Sections 1.5 and 8.3 of EMR Newmarket's Environmental Management Plan	Yes
— handling and transfer of waste are duly documented, validated prior to execution and verified after execution;	Section 7 of EMR Newmarket's Environmental Management Plan	Yes
— measures are taken to prevent, detect and mitigate spills;	Section 4.6 of EMR Newmarket's Environmental Management Plan and EPP 5.2.	Yes
— operation and design precautions are taken when mixing or blending wastes (e.g. vacuuming dusty/powdery wastes).	No mixing or blending of waste occurs at EMR Newmarket	N/A
Handling and transfer procedures are risk-based considering the likelihood of accidents and incidents and their environmental impact	Section 4 of EMR Newmarket's Environmental Management Plan	Yes
1.2. Monitoring		
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 pretreatment, at the inlet to the final treatment, at the point where the emission leaves the installation).	Regular monitoring of surface water discharge undertaken and results reported. EMR Newmarket will implement the new monitoring requirements once the new installation permit is issued	Yes
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.	Regular monitoring of surface water discharge undertaken and results reported. EMR Newmarket will implement the new monitoring requirements once the new installation permit is issued	Pending permit issue

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<p>Once every month: Chemical oxygen demand (COD), Hydrocarbon oil index (HOI), Total organic carbon (TOC), Total suspended solids (TSS), Phenol index, Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Nickel (Ni), Lead (Pb), Zinc (Zn), Mercury (Hg)</p> <p>Once every six months: PFOA and PFOS</p>	<p>Most parameters are currently analysed for, the remaining parameters will be included once the new permit is issued.</p>	<p>Pending permit issue</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>PFOA and PFOS analysis will be implemented once the new permit is issued.</p> <p>Point source emissions have been assessed to ensure correct sampling ports and access for monitoring once the permit is issued. Some pre-emptive monitoring has been undertaken, but the full monitoring programme will be implemented upon permit issue.</p>	<p>Pending permit issue</p>
<p>Once every six months: Dust, NH3, TVOC</p>	<p>As above</p>	<p>Pending permit issue</p>
<p>BAT 10. BAT is to periodically monitor odour emissions.</p>	<p>The permitted activities at EMR Newmarket are not expected to give rise an odour nuisance at sensitive receptors and there have been no substantiated complaints of this nature. BAT 12 would therefore not apply.</p>	<p>N/A</p>
<p>Odour emissions can be monitored using:</p> <ul style="list-style-type: none"> — EN standards (e.g. dynamic olfactometry according to EN 13725 in order to determine the odour concentration or EN 16841-1 or -2 in order to determine the odour exposure); — when applying alternative methods for which no EN standards are available (e.g. estimation of odour impact), ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality 	<p>As above</p>	<p>N/A</p>
	<p>As above</p>	<p>N/A</p>
	<p>As above</p>	<p>N/A</p>
<p>The monitoring frequency is determined in the odour management plan (see BAT 12).</p>	<p>As above</p>	<p>N/A</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. Monitoring includes direct measurements, calculation or recording, e.g. using suitable meters or invoices. The monitoring is broken down at the most appropriate level (e.g. at process or plant/installation level) and considers any significant changes in the plant/installation.</p>	<p>ISO50001 accreditation in place</p>	<p>Yes</p>
	<p>As above</p>	<p>Yes</p>
<p>1.3. Emissions to air</p>	<p>The permitted activities at EMR Newmarket are not expected to give rise a significant odour nuisance at sensitive receptors. The EA has therefore never requested an odour management plan. BAT 12 would therefore not apply.</p>	<p>N/A</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), that includes all of the following elements:</p>		<p>N/A</p>
<p>— a protocol containing actions and timelines;</p>	<p>As above. Also Section 6.5 of EMR Newmarket's Environmental Management Plan.</p>	<p>N/A</p>
<p>— a protocol for conducting odour monitoring as set out in BAT 10;</p>	<p>As above. Also Section 6.5 of EMR Newmarket's Environmental Management Plan.</p>	<p>N/A</p>
<p>— a protocol for response to identified odour incidents, e.g. complaints;</p>	<p>As above. Also Section 6.5 of EMR Newmarket's Environmental Management Plan.</p>	<p>N/A</p>
<p>— an odour prevention and reduction programme designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures.</p>	<p>As above. Also Section 6.5 of EMR Newmarket's Environmental Management Plan.</p>	<p>N/A</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 techniques given below.</p>	<p>The permitted activities at EMR Newmarket are not expected to give rise a significant odour nuisance at sensitive receptors.</p>	<p>Yes</p>
<p>a. Minimising residence times (only applicable to open systems).</p>	<p>Waste are processed quickly.</p>	<p>Yes</p>

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b. using chemical treatment (Not applicable if it may hamper the desired output quality).	As above	N/A
c. Optimising aerobic treatment	As above	N/A
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.		Yes
a. Minimising the number of potential diffuse emission sources	The majority of waste processing is undertaken in buildings. Dust emissions are directed to point source emission points with abatement where feasible. Section 4 of EMR Newmarket's Environmental Management Plan.	Yes
b. Selection and use of high integrity equipment (Applicability may be restricted in the case of existing plants due to operability requirements).		Yes
c. Corrosion prevention	Sections 3.1.5, 4.1.5, 4.1.6 and 4.1.7 of EMR Newmarket's Environmental Management Plan	Yes
d. Containment, collection and treatment of diffuse emissions (The use of enclosed equipment or buildings may be restricted by safety considerations such as the risk of explosion or oxygen depletion. The use of enclosed equipment or buildings may also be constrained by the volume of waste).	The majority of waste processing is undertaken in buildings. Dust emissions are directed to point source emission points with abatement where feasible.	Yes
e. Dampening	Section 6.5 of EMR's Environmental Management Plan.	Yes
f. Maintenance	Sections 3.1.5, 4.1.5, 4.1.6 and 4.1.7 of EMR Newmarket's Environmental Management Plan	Yes
g. Cleaning of waste treatment and storage areas	EPP 4.11	Yes
h. Leak detection and repair (LDAR) programme	Sections 3.1.5, 4.1.5, 4.1.6 and 4.1.7 of EMR Newmarket's Environmental Management Plan	Yes
1.4. Noise and vibrations		
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:	The permitted activities at EMR Newmarket are not expected to give rise to a significant noise and vibration nuisance at sensitive receptors. The EA has therefore never requested a noise and vibration management plan. BAT 12 would therefore not apply.	N/A
I. a protocol containing appropriate actions and timelines;	As above	N/A
II. a protocol for conducting noise and vibration monitoring;	As above	N/A
III. a protocol for response to identified noise and vibration events, e.g. complaints;	As above	N/A
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.	As above	N/A
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.	Section 6.4 of EMR Newmarket's Environmental Management Plan	Yes
a. Appropriate location of equipment and buildings (for existing plants, the relocation of equipment and building exits or entrances may be restricted by a lack of space or excessive costs).	The majority of automated processing takes place in buildings. The site is designed to locate the noisiest operations away from sensitive receptors and the site is shielded by rows of trees.	Yes
b. Operational measures	Minimum handling of wastes, waste acceptance procedures, plant maintenance, and specified waste management operations (Sections 4 and 6.4 of EMR Newmarket's Environmental Management Plan).	Yes
c. low noise equipment	Programme to to replace mobile plant with electric equivalents, and fit white noise reversing alarms.	Yes
d. Noise and vibration control equipment (applicability may be restricted by lack of space (for existing plants)).	Noise abatement controls fitted where feasible.	Yes

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e. Noise attenuation (Applicable only to existing plants, as the design of new plants should make this unnecessary. For existing plants, the insertion of obstacles may be restricted by lack of space).	Programme to to replace mobile plant with electric equivalents, white noise reversing alarms.	Yes
1.5. Emissions to water 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.		
a. Water management	Sealed drainage system as defined in sections 3.1.2 to 3.1.3 of EMR Newmarket's Environmental Management Plan)	Yes
b. Water recirculation	As above Recycled water used with the Heavy Media Plant (Section 4.1.6 of EMR Newmarket's Environmental Management Plan).	Yes
c. Impermeable surface	Sealed drainage system as defined in sections 3.1.2 to 3.1.3 of EMR Newmarket's Environmental Management Plan)	Yes
d. Techniques to reduce the likelihood and impact of overflows and failures from tanks and vessels	Sections 3.1.5 to 3.1.6 of EMR Newmarket's Environmental Management Plan	Yes
e. Roofing of waste storage and treatment areas (applicability may be constrained when high volumes of waste are stored or treated (e.g mechanical treatment in shredders of metal waste)).	The majority of the automated waste treatment processing is undertaken within buildings.	Yes
f. Segregation of water streams (generally applicable to new plants. Generally applicable to existing plants within the constraints associated with the layout of the water collection system).	Sealed drainage system as defined in sections 3.1.2 to 3.1.3 of EMR Newmarket's Environmental Management Plan)	Yes
g. Adequate drainage infrastructure (Generally applicable to new plants. Generally applicable to existing plants within the constraints associated with the layout of the water collection system). Generally applicable to existing plants within the constraints associated with the layout of the water collection system).	Sealed drainage system as defined in sections 3.1.2 to 3.1.3 of EMR Newmarket's Environmental Management Plan)	Yes
h. Design and maintenance provisions to allow detection and repair of leaks (The use of above-ground components is generally applicable to new plants. It may be limited however by the risk of freezing. The installation of secondary containment may be limited in the case of existing plants).	Section 3.1.5 of EMR Newmarket's Environmental Management Plan	Yes
i. Appropriate buffer storage capacity (Generally applicable to new plants - For existing plants, applicability may be limited by space availability and by the layout of the water collection system).	Sealed drainage system as defined in sections 3.1.2 to 3.1.3 of EMR Newmarket's Environmental Management Plan)	Yes
BAT 20. In order to reduce emissions to water, BAT is to treat waste water using an appropriate combination of the techniques given below.	Sealed drainage system as defined in sections 3.1.2 to 3.1.3 of EMR Newmarket's Environmental Management Plan)	Yes
a. Equalisation	As above	N/A
b. Neutralisation	As above	N/A
c. Physical separation, e.g. screens, sieves, grit separators, grease separators, oil water separation or primary settlement tanks.	As above	Yes
d. Adsorption	As above	N/A
e. Distillation/rectification	As above	N/A
f. precipitation	As above	N/A
g. chemical oxidation	As above	N/A
h. chemical reduction	As above	N/A
i. evaporation	As above	N/A
j. ion exchange	As above	N/A
k. stripping	As above	N/A
l. activated sludge process	As above	N/A
m. membrane bioreactor	As above	N/A
n. Nitrification/denitrification when the treatment includes a biological treatment	As above	N/A
o. Coagulation and flocculation	As above	N/A
p. Sedimentation	As above	N/A

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- q. Filtration (e.g. sand filtration, microfiltration, ultrafiltration)
- r. floatation

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

Total organic carbon (TOC) 10-60 mg/l

Chemical oxygen demand (COD) 30-180 mg/l
 Total suspended solids (TSS) 5-60 mg/l
 Hydrocarbon oil index (HOI) 0,5-10 mg/l
 Phenol index 0,05-0,2 mg/l

Arsenic (expressed as As) 0,01-0,05 mg/l

Cadmium (expressed as Cd) 0,01-0,05 mg/l
 Chromium (expressed as Cr) 0,01-0,15 mg/l
 Copper (expressed as Cu) 0,05-0,5 mg/l
 Lead (expressed as Pb) 0,05-0,1 mg/l
 Nickel (expressed as Ni) 0,05-0,5 mg/l

Mercury (expressed as Hg) 0,5-5 µg/l

Zinc (expressed as Zn) 0,1-1 mg/l

1.6. Emissions from accidents and incidents

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).

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

1.7. Material efficiency

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

Waste is used instead of other materials for the treatment of wastes (e.g. waste alkalis or waste acids are used for pH adjustment, fly ashes are used as binders).

1.8. Energy efficiency

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

- a. Energy efficiency plan
- b. Energy balance record

1.9 Reuse of packaging

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).

EMR Newmarket

- As above
- As above

Most parameters are currently analysed for, the remaining parameters will be included once the new permit is issued.

Monitoring to be implemented once the new permit is issued.

Currently monitored and results indicate compliance
 Currently monitored and results indicate compliance
 Currently monitored and results indicate compliance
 Monitoring to be implemented once the new permit is issued.

Monitoring to be implemented once the new permit is issued.

Currently monitored and results indicate compliance
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 Currently monitored and results indicate compliance
 Currently monitored and results indicate compliance
 Monitoring to be implemented once the new permit is issued.

Monitoring to be implemented once the new permit is issued.

Currently monitored and results indicate compliance

- EMR Newmarket's Emergency Plan
- EMR Newmarket's Emergency Plan
- EMR Newmarket's Emergency Plan

Raw materials are used for very specific purposes (e.g. magnetite and ferrosilicon for heavy media separation, liquid and solid flocculants to aid the settlement of particulates in floatation tanks and anti-foaming agents) and require properties that wastes would not exhibit

- EMR Newmarket is accredited against the ISO50001 energy management system.
- As above
- As above

BAT Compliance

- Yes
- N/A

Pending issue of permit

Pending issue of permit

Yes
 Yes
 Yes
 Pending issue of permit

Pending issue of permit

Yes
 Yes
 Yes
 Yes
 Pending issue of permit

Pending issue of permit

Yes

- Yes
- Yes
- Yes

N/A

N/A

Yes

Yes

Yes

Yes

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Packaging (drums, containers, IBCs, pallets, etc.) is reused for containing waste, when it is in good condition and sufficiently clean, depending on a compatibility check between the substances contained (in consecutive uses). If necessary, packaging is sent for appropriate treatment prior to reuse (e.g. reconditioning, cleaning).

EMR Newmarket

Pallets and drums are re-used wherever their condition allows.

BAT Compliance

Yes

2. BAT CONCLUSIONS FOR THE MECHANICAL TREATMENT OF WASTE**2.1. General BAT conclusions for the mechanical treatment of waste****2.1.1 Emissions to air**

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 below.

Dust emissions are directed to point source emission points with abatement where feasible (cyclone and fabric filters)

Yes

- a. cyclone
- b. fabric filter
- c. wet scrubbing
- d. Water injection into the shredder

As above
As above
Not feasible
No metal shredder at EMR Newmarket.

Yes
Yes
N/A
N/A

BAT-associated emission level (BAT-AEL) for channelled dust emissions to air from the mechanical treatment of waste

Dust 2-5 mg/Nm³ (when fabric filter not used upper end of the range is 10mg/Nm³)

Pre-emptive monitoring suggests compliance but the full monitoring programme will be implemented upon permit issue.

Pending issue of permit

4. BAT CONCLUSIONS FOR THE PHYSICO-CHEMICAL TREATMENT OF WASTE**4.1. BAT conclusions for the physico-chemical treatment of solid and/or pasty waste****4.1.1. Overall environmental performance**

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).

All wastes are received internally from EMR and are therefore well understood, trusted and undergo regular analysis overseen by EMR's Waste and Environmental Impacts Manager. Subjected to waste acceptance procedures (Section 4.1 of EMR Newmarket's Environmental Management Plan and EPPs 1.1 to 1.3 and 1.17)

Yes

Monitoring the waste input, e.g. in terms of:

- content of organics, oxidising agents, metals (e.g. mercury), salts, odorous compounds;
- H₂ formation potential upon mixing of flue-gas treatment residues, e.g. fly ashes, with water.

Regular testing of waste residues coordinated by EMR's Waste and Environmental Impacts Manager (Section 4.2 of EMR Newmarket's Environmental Management Plan)
As above. Salts and odorous compounds are not relevant.
No mixing of flue gas treatment residues

Yes
Yes
N/A

4.1.2 Emissions to Air

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.

See abatement measures for BAT 25

N/A

- a. adsorption
- b. biofilter
- c. thermal oxidation
- d. wet scrubbing

See abatement measures for BAT 25
See abatement measures for BAT 25
See abatement measures for BAT 25
See abatement measures for BAT 25

N/A
N/A
N/A
N/A

BAT-associated emission level (BAT-AEL) for channelled emissions of dust to air from the physicochemical treatment of solid and/or pasty waste

Dust 2-5 mg/Nm³

Pre-emptive monitoring suggests compliance but the full monitoring programme will be implemented upon permit issue.

Pending issue of permit

Pending issue of permit