

EOW-G01 End of Waste Processes and Requirements

1. PURPOSE:

- 1.1 Council Regulation (EU) No. 333/2011 and Commission Regulation (EU) No. 715/2013, the *End of Waste (EoW) Regulations*, determines when certain types of iron, steel and copper scrap cease to be waste upon transfer from the producer to another holder. One of the requirements of these regulations is to operate a certified Quality Management System with documented procedures including those relating to the self monitoring of material/product.
- 1.2 This procedure is applicable to all EMR Depots in the United Kingdom that are operating a Quality Management System in accordance with the EoW Regulations.

2. GUIDANCE :

Reception of Goods and Acceptance of Input Material

- 2.1 All material is accepted on to EMR yards in accordance with relevant EMR waste acceptance and storage procedures. For loads that are being accepted as material that will be classified as EoW, operatives will inspect loads against the EoW criteria (See Appendix 1-3).
- 2.2 Competent staff shall determine the status of the load and grade it accordingly. If it does not meet the criteria, the load must be rejected and returned to the originator. This information will generate a Quality Acceptance Report (Weighbridge Ticket) that will be retained. The total weight of the incoming material will be defined by the outward weighing off of the vehicle. The designated EoW material will be stored in a separate area on site clear from other materials.

Radioactivity:

- 2.3 All material are monitored for radioactivity. All goods entering the yard are subject to procedures EPP 1.6 *Identification of Radiation* and H22-01 *Local Rules for Radioactive Sources*. Loads that are carrying designated grades for EoW are also subject to the requirements of this procedure.
- 2.4 Each load that forms the EoW Consignment will have been subject to radiation monitoring and so a Radioactive Test certificate can be generated for each consignment. This record will be held locally to be made available if necessary.
- 2.5 When a consignment of material is ready to be released for export or sold to a customer it will be accompanied with a radioactive test certificate: "Non Radioactivity Certificate". This will be for all material leaving the site via a coastal trading vessel or coaster. This is generated by the Area Manager to accompany the consignment or by an Independent surveyor.
- 2.6 When a consignment is due to leave the dock via a deep sea vessel, then the "Non Radioactivity Certificate" to accompany the consignment will be generated by the surveyor who is commissioned to do so.

Monitoring of Treatment Processes

- 2.7 The effectiveness of treatment processes will be monitored and measured. Trained personnel at the site (Site Manager) will ensure the following:
 - 2.7.1 Monitoring of material/product reports made available to determine if quality checks of the input materials are being carried out to the acceptable criteria.
 - 2.7.2 Records of end customer complaints made available and evaluated to determine if materials are produced and dispatched in accordance with customer requirements and to specification.
 - 2.7.3 Monitoring the effectiveness of treatment processes through the evaluation of internal audits.
 - 2.7.4 Monitoring Key Performance Indicators (KPI's), reviewing and developing processes for continual improvement.
 - 2.7.5 Communicating with relevant suppliers where materials supplied do not meet criteria.
 - 2.7.6 Ongoing maintenance of fixed and mobile plant to ensure production rates are achieved and materials continue to be produced in accordance with customer requirements and to specification.
 - 2.7.7 Continuous daily inspections and monitoring of the product to ensure failures in the process are immediately identified for investigation into the root cause and to determine suitable corrective actions.

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Monitoring of Quality – Sampling and Analysis

- 2.8 A key stage in End of Waste (EoW) certification is sampling the material to demonstrate the materials meet the minimum EoW criteria in accordance with the requirements of the EoW Regulations EU333 / EU715.
- 2.9 The purpose and objectives of monitoring and the methods followed are as outline in:
- EOW-PM02 - *Sampling & Analysis - Ferrous*
 - EOW-PM03 - *Sampling & Analysis – Non-Ferrous (Al)*
 - EOW-PM04 - *Sampling & Analysis – Non-Ferrous (Cu)*
- 2.10 Sampling for each of the EoW grades should be undertaken every 6 months (as a minimum) as required in accordance with the requirements of the End of Waste Regulations, however, should inventory be cleared and replenished between samples, materials could not be clearly validated. EMR therefore implements a risk based sampling program to allocate appropriate sampling resource to those materials where quality may pose a greater challenge. The sampling intensity is as outlined below.

Material Grade		Frequency
8A 4A	New production, loose cuttings raw material Very high quality raw material ferrous grades	Quarterly
8B 4C	Bushelling steel cuts High quality, very low residual ferrous grades	
9B	Cylinder Cast	
12A 12C Pbale	New Production Heavy Steel Over Size Profile/Mixed Source	
3B 0A	Old light steel arisings fragmentised Plate and Girder (P&G)	
HMS 1 & 2	Associated with more significant residuals and potential visual residual items	1 Monthly
Al	Aluminium Twitch (Floated fragmentiser aluminium)	
Cu	Copper Granules	Per Consignment

- 2.11 Dependant on the sampling results, it is then determined if monitoring events are required to be undertaken more frequently. Where sampling indicates a declining quality (increasing foreign materials) then the materials grade risk profile will be deemed to have increased, pushing the materials in to the higher frequency banding for additional sampling. Where sampling indicates an increasing quality (declining foreign materials) over several events then the risk profile banding will be adjusted to reduce the sampling frequency.
- 2.12 Therefore, where a failure to meet the EoW criteria is detected, which is classified as a non-compliance, sampling is required to be repeated within one week, should sampling result in a subsequent non-compliance, then sampling will continue to be repeated weekly until the EoW criteria is being achieved. If the results of sampling achieve the EoW criteria consecutively over three sampling events, then the frequency will be reduced and carried out in accordance with the risk based sampling program (see table above).
- 2.13 Sampling trials are carried out by Mayer Environmental Ltd in accordance with sampling procedures that have also been approved by a third party certification body accredited to meet the requirements of the of EoW Regulations.

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Record Keeping

- 2.14 In addition to the 'Non Radioactivity Certificate' a 'Statement of Conformity' must also be generated to accompany the consignment.
- 2.15 A consignment is a batch of scrap metal or scrap copper which is intended for delivery from a producer to another holder and may be contained in either one or several transport units such as containers.
- 2.16 All other relevant records must also be retained in accordance with company policy and procedures and to demonstrate compliance with EoW Regulations EU333 / EU715. Relevant records in respect of EoW includes:
- Weighbridge Ticket (Quality Acceptance Report)
 - Sampling Events
 - Customer Feedback
 - Audit and Inspection Reports
 - Training Records

Feedback from Customers

- 2.17 The Shipping department are responsible for issuing Customer Feedback Surveys to customers biannually (as appropriate) and will collate and analyse data to produce a summary report in order to monitor progress.
- 2.18 Negative feedback will be communicated to the Depot Manager who is responsible for recording the non-conformance on TCM Event Log and for investigating the root causes to determine and implement suitable corrective actions.

Review and Improvement

- 2.19 Internal IMS and EoW Audits are undertaken at frequent intervals by Mayer Environmental Ltd to determine effectiveness and conformance to the management systems including the EoW processes and applicable legal and other requirements e.g. EU333/EU715.
- 2.20 Management Reviews are conducted at Group level at frequent intervals to review progress against objectives and targets, positive and negative feedback from customers, non-conformances identified during internal / external audits and inspections, identify additional training needs for continual improvement of the management system etc.

Training and Competence

- 2.21 All EMR employees involved in processes relating to EoW are to complete EoW Awareness training in addition to completing additional role specific training in order to carry out tasks correctly and to operate in accordance with the EoW quality criteria.

3. ASSOCIATED GUIDANCE & INFORMATION:

- *EOW-PM01 EoW Process Overview*
- *EOW-PM02 - Sampling & Analysis - Ferrous*
- *EOW-PM03 - Sampling & Analysis – Non-Ferrous (Al)*
- *EOW-PM04 - Sampling & Analysis – Non-Ferrous (Cu)*
- *EPP-1.1 Waste Acceptance – The Duty of Care Acceptance of Incoming Material*
- *EPP-1.2 Waste Acceptance – Inspection of Incoming Material*
- *EPP-1.3 Waste Acceptance – Identifying Hazardous Waste*
- *EPP-1.6 Waste Acceptance – Identification of Radioactive Items*
- *EPP-1.7 Waste Acceptance – Identification of Explosive Materials*
- *EPP-1.8 Waste Acceptance – Rejection of Waste Material*
- *EPP-1.9 Waste Acceptance – WEEE and Refrigerator Acceptance*
- *H22- G01 Ionising Radiation Guidance*

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Appendix 1

Criteria for iron and steel scrap (Council Regulation (EU) No. 333/2011, Annex 1)

1.2 The total amount of foreign materials (steriles) shall be $\leq 2\%$ by weight.

Foreign materials are:

- (1) non-ferrous metals (excluding alloying elements in any ferrous metal substrate) and non-metallic materials such as earth, dust, insulation and glass;
- (2) combustible non-metallic materials such as rubber, plastic, fabric, wood and other chemical or organic substances;
- (3) larger pieces (brick-size) which are non-conductors of electricity such as tyres, pipes filled with cement, wood or concrete;
- (4) residues arising from steel melting, heating, surface conditioning (including scarfing), grinding, sawing, welding and torch cutting operations, such as slag, mill scale, baghouse dust, grinder dust, sludge.

1.3 The scrap shall not contain excessive ferrous oxide in any form, except for typical amounts arising from outside storage of prepared scrap under normal atmospheric conditions.

1.4 Scrap shall be free of visible oil, oily emulsions, lubricants or grease except negligible amounts that will not lead to any dripping.

Radioactivity: there is no need for response action according to national or international rules on monitoring and response procedures for radioactive scrap metal.

The scrap shall not display any of the hazardous properties listed in Annex III to Directive 2008/98/EC. The scrap shall comply with the concentration limits laid down in Decision 2000/532/EC (2) and shall not exceed the concentration limits laid down in Annex IV to Regulation (EC) No 850/2004 (3). Properties of individual elements included in iron and steel alloys are not relevant for this requirement.

The scrap shall not contain any pressurised, closed or insufficiently open containers that could cause an explosion in a metalwork furnace.

Appendix 2

Criteria for aluminium scrap (Council Regulation (EU) No. 333/2011, Annex 2)

1.2 The total amount of foreign materials shall be $\leq 5\%$ by weight or the metal yield shall be $\geq 90\%$;

Foreign materials are:

- (1) metals other than aluminium and aluminium alloys;
- (2) non-metallic materials such as earth, dust, insulation materials and glass;
- (3) combustible non-metallic materials such as rubber, plastic, fabric, wood and other chemical or organic substances;
- (4) larger pieces (brick-size) which are non-conductors of electricity such as tyres, pipes filled with cement, wood or concrete; or
- (5) residues arising from the melting of aluminium and aluminium alloys, heating, surface conditioning (including scarfing), grinding, sawing, welding and torch cutting operations such as slag, dross, skimmings, baghouse dust, grinder dust, sludge.

1.3 The scrap shall not contain polyvinyl chloride (PVC) in form of coatings, paints, plastics.

1.4 The Scrap shall be free of visible oil, oily emulsions, lubricants or grease except negligible amounts that will not lead to any dripping.

1.5 Radioactivity: there is no need for response action according to national or international rules on monitoring and response procedures for radioactive scrap metal. This requirement is without prejudice to the basic standards on the health protection of workers and members of the public adopted in acts falling under Chapter III of the Euratom Treaty, in particular Council Directive 96/29/Euratom (2).

1.6 The scrap shall not display any of the hazardous properties listed in Annex III to Directive 2008/98/EC. The scrap shall comply with the concentration limits laid down in Commission Decision 2000/532/EC (3) and shall not exceed the concentration limits laid down in Annex IV to Regulation (EC) No 850/2004 (4). Properties of individual elements included in aluminium alloys are not relevant for this requirement.

1.7 The scrap shall not contain any pressurised, closed or insufficiently open containers that could cause an explosion in a metalwork furnace.

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Appendix 3

Criteria for copper scrap (Commission Regulation (EU) No. 715/2013, Annex 1)

1.2 The total amount of foreign materials shall be < 2 % by weight;

Foreign materials are:

- metals other than copper and copper alloys,
- non-metallic materials such as earth, dust, insulation and glass,
- combustible non-metallic materials such as rubber, plastic, fabric, wood and other chemical or organic substances,
- slag, dross, skimming, baghouse dust, grinder dust, sludge.

1.3 The scrap shall not contain excessive metal oxide in any form, except for typical amounts arising from outside storage of prepared scrap under normal atmospheric conditions.

1.4 The scrap shall be free of visible oil, oily emulsions, lubricants or grease except negligible amounts that will not lead to any dripping.

1.5 There is no need for response action according to national or international rules on monitoring and response procedures for radioactive scrap metal. This requirement is without prejudice to the legislation on the health protection of workers and members of the public adopted in Chapter III of the Euratom Treaty, in particular Council Directive 96/29/Euratom (1).

1.6 The scrap shall not display any of the hazardous properties listed in Annex III to Directive 2008/98/EC of the European Parliament and the Council. The scrap shall comply with the concentration limits laid down in Commission Decision 2000/532/EC (2) and not exceed the concentration limits laid down in Annex IV to Regulation (EC) No 850/2004 of the European Parliament and the Council (3). Properties of alloy metals included in copper alloys are not relevant for this requirement.

1.7 The scrap does not contain any pressurised, closed or insufficiently open containers that could cause explosions in a metal work furnace.

1.8 The scrap shall not contain PVC in form of coatings, paints, or residual plastics.

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