CARGO SERVICES
(U.K.) LIMITED

Standard Operating Procedure (SOP)

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Document Control Sheet

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1 Purpose

1.1 Background

The Cargo Services Group of Companies is a family run business based in South Wales which offers a one stop shop in Maritime Port Logistics. We specialise in the handling & distribution of all types of general and bulk cargo via seaborne traffic at our own private port (with an All Weather Rail & Ships terminal) and independent cargo terminal operations which offer extensive modern warehousing and open storage facilities that are also connected to both road and rail networks for onward distribution throughout the UK and Ireland.

Authority and responsibility is derived from the Company policy and the procedures. It is the responsibility of all Cargo Services personnel to ensure that this procedure is followed correctly.

1.2 Scope and Permissible Exclusions

The scope of this procedure applies to all stages in the collection and handling of Electric Arc Furnace (EAF) waste from the CELSA Manufacturing (UK) Ltd (CELSA), Tremorfa Works, Seawall Road, Cardiff, South Glamorgan, CF24 5TH site until such time as the material is loaded on to a vessel.

2 Management System

2.1 Environmental Policy

The Cargo Services group environmental policy recognises that it has a responsibility to the environment and we will take all positive steps to address the environmental impacts of our business operations. We will seek to minimise our adverse impacts through good management, aiming for continuous improvement in our environmental performance. In recognition of the principles in the European Sea Ports Organisation's Environmental Code of Practice, the main objectives of this policy are:

- Reduce to a minimum the environmental impact of its activities, seek ways to conserve natural resources and continually strive to improve its environmental performance.
- Use energy and water efficiently and optimise our use of natural resources.
- Meet or exceed the requirements of all applicable legislation and Port industry best practice.
- Reduce or eliminate the production of polluting releases to the environment by using the latest and newest technology and engineering solutions.

- Reduce waste and the use of natural resources through consideration of the environmental impacts of purchasing decisions.
- Manage waste effectively through a programme of improvements to existing control systems.
- Where relevant, assist governmental and local bodies to develop solutions to pressing environmental problems.

To implement this policy, Cargo Services will ensure that its staff and contractors are fully aware of these commitments and of the need to assess and monitor the environmental implications of activities within their areas of responsibility and we shall, if necessary, provide training to heighten such awareness.

2.2 EHS Legislative Requirements

The EAF waste shall be collected, handled, transported and stored in-line with current statutory requirements and associated guidance. This includes:

- *Environmental Protection Act 1990* (EPA 1990)
- *Environmental Protection (Duty of Care) Regulations 1991*
- *Waste (England and Wales) Regulations 2011* (as amended)
- *Hazardous Waste (Wales) Regulations 2005* (as amended)
- *Hazardous Waste (England and Wales) Regulations 2005* (as amended)
- *Health and Safety at Work etc. act 1974*
- *Control of Substances Hazardous to Health Regulations 2002* (as amended)
- *List of Wastes (Wales) Regulations 2005*
- *The Transfrontier Shipment of Waste Regulations 2007* (as amended)

2.3 Roles and Responsibilities

It is the responsibility of the Cargo Services Agency & General Manager to ensure EHS legislative requirements are identified and compiled with and that all statutory records are maintained.

It is the responsibility of the warehouse operatives and stevedores that the EAF material is handled correctly using the provided equipment and that in the event of an accident or emergency situation the EAF material is contained so as to prevent an environmental release.

2.4 Competence, Training and Awareness

EAF materials shall only be handled, lifted, moved and stored by personnel competent to undertake such operations. Cargo Services maintains training and competence records for all personnel involved with the activity.

All personnel involved with the EAF material, from point of collection until vessel loading shall be made aware of the requirements of the environmental permit and their responsibilities with regards to on-going compliance.

2.5 Communication

It is the responsibility of the Cargo Services Agency & General Manager to ensure that environmental permit requirements are fully communicated to employees involved with the EAF material.

2.6 Documentation and Records

Cargo Services shall maintain, as a minimum, the following documentation associated with the collection and storage of EAF material.

Movement from CELSA to Cardiff Docks (prior to vessel loading)

- Waste carriers registration certificate (check validity before use)
- Hazardous waste consignment notes (must be maintained for 3 years)
- Certificate of test for radiation
- Hazardous Waste Returns documentation (quarterly)

Vessel related documentation

- Bill of lading *i.e.* a document issued by a carrier which details a shipment of merchandise and gives title of that shipment to a specified party.
- Manifest/T2L *i.e.* document listing the cargo.
- IMO dangerous goods manifest *i.e.* as required by SOLAS 74.
- Stow plan *i.e.* positioning of cargo on the vessel
- Safety data sheets
- Approval of UK and Italian Authorities
- Transfrontier shipments of waste forms

The traceability of the EAF material from the point of generation until final recovery shall be maintained at all times in order to allow third-party audits.

2.7 Contractors

Where contractors are used to handle or move EAF waste materials they shall be approved by Cargo Services *i.e.* meet training and competence requirements.

2.8 Emergency Response

If any bags fail the radiation screening process these shall be separated and labelled as **'Quarantined Material – Do Not Move'**.

Cargo Services shall maintain a stock of over-bags that can be used if/when damage to the original EAF bags occurs.

Any spillage of EAF materials, during handling, shall be cleaned up promptly and the area shall be cleaned through the use of a road sweeper (if required).

2.9 Nonconformity, Corrective and Preventive Action

Any non-conformity (*e.g.* failure of radioactive screening) shall be brought to the attention of the Cargo Services Agency & General Manager. They shall be responsible for identifying and implementing suitable corrective and/or preventive action.

2.10 Audit

The Cargo Services Agency & General Manager shall ensure that the paperwork associated with the EAF waste is managed so as to allow external third-party audit and review.

2.11 Review

The Cargo Services Agency & General Manager has overall responsibility for the management of the EAF process and shall ensure that the activity is reviewed in-light of process changes, accidents/incidents, EHS legislative changes and requests from the principal regulator (*i.e.* Natural Resources Wales).

3 EAF Procedure

3.1 EAF waste production

The activity relates to the storage of Electric Arc Furnace (EAF) waste that is solely produced at the nearby CELSA Manufacturing (UK) Ltd (CELSA), Tremorfa Works, Seawall Road, Cardiff, South Glamorgan, CF24 5TH. EAF dust contains iron, zinc, lead and cadmium which can be recovered by recycling and treatment. The key characteristics of the material are outlined in *Table 3.1*.

Table 3.1: Waste Characteristics	
Section	**Description**
Material	Red-brown solid - Electric Arc Furnace (EAF) Waste (solid waste from gas treatment containing hazardous substances)
EC List of Waste Code	10-02-07*
Components	Zinc iron metal oxides (also containing Cadmium, Lead and Chromium)
Concentration	24-28%
Y Code	Y23(Zinc Compounds) As defined in Council Decision c(92)39/final on the control of transboundary movements of wastes destined for recovery operations.
Hazard Code	H12 (Ecotoxic)
Flashpoint (°C)	N/A
Melting point (°C)	1600 °C
Solubility	Insoluble
Odour Potential	Odourless
UN Class	Class 9 (*i.e.* substances and articles which, during transport present a danger not covered by other classes).
UN ID No.	3077
UN Shipping Name	Waste-Environmentally Hazardous Substance, Solid, N.O.S.

This EAF waste production activity is controlled by the current CELSA environmental permit.

3.2 Packaging and storage and the place of generation

The EAF waste stream is packaged at the CELSA site within the primary containment system *i.e.* UN approved lined and sealed 1 tonne polypropylene big bags (Photograph 3.1).

Photograph 3.1: *EAF Big Bags (showing plastic liner)*

It is important that the bags are in good condition prior to loading on to road vehicles. Where damaged bags are identified they should not be loaded on to the road vehicle.

This packaging and initial storage of the EAF waste is controlled by the current CELSA environmental permit.

3.3 Collection of EAF waste by road vehicle

Prior to removal of EAF waste from the CELSA site a hazardous waste consignment note is raised (by CELSA) for each load. Copies of these are maintained by CELSA and Cargo Services for a minimum of three years.

All bags/loads are weighed at CELSA before dispatch.

3.4 Transportation by road vehicle to the docks

The HGV flatbed trailers containing the EAF waste are moved by a registered waste carrier to the Cargo Services site within Cardiff Docks (approximately 3 km away). The carrier is currently Ryan Transport (Carrier No. CB/UP/3899 MK). All EAF movements must be made using a registered waste carrier.

3.5 Unloading of road vehicles and storage within A-Shed

Upon arrival at the docks the HGV flatbed trucks are directed into A-Shed where the bags are unloaded and stored.

The EAF bags are stored within A-Shed until such time as there is an economic volume that would permit shipping of the material. In general this is 2,500 tonnes but Cargo Services are permitted to store up to 3,500 tonnes.

The size and shape of A-Shed is such that it is easily able to store up to 250 bags in a 10 bag x 25 bag layout. A-Shed is solely used for the storage of EAF waste. No secondary containment is considered necessary. All surfaces both within and external to the storage area are constructed of good quality concrete that is free from significant damage.

3.6 Movement of EAF waste to dockside

Upon arrival of the vessel radiation testing/screening is undertaken to ensure that the EAF material is below the acceptable EU limit of 20.0 mSv/hr prior to loading. Failure of the radiation screening will require quarantine of individual bags. These should be clearly labelled.

If the bags are cleared forklift trucks fitted with clamps move 2 bags at a time to the dockside.

3.7 Movement and loading of the vessel

The dockside cranes use a spreader beam to lift 6 bags at a time into the hold of the ship. This activity carries on until the ship is filled, usually around 2.5 days.

3.8 Transportation to Italy

Each shipment of EAF waste to Italy is moved using a pre-notified International Waste Shipment (IWS) or Transfrontier shipment of waste documentation. All vessels moving the EAF waste carry the following documents:

- Bill of lading *i.e.* a document issued by a carrier which details a shipment of merchandise and gives title of that shipment to a specified party.
- Manifest/T2L *i.e.* document listing the cargo.
- IMO dangerous goods manifest *i.e.* as required by SOLAS 74.
- Stow plan *i.e.* positioning of cargo on the vessel
- Safety data sheets
- Approval of UK and Italian Authorities
- Shipments of waste forms