



**Environmental, Health & Safety  
Management System (EHSMS)**



**Equipment Calibration &  
Maintenance, and Health &  
Safety Monitoring Procedure**

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**1. PURPOSE**

To facilitate an integrated EMS, this procedure has been written in accordance with ISO 14001:4.5.1, OHSAS 18001:4.5.1, R2 2013: Provision 4 and Iowa EMS (Element: Legal and Other Requirements).

This procedure outlines the monitoring, maintenance and calibration protocols utilized to ensure the practices employed are effectively and continuously managing the risks associated with its operations, while protecting human health and safety and the environment.

**2. SCOPE**

This procedure applies to employees of the Electronic Demanufacturing Facility (Facility) when engaged in Facility-related work activities.

**3. RESPONSIBILITY**

3.1 Special Waste Manager is responsible for:

- Identifying monitoring, maintenance and calibration needs and providing procedures to ensure the Facility is not posing a risk to the environment or employee health and safety.

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- Reviewing and approving monitoring, maintenance and calibration records in Intelex.
- Assisting Facility Supervisor and employees with implementing the requirements outlined in this procedure.

3.2 Facility Supervisor is responsible for:

- Implementing the recommended monitoring, maintenance and calibration procedures, providing training as necessary, and ensuring procedures are being followed.
- Verifying that original monitoring, maintenance and calibration records are available and maintained.

#### 4. PROCEDURES

The Facility complies with all legal, permit, environmental, health and safety requirements by following manufacturer's recommendations and its own best management practices.

4.1 Monitoring, maintenance and calibration requirements are maintained in Intelex in the Legal and Other Requirements module under the Other Requirements heading. The requirements shall include name of the task or equipment, frequency of task performed, due date, person responsible or company completing the work if applicable, and completion date. All original monitoring, maintenance and calibration reports are controlled in Intelex externally, and housed at the Facility.

- Once the task is completed, resulting reports are forwarded to the Special Waste Manager for compliance review.
- If in compliance, any report updates and the date of the next monitoring or calibration is entered into Intelex. Original reports are returned to Facility Supervisor for on-site storage.
- If results are not in compliance, any reports and plans to address issues are entered into Intelex. Once compliant, the next monitoring or calibration date is entered into Intelex. Original reports are returned to Facility Supervisor for on-site storage.

*See also: Intelex Legal and Other Requirements module (Other Requirements) for calibration protocols, frequencies and results.*

4.2 Facility's Tool and Equipment Maintenance and Calibration

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The Facility utilizes and maintains some of its own operational tools and equipment, as well as environmental, health and safety monitoring equipment. All tools and equipment must be properly stored, maintained, and must be certified or verified to be within the manufacturers' calibration requirements at least annually.

- To ensure tools are in good working order and do not pose environmental, health or safety risks, employees are required to inspect tools daily using the EDF Tool Inspection Form, Doc. No. 01038. If employees encounter any problems with their tools, they are to discontinue use of that tool and to notify the Facility Supervisor immediately.
- To ensure that the fork truck is functioning as intended and does not pose environmental, health or safety risks, employees conduct a visual and operational check on the fork truck prior to the start of each shift, Doc. No. 01040. If any problems are found, employees are instructed not to use that fork truck, and the Facility Supervisor is notified immediately.
- To ensure proper functionality and environmental, health and safety precautions are being taken, the Preventative Maintenance for Dust Collection Checklists are utilized, Doc. Nos. 01343-01347. The checklists were compiled from practices and frequencies set forth by the OEM.
- To ensure proper functionality, maintenance scheduling and environmental, health and safety precautions are being taken, the EDF Shredder System Checklists are utilized, Doc. Nos. 01258, 01260, and 01262. The checklists were compiled from practices and frequencies set forth by the OEM.

#### 4.3 Outside Vendor Tool and Equipment Maintenance and Calibration

When possible, environmental, health and safety monitoring equipment supplied from an outside vendor shall be delivered calibrated along with calibration records.

- It is the responsibility of the facility supervisor to verify that all delivered equipment is properly calibrated before use.
- Monitoring and calibration done by a contracted vendor shall include the protocols, calibration, and/ or monitoring results in the respective reports.

#### 4.4 Scale Calibration

The Facility scale is calibrated bi-annually by a certified contractor per permit requirements, Doc. No. 00153.

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#### 4.5 Environmental, Health and Safety Monitoring

- Air Monitoring:

The Facility annually contracts with a third party to provide air monitoring to test for lead, cadmium and particulates, Doc. No. 01036. The purpose of the sampling event is to monitor work areas that may potentially expose employees to maximum levels of cadmium, lead and particulate matter. The exposure levels are compared to OSHA Permissible Exposure Limits (PEL) and OSHA Action Levels.

- Noise Monitoring:

The Facility has a noise monitoring program, Doc. No. 01037, to ensure compliance with OSHA 1910.95 App G, Doc. No. 01121. To establish a noise baseline, a dosimeter was used to measure noise level exposures at different locations throughout the Facility. Areas where employees are exposed to average noise levels of 85 dB or greater during an 8 hour workday are included in the Hearing Conservation Program, Doc. No. 01043.

- Sprinkler System Monitoring

The Facility has a sprinkler system monitoring system in place to ensure sprinklers are functioning properly in the event of a fire. The sprinkler system is inspected annually by a third party contractor, Doc. No. 01045.

- Backflow Device Monitoring

The Facility has a backflow device monitoring system, Doc. No. 01046, in place to ensure sprinklers are functioning properly in the event of a fire. The sprinkler system is inspected annually by a third party contractor, Doc. No. 01045.

- Fire Alarm Monitoring

The Facility has fire alarm monitoring system in place to ensure fire alarms are functioning properly in the event of a fire. The fire alarm system is inspected annually by a third party contractor.

- Manometer for Dust Handling System Calibration

The Facility follows the calibration procedure outlined by the OEM.

- Confined Space Air Monitor Calibration

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The Facility uses a confined space air monitor, which requires calibration annually, as well as self-calibration prior to each use, Doc Nos. 01201, 01047, and 01165.

#### 4.6 Housekeeping/ Facility Maintenance

The Facility adheres to good housekeeping standards, including keeping all work and storage areas clean and orderly, Doc Nos. 01249-01251.

- Cleanup operations for all areas of the Facility are planned, regularly implemented and monitored using the EDF Shop, Doc. No. 01014, and EDF Office Housekeeping Checklists, Doc. No 01015.
- Exceptions to standard conditions are corrected immediately.
- Inspection frequencies are based upon maximum deterioration rates and realistic probabilities that any given equipment malfunction or failure will impact human health or the environment.
- Areas subject to spills are visually inspected weekly using the EDF Shop Housekeeping Checklist, Doc. No. 01014, and are inspected monthly using the CRT Recycling Permit Inspection Form, Doc. No. 01268.

### 5. RELATED DOCUMENTATION

Fork Truck Operator's Checklist, document number 01040

Preventative Maintenance for Dust Collector – Every Use, document number 01343

Preventative Maintenance for Dust Collector – Weekly, document number 01344

Preventative Maintenance for Dust Collector – Monthly, document number 01345

Preventative Maintenance for Dust Collector – 3 Month, document number 01346

Preventative Maintenance for Dust Collector – 6 Month, document number 01347

Confined Space Air Monitor Owner's Manual, document number 01201

Confined Space Plan, document number 01047

Confined Space Inventory & Procedures by Facility, document number 01165

CRT Recycling Permit Inspection Form, document number 01268

Ewaste Hearing Conservation Plan, document number 01043

EDF Tool Inspection Form, document number 01038

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EDF Scale Service Agreement and Calibration Reports, document number 00153

EDF Annual Fire Extinguisher Inspection Report, document number 01245

EDF Air Monitoring Records, document number 01036

EDF Noise Monitoring Records, document number 01037

EDF Sprinkler Monitoring Records, document number 01045

EDF Backflow Device Inspection Reports, document number 01046

EDF Housekeeping Checklist (Daily) document number 01249

EDF Housekeeping Checklist (Weekly) document number 01251

EDF Housekeeping Checklist (Monthly) document number 01250

EDF Shop Housekeeping Checklist, document number 01014

EDF Office Housekeeping Checklist, document number 01015

EDF Scale Service Agreement and Calibration Reports, document number 00153

EDF Shredder System Every Use Inspection, document number 01258

EDF Shredder System 50 Hour Inspection, document number 01260

EDF Shredder System 250 Hour Inspection, Document number 01262

Definitions, document number 01342

## **6. CHANGE HISTORY**

01/31/2012—Initial Document Registration.

02/03/2012—Added additional monitoring, measurement and calibration procedures and related documentation.

01/29/2013 – Clarified documentation of the monitoring, measurement and calibration results in Intellex.

02/26/14 – Updates reflect an integrated EMS in accordance with ISO 14001, ISO 18001, R2:2013 and Iowa EMS standards. The following updates are included: formatting, simplification of contents, add info to Procedures, add reference to Definitions document in Related Documentation, and add standardized language to Purpose and Change History sections. Reviewed by Brian Briggs, Carrie Carlstrom, Keith Krambeck, Kurt Liske, Kathy Morris, Bryce Stalcup, and Brandy Welvaert.

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04/16/2014 - Updated to include document control numbers of applicable regulations or operational documents referenced in the text. Additional documents were added to Related Documentation, by Carrie Carlstrom per Brian Briggs.

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