Self-evaluation of Learning

Best Practices for Achieving Environmentally Sound Management (ESM)

At Facilities that Refurbish and Recycle Used and End-of-Life Electronic Products in North America

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Commission for Environmental Cooperation

Best Practices for Achieving Environmentally Sound Management at Facilities that Refurbish and Recycle Used and End-of-life Electronic Products in North America

Module 7b: *Self-evaluation of Learning for Supervisors and Workers*

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7 Module 7b: Self-evaluation of Learning for Supervisors and Workers

7.1 Introduction

This module provides an opportunity for participants to review the material of the training and assess how the content can be applied to various scenarios. Individuals are encouraged to use this module to gauge their understanding of the material and identify items that need to be reviewed again.

The following sections of this module include:

- an overview of the "Key Take-away Messages" for each module,
- discussion/reflection questions to help learners gauge how much they have gained from the training,
- a "Key Learnings" sheet for each worker, and
- an "Observations Page" where the worker or supervisor identifies top environmentally sound management (ESM) priorities for his/her facility.

Note that there was not a designated Module 2 or 5 for workers & supervisors; these two modules were primarily geared toward facility managers.

7.2 Review of Modules

7.2.1 Module 1: Introduction to Environmentally Sound Management—Key Take-away Messages

Definition of environmentally sound management (ESM):

Taking all practicable steps to ensure that used and/or end-of-life products and wastes are managed in a manner which will protect human health and the environment.

Reasons to implement ESM:

- ✓ to protect the health of your workers, their families, your local community, and the environment;
- ✓ to ensure that all potential environmental and occupational health and safety risks associated with refurbishing and recycling operations are effectively managed and that workers are adequately protected from these risks;
- ✓ to place your company in a better position to meet or exceed applicable existing, new and future environment, health and safety regulations—implementing ESM helps to ensure due diligence with these requirements and goes beyond basic compliance to ensure a higher level of health and safety and environmental protection;
- ✓ to increase business opportunities with new clients, who more frequently are demanding that processors of electronic products use ESM practices;
- ✓ to potentially increase your company's profit margins through increasing the recovery of materials that are of high economic value, and can improve operational efficiency while reducing costs;
- ✓ to provide your company with a distinct marketing advantage over competitors, particularly if verification and certification against ESM standards is achieved; and
- ✓ to build improved relations with regulators, the public, and business partners.

OECD criteria for ESM (core performance elements):

1. An environment, health and safety management system
2. Environment, health and safety policy and procedures
3. A monitoring, recording and reporting program
4. A training program for all personnel
5. An emergency plan
6. A plan for closure and after-care

United Nations Basel Convention ESM Criteria:

1. Management commitment to a systematic approach (a management system)
2. Risk assessment process
3. Risk prevention and minimization process
4. Compliance with legal requirements
5. Appropriate level of awareness and competency amongst employees
6. Maintain records, monitor, track and evaluate facility performance
7. Take corrective action to address environmental, health and safety risks
8. Measures to support transparency and verification in all the above criteria

7.2.2 Module 3: Risk Assessment—Key Take-away Messages

The Risk Assessment Process:

- ✓ It is important to identify and assess risks relating to direct facility activities, operations and services.

Used and end-of-life electronic products contain hazardous substances such as lead, mercury, cadmium, and beryllium. Other hazardous substances, such as dioxins and furans, are formed during recycling operations. All hazardous substances can pose hazards to worker health and safety, the local community, and the broader environment, and are important to identify and consider during the risk assessment process.

- ✓ The Risk Assessment process includes five steps:

  Step 1. Identify the stages of operations

  Step 2. Identify the hazards

  Step 3. Assess the hazard and exposure to the hazard (level of risk)

  Step 4. Identify the consequence or effect of the hazard / characterize the risk

  Step 5. Evaluate and prioritize the risk

- ✓ To ensure ESM, risks are prioritized during the risk assessment process, and then eliminated if possible, or minimized when they cannot be eliminated.

Using best practices, all combined, presented in Module 3 will allow your company to be in a better position to offer assurance that it has a serious commitment to worker health and safety, the environment and the local community.

7.2.3 Module 4: Risk Prevention and Minimization—Key Take-away Messages

Why Implement Risk Prevention and Minimization?

Efforts to minimize risks to the environment, worker health and safety are important to:

- ✓ reduce worker and community illnesses,
- ✓ reduce worker accidents,
- ✓ raise awareness in the facility about hazards and how to prevent risks—this will contribute to safer work practices—and
- ✓ improve workers' skills through regular training.

How to Implement Risk Prevention and Minimization?

Companies could adopt many of the ESM practices outlined in this module, such as a commitment to:

- ✓ control a hazard at the source (including controls during manual processing, emission controls during mechanical processing, and emission monitoring in processing areas);
- ✓ use of procedures and training to increase awareness, understanding and competency of how to minimize hazards from company operations to the environment, and worker health and safety; and
- ✓ use of personal protective equipment to ensure worker health and safety in all designated areas of electronic product refurbishment and recycling facilities. Personal protective equipment might include eye and ear protection, hand and body protection, respiratory protection, and head protection. If this equipment is not worn properly and consistently, workers and their families could become very ill.





7.2.4 Module 6: Record Keeping and Performance Measurement—Key Take-away Messages

Effective record keeping and performance evaluation enable an organization to:

- ✓ manage its ongoing operations more effectively with data ("you cannot manage what you do not measure;" i.e., you cannot manage for improvement if you do not measure to see what is getting better and what is not);
- ✓ demonstrate accountability to regulators, certification or insurance bodies by having appropriate documentation in place and being able to make it available in a timely manner when requested to do so;
- ✓ be organized, by having records and documentation to demonstrate procedures, systems, etc., to workers and authorities as needed;
- ✓ facilitate both internal and external compliance audits undertaken by certification or regulatory bodies;
- ✓ demonstrate a commitment to transparency and verification;
- ✓ identify or confirm if a problem exists and allow for early corrective action; and
- ✓ measure and monitor effectiveness of corrective measures introduced to address problems by comparing with baseline data accumulated over time.

Important Definitions:

What is Record keeping?	The practice of creating written documents to support effective decision making, facilitate ongoing operations, and allow for checking effectiveness, and that may be required to meet compliance with legal compliance in some situations.
What is Performance measurement?	A process of identifying goals or objectives, measuring progress relative to these goals, and identifying necessary interventions to improve future performance against these goals (corrective action).
What is Corrective Action?	Improving an organization's business processes that do not conform to desired practices or objectives.
What is Transparency?	Providing publicly available information on an organization's commitments, activities and performance in support of achieving ESM.
What is Verification?	The practice of evaluating results against set standards or objectives. Often, verification requires evidence—this can be attained through reviewing records, auditing or inspections.

7.3 Self-Evaluation of Learning

Scenario 1

What are the real benefits of ESM to a facility like yours, and what are the benefits for your job?

Reflect on these questions and think of what you would say to a co-worker, manager, or friend if they asked you why you or your facility should put the effort into ESM practices.

Scenario 2

Jason's manager is reviewing the facility's process for monitoring and measuring performance. She asks Jason about whether the facility's current performance indicators measure what matters. What kinds of questions about the indicators can Jason think through to help his manager with the review? (E.g., one question could be "Do the indicators measure problem areas in the interest of continual improvement?")

Scenario 3

Lee is removing a cathode ray tube (CRT) from a monitor, when it breaks. What are some recommended steps as a part of the clean-up process?

Scenario 4

Nadia has been hired to work in your area of your facility. Although she was given health and safety training as a part of her orientation to the job, your manager has asked you to give Nadia a quick overview of the job's risks and hazards to make sure she is aware of them from the worker's perspective. What would you tell her are the main risks and hazards associated—both those she might have received in the training as well as others that you have learned on the job?

Now reflect on what you have included. Are there any you think your management might not know about and that should be a part of the training program at your workplace?

7.4 Summary of Key Learning Messages

Please identify your top 3 take-away messages from this training (considering all of the modules):

1. _____

2. _____

3. _____

7.5 Summary of Observations

Please identify the 3 priority areas that you believe need improvement at your facility, based on what you have learned over the course of this training.

1. _____

2. _____

3. _____