



Oracle Electronic Recycler Standard

Table of Contents

Page

Section 1 Environmental, Health and Safety Management System 3

Section 2 “Reuse, Recover...” Hierarchy of Responsible Management Strategies 4

Section 3 Legal Requirements 5

Section 4 On-Site Environmental Health and Safety 6

Section 5 Focus Materials..... 7

Section 6 Reusable Equipment and Components..... 9

Section 7 Tracking Throughput 11

Section 8 Data Destruction 11

Section 9 Storage 11

Section 10 Facility Security 11

Section 11 Insurance, Closure Plan and Financial Responsibility..... 12

Section 12 Transportation to Downstream Recyclers 12

Section 13 Record Keeping 12

Section 14 Audit and Corrective Actions 14

Section 15 Collection of Electronic Equipment on Oracle's Behalf 15

Table 1 12

Definitions 15

The Oracle Electronic Recycling Standard is aligned with the US EPA Responsible Recycling (R2) Practices and is used to define the minimum requirements to become an approved electronic recycler for Oracle's Returns Program. This standard does not absolve any recycler from complying with any and all Federal, Provincial, State, local and/or Municipal regulations that may apply to their business operations. It is the responsibility of the recycler to be aware of and abide by all applicable regulatory legislation. This Standard is intended to assist recyclers by ensuring electronic products are managed in an environmentally sound manner that safeguards public health and safety, worker health and safety, and the environment from the point of transportation, receipt, primary processing to final disposition. To validate the electronic recycler's ongoing performance, Oracle conducts a rigorous audit program.

In the execution of Oracle's audit process it is likely actions will be generated where gaps are identified or questions are raised. Any action raised will comply with the "SMART" format and update and closure dates agreed by both parties.

S - Specific

M - Measurable

A - Achievable

R - Realistic

T - Time bound (i.e. a date when it will be completed)

All actions will be managed by Oracle and formally communicated with the audit report. It is possible audit actions may also be reflected within the supplier's scorecard to ensure recognition and prioritization is provided, along with other day-to-day operational business.

Oracle reserves the right to engage a qualified auditor to verify the electronic recyclers conformance to this Standard.

1.0 Environmental, Health and Safety Management System

The electronics recycler shall develop and use a third party certified Environmental, Health and Safety Management System (EHSMS) to plan and monitor its environmental, health and safety practices, including the activities it undertakes to conform to this standard. If the recycler is not currently certified by a third party, the recycler shall obtain certification within one year or in accordance to an agreed upon schedule. If the recycler contracts with a partner site to supply recycling services for Oracle equipment, the partner site shall either maintain a third party certification, or at the minimum, maintain an Environmental, Health and Safety Management System that meets the requirements in sections 1.1 through 1.3 below and is validated by the primary recycler annually.

The recycler shall document, fully implement, review at least annually, and update as needed (e.g., as products and/or technologies change) a written EHSMS that:

- 1.1 Includes written goals and procedures and requires the organization to systematically manage its environmental, health, and safety matters, and

- 1.2 Is based on a “Plan-Do-Check-Act” model (please see the definitions section for additional detail) for continual improvement, and
- 1.3 Includes sections setting forth the following:
 - 1.3.1 A policy for managing used and end-of-life electronic equipment that is based on a “reuse, recover, recycle, dispose” hierarchy of responsible management strategies and covers materials management on site and throughout the recycling chain (as described in section 2),
 - 1.3.2 A plan for complying with the environmental, health, and safety legal requirements relating to its operations (as described in section 3),
 - 1.3.3 A system for assuring 1) it only exports equipment and components containing Focus Materials (FM) to countries that legally accept them (as described in section 3), and 2) facilities have the permits or authority to accept the FMs.
 - 1.3.4 An analysis of and plan – the “FM Management Plan” – for how the Focus Materials (FMs) that pass through the recycler’s facility or control should be properly managed, both on site and throughout the recycling chain (as described in section 5), this can be a subsection of the section described in 1.3.1 above,
 - 1.3.5 An EHS hazards identification and assessment of on-site occupational and environmental risks (as described in section 4.1.3),
 - 1.3.6 A plan for responding to and reporting exceptional releases, accidents, spills, fires, explosions, and other out-of-the-ordinary events that pose risks to worker safety, public health, or the environment – this section should be provided to local emergency responders if appropriate or required, (as described in section 4.5),
 - 1.3.7 A documented audit program and associated schedule designed to systematically review, on at least an annual basis, both internal (on-site) procedures and activities as well as downstream vendors to validate EHSMS conformance (as described in section 14),
 - 1.3.8 A corrective action tracking system following the requirements in section 14.
 - 1.3.9 A list of the activities necessary to conform to the requirements of these practices and a list of the documentation necessary to show conformity with these requirements.
- 1.4 The electronics recycler shall obtain a certification from an Accredited Certification Body (i.e. third party) stating that:
 - 1.4.1 Its EHSMS conforms to the requirements of this section, and
 - 1.4.2 Its practices conform to the electronics recycler’s EHSMS and to the requirements of this standard.

2.0 “Reuse, Recover, ...” Hierarchy of Responsible Management Strategies

The electronics recycler shall develop and adhere to a policy for managing used and end-of-life electronic equipment that is based on a “reuse, recover, recycle, dispose” hierarchy of responsible management strategies.

- 2.1 The electronics recycler shall develop in writing and adhere to a policy stating how it manages used and end-of-life electronic equipment, components, and materials with

respect to both on-site activities and the selection of downstream vendors which is based on a hierarchy of responsible management strategies:

- 2.1.1 Reuse – The electronics recycler shall take all practical steps to direct properly functioning equipment and components complying with Oracle's Reuse policy – Refer to section 6.0
- 2.1.2 Materials Recovery – The electronics recycler shall separate as appropriate, through manual dismantling and/or mechanical processing, the materials in equipment and components that are not directed to reuse and direct them to properly-equipped materials recovery facilities when technically and economically feasible.
- 2.1.3 Energy Recovery or Disposal – The electronics recycler shall direct remaining material to properly-equipped energy recovery and/or disposal facilities in conformity with section 5.

2.2 This policy shall incorporate and be consistent with the Focus Material Management Plan that the electronics recycler develops in accordance with section 5.

3.0 Legal Requirements

The electronics recycler shall comply with all applicable environmental, health, and safety legal requirements and shall only export equipment and components containing FMs to countries that legally accept them.

In order to maintain its compliance with all applicable environmental, health, and safety legal requirements and to assure it only exports equipment and components containing FMs to countries that legally accept them, an electronics recycler shall develop and implement a plan covering these matters that shall be included as a section of its EHSMS:

- 3.1 The plan shall identify and document the environmental, health, and safety legal requirements that cover the recycler's operations. The recycler shall keep the plan up to date, identify (in the plan) and implement the steps necessary to comply with each requirement, document the implementation of these steps, periodically evaluate its compliance with the requirements (at least once per calendar year), and take corrective action to address any issues of non-compliance.
- 3.2 The plan also shall identify and document the legality – under the laws of the importing countries – of all international shipments of equipment, components, or materials containing FMs that have passed through the recycler's facility or control (this includes shipments made by downstream vendors). The recycler shall identify the countries that are receiving such shipments, obtain documentation demonstrating that each non-OECD country legally accepts such shipments, and only make such shipments to countries for which it has such documentation. The documentation shall consist of one of the following:
 - 3.2.1 A copy of the relevant information from the United States Environmental Protection Agency, or
 - 3.2.2 Documentation from the country's Competent Authority stating that the country

- legally accepts such imports, or
- 3.2.3 A copy of a law or court ruling from the importing country that demonstrates the legality of the import.

4.0 On-Site Environment, Health, and Safety

The electronics recycler shall utilize practices at their facilities that protect worker health and safety and the environment.

4.1 Workforce and Environmental Protection

- 4.1.1 The electronics recycler shall possess the expertise and technical capability to process each type of equipment, component, and material it accepts in a manner protective of worker safety, public health, and the environment.
- 4.1.2 The electronics recycler adheres to good housekeeping standards, including keeping all work and storage areas clean and orderly. Clean up operations for all areas of the facility should be planned, regularly implemented, and monitored.
- 4.1.3 Chemical and waste storage areas shall be managed in a compliant manner and follow good housekeeping standards and practices including, but not limited to the following:
- All chemical and waste containers shall be closed and labeled to reflect what they contain and applicable hazard warnings.
 - Drums and other large volume containers will be stored in catchment basin or some other suitable secondary containment structure. The goal being to prevent any discharges to the environment, sanitary or other sewer system.
- 4.1.4 The electronics recycler shall conduct on an ongoing basis (e.g., as new types of materials are processed or new processes are utilized) a hazards identification and assessment of occupational and environmental risks that exist or could reasonably be expected to develop at the facility. Such risks could result from any sources, including but not limited to emissions of and/or exposure to substances, noise, ergonomic factors, thermal stress, substandard machine guarding, cuts and abrasions, etc.. The hazards identification and assessment shall be captured in writing and incorporated as a component of the recycler's EHSMS.
- 4.1.5 The electronics recycler shall manage the hazards and minimize the releases it identifies using an appropriate combination of strategies, including but not limited to (1-3 below are in order of priority):
1. Engineering controls such as (a-c below are in order of priority):
 - (a) Substitution (e.g., replacing a toxic solvent with one less toxic),
 - (b) Isolation (e.g., automating a process to avoid employee exposure), or
 - (c) Ventilation and, if appropriate, capture (e.g., fume hood),
 - (d) Dust control, capture, and clean up, and
 - (e) Emergency shut-off systems, and
 - (f) Fire suppression systems,
 2. Administrative and work practice controls, including appropriate combinations of:
 - (a) Regular, documented health and safety training that covers information

from the hazards assessment, as well as safe management handling, spill prevention, engineering controls, equipment safety, and use and care of personal protection equipment; with training for new hires and refresher courses for all employees that is understandable to them, given language and level-of-education considerations,

- (b) Job rotation as feasible given workforce size,
- (c) Safe work practices,
- (d) Medical surveillance,
- (e) Safety meetings,

3. Personal protective equipment must be provided as appropriate for the risks involved in the tasks being performed. This would include but is not limited to, respirators, protective eye wear, hearing protection, cut-resistant gloves, foot protection etc.

4.2 The electronics recycler shall utilize monitoring and sampling protocols to provide assurances that the practices it employs are effectively and continuously managing the risks it has identified. This includes complying with all applicable local or regional occupational health and safety standards and permissible exposure levels for sampling and/or monitoring.

4.3 The electronics recycler shall treat its entire workforce, including volunteer workers, paid workers, and anyone else performing activities under its direction, using the standard of care established pursuant to 4.1.4 of this section.

4.4 The electronics recycler shall designate a qualified employee(s) or consultant(s) to coordinate its efforts to promote worker health and safety and environmental protection. The designated individual(s) shall be identified to all employees and two-way communication shall be encouraged between employees and the designated individual(s) regarding potential hazards and how best to address them.

4.5 Exceptional Releases

The electronics recycler shall be prepared at all times to implement the plan set forth in its EHSMS for responding to and reporting exceptional releases, accidents, spills, fires, explosions, and other out-of-the-ordinary events that pose risks to worker safety, public health, or the environment.

4.6 Maintain a process to provide written notice to the Oracle contact of any fines; regulatory audits and subsequent orders; environmental incidents such as spills; and loss of data storage products that has occurred at the primary or downstream processor within 30 calendar days of such incident.

5.0 Focus Materials

The electronics recycler shall manage both on site and in the selection of downstream vendors –

the Focus Materials that pass through its facility or control in a manner protective of worker health and safety, public health, and the environment; and shall perform due diligence and annually audit all downstream vendors to which it ships these materials (as described in section 14).

5.1 Development and Adherence to an FM Management Plan

The electronics recycler shall analyze and plan how the Focus Materials (FMs) that pass through its facility or control will be properly managed both on site and throughout the Recycling Chain (and include this analysis and plan as the “FM Management Plan” section of its EHSMS). The FM Management Plan shall state how the recycler and its downstream vendors shall conform to the requirements set forth in the rest of this section.

5.2 Removal of FMs

Prior to shredding, materials recovery, energy recovery, incineration, or land disposal of equipment or components, FMs (as well as toner and toner cartridges) shall be removed using safe and effective mechanical processing or manual dismantling, with two exceptions:

- 5.2.1 Items containing mercury if they are too small to remove safely at reasonable cost, and workers are protected from the risks posed by the mercury during and subsequent to any processing or manual dismantling of the equipment containing it, and the equipment and components containing such items are sent to materials recovery facilities that are properly licensed to receive, and that utilize technology designed to safely and effectively manage, equipment or components containing such mercury-containing items.
- 5.2.2 CRTs, batteries, and circuit boards contained in equipment or components destined for materials recovery need not be removed prior to shredding and/or materials recovery if the shredding and/or materials recovery occurs in facilities that are properly licensed to receive, and that utilize technology designed to safely and effectively manage, equipment or components containing these FMs.

Recyclers that export used CRTs for reuse and CRT or mixed CRT glass for recycling also have export obligations under US EPA's CRT rule (FR: July 28, 2006 Volume 71, Number 145).

5.3 Processing, Recovery, and Treatment of FMs

The electronics recycler shall send removed FMs to processing, recovery, or treatment facilities that are properly licensed to receive, and that utilize technology designed to safely and effectively manage, the FMs. This shall include:

- 5.3.1 For items containing mercury – mercury retorting,
- 5.3.2 For circuit boards – removal of batteries and mercury and then smelting for metals recovery, and;
- 5.3.3 For items containing polychlorinated biphenyls – technology specifically designed for polychlorinated biphenyls destruction and licensed under the Toxic Substances Control Act and/or any other applicable law.
- 5.3.4 Toner and toner cartridges, though not an FM, shall be recycled through the OEM or other qualified toner recycler unless it is not economically feasible.

5.4 Energy Recovery, Incineration, and Land Disposal of FMs

The electronics recycler shall not utilize energy recovery, incineration, or land disposal as a management strategy for FMs or equipment and components containing FMs unless the applicable local law allows or requires the use of one of these technologies (e.g., thermal destruction of PCBs). However, if circumstances beyond the control of the recycler disrupt its normal management of an FM, it may consider these technologies to the extent allowed under applicable law.

5.5 Selection and Ongoing Due Diligence of Downstream Vendors for FMs

For shipments of removed FMs, and shipments of equipment and components containing FMs, an electronics recycler shall select downstream vendors that possess and conform to:

- 5.5.1 The recycler's FM Management Plan (developed in accordance with and including the requirements set forth in Sections (5.0-5.4 above),
- 5.5.2 A documented environmental, health, and safety management system,
- 5.5.3 A list of its environmental permits and copies of each. Note: related to the management of any regulated hazardous wastes, it is the primary recycler's responsibility to confirm that any downstream vendors have the documented authority to manage these wastes, and,
- 5.5.4 This section 5, thereby establishing that each vendor in the Recycling Chain conforms to these subsections (5.5.1- 5.5.7),
- 5.5.5 Section 6 (Reuse),
- 5.5.6 The exporting requirements of section 3.2, and
- 5.5.7 Section 7 (Tracking Throughput).

5.6 The electronics recycler shall confirm, through annual audits that each downstream vendor in the recycling chain to which section 5.5 applies continues to conform to the requirements of section 5.5 for as long as it is on contract to receive FMs directly or indirectly from the recycler.

5.7 The electronic recycler shall provide copies of the downstream vendor audits to Oracle each time they are conducted.

6.0 Reusable Equipment and Components

The electronics recycler shall refurbish as needed, properly test, and adequately package equipment and components going to reuse, complying with Oracle's strict reuse criteria.

6.1 The electronics recycler shall not allow equipment or components to be sold or donated for reuse if contrary to commercial agreements.

6.2 The electronics recycler shall, with respect to equipment and components it ships downstream:

- 6.2.1 Label and sort each shipment in a manner sufficient to track throughput in conformity with section 7.

6.2.2 Handle and package shipments in conformity with section 12.

- 6.3 The electronics recycler shall, when shipping equipment and components back to Oracle, or Oracle's 3rd party manufacturing sites, follow all packaging requirements as documented in the current version of the RPR Packaging Specifications document.
- 6.4 The electronics recycler shall, when ever processing or disassembling equipment or components for return to Oracle, or Oracle's 3rd party manufacturing sites, follow the ESD control requirements as documented in the current version of the ESD Precautions document.
- 6.5 The electronics recycler, prior to shipping equipment and components (except equipment and components that are new and in their original packaging) that contain FMs and that will be reused as is or repaired, refurbished, or re-manufactured, shall:
- 6.5.1 Utilize effective testing methods to confirm that the Key Functions of the equipment or components are working properly, or
 - 6.5.2 Determine that the recipient vendor meets the requirements of this standard or non-conformances are documented and reviewed with Oracle prior to use of this vendor, or
 - 6.5.3 Confirm through an appropriate combination of contractual agreements, detailed materials tracking and record keeping, and auditing that:
 - The equipment or components meet the specifications of the recipient vendor, and
 - The recipient vendor sells the equipment or components for reuse, with their key functions, functioning properly, and
 - The recipient vendor manages all residual FMs resulting from refurbishing operations in a manner that conforms to these practices.
- 6.6 The electronics recycler need not conform to section 6.3 for shipments of small quantities of units that either are going to a new vendor as a sample for purposes of evaluation of whether to purchase larger quantities for refurbishment or that are being sold with a practical return policy to an end user. This Section (6.4) does not apply to multiple sales or shipments within a proximate time frame to the same entity.
- 6.7 The electronics recycler need not conform to the downstream requirements of section 5 for shipments that satisfy the requirements of section 6.3 or 6.4, or are new and in their original packaging.
- 6.8 The electronics recycler need not conform to the exporting requirements of section 3.2 for shipments that satisfy either the functionality requirement of section 6.3.1 or the requirements of section 6.4, or are new and in their original packaging.

7.0 Tracking Throughput

The electronics recycler shall maintain business records sufficient to demonstrate the material flow of equipment, components, and materials that pass through its facility.

- 7.1 The electronics recycler shall maintain for at least three years commercial contracts, bills of lading, or other commercially-accepted documentation for all transfers of equipment, components, and materials into and out of its facility, as well as for any brokering transactions.

8.0 Data Destruction

The electronics recycler shall effectively employ Oracle's defined, data destruction procedures. Before an alternative procedure can be applied to Oracle's products pre-approval from Oracle must be secured.

- 8.1 The electronics recycler shall sanitize, purge, or destroy data on identified hard drives and other data storage devices as defined by Oracle's Data Destruction instructions, detailed within respective statement of works.
- 8.2 The electronics recycler shall document their data destruction procedures.
- 8.3 Employees involved in data destruction shall receive appropriate training on a regular basis.
- 8.4 Data destruction processes shall be reviewed and validated by an independent, competent party on a periodic basis.

9.0 Storage

The electronics recycler shall store items and materials that may cause risk to worker health or safety or the environment if inappropriately stored, and equipment and components going to reuse, in an appropriate manner.

- 9.1 The electronics recycler shall store items removed pursuant to section 5, and equipment and components destined for reuse, in a manner that:
 - 9.1.1 Protects them from adverse atmospheric conditions and floods and, as warranted, includes a catchment system, and
 - 9.1.2 Is secure from unauthorized entrance, and
 - 9.1.3 Is in clearly labeled containers and/or storage areas.

10.0 Facility Security

The electronics recycler shall employ facility security measures appropriate for the equipment they handle and customers they serve.

- 10.1 The electronics recycler shall maintain a security program that controls access to all or parts of the facility in a manner and to a degree appropriate given the type of equipment handled

and the needs of the customers served.

11.0 Insurance, Closure Plan, and Financial Responsibility

The electronics recycler shall possess insurance that is adequate to cover the potential risks and liabilities associated with the nature and size of the company's operations, and shall have adequate legal and financial assurances in place for the proper closure of its facilities.

- 11.1 The electronics recycler shall possess adequate Comprehensive or Commercial General Liability Insurance or equivalent, including coverage for bodily injury, property damage, pollutant releases, accidents and other emergencies.
- 11.2 The electronics recycler shall develop and keep current a written plan and a sufficient financial instrument that assures proper closure of the facility and assures against abandonment of any electronics recycling products, components, or materials.

12.0 Transportation to Downstream Recyclers

The electronics recycler shall transport all equipment, components, and materials using entities that have the necessary regulatory authorizations and in a manner protective of public health and the environment.

- 12.1 The electronics recycler ensures that all equipment, components, and materials to be transported are packaged appropriately in light of the risk they could pose during transportation to public health or the environment and the level of care warranted by their intended use.
- 12.2 The electronics recycler obtains written documentation or a third-party certification indicating that their transporters have all the necessary regulatory authorizations and no significant violations of relevant legal requirements during the past 3 years.

13.0 Record Keeping

The electronics recycler shall maintain the documentation necessary for an auditor to assess its conformity to the requirements of this document.

- 13.1 The electronics recycler shall maintain for a minimum of three years in a single location each piece of documentation necessary to show conformity to each requirement of this document.

Table 1: Recyclable Materials and Final Disposition

Material	Best Practices Goal for Final Disposition	Acceptable Final Disposition	Non-acceptable Final Disposition
Metals (ferrous, non ferrous) and	Metal recovery	Metal recovery	Landfill

other metals (brass, bronze, metal fines)			
Separated plastics	Recycle by pelletizing plastics to a reusable feedstock product.	Pelletizing, plastic product feedstock, energy recovery or landfill	Use as raw material for food containers or toys
Mixed plastics	Recycle by pelletizing plastics to a reusable feedstock product.	Pelletizing, plastic product feedstock, energy recovery, or landfill	Use as raw material for food containers or toys
Wood	Reuse or recycled	Energy recovery	Export to non-OECD/EU countries
Glass (non-lead)	Glass product feedstock	Glass product feedstock, energy recovery, landfill	Export to non-OECD/EU countries
Cables and wires	Metal recovery	Metal recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries
Printed circuit boards and analog boards	Metal recovery & chip removal for reuse	Metal recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries
Metal and plastic laminates	Metal recovery	Metal recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries
Components, including hard drives, optical drives. LCD/PDP panels, processors and chips, and other electronic components;	Metal recovery	Metal recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries
Cathode Ray Tubes (CRT), CRT frit, leaded plasma display or other leaded glass	Metal recovery	Metal recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries
Leaded glass cullet	Recycling into CRT manufacturing processes	CRT manufacturing, metal recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries IF NOT washed in an OECD country prior to export and destination country has not provided written determination that the material is not waste
CRT Phosphor powder	Hazardous waste disposal	Hazardous waste disposal	Landfill, non-EFW incineration, export to non-

			OECD/EU countries
Ethylene glycol in CRT projection tubes	Hazardous waste disposal	Industrial or Hazardous waste disposal	Landfill, non-EFW incineration, export to non-OECD/EU countries
Mercury-bearing lamps in LCD displays, projection units, and scanning equipment	Mercury recovery	Mercury recovery	Landfill, Landfill of stabilized mercury, non-EFW incineration, export to non-OECD/EU countries
Non-rechargeable batteries	Metal recovery	Metal recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries
Rechargeable batteries	Metal recovery	Metal recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries
Ink and toner cartridges	Materials recovery, energy recovery	Materials recovery, energy recovery	Landfill, non-EFW incineration, export to non-OECD/EU countries
Battery processing effluent	Permitted recovery or disposal	Permitted recovery or disposal	Unpermitted discharge

14.0 Audit and Corrective Action

14.1 Audit - It is the recycler's responsibility to audit, at least annually, both its internal operations and downstream vendor's operations to validate EHSMS conformance. With Oracle's approval, remote audits reviewing necessary documentation. Results of these audits are to be made available to Oracle upon request and, at a minimum, during Oracle's routine annual audits of the primary electronics recycler. Audits must meet the following criteria:

14.1.1 Audits are documented and performed at least annually.

- FM recyclers require an annual audit of the facility and document review.
- For non-FM recyclers, a remote inspection reviewing appropriate documentation may be conducted with Oracle's approval. However, an in person site inspection is expected to be completed every three years if this remote audit option is selected.

14.1.2 A documented audit schedule is provided and followed.

14.1.3 Individuals performing audits are well versed in audit protocols, legal requirements, and all other facets of this and other applicable standards and can show evidence the auditor is qualified to perform such audits.

Important note: it is the primary recycler's responsibility to confirm that any downstream vendors have the documented authority to manage any hazardous wastes or focus materials they may generate.

14.2 Corrective Action - Corrective actions identified through audit or other means must be documented and meet the following criteria:

- 14.2.1 A tracking mechanism such as a unique item number for each corrective action.
- 14.2.2 A detailed description of the non-conformance.
- 14.2.3 The name of the business unit or individual assigned to take action.
- 14.2.4 Date the item was assigned to the owner.
- 14.2.5 Anticipated date of completion.
- 14.2.6 Actual completion date.
- 14.2.7 A root cause and corrective actions required to prevent recurrence.
- 14.2.8 Status that includes a brief description of the corrective action.
- 14.2.9 Validate all completed corrective actions are effective at the next scheduled audit or site visit.

Important Note: it is the responsibility of the primary electronics recycler to verify effective and timely closure of non-conformances both of internal audits and of those performed on the downstream vendor(s).

Variable Section – These sections may be deleted if services are not applicable to the vendor being audited.

15.0 Collection of Electronic Equipment on Oracle's Behalf

This section is applicable when the electronic waste recycler supplies or arranges the transportation on Oracle's behalf.

- 15.1 Is the transporter authorized to transport e-waste? (Please provide certification/registration)
 - 15.1.1 Has the transporter received a copy of the notification for transboundary shipment of e-waste for Oracle? (Please provide copy of the notification)
 - 15.1.2 Is the appropriate documentation for transport of e-waste present at any time during transport?
 - 15.1.3 Have the competent authorities (of the country of origin, transit countries, country of destination) been pre-notified of the intended transport?
 - 15.1.4 Have the competent authorities (of the country of origin, transit countries, country of destination) been notified of the completed transport?
 - 15.1.5 Have the competent authorities (of the country of origin, transit countries, country of destination) been notified of the completed processing of the transported waste?
- 15.2 Are subcontractors used for transporting e-waste?
 - 15.2.1 If yes, are subcontractors authorized to transport e-waste? (Please provide certification/registration per subcontractor)

DEFINITIONS

Accredited Certification Body is accredited under ISO Guide 66 or ISO/IEC Standard 17021:2006 to certify electronics recyclers to the R2 Practices.

CRT is a cathode ray tube. CRTs typically contain leaded glass

Downstream Recycler or sub-contractor means an entity that receives material from a primary recycler or other downstream processors for additional processing and/or disposition.

This includes entities that:

- Bulk and blend materials that are sent to other vendors for additional processing;
- Shred and separate materials that are sent to other vendors for additional processing;
- Process materials into new products; This may be an entity that has purchased a usable product and may not need to comply with sections in this std.
- Process materials to recover metals, energy, and other resources;
- Disposal by landfill and/or incineration with or without waste to energy recovery;
- Any other contracted party that handles, processes or disposes of materials on behalf of the primary recycler.

EFW means energy from waste recovery.

Electronic Equipment also referred to as “equipment and components”, includes computers and peripheral equipment – central processing units (CPU’s), monitors, printers, keyboards, scanners, storage devices, servers, networking systems; copiers; fax machines; imaging systems; printing systems; telephones; televisions; video cassette recorders; camcorders; digital cameras; control boxes; stereo systems; compact disc players, radios, cell phones; pagers; personal digital assistants (PDAs); calculators; organizers; and game systems and their accessories. It furthermore includes any other or new (future) types of equipment that is designed primarily to store or convey information electronically, and any new accessories to such equipment.

Hazardous Wastes are materials that are classified as a hazardous waste or hazardous recyclable material under the local governing authority. Components of electronic waste that could fall under the definition of hazardous wastes include batteries, mercury-bearing products, leaded glass, and other materials defined as hazardous by applicable regulatory authorities.

Industrial Waste is any waste which has a reasonable potential to present a hazard to human health and/or the environment but is not currently regulated as hazardous waste.

Key Functions are the originally-intended functions of a unit of equipment or component, or a subset thereof, that will satisfactorily serve the purpose(s) of someone who will reuse the unit.

Focus Materials also referred to as “FMs”, are materials in end-of-life electronic equipment that warrant greater care during recycling, refurbishing, materials recovery, energy recovery, incineration, and/or disposal due to their toxicity or other potential adverse worker health and safety, public health, or environmental effects that can arise if the materials are managed without appropriate safeguards.

The following are Focus Materials:

- Items containing polychlorinated biphenyls,
- Items containing mercury,
- CRTs and CRT glass,
- Batteries
- Whole and shredded circuit boards, except for whole and shredded circuit boards that do

not contain lead solder, and have undergone safe and effective mechanical processing, or manual dismantling, to remove mercury and batteries.

Equipment, components, or materials (whole or shredded) that have undergone safe and effective mechanical processing or manual dismantling to remove FMs, yet still retain de minimus amounts of FMs, are not subject to the requirements that are triggered by the presence of FMs.

Plan-Do-Check-Act Model: Elements of this model include: **Plan** – (a) Identify environmental and worker health/safety impacts, and legal and regulatory requirements; (b) Establish environmental goals, objectives and targets; (c) Plan actions that work toward achieving identified goals; (d) Plan for emergency preparedness and response; and (e) Identify management support. **Do** – (a) Establish roles and responsibilities for the EHSMS and provide adequate resources; (b) Ensure that staff are trained and capable of carrying out responsibilities; and (c) Establish a process for communicating about the EHSMS. **Check** – (a) Monitor key activities and track performance, this includes auditing; (b) Identify and correct problems and prevent recurrence; and (c) Provide a measurement system. **Act** – (a) Conduct annual progress reviews; this activity means to have reviews with upper management to update them on progress, goals and continual improvement(s). (b) Act to make necessary changes to the EHSMS; (c) Create and implement an action plan for continual improvement.

Printed Circuit Boards (PCBs) within the electronic recycling industry these may also be termed printed wire assembly (PWA) This is not to be confused with polychlorinated biphenyls.

Point of Final Disposition means a point in the downstream flow of materials where the separated materials generated from the processing of electronic waste become commodities used to produce new products.

This includes:

1. Use as a raw material in the production process of new products
2. Metal, energy and other resources recovery;
3. Pelletization of plastics;
4. Landfill and incineration disposal.

This does not include:

1. Bulk and blend materials that are sent to other vendors for additional processing;
2. Processing to prepare materials for use as a raw material, such as size reduction for feedstock in mills to be processed

Recyclers includes but need not be limited to electronics resellers, refurbishers, recyclers, demanufacturers, asset recoverers, brokers, as well as leasing companies that engage in these activities.

Recycling Chain refers to all the downstream vendors that handle end-of-life equipment, components, or materials that pass through an electronics recycler's facility or control. It includes, but does not extend beyond materials recovery facilities such as smelters. For equipment and components that are sold or donated for reuse, it does not extend beyond the entity that conforms with section 6.3 or 6.4.

Responsible Recycling (“R2”) Practices is a set of guidelines for accredited certification programs to assess electronics recyclers’ environmental, worker health and safety, and security practices. Since January 2006, the US EPA has facilitated a multi-stakeholder group to develop these voluntary practices and they include general principles and specific practices for recyclers disassembling or reclaiming used electronics equipment including those electronics that are exported for refurbishment and recycling.

OECD Member Country means a country that is a recognized member of the Organization of Economic Cooperation and Development and is listed on the website www.oecd.org.

Substance Exposures risk posed by exposure to substances may arise in a variety of situations – sometimes involving substances that do not under ordinary conditions pose a risk to worker safety or the environment. Such substances may include mercury, lead, beryllium, cadmium, polychlorinated biphenyls some phosphor compounds, certain brominated flame retardants (i.e., polybrominated biphenyls, pentabrominated diphenyl ether, and octabrominated diphenyl ether), silica dust, chlorinated or brominated dibenzodioxins and dibenzofurans, and hexavalent chromium. Special attention should be given to potential lead and cadmium exposure during the creation or handling of broken CRT glass, as well as where lead solder is melted during chip recovery.