ORACLE
Global EHS

Oracle Global Electronic Recycler Audit Standard

Applicability: Global

Public

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ORACLE GLOBAL ELECTRONIC RECYCLER AUDIT STANDARD

This standard aligns with select elements of the _R2 Responsible Recycling Standard_ and defines the minimum requirements to become an approved Oracle electronic recycler. While not required to do business with Oracle, it is highly encouraged that Oracle contracted recyclers also obtain certification to a Responsible Recycling Standard, such as R2, or E-stewards.

This standard does not absolve any recycler from complying with applicable Environmental, Health & Safety (EHS) federal, provincial, state, local, municipal or other applicable regulations. It is the responsibility of the recycler to be aware of and abide by all applicable regulatory requirements and to adhere to the terms and conditions detailed in their Statement of Work (SOW) or Scope of Work (SOW) contracts issued by Oracle. 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; data confidentiality is also addressed as part of this recycler audit standard.

Oracle reserves the right to engage a qualified auditor, either internal or external to Oracle, to verify the electronic recycler's conformance to this standard.

SCOPE OF THE ELECTRONIC RECYLER AUDIT STANDARD

Compliance Standard Matrices

Oracle requires their Contracted Recyclers to develop and update their Compliance Standard Matrices annually, unless a change in supplier or service requires this sooner. These matrices are maintained by Oracle Contracted Recyclers (main recycling partners), and shared with Oracle, to validate conformance with local laws and regulations of their own recycling operations and those of their subcontractors. At a minimum a recycler's matrix should include a comprehensive list of all recycling sites, including address, contact details, certifications and expirations and acknowledgement that the listed site currently meets all applicable local laws and regulations. Oracle's Global Contracted Recyclers typically use subcontractors in locations where they do not have their own recycler operations, and these partners must also be included in the matrices.

Environmental, Health and Safety Management System (EHSMS)

All Oracle electronics recyclers must develop and conform to an Environmental, Health and Safety Management System (EHSMS) in order to plan and monitor its environmental, health and safety practices, and including the activities it undertakes to conform to this standard.

- Oracle Contracted Recyclers are required to have an EHSMS certified by a third-party registrar. Oracle will allow a grace period of up to one year to obtain certification if not already obtained at the time of contract approval.
- Oracle Sub-contracted recyclers must **either** maintain a third-party certification or maintain an EHSMS that is validated by the primary recycler at least annually.

Examples of acceptable EHSMS certification standards include ISO14001, and the Recycling Industry Operating Standard® (RIOS®) Quality, Environmental, Health and Safety (QEHS) Management System; many countries have their own unique standards as well.

Hierarchy of Responsible Management Strategies

The electronics recycler must 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.

Legal Requirements

The electronics recycler must comply with all applicable legal requirements for collecting, storing, treating and transporting Waste Electrical and Electronic Equipment (WEEE) and items destined for reuse, including having all the proper permits and licenses for such activity.

The electronics recycler must only export equipment and components containing Focus Materials (FMs), as defined below, to countries that legally accept them. In order to maintain its compliance with all applicable legal requirements and to assure it only exports equipment and components containing FMs to countries that legally accept them, an electronics recycler must develop and implement a plan covering these materials (and can be included as a section of its EHSMS).

Business Continuity & Disaster Recovery

As detailed in Oracle's Supplier Information and Physical Security Standards, the recycler must develop and maintain Business Continuity (BC) and Disaster Recovery (DR) plans for all computers, environments, networks and facilities that are used to provide services to Oracle.

Focus Materials

The term *Focus Materials* (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.

Focus Materials commonly found in electronics products include:
- Items containing polychlorinated biphenyls (PCB's)
- Items containing mercury (Hg)
- CRTs and CRT glass (Inorganic Lead)
- Batteries
- Whole and shredded circuit boards, except for the following: 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

For a list of FMs commonly found in Oracle branded products, or other electronic products, reference the WEEE Selective Treatment Document (also found in the Appendix A below).

Development and Adherence to an FM Management Plan: The electronics recycler must analyze and plan how the FMs that pass through its facility or control will be properly managed both on site (including storage) and throughout the recycling chain. This analysis and plan is typically referenced as the "FM Management Plan" (or Hazardous Materials Management Plan) and can be included as a section in an EHSMS.

- Removal of FM: Prior to shredding, materials recovery, energy recovery, incineration, or land disposal of equipment or components, FMs (as well as toner and toner cartridges) must be removed using safe and effective mechanical processing or manual dismantling.

- Processing, Recovery, and Treatment of FM: The electronics recycler must send removed FMs to processing, recovery, or treatment facilities that are properly licensed to receive FMs, and that utilize technology designed to safely and effectively manage the FMs.

- Energy Recovery, Incineration, and Land Disposal of FM: The electronics recycler must **not** utilize energy recovery, incineration, or land disposal as a management strategy for FMs, or for 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).

It is recommended that the recycler follow the Focus Materials Management Plan found in the R2 Standard.

Tracking Asset Throughput

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

On-Site Environment, Health, and Safety

The electronics recycler must utilize practices at their facilities that protect worker health and safety and the environment, including regulatory requirements and best practices for maintaining a safe workplace free of environment impacts. Unless highly significant on-site EHS issues are identified during the audit, such gaps are often considering a low risk finding or even a BMP as a local attention item for the site to address. However, waste management non-conformances can result in especially significant risks to Oracle, associated with improper handling their products and recyclable wastes.

Notification of Significant Releases, Incidents and Violations

As is also required in Oracle's Supplier Information and Physical Security Standards, the supplier must report security incidents of which they become aware relating to the Oracle services within 24 hours to their business contacts at Oracle.

In addition, the recycler must also maintain a process to provide immediate written notice to Oracle on any of the following incidents:

- Fines or Notices of Violations, including but not limited to fatalities or monetary penalties, or the improper or non-compliant handling and/or disposal of e-wastes, as well as other incidents potentially resulting in material impacts to Oracle's reputation.
- Environmental incidents such as spills or releases, such as those triggering federal reporting and clean-up.
- Any loss of data storage products that has occurred at the primary or downstream processor or at any other part of the recycling and recover chain.

Equipment and Components reuse

The electronics recycler must follow their reuse requirements as outlined in their Master Supplier Agreements and Statement of Work. Additionally, the electronics recycler shall not allow equipment or components to be sold or donated for reuse if contrary to these commercial agreements from whom the equipment or components were received. Only certain recyclers are permitted to perform reuse work on behalf of Oracle.
For those materials allowed to undergo refurbishment, the electronics recycler mush refurbish as needed, properly test, and adequately package equipment and components intended for reuse.

Data security and Destruction

The electronics recycler must effectively implement Oracle's defined, data destruction procedures as further detailed in each recycler's Statement of Work issued by Oracle. Before an alternative procedure can be applied to Oracle's products, pre-approval from Oracle must be secured.
If the recycler is allowed by Oracle via the SOW/contract to re-market non-Oracle branded systems and memory devices, the recycler should provide evidence of compliance to Oracle data privacy and engineering standards for HDD and other Memory device memory wipe and de-branding processes. As is required by Oracle's Supplier Information and Physical Security Standards, electronic media that is decommissioned and has been used in the delivery of services

to Oracle must be sanitized before disposal or repurposing, using a process that assures data deletion and prevents data from being reconstructed or read, as prescribed in a recognized standard (e.g. NIST SP 800-88). Defective electronic media containing Oracle confidential information must be physically destroyed.

If contract terms require physical destruction of HDD's and memory devices, the recycler must provide evidence that all other HDD and Memory devices are physically destroyed leaving no potential for any data recovery.

Facility Security

The electronics recycler must employ adequate facility security measures appropriate for the equipment they handle. At a minimum, these controls should meet the requirements set forth in Oracle's Supplier Information and Physical Security Standards.

Insurance, Closure Plan, and Financial Responsibility

The electronics recycler must possess current insurance to cover the potential risks and liabilities associated with the nature and size of the company's operations and must have adequate legal and financial assurances in place for the proper closure of its facilities (as detailed in their supplier's insurance exhibit), as well as in accordance with any local regulatory requirements.

Transport

The electronics recycler or contracted logistics provider must transport all electronic equipment, components, and materials (and waste) on Oracle's behalf using entities that have the necessary regulatory authorizations and in a manner protective of public health and the environment.

a. The electronics recycler must ensure that all equipment, components, and materials to be transported are packaged appropriately based on the risk they could pose during transportation to public health or the environment.
b. The electronics recycler must verify that its transporters, including its own fleet, have all the necessary regulatory authorizations, and maintain adequate insurance coverage consistent with the material and method of transportation.

Audit and Corrective Action

It is the recycler's responsibility to audit both its internal operations and downstream vendor's operations, to validate EHSMS conformance, including shipments of removed Focus Materials (FMs), and shipments of equipment and components containing FMs. The frequency of physical audits can vary, depending on the certification level and commitments of the primary recycler and the materials it is processing. R2 facilities that process Focus Materials (FM) are required to conduct annual audits of their facilities and downstream vendors that process FM's. All recyclers are required to adhere to the audit schedule that they have developed. A site's EHSMS also typically requires system recertification audits – both internal and internal - at a specified minimum frequency.

With Oracle's approval, desktop audits may be conducted by reviewing necessary site documentation, along with tele-conferences, phone calls and email communications and Q&A. Results of these audits (e.g. corrective actions) are to be made available to Oracle upon request and, at a minimum, during Oracle's routine annual audits of the overall performance of the primary electronics recycler who would bear responsibility for the audits conducted of their vendors/subcontractors.

APPENDIX

Appendix A: associated documents

WEEE Selective Treatment Document

The purpose of this document is to assist in the understanding and breakdown for recycling of Oracle branded products at the end-of-life.

Categories of EEE sold by Oracle include:

- Screens, monitors and equipment containing screens having a surface greater than 100 cm2
- Large equipment (any external dimension more than 50 cm) including, but not limited to:
    - Servers, switches, routers
- Small equipment (no external dimension more than 50 cm) including but not limited to:
    - Headset, Speaker (when IoR but not Oracle branded)
- Small IT and telecommunication equipment (no external dimension more than 50 cm)
    - Micros printers and other equipment. All other small Oracle equipment.

The two tables below provide information for selective treatment for materials and components of waste electrical and electronic equipment in accordance with Article 8(2) and Annex VII of the EU WEEE Directive.

This document has been sent to Oracle's EU Treatment facilities as a means of meeting the requirements set forth under Article 15(1) of the EU WEEE Directive.

Table 1. As a minimum the following substances, preparations and components have to be removed from any separately collected WEEE:

Type of material, as specified by WEEE	Where Found
polychlorinated biphenyls (PCB) containing capacitors in accordance with Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT) (1),	N/A
mercury containing components, such as switches or backlighting lamps,	N/A*
batteries,	Lithium button cells – found in all printed circuit boards Lithium Ion – servers, disk arrays, routers (Tekelec), printers, scanners, tablets Lead Acid – Powervar (Micros) Alkaline- Micros key bumpbar

printed circuit boards of mobile phones generally, and of other devices if the surface of the printed circuit board is greater than 10 square centimetres,	All products contain printed circuit boards
toner cartridges, liquid and pasty, as well as colour toner,	N/A
plastic containing brominated flame retardants,	All plastic components should be considered to contain brominated flame retardants
asbestos waste and components which contain asbestos,	N/A
cathode ray tubes,	N/A*
chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC) or hydrofluorocarbons (HFC), hydrocarbons (HC),	N/A
gas discharge lamps,	N/A
liquid crystal displays (together with their casing where appropriate) of a surface greater than 100 square centimetres and all those back-lighted with gas discharge lamps,	N/A
external electric cables,	Cables are typically associated with all Oracle branded products
components containing refractory ceramic fibres as described in Commission Directive 97/69/EC of 5 December 1997 adapting to technical progress Council Directive 67/548/EEC relating to the classification, packaging and labeling of dangerous substances (2),	N/A
components containing radioactive substances with the exception of components that are below the exemption thresholds set in Article 3 of and Annex I to Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation (3),	N/A
electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)	N/A

- *mercury may be found in the backlighting lamps of historical flat panel displays and cathode ray tubes may be found in historical monitors*

Table 2. The following components of electrical equipment that is separately collected have to be treated as indicated:

Type of material, as specified by WEEE	Where Found
cathode ray tubes: The fluorescent coating has to be removed,	N/A

equipment containing gases that are ozone depleting or have a global warming potential (GWP) above 15, such as those contained in foams and refrigeration circuits: the gases must be properly extracted and properly treated.	N/A
gas discharge lamps: The mercury shall be removed.	N/A

Note: N/A means this item is not present in this type of Oracle branded product