

# e-Stewards Standard V4 Guidance

(Includes identification of new or modified requirements as noted)

## Introduction

This document is provided by e-Stewards staff and their consultants to provide interpretive guidance to the e-Stewards Standard. It is designed to be a living document with new guidance being added on an as-useful basis. Any stakeholder can contact e-Stewards and request guidance on any subject and that guidance will be considered for addition to this document to help future e-Stewards Certified Recyclers and Refurbishers.

### 3.1 Ancillary Sites

Includes facilities for collection, receiving, sorting, consolidating, warehousing, storing, cross-docking, administration, retailing, and wholesaling, as well as websites that are designed to sell or donate Electronic Equipment. All ancillary sites (actual and virtual) need to be reported to the auditor at the outset of the certification process.

### 3.2 Annual

Every year on or before the same date, but not after. Remember that Annual due dates do not reset if their deadline is missed.

### 3.6 Control

Storing includes offsite and leased storage, as well as storage at Ancillary Sites

*New: Defined end of Control for Tolling Operations*

### 3.7 Customer Data

*New: Added licensed digital content to (c)*

### 3.8 Designated Health Provider

*New definition*

*Medical authority means:* a medical expert that is licensed within their jurisdiction to diagnose and prescribe medicine or medical products.

### 3.10 Downstream Provider (DP or DSP)

In-country facilities owned by the Organization are not considered Downstream Providers

*New: Added facilities/operations handling EE potentially containing Customer Data*

### 3.11 e-Stewards Processor

*New definition*

### 3.12 Electronic Equipment (EE)

EE is the material scope of this standard. Examples of materials not considered EE due to containing ozone-depleting substances, fuels or gases include refrigerators, air conditioners, gas powered dryers, gasoline powered lawn mowers etc. However, loose circuit boards removed from these or from any source would be considered EE, as they will not contain the gases or fuels and are dependent on electric currents in order to function.

### 3.13 Electronic Waste

This definition is based on the international law and definition found in the Basel Convention.

*New definition*

### 3.14 End Processor

A Provider can be an End Processor for a given material stream, without being one for other material streams

*Modified: Removed Note making the exception that the End Processor for cleaned CRT glass is the manufacturer using the feedstock, not the Commodity/feedstock processor*

### 3.16 Extended Producer Responsibility (EPR)

*New definition*

### 3.18 Final Disposition

Examples of Final Disposition operations include smelters, glass furnaces, refurbishers, landfills, incinerators, etc. The difference between Final Disposition and End Processor is that End Processors are a subset of Final Disposition. End processors refer to (a) but not (b) or (c).

### 3.19 Fully Functional/Full Functionality

Based on the Basel definition in *Technical guidelines on transboundary movements of electrical and electronic waste and used electrical and electronic equipment, in particular regarding the distinction between waste and non-waste under the Basel Convention* (UNEP-CHW.12-5-Add.1-Rev.1.English) as referenced in the Basel Convention [Glossary of Terms](#) (see Direct Reuse Definition).

#### 3.19 (b)

Examples of structural issues include cracked casings, damaged wire sheathing, etc.

### 3.21 Hazardous Electronic Waste or Hazardous e-Waste (HEW)

*Modified: Incorporates former definition of Hazardous Electronic Equipment*

*When an Organization wishes to declare some Electronic Equipment or e-Waste as being non-hazardous they shall either submit to the Administrator a justification for this claim based on existing literature. The Administrator may require the Organization to conduct a TCLP test as described in this definition as part of the proof of non-hazardousness.*

#### 3.21(c)(6)

Examples of such plastics include Y48 of Basel Annex II, (which include mixed and dirty plastics) etc. For more information on this, see [e-Stewards webinar](#) on this new Basel listing (<http://e-stewards.org/learn-more/for-recyclers/media/recent-changes-at-the-basel-convention-and-their-impacts-on-electronics-recyclers-webinar/>).

To determine whether a plastic is a HEW, PCM or a plastic without designation, see the explanation below:  
Under the e-Stewards Standard, there are 3 plastic categories:

- ▶ HEW: Plastics that appear on Annex VIII or Annex II of the Basel Convention (Note that Annex VIII or Annex II contain a list of exceptions. Plastics listed in these exceptions are either a PCM or an undesignated plastic.).
- ▶ PCM: Plastics with halogenated additives or constituents, such as containing brominated flame retardants or polyvinyl chloride (PVC), other than those appearing on Annex II or VIII.
- ▶ Undesignated: not PCMs, not on Annex II or VIII.

In practice: For the purposes of implementation in the field of computer, peripheral, and toner cartridge plastics – Organizations shall assume that all such plastics contain halogenated flame retardants and thus are PCMs unless they are specifically listed in Annex II – such as PVC, mixed plastics, or contaminated plastics. PVCs, mixed plastics or contaminated plastics are HEWs. For the purposes of the e-Stewards Standard, contamination at levels above .5% are considered Annex II plastics, and therefore are HEWs.

To demonstrate that a plastic is neither a HEW nor a PCM, each Organization needs to demonstrate the following to their auditor:

- ▶ Demonstrate that the plastic they are dealing with is not a HEW: To achieve this, the Organization needs to demonstrate that the plastic is on Annex IX of the Basel Convention (i.e. not Annex II or VIII and therefore not a HEW). Additionally, the Organization also needs to demonstrate a process that ensures plastics are single polymers and unmixed, with the exception of a mixture of PE, PP and PET and are not contaminated at levels above .5%.
- ▶ Demonstrate that the plastic is not a PCM: This likely requires an in-house process that regularly tests the plastics for halogen content. Such handheld devices exist. One would also need to show that the material is uncontaminated by any foreign substance. To prove this, spot-checking this with a sampling procedure over the course of the year would be sufficient.

### **3.22 Immediate Downstream Provider (IDP)**

Providers of outsourced processes are considered Immediate Downstream Providers, as long as no other processor is used in between the Organization and the provider. The same IDP requirements apply for those who handle Electronic Equipment capable of holding data as for those handling MOCs.

### **3.25 Key Function(s)**

Based on the Basel definition in *Technical guidelines on transboundary movements of electrical and electronic waste and used electrical and electronic equipment, in particular regarding the distinction between waste and non-waste under the Basel Convention* (UNEP-CHW.12-5-Add.1-Rev.1.English) found [here](#).

*Modified: Formerly Essential Function(s)*

### **3.26 Life-Cycle Perspective**

*New definition*

### **3.27 Management**

*New definition*

### **3.28 Materials of Concern (MOCs)**

*New definition*

### **3.30 Organization**

*New definition*

### **3.32 Potentially Hazardous Processing Technologies (PHPTs)**

See A.8.3.1 for types of PHPTs

### **3.33 Precautionary Principle**

*New definition*

### **3.35 Problematic Components and Materials (PCMs)**

To determine whether a plastic is a PCM, and not a HEW or a plastic without designation, each organization has to demonstrate that a plastic is not a HEW. HEW plastics are plastics that appear on Annex VIII or Annex II of the Basel

Convention (Note that Annex VIII or Annex II contain a list of exceptions. Plastics listed in these exceptions are either a PCM or an undesignated plastic.).

For more detailed information, see the guidance under 3.21(c)(6).

### **3.36 Processing**

*Modified: Processing and Recycling are no longer considered the same thing; Recycling is a type of Processing*

### **3.37 Qualified Auditor**

Competence may be acquired through training, relevant work experience, experience as an auditor, etc.

*Modified: Removed specific competency requirements*

### **3.38 Qualified Smaller Components (QSCs)**

Per this definition, equipment cannot qualify as QSC if it contains batteries, however, once any batteries present have been removed it may then qualify as QSC.

*New definition*

### **3.39 Recycling**

*New definition*

### **3.41 Repair/Refurbishment**

Repair/Refurbishment activities include cleaning, data sanitization, software and hardware changes or upgrading, fixing hardware faults, replacing or removing faulty or unwanted components, remanufacturing, removal of identifying labels/stickers, Repurposing, etc.

The International definition as used by the IDSC for Data Sanitization is: the process of deliberately, permanently and irreversibly removing or destroying the data stored on a memory device to make it unrecoverable. A device that has been sanitized has no usable residual data, and even with the assistance of advanced forensic tools, the data will not ever be recovered. There are three methods to achieve data sanitization: physical destruction, cryptographic erasure and data erasure.

### **3.42 Repurposing**

Other examples of Repurposing include combining CPUs or motherboards for use as a network server, phones used as wireless hotspots, etc. Repurposing does not include use as anything other than functional Electronic Equipment (e.g., as a doorstop, a paperweight, or artwork).

### **3.44 Significant Change**

Examples of Significant Change include changes in ownership, management, location of facilities or Ancillary Sites, major emergencies, Processing methods, etc.

### **3.45 Stewardship**

*New definition*

### **3.46 Stewardship Management System (SMS)**

*New definition*

### **3.47 Tolling Operations**

*New definition*

### 3.48 Transboundary Movement

*New definition*

### 3.49 Unusual Equipment

*New definition*

### 3.50 Waste Management Hierarchy

*New definition*

## 4.1 Stewardship Management System

Remember that an Organization can be either an e-Stewards Processor or a company preparing for e-Stewards certification

*Interested parties means:* workers (including contractors and volunteers), drivers, families of workers, visitors to the Organization's facilities, customers, suppliers and service providers, Downstream Providers, regulators, surrounding communities, the ecosystem, etc.

*Documented scope means:* The scope on CB-issued certificates is a summary of the processes verified by the Organization's certification; the documented scope required by this section describes and expands on what is included in that verification.

## 5.2 (b) and (c) Stewardship Policy

*New requirements*

### 5.3 (b) Organizational Roles, Responsibilities, and Authority

"...all relevant levels...": a management review team, for example, does not need shop employee representation

#### 6.1.1 Risk assessment

Workplace hazard assessments are also called job hazard analyses, or job risk evaluations.

Specific training and/or qualifications are not stipulated for performing risk assessment(s), as the risks associated with each individual Organization can vary dramatically. Options for conducting assessments include choosing from the numerous risk assessment templates that can be found online, developing internal methodology, or hiring a third party or parties if Management does not feel sufficient experience, skill, or knowledge is available to assess a given area using in-house personnel.

##### 6.1.1 (a)

*Environmental impacts:* Stormwater runoff, air emissions, sustainable resource use, climate change impacts, etc.

##### 6.1.1 (b)

*Physical hazards:* Ergonomic issues, noise, vibration, falls, temperature extremes, etc.

##### 6.1.1 (c)

*Chemical hazards:* hazards listed in 3.21 (HEW), etc.

Examples of places where hazards may migrate include changing rooms, breakrooms, restrooms, offices, etc.

##### 6.1.1 (e)

*Operational risks:* housekeeping practices, individuals' work habits, accidental breakage, etc.

### 6.1.2 Stewardship aspects

In other words, the Organization is required to both identify the aspects and impacts associated with their business, and to prioritize and take action on those aspects it has determined to be significant.

### 6.1.3 Compliance obligations

Examples include customer contracts, DSP agreements, local, state, federal, and international laws & regulations (including GDPR), management system standards, etc.

#### 6.1.3.1 International Waste Trade Agreements and National Laws

These include the Basel Convention, EU Waste Shipment Regulation, OECD Council Decision (OECD/LEGAL/0266), Bamako Convention, Central American Accord, Izmir Protocol, Waigani Treaty, etc. See below for more detail on these laws and how they apply:

When an Organization is involved in the transboundary movement of e-wastes, either directly, or through the handling of others of those e-wastes passing from your control (e.g. downstream), many laws may be invoked that govern the movements of hazardous and sometimes, other types of waste. These can be national laws, such as the Chinese national import ban on wastes (National Sword), or they can be regional, bilateral, or multilateral agreements such as the Basel Convention. Prior to contemplating an export or transit of e-Waste to or through other countries, the Organization should find out which of these agreements apply to the country. Additionally, they must learn which national laws governing waste imports and exports may apply.

#### **National Laws**

The first stop on in the research on National laws should be the Basel Convention's non-exhaustive list of national import prohibitions/legislation listed [here](#). Apart from that, the website of the government's environmental protection department or Ministry of Environment can be useful. All e-Stewards Organizations must honor the national laws of exporting, importing or transit states. Bear in mind also that the Basel Convention recognizes national laws as part of the Convention's definition of hazardous waste (Art. 1 (1) (b)).

#### **Multilateral / Regional Agreements**

With respect to regional and multilateral agreements one should visit the [BAN Country Status page](#) on the BAN website.

#### **The Basel Convention**

The best-known multilateral agreement is the global agreement known as the [Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal](#) (Basel Convention). Almost every country in the world is a Party to the Basel Convention. Only the United States, and a handful of other countries are not. For a list of Basel Parties click [here](#).

#### **Scope of the Basel Convention**

The Basel Convention controls two different types of wastes -- hazardous wastes, and other wastes. Hazardous wastes are defined in the Convention by consisting of certain constituents (Annex I) and at the same time possessing certain hazardous characteristics (Annex III). "Other wastes" are listed in the Convention under Annex II. The e-Stewards Standard has ensured that all electronic wastes that are likely to be hazardous or "other wastes" under the Convention and defined as HEWs in the Standard. The e-Stewards Standard has added some other wastes (PCMs) which are not explicitly listed in the Basel Convention for control as if they were hazardous wastes under the Convention. If there is ever a question requiring legal certainty under the Basel Convention rules, the law, and not the standard must be definitive for the purposes of the law.

#### **Key Obligations**

There are many obligations placed upon Parties to the Basel Convention, but the most important ones to be aware of include:

- 1. Party to non-Party Trade Ban (Article 4 and 5 of the Basel Convention):** This obligation does not allow transboundary movements of *hazardous or other wastes* to take place between Parties and non-Parties without a special agreement (Article 11) being in place. This means that the US cannot trade in hazardous and other wastes (including most e-waste) with Basel Parties except for trade destined for recycling in other members of the Organization for Economic Cooperation and Development (OECD). The special OECD Council Decision agreement which is considered an Article 11 agreement as well as a [small number of bilateral agreements](#) which constitute exceptions to the Party to non-Party Trade Ban. The US has ratified a number of bilateral agreements with some countries for the purposes of importing but not exporting wastes. One key effect of the Party to non-Party Trade Ban is that it is forbidden under the e-Stewards Standard to export HEWs and PCMs from the US to any Basel Party that is not also a member of the OECD. A list of Members of the OECD can be found [here](#).
- 2. Basel Ban (Article 4a of the Basel Convention):** In 2019 the Basel Convention was amended ([the Basel Ban Amendment](#)) to include a new Article (4a) and a new Annex 7 – a list of countries that are forbidden from exporting hazardous wastes to any country not on that list for any reason. Not all countries have yet ratified the new amendment. Nevertheless, in the e-Stewards Standard all Organizations must behave as if the country in which they operate has ratified the amendment (6.1.3.1(c)). One key effect of the Basel Ban is that countries that are Parties to the OECD or EU are forbidden from exporting hazardous wastes to developing countries (non-Annex 7).
- 3. Prior Informed Consent (Article 4 (1) (c) and Article 6 of the Basel Convention):** For exports of hazardous and other wastes that are not banned as per above, they can be exported or imported as long as notification is given to all exporting and transit states and consent to such import or transit received prior to export. The notification and consent must be between governments through the channels of their [competent authorities](#). Without proper notification and consent, the export is considered illegal traffic.
- 4. Duty to Ensure Environmentally Sound Management (Article 4 (2) (e) of the Basel Convention):** States concerned (importing, transit, or exporting) must ensure that the export and disposal or recycling of the waste in question will be environmentally sound management as defined in the Convention. Without environmental sound management being assured, the export is considered illegal traffic.

### **OECD Council Decision (OECD/LEGAL/0266)**

The [OECD Council Decision](#) was created to streamline the Basel control procedures for recycling trade that moves only between or through OECD member states. It is considered as a valid Article 11 Agreement under the Basel Convention. It is similar to the Basel Convention in scope with hazardous and other wastes being considered as "amber" wastes and all other wastes considered "green" listed waste. Only "amber" listed wastes require a form of prior informed consent allowing for pre-consented facilities and tacit consent wherein consent is considered given after a certain period. There are some important deviations from the Basel Convention's definitions with respect to electronic waste in the OECD agreement. One of these involves circuit boards etc. (Basel Annex VIII, A1180) being considered as a "green" listed waste in the OECD agreement. The OECD agreement includes the United States and thus is one of the only legal means by which US recyclers can export wastes from that country. Still, notification must be made via the US government to the recipient countries before such shipments can take place. These US requirements are found within the US Resource Conservation and Recovery Act (RCRA) [here](#).

### **EU Waste Shipment Regulation**

The European Union has legislation governing the Basel Convention, including the Basel Ban, and the OECD Council Decision, which is binding for all [member states](#) of the European Union. The e-Stewards Standard conforms more precisely to the EU legislation with respect to the trade prohibitions because both agreements ban the export of all hazardous and other wastes to non-Annex VII countries (developing countries).

## **Other Regional Agreements (Bamako Convention, Waigani Treaty, Izmir Protocol, Central American Agreement)**

These agreements are also Basel Article 11 agreements because they aim to be stricter than the Basel Convention in order to prohibit and thus protect developing countries within their regions from being beset by imports of hazardous wastes for any reason. More information about these agreements can be found [here](#).

### **The Hazardous /non-Hazardous Waste Question**

For any of the above laws to be apply, the materials in question must first be considered wastes and then they must be considered a "hazardous" or other type of controlled waste.

For the purposes of application of the e-Stewards Standard it is most prudent for exporters to assume the e-waste material they handle is a waste, and if the electronic equipment has not been first separated into various known non-hazardous fractions (e.g. plastics, steel, aluminum) they should assume it is a hazardous waste (8.7.1(a)). However, should an Organization wish to assert that a certain e-waste fraction or type of electronic equipment does not meet the definition of HEW found in the standard they can accomplish this by conducting the test found in the definition on HEWs at 3.21.

### **The Waste/non-Waste Question**

Wastes are defined in the Basel Convention and the other similar agreements noted above, by their destination operation. In Basel these operations are listed in Annex IV. Wastes on Annex IV can go to either final disposal operations (List IV A) or recovery/recycling operations (List IV B). Materials that are not wastes but rather commodities, have either never been used, or are feedstocks in a primary manufacturing operation as opposed to a secondary operation (Annex IV). Sometimes, used materials that have been processed to the point where they are the equivalent of a feedstock in a primary manufacturing operation can be considered to no longer be wastes. Likewise, hazardous waste equipment which is repaired to a fully functional state can be considered as a non-waste. If all of the authorities in all of the States Concerned (importing, exporting or transit) concur that the material can be considered a non-waste then it will be able to be transported as a non-waste and thus outside of the control procedures of the treaty or law.

#### **6.1.3.1 (b)**

*Control procedures:* Prior notification and consent, etc.

#### **6.1.3.2 Extended Producer Responsibility Programs**

Possibilities for evidence of compliance include documentation of unique pounds per OEM, audit findings, reports filed with the relevant jurisdiction(s), material balance, etc.

The [NCER site](#) can be helpful in getting initial information on particular state programs in the United States. A non-official summary of the requirements for each state of the United States can be found [here](#). In the European Union, the [EWRN site](#) can be helpful.

Examples of possible EPR program requirements include documentation of:

- Registration with those EPR jurisdictions requiring recyclers to register.
  - Evidence of timely fees paid to states where necessary.
- Registration and maintenance of collection sites/networks where necessary.
- Reporting as required by each jurisdiction
- Covered electronic devices (also sometimes referred to as CEDs or “covered electronic equipment”) – product types legally required to be managed by original equipment manufacturers (OEM).
- Covered entities – the type of person or business in which CEDs are legally required to be collected from. E.g.: households, small businesses, government institutions, etc.
- Reuse eligibility – ability to use CEDs which are sent for reuse towards compliance in a particular jurisdiction.

- Insurance requirements – specific to state/jurisdictional requirements.
- Pounds incentives – specific to state/jurisdictional requirements. E.g. – rural/non-rural (metro/non-metro) and or other incentives which may be identified by the local law.
- Collection Fees – specific state /jurisdictional requirements related to ability to charge for services related to CED collection, transportation, and recycling.
- Unique pounds – show each CED pound is not duplicated or sold to more than one OEM.

*New explicit requirement*

#### **6.1.4 Performance Verification**

The documented performance verification plan can include NAID’s required unannounced audit plan.

*Modified: Formerly in Appendix B*

##### **6.1.4.1 Report to e-Stewards database**

The information is to be completed and filed [here](#).

For example, if a candidate Organization has their Stage One e-Stewards certification audit scheduled for March 15th, their initial report to the e-Stewards website would include at least the entirety of the previous December, January, and February; their next report in January would cover the rest of the year (March -December) and following reports would document complete calendar years.

For an Organization currently certified to e-Stewards that is adding a new facility managed by their existing SMS, the reporting would be handled the same way except scheduled around that facility’s Stage Two audit, as the SMS will have already been fully audited for at least one other facility.

*Modified: Formerly 9.1.8*

#### **6.2 Stewardship Objectives and Planning to Achieve Them**

While measurable objectives must be established, qualitative objectives may be established as well. In such cases, progress towards or achievement of these qualitative goals should also be monitored.

#### **6.3 Planning for changes**

See 8.3.1 for monitoring requirements regarding changes involving PHPTs

*New requirement*

#### **6.4 Contingency Planning**

*Modified: Formerly 6.2.5, 6.2.6, and 8.10*

##### **6.4(e)**

*Temporary closure or disaster recovery:* potential causes for such situations include extreme weather, pandemic, security breach, etc.

*New requirement*

##### **6.4.1(a)(2)**

*Wastes generated by closure activities means:* any waste, hazardous and/or non-hazardous, which could incur a liability or cost on closure, including byproducts and residuals, former products, etc.

#### 6.4.1(b)(1)

*Waste means:* any waste, hazardous and non-hazardous, e-waste and non-e-waste, which could incur a liability or cost on closure, including construction materials, equipment, former products, byproducts, residuals, etc.

#### 6.4.2 Establishing financial surety to implement a site closure plan

*Other financial instruments may mean:* escrow, insurance, 3<sup>rd</sup> party bonds, etc.

Commodities are not considered assets.

*Modified: Removed corporate parent as eligible custodian of financial instrument(s)*

The \$5,000 exception is only for establishing financial surety, not for the entirety of 6.4

*New: Added allowable exception to this requirement*

#### 6.4.2 Second Paragraph

Proof of risk management advice could include comparisons with industry averages, etc.

*New: Added insurance for legal liabilities*

*New: Added interval*

## 7.2 Competence

Documented evidence of competence is required by ISO 14001.

### 7.4.1 General [Communication]

*Methods for communication:* formal training, meeting, press release, email, etc.

See guidance on section 4.1 for examples of interested parties

“...in a manner appropriate and accessible to its intended audience...”: i.e., with consideration for language, disability, literacy level, etc.

### 7.5.1 General [Documented Information]

*Documented information:* see definition in ISO 14001

*Individual documents:* While these must be individual, titled documents as stated, they may be collected with others. For example, an Organization’s Downstream Disposition Chart may be included in an audit packet with other documentation, such as certifications, certificates of insurance, etc. Or, a completed site closure plan may be embedded in a contingency plan as required by certain state authorities.

*New: Added three required individual documents*

These three documents are required to be readily available, stand-alone, up-to-date documents.

## 8.2 Emergency preparedness and response

Documentation could include incident reports, drill reports, etc.

*Relevant emergency drills:* Drills deemed applicable to the Organization by Management. Risk assessments & compliance obligations are among the sources for determining which drill(s) may be necessary

Drills should be conducted physically, emulating real emergencies as closely as practicable.

*Modified: added drill interval requirement*

### **8.3(a)(4) [Industrial Hygiene]**

*Physical hazards may mean:* Slips, trips, falls, issues with walking/working surfaces, etc.

### **8.3.1 Potentially Hazardous Processing Technologies (PHPTs)**

*Modified: formerly 9.1.6*

#### **8.3.1(a)(1)**

*...under the direct supervision of a Certified Industrial Hygienist or Equivalent:* This is intended to allow someone other than a CIH/E to conduct the actual tests, but still retain assurance that the tests are done correctly. See also definition 3.3.

*Modified: Formerly by a CIH/E*

#### **8.3.1(a)(4)**

The concept of PHPT is independent of any HEW or PCM designations.

Monitoring processes are not limited to testing of worker breathing zones and wipe sampling for surface areas, because, for example, wipe testing is not used for fiberglass or asbestos

#### **8.3.1(c)(1)**

*Modified: Previously six months*

#### **8.3.1(c)(2)**

*New: Added noise hazards to testing interval requirements*

#### **8.3.1(c) Table 1 (A) and (b)**

*Modified: Formerly 80%*

#### **8.3.1(e)**

See 3.8 for definition of Designated Health Provider

*Program Review:* The DHP is supposed to review all PHPT IH monitoring results as part of the 6.1.1 risk assessments; a medical surveillance program is a different set of requirements established at least in part by both the DHP and relevant CIH/E (see 8.3.1(f)). Also, under certain circumstances, the CIH/E definition allows someone working for the Organization as an IH professional to evaluate test results. The DHP review requirement brings an outside set of eyes to those results.

Possible evidence of DHP review: statement that no action is required, recommendation for action(s), etc.

*Modified: Program review formerly required Annually*

#### **8.3.1(f)(2) 2<sup>nd</sup> bullet**

Note: these methods/requirements are and/or become compliance obligations

### **8.4.1 Planning for the management of Electronic Equipment**

Documentation could be provided using the Downstream Disposition Chart, the Organization's Inventory Management system, etc.

*Modified: Formerly 6.2.3*

#### **8.4.1(d) [Planning for the Management of Electronic Equipment]**

This Section requires a listing of the equipment normally encountered in the operation of an Organization. Additionally, it requires for each type of equipment an assessment as to what kinds of HEW, PCMs etc. will be managed as part of the

disassembly or other process (see definitions of HEW [3.21] and PCMs [3.35]). For example, a CRT television will have circuit boards, a CRT (including leaded glass and phosphors), brominated plastics, etc. Only if there is reason to believe that there are hidden hazardous elements or compounds in parts of the equipment is it necessary to go into the individual elements listed in 3.21 (c) 7) or specify elements other than 1-6 in the HEW definition [3.21 (c)] and the bulleted components or materials in the PCM definition [3.35].

#### **8.4.3(a)** [Packaging, storage, and transportation]

*Receipt by the Organization:* Storage duration is Organization based, not facility based, which disallows switching between facilities to reset the accumulation start date.

Storage time limitations apply only to MOCs. Some plastics are MOCs, some are not.

*Extenuating circumstances:* for example, the need to accumulate enough material to facilitate proper recovery per United States regulation 40 CFR 273.35..

*Modified:* Storage duration limits formerly based on relevant regulatory requirements

#### **8.4.3(g)**

*Fire lanes:* The intent is that fire fighters and their equipment (e.g. hoses) have sufficient access to all areas of the storage site. We recommend rows not exceeding 4 adjacent bays (16 ft.) between fire lanes (with lanes at least wide enough to accommodate a forklift, though lanes may be longer than 4 bays length). Where compliance obligations are more stringent, they take precedence.

*New requirement*

#### **8.4.3(h)**

*New requirement*

#### **8.4.4 Tolling Operations**

The concern with respect to tolling operations is that the e-Stewards name and behavioral standard can become tarnished if the customer uses an e-Stewards Recycler and then retains ownership of the EE and proceeds to behave in ways with that same material which are unacceptable in the e-Stewards Standard/Certification. Of particular concern would be a customer that violates the export restraints of the Standard. Thus, while allowing tolling for those operating in good faith, this section calls for vigilance by all e-Stewards Organizations to prevent operations that might be illegal in any jurisdiction.

*New requirements*

#### **8.4.5 Prison Operations**

*Modified:* requirements moved from definition of Prison Operation

*New:* added job training

Prison operations are both a known area for potential abuse as well as for providing valuable activity and job training for prisoners. The potential areas for abuse are in allowing a subsidy effect, which undermine the private sector recyclers from a competitiveness standpoint, allowing high risk individuals to manage data security operations, and exposure of a disempowered labor force to hazardous materials or emissions. This section aims to address those concerns and at the same time allow job training operations that are safe and ethical.

#### **8.4.5(a)**

*Private sector Processors:* operations using non-incarcerated workers

#### **8.4.5(b)**

*New: added NAID certification requirement*

#### **8.4.5(d)**

*New requirement*

### **8.5 Reuse and Refurbishment of Electronic Equipment**

#### **8.5(a)**

*New: added NAID certification exception*

#### **8.5(c)**

*Modified: Removed option to ship untested equipment for outsourced repair/refurbishment without prior onsite audit*

#### **8.5 Note**

Examples for this exception include redeployment, accidental shipment to an Organization, RMAs being handled for a customer, legal holds, etc.

*New: added exception for returning equipment to original owner*

#### **8.5.1(b)(2)ii. A**

*New: added OEM-provided software, and option to develop software internally if validated by a third party*

#### **8.5.1(b)(2)ii. B**

*Industry best practices: examples of possible supporting evidence include documentation of research, etc.*

*New: added option to establish internal testing methodology/criteria*

#### **8.5.1(c)(2)i**

*New: added OEM-provided software, and option to develop software internally if validated by a third party*

#### **8.5.1(c)(2)ii**

*Industry best practices: examples of possible supporting evidence include documentation of research, etc.*

*New: added option to establish internal testing methodology/criteria*

#### **8.5.1 Table 3**

*Modified: Removed exemption for equipment sold/donated to employees*

#### **8.5.1 Table 3(3)**

*New: added option to cap at 1% of total Annual units*

#### **8.5.1 Table 3(3)**

“Ensure no Customer Data is present...”: Certain things can be deduced from an item’s configuration; for example, if there’s a hard drive present then there’s the potential for Customer Data to be present also.

*New requirement*

### **8.5.2 Record identifying information for each item of Electronic Equipment**

*New: added certain exceptions for Qualified Smaller Components*

#### **8.5.2(a)(2)**

QSCs do not require individual test results to be associated with a specific serial number, but this does not negate the requirement that they must be tested as Fully Functional in order to go for Direct Reuse.

### 8.5.2(c) NOTE

The general status of “untested” is intended to allow for outsourcing of testing processes, or shipment as scrap for recycling or final disposal. (QSCs do not require individual test results to be associated with a specific serial number, but this does not negate the requirement that they must be tested as Fully Functional in order to go for Direct Reuse. )

#### 8.5.2.1 Shipping documentation

*Modified: no longer specifies method for conveying full identifying information; allows general test status on packing list instead of itemized information*

#### 8.5.2.1(d)

The general status of “untested” is intended to allow for outsourcing of testing processes, or shipment as scrap for Recycling or Final Disposal to an IDP.

### 8.5.3 Verify Direct Reuse markets

Documentation examples: Declaration, contract, invoice, receipt, etc.

### 8.6.1 Restrictions on Materials Recovery and Final Disposition of MOCs 8.6.1 (a)

*Modified: added CB program manager*

#### 8.6.1(a)(5)

*New: added additional option for justification of conditionally allowable disposition*

#### 8.6.1(c)

*Emissions and releases:* subsurface injection (fracking), emission of combustion byproducts, etc.

#### 8.6.1(d)

Examples include

- Leaded CRT glass going into cement construction products where lead can be released when such products are cut with saws by construction workers
- Using mercury-laden wastes such as CCFL lamps in aggregate that would be used to make roads, where the mercury could enter the groundwater
- Incorporating recycled plastics containing brominated flame retardant into food containers or children’s toys

### 8.6.2 Alternative uses and processes

*Additional testing and/or documentation may mean:* relevant TCLP results, testing protocols, emissions documentation, etc.

## 8.7 Control of Transboundary Movement

Operational controls in this section are directly related to the compliance obligations of 6.1.3.1

### 8.7(a)

*Documented evidence:* Manufacturer’s material declaration, etc.

### 8.7(c)

This particular instance is very rare indeed and involves a situation where no country concerned (exporting, importing or transit) is a Basel Party. This might be an export from Haiti to the USA for example.

### 8.7.1 Exemptions from Transboundary Movement Controls for MOCs

#### 8.7.1(b)

PCM Plastics are those that might have brominated flame retardants or other halogens in them but are not listed on Basel's Annex VIII or II.

### 8.7.1(c)

*Other material containing CRT glass:* Mixtures of CRT glass with other materials and minerals intended for use as feedstock. One example would be frit used to make ceramic glazes.

*New: added other material containing CRT glass*

### 8.7.2

Bear in mind that these shipments in normal circumstances are assumed to be HEW under the Standard and can only proceed in transboundary movement in accordance with the controls (e.g. prohibited or requires prior notification and consent) as noted under 6.1.3.1.).

### 8.7.3

Bear in mind that in normal circumstances, these shipments are assumed to be non-hazardous e-waste as long as the declarations asserting testing and direct reuse markets are completed and included as required.

## 8.8 Downstream Accountability

See 3.44 for definition of Significant Change.

### 8.8.1 Downstream Disposition Chart

Keeping the Downstream Disposition Chart accurate and up-to-date is extremely important.

#### 8.8.1 (b)

*Contact information:* connection at a DP/Intermediary that will respond to an inquiry, such as an individual or a department

#### 8.8.1 NOTE

You can check Critical Nonconformity status [here](#).

### 8.8.2 Downstream Due Diligence

*Modified: Combined HEW and PCM sections*

#### 8.8.2.1 Processing Capability Evaluations

These could be included in the desk audits required by 8.8.2.2, or they could also be done as a precursor to an initial onsite audit (if potential IDPs don't meet these requirements, going to the expense of an onsite audit would be pointless, since they couldn't be approved).

*Modified: now same requirements for PCMs as HEWs*

#### 8.8.2.1(b)(4)

*New requirement*

#### 8.8.2.3 Onsite Audits of Immediate Downstream Providers

Evidence of e-Stewards certification could include a copy of the certificate or a dated screenshot of the e-Stewards website listing

*Financial surety:* see 6.4

The final sentence of this section refers to verification of contingency planning information for the IDP's downstream.

*Modified: expanded exception to include all licensed and permitted End Processors*

*Modified: formerly required every two years*

#### 8.8.2.4 Agreements and Control Systems

##### 8.8.2.4(a)

*Modified: expanded exception to include licensed and permitted End Processors*

*Modified: Removed requirement for IDP to notify Organization within 15 days of nonconformity with agreement*

##### 8.8.2.4(a)(1)

*New requirement: Added to balance removal of 15-day notification requirements*

##### 8.8.2.4(a)(3)

*Alternative control systems: scope of work agreements, memorandums of understanding, buy/sell agreements, restrictions built into inventory management systems*

##### 8.8.2.4(a)(5)

See 3.44 for definition of Significant Change

*Modified: notification of Significant Change formerly required within 15 days*

*New: Added last two bullets to balance removal of 15-day notification requirements*

##### 8.8.2.4(b)

*Other control system: scope of work agreements, memorandums of understanding, buy/sell agreements, restrictions built into inventory management systems*

*Modified: expanded exception to include all licensed and permitted End Processors; added other control systems*

##### 8.8.2.4(c)

The intent is that all DPs beyond IDPs have the same control system requirements as PCM IDPs.

Also, notification of the immediate upstream DP of any Recycling Chain changes would count as notifying the Organization, since each link has agreed to maintain the information flow.

## 8.9 Data Security

*Modified: Formerly 8.5*

### 9.1.2 Evaluations of compliance

Evaluations could be done similarly to an internal management system audit, or by having a third-party perform the evaluation(s), etc.

## 9.2 Internal audits

Preferably a third party independent consultant can be hired to conduct internal audits. Although not ideal, companies may also conduct their own internal audits with internal staff as long as internal auditors don't audit their own work. In cases where this caveat is difficult, it is recommended that someone other than the primary auditor (or the person being audited) review each audit and associated supporting evidence, to ensure nothing is overlooked or left out.

## 9.3 Management review

*Modified: expanded required topics*

## 10 Improvement

*Modified: includes former 9.1.4*

## **APPENDIX A – Additional Requirements for e-Stewards Organizations**

All appendices are a binding part of the standard.

### **A.6.1.4.1 Annual Reporting to e-Stewards Database**

*Modified: formerly 9.1.8*

### **A.8.3.1 PHPT Hazard Testing Requirements**

\* Documented evidence could include a statement from a third-party CIH that testing for a given hazard is unnecessary

*Modified: Formerly A.9.1.6(a)*

### **A.8.6.1(8)**

*Removed manufacturing facilities using this as feedstock*

### **A.8.6.1(10)**

*Rare earths & critical metals: phosphors, etc.*

### **A.8.6.1(12)(b)**

*Determined to be without hazardous characteristics: based on information from Safety Data Sheets (SDS), etc.*

*New option*

### **A.8.6.1(13)**

*Modified: allows legal re-use and landfilling in accordance with legal/regulatory requirements*

*New: added segregated landfilling*

*Modified: moved energy recovery from preferred to conditionally allowable*

### **A.8.6.1(17)**

*International standards: instruments and guidelines of the International Atomic Energy Agency (IAEA), including the Convention on Nuclear Safety, the Codes of Conduct, and the International Safety Standards*

### **A.8.7.2 e-Stewards Shipping Declaration for Repair/Refurbishment**

You can find a fillable Word document [here](#).

*New form*

### **A.8.7.3 e-Stewards Shipping Declaration of Full Functionality**

You can find a fillable Word document [here](#).

*Modified: formerly A.8.8.1*

## **APPENDIX B – Administrative Rules, Policies, and Procedures**

All appendices are a binding part of the standard.

### **Appendix B (h) Significant Changes**

*Modified: notification formerly required in 5 days*

## **APPENDIX C – Requirements for e-Stewards Certification Bodies and Accreditation Bodies**

*Modified: Sanctioned Interpretations formerly effective upon publication*

## **APPENDIX D – Data Security**

All appendices are a binding part of the standard.

### **8.9 (a) Data Security**

*Modified: added explicit reference to GDPR and new laws.*

#### **8.9.5 Establish a program for data security breaches and incidents**

*New: added suspected security incidents*