



Guidance for implementing an  
integrated Management System for  
e-Stewards® Standard for  
Responsible Recycling and Reuse of  
Electronic Equipment©

&

Responsible Recycling ("R2")  
Practices for Use in Accredited  
Certification Programs

2012

## Essential reading for those considering implementation of both e-Stewards & R2 Certification

### THE GOAL

The world of responsible electronics recycling has been evolving at a rapid pace over the past few years. Customers large and small are concerned about branding and about the potential of their equipment ending up in the wrong hands or the wrong country.

Customers are seeking assurances from recyclers and asset managers in the form of third party certification programs to assure themselves that data is properly sanitized and that negative environmental and social impacts are avoided.

### E-STEWARDS VS R2

Industry responded with the release of two standards:

- ➔ The e-Stewards® Standard for Responsible Recycling & Reuse of Electronic Equipment (2009) (including ISO 14001), &
- ➔ Responsible Recycling (R2) Practices for Use in Accredited Certification Programs for Electronics Recyclers (2008).

While the approach is different, both standards sought to fill the need for independent verification of responsible performance in the electronic recycling and asset management industry.

### WHY NOT BOTH?

Many believed that one or the other of the standards would prevail. In fact, rather than choosing one standard over the other, many companies are pursuing certification to both.

For organizations already pursuing e-Stewards, it is an easy choice, as most of the requirements in R2 are covered in e-Stewards, thus making it a straight forward process to make up the difference and be audited to both standards in one audit, saving time and money. For those pursuing R2, there are a substantial number of additional requirements, but with them come added assurances to customers and potential new markets.

### COMPARING THE TWO STANDARDS

Ultimately, it is the role of the certification bodies to determine that requirements in both standards have been met, however this document is intended to provide guidance for people considering certification to e-Stewards and R2 at the same time. The differences in the two standards are significant, however in most cases e-Stewards exceeds the requirements in R2, with a couple of exceptions:

- ➔ FM Management Plan,
- ➔ Site security, &
- ➔ Transport,
- ➔ Data destruction processes shall be reviewed and validated by an independent party on a periodic basis.

Each of these are discussed in the following table and highlighted with shading in the relevant cell with recommended actions for addressing the item. In addition to these three major differences, there are a number of areas where the intent is similar, but the approach is slightly different. In these cases, a recommended action is provided to bridge the gap.

### GUIDANCE FOR INCLUDING R2

It is recommended that e-Steward include a table as an Appendix to their Environmental Management System Manual or equivalent, including a list of R2 requirements and a reference to the e-Stewards clause and your own system activities that meet that requirement.

The following summary table could be used as guidance in this process as it identifies the additional requirements that would an Organization would need to implement in order to successfully add R2 to an existing e-Stewards Management System in a manner that would enable dual certification. It is critical that this document be read in conjunction with both standards.

There are some minor differences that would benefit from additional wording to clarify how e-Stewards system meets the R2 Standard. There are three significant differences that require significant action (highlighted by shaded cells).

R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i>	
<p>1. Environmental, Health, and Safety Management System: An R2 electronics recycler shall develop, document, fully implement, review at least annually, and update as needed (e.g., as products and/or technologies change) a written EHSMS</p>	<ul style="list-style-type: none"> <li>➔ 4.1.1 General Requirements includes establishment of an environmental management system including or referencing a health and safety system, as well as other industry specific performance requirements</li> <li>➔ 4.3.1 requires that environmental aspects and hazards are assessed on a regular basis and in response to change</li> <li>➔ 4.6 Management Review requires regular review of the system</li> <li>➔ RECOMMENDED ACTION: Include “at least annual” in establishing timing for management reviews.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 1.(a) (1) Written goals and procedures and requires the organization to systematically manage its environmental, health, and safety matters</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.3.3 requires the organization establish, implement and maintain documented environmental and health and safety objectives and targets, at relevant functions and levels within the organization</li> <li>➔ 4.4.6 Operational controls requires procedures establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the environmental and health and safety policy, objectives and targets.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 1. (a) (2) Plan Do Check Act for continual improvement</li> </ul>	<ul style="list-style-type: none"> <li>➔ e-Steward fully incorporates ISO 14001 which is based on a plan do check act system</li> </ul>
<ul style="list-style-type: none"> <li>➔ 1. (a) (3) (A) A policy for managing used and end-of-life electronics equipment that is based on a “reuse, recover, dispose” hierarchy of responsible management strategies and covers materials management on site and throughout the Recycling Chain (Provision 2)</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.4 Managing Hazardous e-Waste and Problematic Components and Materials requires the e-Steward to plan for management of Electronic Equipment, components and materials based on the same hierarchy priorities for management strategies</li> <li>➔ 4.4.6.6 Final Disposition identifies where these materials can be disposed</li> <li>➔ 4.4.6.5 Accountability for Downstream Recycling Chain requires similar requirements throughout the Recycling Chain</li> </ul>
<ul style="list-style-type: none"> <li>➔ 1.(a) (3) (B) A plan for complying with the environmental, health, and safety legal requirements relating to its operations, and for assuring it only exports equipment and components containing Focus Materials to countries that legally accept them (Provision 3)</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.3.2 requires the e-Steward to identify legal and other requirements, while 4.3.1 requires application of these requirements in determining what significant environmental aspects and hazards and organization identifies</li> <li>➔ 4.3.3 requires setting of objectives and targets giving consideration to these requirements. Section 4.5.2 requires organization to evaluate their compliance</li> </ul>

R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<p><i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i></p>	
<p>➔ 1. (a) (3) (C) FM Management Plan: An analysis of and plan – the “FM Management Plan” – for how the R2 Focus Materials (FMs) that pass through the R2 recycler’s facility or control should be properly managed, both on site and throughout the Recycling Chain (as described in Provision 5) – this can be a subsection of the section described in (A) above.</p>	<p>➔ Also though some sections of e-Stewards have similar requirements and written procedures for the management and disposition of Hazardous Electronic Waste and Problematic Components and Materials, and for appropriate disposition of these, there is no written plan that includes all of these issues.</p> <p>➔ 4.4.6.1 d) requires the e-Steward to create and implement a plan for managing the specific Electronic Waste accepted by the e-Steward as assessed per letter c) above, based on the specific Recycling activities and technologies utilized, and the performance requirements and guidelines for Hazardous e-Wastes contained in this Standard, with a goal to reduce and eliminate workplace exposures and physical hazards that might be encountered during the e-Steward’s management of Electronic Waste</p> <p>➔ RECOMMENDED ACTION: Reference Focus Materials in the definitions of HEW in e-Stewards plans.</p>
<p>➔ 1.(a) (3) (D) An EHS hazards identification and assessment of on-site occupational and environmental risks (as described in Section (c) of Provision 4).</p>	<p>➔ 4.3.1 Environmental aspects and hazards provides for the identification, assessment and determination of significance of environmental aspects and hazards.</p>
<p>➔ 1.(a)(3)(E) 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.</p>	<p>➔ 4.4.6.1.1 requires some e-Stewards to have a written plan and procedures for responding to and reporting emergency situations, and identify the personal protection and safety devices that are required on-site to deal with these emergencies</p> <p>➔ 4.4.7 Emergency response requires e-Stewards:</p> <ul style="list-style-type: none"> <li>➔ Implement a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and personnel health and safety and how it will respond to them</li> <li>➔ Respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts</li> <li>➔ Periodically review, test, and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations</li> </ul>
<p>➔ 1.(a)(3)(F) A list of the activities necessary to conform to the requirements of these R2 Practices and a list of the documentation necessary to show conformity with these requirements.</p>	<p>➔ 4.4.4 requires all system documents to be identified. This could easily be amended to reflect both standards</p> <p>➔ RECOMMENDED ACTION: Update e-Stewards documentation listing to include R2 specific requirements – The easiest way to do this is to create a table similar to this one, that also identifies how your system conforms to the requirements</p>
<p>➔ 1.(b) Obtain a certification from an Accredited Certification Body stating that:</p> <ul style="list-style-type: none"> <li>➔ 1.(b)(1) Its EHSMS conforms to the requirements of this provision, and</li> <li>➔ 1.b(2) Its practices conform to the EHSMS and R2 Practices.</li> </ul>	<p>➔ e-Stewards certification cannot be claimed unless the organization is certified by an accredited certification body.</p> <p>➔ See Appendix B Rules for Certification Bodies</p>

R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i>	
<p>2. An R2 electronics recycler shall develop in writing and adhere to a policy stating how it manages used and end-of-life electronics 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</p>	<ul style="list-style-type: none"> <li>➔ 4.1 General Requirements</li> <li>➔ 4.4.6.4 which requires a plan based on the Reuse, Recover, ...” Hierarchy of Responsible Management Strategies</li> <li>➔ RECOMMENDED ACTION: Reference Focus Materials in the definitions of HEW in e-Stewards plans.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 2.(1) Reuse – Take all practical steps to direct properly functioning equipment and components to reuse unless a customer directs otherwise</li> </ul>	<ul style="list-style-type: none"> <li>➔ As above</li> </ul>
<ul style="list-style-type: none"> <li>➔ 2.(2) Materials Recovery – 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.</li> </ul>	<ul style="list-style-type: none"> <li>➔ As above</li> </ul>
<ul style="list-style-type: none"> <li>➔ 2.(3) Energy Recovery or Disposal – Direct remaining material to properly-equipped energy recovery and/or disposal facilities in conformity with Provision 5. (b) This policy shall incorporate and be consistent with the Focus Material Management Plan that the R2 electronics recycler develops in accordance with Provision 5.</li> </ul>	<ul style="list-style-type: none"> <li>➔ As above</li> </ul>
<p>3. Legal Requirements</p>	
<ul style="list-style-type: none"> <li>➔ 3. (a) To assure it only exports equipment and components containing FMs to countries that legally accept them, an R2 electronics recycler shall develop and implement a plan covering these matters that shall be included as a section of its EHSMS</li> </ul>	<ul style="list-style-type: none"> <li>➔ The e-Stewards standard addresses this in a number of areas including:               <ul style="list-style-type: none"> <li>➔ 4.3.1 Legal and other requirements</li> <li>➔ 4.4.6.7 Export</li> <li>➔ 4.5.2 Evaluation of compliance</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>➔ 3.(a) 1. Identify and document the EH&amp;S legal requirements</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.3.1 Legal and other requirements</li> </ul>



R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i>	
<ul style="list-style-type: none"> <li>➔ Identify and document the legality – under the laws of the importing countries</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.7 Exportation of Hazardous e-Wastes requires e-Stewards to only permit exports of Hazardous Electronic Wastes that are consistent with the decisions and agreements of the Organization for Economic Cooperation and Development (OECD), the Basel Convention, and other applicable national and international laws regarding trade in Hazardous Electronic Waste. This requirement applies throughout the entire Recycling Chain, including all Intermediaries</li> <li>➔ 4.3.1 Legal and other requirements requires these laws to be identified and documented.</li> </ul>
<p>4. On-Site Environment, Health, and Safety</p>	<ul style="list-style-type: none"> <li>➔ E-Stewards has a more comprehensive program for achieving On-Site Environment, Health, and Safety in 4.3.1 Environmental Aspects and in 4.4.6.1 Health and Safety in the Workplace</li> </ul>
<ul style="list-style-type: none"> <li>➔ 4.(a) Expertise and technical capability to process equipment, components, and materials in a manner protective of worker safety, public health, and the environment.</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.2 Competence Training and Awareness requires that all persons operating on the e-Stewards behalf must be competent for both pollution prevention and health and safety</li> <li>➔ 4.4.6.4 includes a number of requirements for onsite management – to which those operating on the e-Stewards behalf must be competent to implement</li> <li>➔ 4.4.6.1 Health and Safety in the Workplace</li> </ul>
<ul style="list-style-type: none"> <li>➔ 4.(b) 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.</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.1 Health and Safety in the Workplace covers a range of requirements in this area</li> <li>➔ Most specifically is 4.4.6.1.1.i which requires the e-Steward to establish and maintain workplace hygiene and cleaning procedures to minimize exposures (both to workers as well as that taken home to family members) and have the necessary equipment on-site to implement these procedures</li> </ul>
<ul style="list-style-type: none"> <li>➔ 4. (c) Hazards identification and assessment of occupational and environmental risks</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.3.1 Environmental Aspects and Hazards</li> <li>➔ 4.4.6.1 Health and Safety in the Workplace</li> </ul>
<ul style="list-style-type: none"> <li>➔ 4.(d) Manage the hazards and minimize the releases giving priority to engineering controls, administrative controls and personal protective equipment as a last resort</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.3.3 requires e-Stewards to create objectives, targets and programs to implement the policy which includes pollution prevention, health and safety</li> <li>➔ 4.4.6 Operational control</li> <li>➔ 4.4.6.1 Health and Safety in the Workplace</li> <li>➔ 4.4.6.1.1 requires an e-Stewards to manage possible exposures of their workers to hazardous materials, and physical hazards, ergonomic and other workplace hazards by engineering, administrative, and personal protective equipment controls (in that order)</li> <li>➔ 4.4.6.4 Managing Hazardous e-Waste and Problematic Components and Materials</li> </ul>
<ul style="list-style-type: none"> <li>➔ 4.(e) Monitoring and sampling to manage risk and comply</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.1.1 has additional monitoring requirements for e-Stewards utilizing Potentially Hazardous Processing Technologies including comparing the results to the most stringent regulatory exposure limits within their jurisdiction with the immediate requirement of not exceeding these levels</li> </ul>

R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i>	
<ul style="list-style-type: none"> <li>➔ 4.(f) Application of (d) above to the entire workforce, including volunteer workers, temporary workers, and anyone else performing activities under its direction</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6 Operational control applies to those operating on its behalf including contractors.</li> <li>➔ 4.4.6.1 Health and Safety in the Workplace – identifies monitoring and operational controls for ensuring health and safety. These requirements are applicable to all workers, including volunteer and temporary workers.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 4.(g) Designate a qualified employee or consultant to coordinate its efforts to promote worker health and safety and encourage two way communication</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.1 Resources Roles, Responsibilities and Authorities requires identification of a Management System representative, and</li> <li>➔ 4.4.6.1 Health and Safety in the Workplace requires that a team be established to coordinate such efforts. This includes worker/labor and management representatives with the authority to implement actions for workplace health and safety.</li> <li>➔ RECOMMENDED ACTION: Formally appoint and communicate a EH&amp;S coordinator.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 4.(h) 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.</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.7 Emergency Response</li> <li>➔ Injury &amp; Illness Prevention Plan required in 4.4.6.1.1.c</li> </ul>
5. R2 Focus Materials	
<ul style="list-style-type: none"> <li>➔ 5.(a) FM Management Plan</li> </ul>	<ul style="list-style-type: none"> <li>➔ Also though some sections of e-Stewards have similar requirements regarding the management and disposition of Hazardous Electronic Waste and Problematic Components and Materials, and for appropriate disposition of these, there is no written plan that includes all of these issues.</li> <li>➔ 4.4.6.1 d) requires the e-Steward to create and implement a plan for managing the specific Electronic Waste accepted by the e-Steward as assessed per letter c) above, based on the specific Recycling activities and technologies utilized, and the performance requirements and guidelines for Hazardous e-Wastes contained in this Standard, with a goal to reduce and eliminate workplace exposures and physical hazards that might be encountered during the e-Steward’s management of Electronic Waste</li> <li>➔ RECOMMENDED ACTION: Reference Focus Materials in the definitions of HEW in e-Stewards plans.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 5.(b) 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:</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.4 Managing Hazardous Waste and Problematic Components and Materials requires an e-Steward to ensure management of Hazardous e-Waste and Problematic Components and Materials on-site and under their control with practices and procedures that are protective of human health and the environment, in accordance with this Standard.</li> <li>➔ This includes safely removal and separation of components and materials from e-Waste so they are not recycled or disposed of using Potentially Hazardous Processing Technologies (such as shredding).</li> <li>➔ The e-Stewards Standard goes further to include additional controls for ensuring these materials are appropriately stored and transported.</li> </ul>

R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i>	
<ul style="list-style-type: none"> <li>➔ 5.(c) 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</li> </ul>	<ul style="list-style-type: none"> <li>➔ This can be included in the recommended FMs, HEWs &amp; PCMs Management Plan</li> <li>➔ 4.4.6.6 Materials Recovery and Final Disposition requires an e-Steward ensure that Hazardous e-Wastes and Problematic Components and Materials that are destined for Materials Recovery or Final Disposition are processed in licensed and permitted facilities using technologies that minimize releases, and are not permitted to enter solid waste landfills or incinerators for Final Disposal, throughout the Recycling Chain.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 5.(d) An R2 electronics recycler shall not utilize energy recovery, incineration, or land disposal as a management strategy for FMs or equipment and components containing FMs<sup>8</sup>. However, if circumstances beyond the control of the R2 recycler disrupt its normal management of an FM, it may consider these technologies to the extent allowed under applicable law.</li> </ul>	<ul style="list-style-type: none"> <li>➔ FMs, HEWs &amp; PCMs Management Plan</li> <li>➔ 4.4.6.4 Managing Hazardous Waste and Problematic Components and Materials states that Waste-to-energy facilities are considered Disposal. Solid Waste systems and should not be used for Hazardous e-Waste except as a last resort.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 5.(c) For shipments of removed FMs, and shipments of equipment and components containing FMs, an R2 electronics recycler shall select downstream vendors that meet requirements</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.5 Downstream Accountability requires e-Stewards to be accountable for management of Hazardous e-Waste in conformance with this Standard throughout the entire Recycling Chain to Final Disposition. The e-Steward shall establish, implement and maintain a documented system of direct controls and accountability for the Recycling Chain of Hazardous e-Waste, which will include, a) performing initial Due Diligence, b) contracting with next tier Downstream Recyclers, c) assuring on-going conformance, d) verifying Intermediaries are directing shipments to intended destinations, and e) providing transparency to customers (when asked)</li> </ul>
<ul style="list-style-type: none"> <li>➔ 5.(f) Downstream due diligence</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.5 Downstream Accountability</li> </ul>
<p>6. Reusable Equipment and Components</p>	<ul style="list-style-type: none"> <li>➔ 4.4.6.2 Reuse and Refurbishment of Electronic Equipment</li> </ul>
<ul style="list-style-type: none"> <li>➔ 6.(a) Not allow equipment or components to be sold or donated for reuse if contrary to commercial agreements</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.2 Reuse and Refurbishment of Electronic Equipment is far more extensive and includes controls</li> <li>➔ 4.3.2 requires e-Steward to identify other requirements (i.e. commercial agreements) to which it subscribes and to evaluate its conformity to these requirements</li> <li>➔ RECOMMENDED ACTION: Include reference to this prohibition for any commercial agreements in the legal and other requirements identification process.</li> </ul>
<ul style="list-style-type: none"> <li>➔ 6.(b) An R2 electronics recycler shall, with respect to equipment and components it ships downstream: (1) Label and sort each shipment in a manner sufficient to track throughput in conformity with Provision 7. (2) Handle and package shipments in conformity with Provision 12.</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.2 d) Reuse and Refurbishment of Electronic Equipment is more extensive with respect to labeling and includes all R2 requirements</li> <li>➔ 4.4.6.2 e) requires the e-Stewards to package refurbished Electronic Equipment and components for shipment in a manner that will protect them from damage during transit</li> </ul>



R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i>	
<ul style="list-style-type: none"> <li>➔ 6.(c) Prior to shipping, ensure vendors conducting Reuse functions test to ensure functionality, is R2 certified or manages all residual FMs resulting from refurbishing operations in a manner that conforms to the R2 Practices</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.2 requires an e-Steward only donate or sell for Reuse, Electronic Equipment and components (which contain or consist of Hazardous Electronic Equipment or Problematic Components or Materials) that are Fully Functional, and shall ensure that all scrap/waste generated during refurbishment operations is managed according to this Standard. An e-Steward shall meet the following requirements for Electronic Equipment in their facilities and under their control that is going for Reuse</li> <li>➔ 4.4.6.6 requires that residuals are managed as hazardous wastes in licensed and permitted facilities if they meet the definition of Hazardous e-Waste in this Standard and in accordance with relevant national and local law</li> </ul>
<ul style="list-style-type: none"> <li>➔ 6.(d) Exemption from (c) for small quantities</li> </ul>	<ul style="list-style-type: none"> <li>➔ NA</li> </ul>
<ul style="list-style-type: none"> <li>➔ 6.(f) Exemption to 3 (a) (2) that are proven functional or new and in original pack</li> </ul>	<ul style="list-style-type: none"> <li>➔ NA</li> </ul>
<p>7. Tracking Throughput: ) Maintain 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.</p>	<ul style="list-style-type: none"> <li>➔ 4.4.6.5 Downstream Accountability</li> <li>➔ 4.5.1.1 Tracking is considerably more extensive and verifiable as it requires mass balance accounting and reporting</li> </ul>
<p>8. Data Destruction</p>	
<p>8.(a) Sanitize, purge, or destroy data on hard drives and other data storage devices (the National Institute of Standards and Technology’s (NIST’s) Guidelines for Media Sanitation – Special Publication 800-88 889 lists categories of devices which need sanitization consideration), unless otherwise requested in writing by the customer. Adhere to the data sanitization, purging, or destruction practices described in the NIST Guidelines for Media Sanitation: Special Publication 800-88 or another current generally-accepted standard, or be certified by a generally-accepted certification program.</p>	<ul style="list-style-type: none"> <li>➔ 4.4.6.3 Data Security includes a variety of requirements that are consistent with this clause, including the need to:               <ul style="list-style-type: none"> <li>➔ Make customers aware of concerns over loss of data,</li> <li>➔ Must offer data security services in-house or under their control,</li> <li>➔ Identify in writing their explicit service obligations and agreements regarding data security for every customer,</li> <li>➔ Defining the specific terms of such services,</li> <li>➔ Procedures for ensuring all data retained in memory devices in Electronic Equipment is protected from release, theft or loss</li> <li>➔ Destruction of data according to the requirements of and procedures set forth by the NIST 800-88 Guidelines for Media Sanitation, The e-Steward shall create and document a process to demonstrate how it has met its data security obligations; and</li> <li>➔ Regarding customer indemnification, the e-Steward must provide customers with information about what specific liability for the data the e-Steward accepts, and if that liability is limited, the e-Steward shall define the amount of liability it accepts for data security services</li> </ul> </li> </ul>
<p>8.(b) An R2 electronics recycler shall document their data destruction procedures.</p>	<ul style="list-style-type: none"> <li>➔ 4.4.6.4.b)4. Requires the e-Steward shall create and document a process to demonstrate how it has met its data security obligations</li> </ul>

R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i>	
<p>➔ 8.(c) Employees involved in data destruction shall receive appropriate training on a regular basis</p>	<p>➔ 4.4.2 requires that people acting on the organization’s behalf are training and competent and their training needs are identified.</p> <p>➔ RECOMMENDED ACTION: Ensure that regular training for employees involved in data destruction in accordance with e-Stewards 4.4.2</p>
<p>➔ 8.(d) Data destruction processes shall be reviewed and validated by an independent party on a periodic basis.</p>	<p>➔ Destruction of data according to the requirements of and procedures set forth by the NIST 800-88 Guidelines for Media Sanitization, The e-Steward shall create and document a process to demonstrate how it has met its data security obligations; and</p> <p>➔ RECOMMENDED ACTION: Incorporate requirement for independent validation into data security in data security procedure</p>
<p>9. Storage - Store items removed pursuant to Provision 5, and equipment and components destined for reuse, in a manner that: (1) Protects them from adverse atmospheric conditions and floods and, as warranted, includes a catchment system (2) Is secure from unauthorized entrance, and (3) Is in clearly labeled containers and/or storage areas.</p>	<p>➔ 4.4.6.3 Data Security requires that all data retained in memory devices in Electronic Equipment is protected from theft or loss and shall not be released to unauthorized parties, from the moment they take control of the Electronic Equipment through final data destruction</p> <p>➔ 4.4.6.4 Managing Hazardous Waste and Problematic Components and Materials</p> <p>➔ 4.4.6.4.b.1 requires an e-Steward to protect hazardous e-Waste from adverse atmospheric conditions and floods including shelter from wind and rain, and a rain-water catchment system</p>
<p>10. Facility Security: An R2 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.</p>	<p>➔ Is partly covered under 4.4.6.3 Data Security, however goes further to actually require that establish, implement, and maintain procedures to assure that all data retained in memory devices in Electronic Equipment is protected from theft or loss and shall not be released to unauthorized parties, from the moment they take control of the Electronic Equipment through final data destruction</p>
<p>10.(a) An R2 electronics recycler shall possess adequate Comprehensive or Commercial General Liability Insurance including coverage for bodily injury, property damage, pollutant releases, accidents and other emergencies</p>	<p>➔ 4.4.8 Insurance Requirements</p> <p>➔ 4.4.6.5 Downstream Accountability</p> <p>➔ RECOMMENDED ACTION: Ensure that your insurance includes coverage of bodily injury</p>
<p>10.(b) 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.</p>	<p>➔ 4.4.6.8 Site Closure Plans</p>
<p>11. Transport:</p>	
<p>➔ 13 (a) Ensure all equipment, components, and materials are transported are packaged appropriately to the risk</p>	<p>➔ 4.4.6.2 Reuse and Refurbishment of Electronic Equipment</p> <p>➔ 4.4.6.2.e) requires the organization to package refurbished Electronic Equipment and components for shipment in a manner that will protect them from damage during transit</p>

R2 SECTION	CORRESPONDING E-STEWARDS SECTIONS/REQUIRED ADDITIONS
<i>Note: The clauses are NOT included in their entirety, and should be read in conjunction with a copy of both standards if implementation is to be pursued.</i>	
<ul style="list-style-type: none"> <li>➔ 13 (b) Written documentation or a third-party certification indicating that transporters have all the necessary regulatory authorizations and no significant violations of relevant legal requirements during the past 3 years</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.6.5 Downstream Accountability</li> <li>➔ This requirement is not covered in e-Stewards. It is recommended that such evidence certification be obtained and documented in system documentation to enable R2 certification</li> </ul>
12. Recordkeeping	
<ul style="list-style-type: none"> <li>➔ 14 (a) An R2 electronics recycler shall maintain in a single location each piece of documentation necessary to show conformity to each requirement of this document</li> </ul>	<ul style="list-style-type: none"> <li>➔ 4.4.4 Documentation</li> <li>➔ 4.5.4 Records control</li> </ul>