

AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WASTE MANAGEMENT AND PREVENTION DIVISION

PROCEDURE FOR THE ENVIRONMENTALLY SOUND MANAGEMENT  
OF ELECTRONIC DEVICES FOR COLLECTORS, TRANSPORTERS,  
AND RECYCLERS

§ 1. AUTHORITY

This Procedure is adopted under the Secretary's authority pursuant to 10 V.S.A. § 7559(7).

§ 2. PURPOSE

It is the purpose of this Procedure to:

- (1) Establish guidelines for the proper environmental management of electronic devices collected, transported, and recycled in the State of Vermont; and
- (2) Provide guidance on how to register as a collector, transporter, or recycler under Vermont's electronic waste management law.

§ 3. DEFINITIONS

As used in this Procedure, the terms shall have the meaning given in 10 V.S.A. § 7551 and as follows:

- (1) "Accredited certifying body" means:
  - (A) For the Responsible Recycling practices (R2), a certifying body that has certified by ANSI-ASQ National Accreditation Board (ANAB) as accredited to certify companies to the R2 Practices.
  - (B) For the e-Stewards standards, a certifying body that has been certified by ANSI-ASQ National Accreditation Board (ANAB) as accredited to certify companies to the e-Stewards standard.
- (2) "Agency" means the Agency of Natural Resources.
- (3) "Banned electronic devices" means an electronic device banned from disposal in a landfill pursuant to 10 V.S.A. § 6621a.
- (4) "Collection" means the aggregation of electronic devices and includes all the activities up to the time the electronic device is delivered to a recycler.
- (5) "Collector" means a public or private entity that receives electronic devices and that performs any of the following:

- (A) Arranges for the delivery of the electronic devices to another collector or a recycler.
- (B) Sorts electronic devices.
- (C) Consolidates electronic devices.
- (D) Provides data security services in a manner approved by the Secretary.

(6) “Container” means any portable receptacle in which a material is stored, transported, treated, disposed of or otherwise handled.

(76) “Disassembly” means the proper dismantling of an electronic device: (1) for the purpose of marketing, reselling, reusing or recycling the components of electronic devices; (2) in a manner that is protective of human health and the environment; (3) without treating the device or any component thereof; and (4) without breaking the cathode ray tube. A facility dismantling electronic devices in this manner shall not be considered a destination facility. Disassembly includes the destruction of a hard drive (including shredding and crushing) in accordance with the National Association of Standards and Technology Guidelines for Media Sanitation, as may be amended. Disassembly does not mean the shredding, crushing, or otherwise treating the electronic devices or any component thereof that may contain Focus Materials, or that break the cathode ray tube in any electronic device.

(87) “Disposal” means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any ground or surface waters.

(98) “Electronic device” means a computer; computer monitor; computer peripheral; device containing a cathode ray tube; printer; or television regardless of who deposits the device with the collector, transporter, or recycler. “Electronic device” does not include: any motor vehicle or any part thereof; a camera or video camera; a portable or stationary radio; a wireless telephone; a household appliance, such as a clothes washer, clothes dryer, water heater, refrigerator, freezer, microwave oven, oven, range, or dishwasher; equipment that is functionally or physically part of a larger piece of equipment intended for use in an industrial, library, research and development, or commercial setting; security or antiterrorism equipment; monitoring and control instruments or systems; thermostats; handheld transceivers; a telephone of any type; a portable digital assistant or similar device; a calculator; a global positioning system receiver or similar navigation device; commercial medical equipment that contains a cathode ray tube, a cathode ray tube device, a flat panel display, or similar video display that is not separate from the larger piece of equipment; or other medical devices, as the term “device” is defined under 21 U.S.C. § 321(h) of the Federal Food, Drug, and Cosmetic Act, as that section is amended from time to time.

- (109) “Focus Materials” means electronic devices or components of electronic devices that include any of the following components:
- (A) Polychlorinated biphenyls (PCBs); or
  - (B) Mercury; or
  - (C) CRT glass, except for glass with lead content less than 5 parts per million, and clean of phosphors, CRT fines, coatings, and frit; or
  - (D) Batteries; or
  - (E) Whole or shredded circuit boards, except for whole and shredded circuit boards that do not contain lead solder, and have undergone safe and effective mechanical processing, or manual dismantling, to remove mercury and batteries.
- (1140) “Local reuse” means reuse within the United States of America.
- (1244) “Non-local reuse” means reuse outside of the United States of America.
- (1342) “Manufacturer Opt-Out Individual Plan” (or “Manufacturer Opt-Out Plan”) refers to a plan approved by the Secretary under 10 V.S.A. § 7554.
- (1443) “Person” means any individual, partnership, company, corporation, association, unincorporated associations, joint venture, trust, municipality, the State of Vermont or any agency, department or subdivision of the state, federal agency, or any other legal or commercial entity.
- (1544) “Program Year” means the period from ~~October~~ January 1 through ~~September~~ December 31.
- (1645) “Recycler” means a person who accepts electronic devices for the purpose of recycling. A person who takes electronic devices solely for reuse, refurbishment, or repair is not a recycler.
- (1746) “Recycling” means the process of collecting and preparing electronic devices for use in manufacturing processes or for recovery of useable materials, followed by delivery of such materials for use. Recycling does not include destruction by incineration; waste-to-energy incineration, or other such processes; or land disposal.
- (1847) “Refurbish” or “refurbishment” means to repair electronic devices to restore or improve the devices so that they may be used for the same purpose for which the devices were originally purchased.
- (1948) “Reuse” means that an electronic device changes ownership and is used, as is, for the same purpose for which it was originally purchased.

(2019) “State Standard Plan” means the plan for collection and recycling of electronic waste in the State adopted by the Secretary under 10 V.S.A. § 7552.

(2120) “Transporter” means a person that moves electronic devices from a collector or collection event to either a collector or to a recycler.

#### § 4. STANDARDS FOR COLLECTORS

- (a) **Applicability.** These standards apply to any person that receives electronic devices, and that arranges for the delivery of the electronic devices to another collector or a recycler, sorts electronic devices, consolidates electronic devices, or provides data security services in a manner approved by the Secretary.
- (b) **Registration.** A collector shall register each location with the Agency by completing the form provided by the Agency.
- (c) **Prohibited activities.** A collector is prohibited from the following:
- (1) Storing electronic devices at any unregistered location for any length of time;
  - (2) Storing electronic devices outdoors;
  - (3) Storing electronic devices in a manner that is inconsistent with the materials management standards in subsection (e);
  - (4) Disposing of any electronic device;
  - (5) Placing any electronic device in a container intended for or sent for scrap metal recycling or managing any electronic device as scrap metal;
  - (6) Cutting permanent cords from electronic devices; and
  - (7) Initiating a shipment of electronic devices to any person, except the following:
    - (A) A destination within the United States, for reuse of whole devices that are functional and are used for the same purpose for which it was originally purchased.
    - (B) A facility in Vermont that is a registered recycler or collector of electronic devices.
    - (C) An out-of-state recycling facility that is operated in accordance with that state’s laws and regulations.
- (d) **Facility management standards.** A registered collector shall manage its facility(ies) located in Vermont in the following manner:
- (1) Access to the collection location shall be controlled at all times. An attendant shall be present to ensure that electronic devices are appropriately separated, to

perform record keeping and to ensure that collection is conducted in accordance with this Procedure during the hours of operation;

- (2) Employees and volunteers have been trained on the materials that can be accepted at the collection location, materials management standards in subsection (e) of this section, the record keeping required by subsection (f) of this section, and how to respond to releases from broken or poorly maintained electronic devices;
  - (3) The facility shall have a written procedure in place to address releases from electronic devices;
  - (4) The facility shall display collection location and data security information/signs provided by the Secretary in a location visible to the public; and
  - (5) The facility shall provide access to Agency personnel to inspect the facility, review any records, or conduct any other sampling or auditing to determine the compliance with the requirements of 10 V.S.A. Chapter 166.
- (e) Materials management standards. A registered collector shall manage electronic devices in a way that prevents releases from any electronic device, or component of an electronic device, to the environment. Registered collectors shall:
- (1) Store electronic devices on a surface that prevents any materials or contents of materials stored thereon from migrating to the soil, groundwater, or surface water. Soil, aggregate stone, gravel, or any earthen material is not acceptable as a storage surface. All storage surfaces shall be properly maintained to sustain the integrity of the surface area and allow for clean-up of any broken devices. an impervious surface within a structure or transportation unit such that the electronic device is protected from precipitation. Outdoor storage is prohibited at any time;
  - (2) Store electronic devices within a structure or transportation unit such that the electronic device is protected from precipitation. Electronic devices abandoned outside of a collection location shall be placed within a storage area by the attendant immediately upon discovery. Outside storage at the collection location for any length of time is prohibited.
  - (~~3~~) Maintain adequate storage space to accommodate periods of peak deliveries;
  - (~~4~~) Package electronic devices in a manner adequate to prevent breakage during transportation, storage, and handling. Such packaging must lack evidence of damage that could cause breakage under reasonably foreseeable conditions. Storage containers must be structurally sound and suitable for the contents and not overfilled;
  - (~~5~~) Clean up broken and damaged electronic devices immediately. All clean-up materials and debris shall be managed in accordance with the guidance set forth by the Agency. Any broken and/or damaged electronic devices showing evidence of breakage, leakage, spillage, or other damage that could cause release of focus materials or any other hazardous constituents under reasonable foreseeable

circumstances must be placed in a container. Any such container shall be kept closed, shall be structurally sound, compatible with the waste, and shall be capable of preventing leakage, spillage, or releases of focus materials or other hazardous constituents from such broken devices to the environment.

- (6) Not accumulate electronic devices for longer than one year from the date the electronic device is delivered to the facility;
  - (7) Clearly mark containers, large individual electronic devices, pallets, or packages containing electronic devices with the words “electronic waste,” ~~“used electronics”~~ or another term approved by the Secretary.
- (f) Recordkeeping and reporting requirements. Reporting shall be due annually by the date specified by the Secretary. The following shall be reported to the Secretary on a form provided by the Secretary:
- (1) For collectors operating under the State Standard Plan or an approved Manufacturer Opt-Out Plan (or for a combination thereof):
    - (A) The types of electronic waste collected from covered entities (e.g. computer, television, mouse, etc.);
    - (B) The amount of electronic waste, by weight, sent to another collector or recycler from all covered entities during the preceding program year;
    - (C) The amount of electronic waste, by weight, that was collected under the State Standard Plan or an approved Manufacturer Opt-Out Plan (or a combination thereof);
    - (D) The amount of electronic waste, either by weight or by number of devices, that was removed at the point of collection for local reuse or refurbishment.
  - (2) For collectors operating outside of the State Standard Plan or an approved Manufacturer Opt-Out Plan:
    - (A) The types of electronic devices collected (i.e., computer, monitor, television, computer peripherals, or desktop printer) and any other banned electronic devices collected.
    - (B) The total weight of all banned electronic devices collected during the preceding program year.
- (g) Collection Events. Collection events may be conducted to collect electronic devices provided that approval from the Secretary is obtained prior to the event (i.e., completion of a registration on a form provided by the Secretary ~~and an Insignificant Waste Management Event Approval (IWMEA)~~), and provided that the event is conducted in compliance with the following:

- (1) Access to the collection area shall be controlled at all times. An attendant shall be present to ensure that electronic devices are appropriately separated, to perform recordkeeping and to ensure that collection is conducted in accordance with the requirements in this section;
- (2) Employees have been trained on the materials that can be accepted at the collection event, the requirements for collection events required by this section, the recordkeeping required by relevant regulatory documents, including (where applicable) any Manufacturer Opt-Out authorization, the State Standard Plan, and this Procedure, and how to respond to releases from broken or poorly maintained electronic devices;
- (3) ~~The electronic devices are stored on an impervious surface~~ Store electronic devices on a surface that prevents any materials stored thereon from migrating to the soil, groundwater, or surface water. Soil, aggregate stone, gravel, or any earthen material is not acceptable as a storage surface. All storage surfaces shall be properly maintained to sustain the integrity of the surface area and allow for clean-up of any broken devices;
- (4) Package electronic devices in a manner adequate to prevent breakage during transportation, storage, and handling. Such packing must lack evidence of damage that could cause breakage under reasonably foreseeable conditions. Storage containers must be structurally sound and suitable for the contents.
- (5) Clean up broken and damaged electronic devices immediately. Any broken and/or damaged electronic devices showing evidence of breakage, leakage, spillage, or other damage that could cause release of focus materials or any other hazardous constituents under reasonable foreseeable circumstances must be placed in a container. Any such container shall be kept closed, shall be structurally sound, compatible with the waste, and shall be capable of preventing leakage, spillage, or releases of focus materials or other hazardous constituents from such broken devices to the environment  
~~All clean-up materials and debris shall be managed in accordance with guidance set forth by the Agency.~~
- (6) Containers, pallets, large individual electronic devices, or packages containing electronic devices shall be clearly marked with the words “electronic waste,” ~~“used electronics,”~~ or another term approved by the Secretary.
- (7) All materials collected shall be delivered to a recycler or registered collector by the end of the next business day or within 48 hours of collection, whichever is later. If the materials are on-site overnight, they shall be stored within a structure or transportation unit and secured to ensure the electronic devices are protected from precipitation and prevent theft and scavenging.
- (8) Collection events must utilize transporters that are registered with the Agency.

- (h) Collection events shall not be permitted as a substitution for any of the required permanent collection locations under the State Standard Plan or any approved Manufacturer Opt-Out Plan.

§ 5. STANDARDS FOR TRANSPORTERS

- (a) **Applicability.** These standards apply to any person who moves electronic devices from a collector or a collection event to either a collector or to a recycler.
- (b) **Registration.** A transporter shall register with the Secretary on a form provided by the Secretary.
- (c) **Prohibited activities.** A transporter is prohibited from the following:
  - (1) Disposing of any electronic device;
  - (2) Placing any electronic device in a container intended for or sent for scrap metal recycling or manage electronic device as scrap metal; and
  - (3) Delivering an electronic device to any person except the following:
    - (A) A facility in Vermont that is a registered recycler or collector; and
    - (B) An out-of-state recycling facility that is operated in accordance with that state's laws and regulations.
- (d) A transporter may consolidate collected electronic devices into a larger vehicle at a transfer facility certified pursuant to 10 V.S.A. § 6605 in accordance with the terms of that certification.
- (e) **Materials management standards.** A registered transporter shall manage electronic devices in a way that prevents releases from any electronic device or component of an electronic device to the environment. Registered transporters shall:
  - (1) Transport electronic devices in a transportation unit that is covered such that the electronic device is protected from precipitation and will remain in the transportation unit during transportation;
  - (2) Package and transport electronic devices in a manner to adequately prevent breakage during transportation and handling. Such packaging must lack evidence of damage that could cause breakage under reasonably foreseeable conditions. Storage containers must be structurally sound and suitable for the contents. Large electronic devices, not within a gaylord or on a pallet, may be transported as an individual item if it is handled and packed in a manner adequate to prevent breakage during transportation; and
  - (3) Clean up broken and damaged electronic devices immediately. Any broken and/or damaged electronic devices showing evidence of breakage, leakage, spillage, or other damage that could cause release of focus materials or any other

hazardous constituents under reasonable foreseeable circumstances must be placed in a container. Any such container shall be kept closed, shall be structurally sound, compatible with the waste, and shall be capable of preventing leakage, spillage, or releases of focus materials or other hazardous constituents from such broken devices to the environment.

~~All clean-up materials and debris shall be managed in accordance with the guidance set forth by the Agency.~~

## § 6. STANDARDS FOR RECYCLERS

- (a) Applicability. The standards apply to any person that accepts electronic devices for the purposes of recycling.
- (1) The only treatment allowed at a Vermont facility registered under this section is disassembly, testing, bailing, repair or reuse. A facility that undertakes additional treatment or recycling activities shall obtain a permit under either 10 V.S.A. § 6605 or 10 V.S.A. § 6606.

~~Note: A person who solely reuses, refurbishes, or repairs electronic devices is not a recycler under this Procedure and is not required to register with the Secretary.~~

- (b) Registration. A recycler shall register with the Secretary on a form provided by the Secretary.
- (c) Prohibited activities. A recycler is prohibited from:
- (1) Disposing of any electronic device. A recycler may initiate a shipment of parts that are not recyclable to a facility that is permitted or certified to accept those materials; and
- (2) Initiating a shipment of electronic devices to any person, except the following:
- (A) Another in-state recycling facility that complies with all standards set forth in § 6;
- (B) An out-of-state recycling facility that is operated in accordance with that state's laws and regulations; or
- (C) A foreign destination shipped in a manner consistent with their facility management standards and is consistent with federal law.
- (d) Facility management standards.
- (1) A recycler shall submit upon request a copy of a current certification by an accredited certifying body demonstrating that the recycler conforms to either the Responsible Recycling Practices (R2) or the e-Stewards Standards. Notwithstanding the requirements of either the e-Stewards Standard or R2, in no case shall the regulatory requirements of this Procedure be more restrictive than 40 C.F.R. Part 262 Subparts E or H.

- (2) Minimum insurance requirements. A recycler shall possess Comprehensive or Commercial General Liability Insurance including coverage for bodily injury, property damage, pollutant releases, accidents and other emergencies with coverage limits of \$1,000,000 per occurrence and an annual aggregate of at least \$2,000,000, exclusive of legal defense costs.
- (3) Closure plan. A recycler shall develop a written plan for [the Secretary's Agency review and approval, to address](#) the proper closure of the facility; a closure plan shall be based upon the following closure requirements:
- (A) A description of how final closure of the facility will be conducted;
  - (B) An estimate of the maximum inventory of electronic devices ever on-site over the active life of the facility and a detailed description of the methods to be used during closure, including, but not limited to methods for removing, transporting, treating, storing or disposing of all electronic devices; and
  - (C) A detailed description of the steps needed to remove or decontaminate all harmful residues and contaminated containment system components, equipment, structures, and soils during closure including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination necessary to satisfy the Secretary.
- (4) Amendment of closure plan. The recycler may amend the closure plan at any time prior to the notification of partial or final closure of the facility. A recycler with an approved closure plan must submit a written request to the Secretary to authorize a change to the approved closure plan. The written request must include a copy of the amended closure plan for approval by the Secretary; the recycler must amend the closure plan whenever:
- (A) Changes in operating plans or facility design affect the closure plan; or
  - (B) In conducting closure activities (unexpected events require a modification of the closure plan).
- (58) Cost-estimate for closure. The following are the minimum requirements to be considered when developing a cost estimate for the closure of a facility:
- (A) The estimate must equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan;
  - (B) The closure cost estimate must be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator; and

(C) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of electronic devices, facility structures or equipment, land, or other assets associated with the facility at the time of closure. Additionally, the closure cost estimate may not incorporate a zero cost as electronic devices might have an economic value.

(D) Closure cost estimate must be updated no less than every two years to adjust for possible changes in markets or changes in the facility.

(69) Adjustments to closure cost estimates. During the active life of the facility, the recycler must adjust the closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year. The adjustment may be made by recalculating the closure cost estimate in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(A) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate; and

(B) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

(740) Amendment to closure cost estimate. During the active life of the facility, the recycler must revise the closure cost estimate no later than 30 days after a revision has been made to the closure plan which increases the cost of closure. If the owner or operator has an approved closure plan, the closure cost estimate must be revised no later than 30 days after the Secretary has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure.

(844) Financial instruments. A financial instrument in the amount of the approved cost estimate for closure of the facility shall be provided to the Secretary and shall be in the form required by 40 C.F.R. § 258.74(b), (c), (e) — (h). Appendix A of the Vermont Solid Waste Management Rules.

(e) Materials Management Standards. A recycler shall manage electronic devices or components of electronic devices containing focus materials in a way that prevents releases to the environment. Electronic devices that are removed for reuse are exempt from the management standards contained in this section. Recyclers shall:

(1) Storage. — Store eElectronic devices and components of electronic devices that contain focus materials on a surface that prevents any materials or contents of materials stored thereon from migrating to the soil, groundwater, or surface water. Soil, aggregate stone, gravel, or any earthen material is not acceptable as a storage

surface. All storage surfaces shall be properly maintained to sustain the integrity of the surface area and allow for clean-up of any broken devices. shall be stored on an impervious surface

- (2) Store electronic devices within a structure or transportation unit such that the electronic devices are protected from precipitation. Outdoor storage for any length of time -of electronic devices is prohibited.  
~~at any time.~~
- (3) Maintain adequate storage space to accommodate periods of peak deliveries.
- (4) Package electronic devices and components of electronic devices that contain focus materials in a manner adequate to prevent breakage during transportation, storage, and handling. Such packaging must lack evidence of damage that could cause breakage under reasonably foreseeable conditions. Storage containers must be structurally sound and suitable for the contents. This does not apply to electronic devices during disassembly.
- (5) Damaged electronic devices or broken components parts that contain focus materials or any other hazardous constituents showing evidence of leakage, spillage, or other damage must be placed in a closed container and marked with the words “broken electronic waste”. Containers must be kept closed except when adding items and must be structurally sound, compatible with the waste, and capable of preventing further leakage, spillage, or releases to the environment.
- (6) Not accumulate electronic devices or components of electronic devices that contain focus materials for longer than one year from the date the electronic device is delivered to the facility, unless approved by the Secretary.
- (7) Clearly mark pallets or containers holding electronic devices or components of electronic devices that contain focus materials with the word “electronic waste” or another term approved by the Secretary. This does not apply to electronic devices during disassembly.

(f) Recordkeeping and reporting requirements. Reporting shall be due annually by a date specified by the Secretary January 31. The following shall be reported to the Secretary on a form provided by the Secretary:

- (1) The types of electronic waste managed;
- (2) The total weight of electronic waste recycled during the preceding program year (and if any waste was collected directly from a covered entity at the recycling location that weight identified separately);
- (3) The amount of electronic waste, by weight, that was collected under the State Standard Plan, an approved Manufacturer Opt-Out Plan, or that was collected outside of an approved plan;

- (4) The amount of electronic waste, by weight, that was removed for non-local reuse; and
  - (5) The amount of electronic waste, by weight or by number of devices, that was removed for local reuse.
- (g) Record retention. A recycling facility must retain records for shipments, export, and records identified in subsection (f) of this section for at least three years from the date a shipment of electronic devices, electronic devices for reuse, electronic devices or components containing Focus Materials received by, or shipped from, the facility and provide them to the Secretary upon request.

This Procedure for the Environmentally Sound Management of Electronic Devices for Collectors, Transporters, and Recyclers is effective upon date of signature.

By: \_\_\_\_\_

Date: \_\_\_\_\_

~~David K. Mears~~ Alyssa Schuren, Commissioner  
Department of Environmental Conservation  
Agency of Natural Resources