

Guidelines for On-Site Reviews of Electronics Recyclers

Updated: 7/2/2012

PURPOSE

This tool is designed to aid Federal Electronics Challenge (FEC) Partners through an on-site review of an electronics recycler. This form will guide you in answering questions about an electronics recycler's practices and may be completed at a recycler's facility. Completion of this review can help you ensure due diligence when selecting an electronics recycler.

BACKGROUND

Executive Order (E.O.) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, requires agencies to employ environmentally sound practices with respect to the agency's disposition of all agency excess or surplus electronic products. Additionally, the U.S. General Services Administration (GSA) Federal Management Regulation (FMR) Bulletin B-34, *Disposal of Federal Electronic Assets*, strongly encourages the use of certified recyclers and refurbishers for the recycling of electronic equipment labeled for abandonment and destruction.

If a federal agency or facility opts to use an electronics recycler certified through either the Responsible Recycling (R2) Practices for Use in Accredited Certification Programs for Electronics Recyclers, or the e-Stewards Standard for Responsible Recycling and Reuse of Electronic Equipment®, they do not need to perform additional due diligence to ensure compliance with E.O. 13514 and GSA FMR Bulletin B-34. Due diligence activities have been performed through the third-party certification process to ensure these recyclers follow environmentally sound recycling practices.

IMPORTANT NOTE: Recycling facilities are certified at the facility level. A multi-facility or national organization must independently certify each of their locations. Due to the length of time required for certification, these multi-facility or national organizations may have some facilities that are certified and some that are not yet certified. Check to determine which facility location will be used to recycle your electronics, and ensure that specific facility is certified.

The FEC encourages all federal agencies and facilities to use a certified recycler for recycling of federal electronics. Federal agencies and facilities that choose not to use a certified recycler may choose and contract with a local recycler that meets their needs. When selecting a different recycler, federal agencies and facilities must practice due diligence to ensure that the electronics recycler they select utilizes environmentally sound practices, in accordance with E.O. 13514.

The purpose of this review tool is to provide you with questions to consider about a particular recycler and/or recycling facility that you may be considering contracting with. A review of this type is essential for assuring and documenting that the recycling vendor you select will handle your electronics in an environmentally sound manner.

In addition to the questions outlined in this form, the FEC encourages reviewers to read the R2 Standard and e-Stewards Standard, and consider utilizing these resources to determine if an electronics recycler is following practices consistent with environmentally sound practices. The R2 Practices and Checklist are available at: <http://www.r2solutions.org/r2practices/r2-standard/>. A free, excerpted version of the e-Stewards Standard is available at: <http://e-stewards.org/certification-overview/the-e-steward-standard/#Excerpted Version>. The FEC also encourages you to ask additional questions which may pertain to your facility's particular needs or enhance your knowledge of end-of-life issues with electronics.

A sample worksheet has been provided with this document to aid your review, as well as a sample confidentiality notice. The confidentiality notice was developed to inform electronics recyclers of their right to claim certain information as confidential, as well as to request the recycler's consent to share information gathered from the on-site electronics recycling facility review with other federal agencies. This notice is provided as a sample document for staff from other agencies. Please consult your own agency's procedures with respect to notification of confidentiality.

DISCLAIMER

These guidelines are not meant to substitute or override Federal, state, or local laws and regulations.

REVIEWING ELECTRONICS RECYCLERS

While completing or reviewing the questions in the attached *Work Sheet for On-Site Review of Electronics Recycling Facility* (starting on page 5), please consider the following, which may help you complete the form or understand the information provided by the recycler.

General Facility Facts

- How long has the recycler been in business?
- Has the facility changed ownership recently?
- Compare the input of electronics with the output (via processing or resale). Is the majority of the incoming electronics processed or resold? A difference between input and output of +/-10% is usually considered acceptable. Anything larger may indicate the facility is sending a significant amount of the input electronics to landfills. If there is cause for concern, you may wish to ask your point of contact for clarification.
- If the facility handles hazardous materials they should have an EPA ID number related to their generation of large or small quantities of hazardous waste. Recyclers may say they are "EPA permitted," "EPA approved," or "EPA certified," however, the **EPA has no permit, approval, or certification process verifying environmentally sound practices by electronics recyclers.** An EPA hazardous waste ID number is not a federal permit to recycle electronics, but may be indicative of due diligence related to hazardous waste disposal.
- Some states provide electronics recyclers with operating permits or licenses, but these permits or licenses may or may not indicate compliance with any standards. If you are unsure, determine the purpose of each permit and license, and what each requires of the facility or its operators. Be sure the recycler is adhering to the requirements of the state(s) it is located in.
- Some recyclers may have International Organization for Standardization (ISO) 9000 and/or 14000 certification. These certifications mean that a third party auditor has examined the operating procedures of the company, and found them to be in compliance with regard to that standard. These are an indication of good practice, but because of the expense of these audits, not all facilities will have them. It is perfectly fine to do business with a recycler that does not have these certifications. These certifications are NOT equivalent to R2 or e-Stewards certifications.
- ***If the facility has active R2 or e-Stewards certification, there is no need to perform due diligence through an on-site visit, since due diligence is ensured through the third-party certification process.***

Electronic Waste Input

- A "Certificate of Recycling" is usually the recycler's own certification of the total weight of material received on a certain date and an acknowledgement that it was (or will be) processed in accordance with all state and federal regulations. For record-keeping purposes, a Certificate of Recycling for each received shipment is essential, but the availability of a certificate does not absolve the federal agency/facility or recycler of environmental liability in the event of mismanagement.

Electronic Waste Processing

- Does the facility strive to maximize reuse and refurbishment, and minimize incineration and landfilling, within the facility and through downstream organizations?
- Used electronics are not necessarily hazardous waste. A facility may not need to be permitted or licensed to handle waste if the electronics they handle are not classified as hazardous waste.

Please see EPA's eCycling Regulations web page for more details about federal and state "hazardous" designations: <http://www.epa.gov/epawaste/consERVE/materials/ecycling/rules.htm>.

- Many of the media sanitization terms used in these questions are defined in the National Institute of Standards and Technology (NIST) Guidelines for Media Sanitization (NIST Special Publication 800-88), available at: <http://csrc.nist.gov/publications/PubsSPs.html>.
- Media disposal is not the same as sanitization. Check that the facility can provide the media sanitization (clearing, purging, destroying) your organization might need, and that they adhere to any agency or facility requirements you have for media sanitization and data security.

Electronic Waste Output

- Does the facility send output to recipients that maximize reuse and refurbishment, and minimize incineration and landfilling?
- Is equipment that is sent for reuse tested to ensure that it is working, or sent to a recipient that can reuse or refurbish non-working equipment?

Due Diligence for Incinerators and Landfillers

- The facility should be able to answer the questions found in this section of the Work Sheet below if they perform incineration/landfilling on site, or answer these questions for any other downstream facility or organization that does incineration/landfilling.

Due Diligence for Recyclers of Focus Materials

- The facility should be able to answer the questions found in this section of the Work Sheet below if they recycle electronics, components or materials containing focus materials on site, or answer these questions for any other downstream facility or organization that recycles these electronics, components or materials.
- Use of the systems or plans listed are indicative of appropriate planning for handling focus materials so as to reduce potential environmental, health, safety and economic impacts.

Due Diligence for Exporters

- The facility should be able to answer the questions found in this section of the Work Sheet below if they export electronics, components or materials from their site, or answer these questions for any other downstream facility or organization that exports electronics, components or materials.

Documentation and Records

- Not all of the listed documentation and records are necessary for all facilities. Proper documentation and records may vary according to the type and size of the facility, the type and quantity of electronics they process, and the processing methods that they use.
- Electronic recyclers who export cathode ray tube (CRT) monitors for reuse and mixed CRT glass for recycling should be able to provide documentation (i.e., notification letter to EPA; consent letter from EPA that export is allowed) that they are in compliance with the export section of the CRT rule. Notifications are not necessary for cleaned and sorted CRT glass, so recyclers exporting this material may not have documentation. A responsible recycler should not be doing business with vendors that have not complied with the CRT rule, so requesting information on compliance of downstream vendors is also important.
 - A list of companies approved to export cathode ray tubes for recycling is available at: <http://www.epa.gov/osw/hazard/international/crts/recycling.htm>.
 - A list of companies that have submitted to EPA their written notification for exporting cathode ray tubes for reuse is available at: <http://www.epa.gov/osw/hazard/international/crts/reuse.htm>

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- Electronic recyclers who export, or use downstream vendors that export, specific electronic equipment outside the U.S should be able to supply you with information on the legality of the export. Documentation is needed for equipment or materials that contain mercury, polychlorinated biphenyls (PCBs), batteries, CRTs or CRT glass, or circuit boards.
- If the facility cannot provide specific documentation during your on-site review, continue with the review, but have them send the documentation to you as soon as possible. Lack of follow-up correspondence may be cause for concern.

Physical Examination

- Shipping containers are entirely made of steel and sit on a flatbed trailer; they have tightly closing steel doors with a rubber gasket; and the container is detachable from the trailer so that people can walk in and out of it from ground level. It is important to note that the containers may not always be on a truck, they may be stacked on each other in a storage yard. Shipping containers may mean that electronics are being shipped overseas.

REFERENCES

The text of Executive Order 13514 is available at: <http://www.fedcenter.gov/programs/eo13514/>.

Information about the R2 Practices is available at: <http://www.r2solutions.org/>.

Information about the e-Stewards Standard is available at: <http://e-stewards.org/>.

Federal regulatory requirements are described at EPA's eCycling website:
<http://www.epa.gov/epawaste/conserva/materials/ecycling/rules.htm>

The National Center for Electronics Recycling provides a list of electronics recycling laws in effect at their website: <http://www.electronicrecycling.org/public/ContentPage.aspx?pageid=14>.

CONTACT INFORMATION

If you have questions related to this resource or need other assistance with the Federal Electronics Challenge, please contact your Regional Champion: <http://www.epa.gov/fec/technical.html>.

Visit the FEC online: <http://www.epa.gov/fec/>

E-mail the FEC: fec@epa.gov



Work Sheet for On-Site Review of Electronics Recycling Facility

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REVIEWER INFORMATION

Agency and facility: _____

Name and title: _____

Phone: _____

GENERAL FACILITY FACTS

Facility name: _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

Facility contact: _____

E-mail: _____

Phone: _____ **Fax:** _____

Size of facility:

_____ Square feet for production and storage

_____ Total employees

_____ Production employees

_____ Administrative employees

Facility throughput:

_____ Pounds of electronics input to the facility last month

_____ Pounds of electronics output by the facility last month (refurbished/recycled)

_____ Pounds of electronics output by the facility last month (landfilled/incinerated)

_____ Pounds of electronics input to the facility last year

_____ Pounds of electronics output by the facility last year (refurbished/recycled)

_____ Pounds of electronics output by the facility last year (landfilled/incinerated)

List of federal, state and local permits and licenses:

List of environmental, health and safety management systems and/or plans:

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List of third-party certifications:

ELECTRONIC WASTE INPUT

Type(s) of electronic waste the facility accepts:

Computer central processing units (CPUs), desktops, and notebooks/laptops/tablets	Yes No
Computer peripherals, including mice, keyboards, and cords/wires/connectors	Yes No
Computer monitors/displays, including cathode ray tubes (CRTs) and liquid crystal displays (LCDs)	Yes No
Other office electronics, including fax machines, copiers, printers, scanners, and multi-function devices	Yes No
Servers, including racks and power supplies	Yes No
Handheld electronics, including cellular phones, personal digital assistants, and peripherals	Yes No
Telecommunications equipment, including telephones or telephone equipment	Yes No
Household electronics, including televisions, stereos, projectors, digital video disc (DVD) players, and video cassette recorders (VCRs)	Yes No
Microwaves or other appliances	Yes No
Other electronic equipment Please specify:	Yes No

Source(s) of the electronic waste the facility accepts:

Original equipment manufacturers	Yes No
Private asset disposition (e.g., corporations)	Yes No
Public asset disposition (e.g., government)	Yes No

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Municipal programs/events	Yes No
Drop-off	Yes No
Retailers (e.g., Staples, Office Depot, Circuit City, Best Buy, etc.)	Yes No
Other processors and recyclers	Yes No
Other sources Please specify:	Yes No

Does the facility provide a Certificate of Recycling or similar document?

Yes
No

ELECTRONIC WASTE PROCESSING

Processing method(s) utilized at the facility and the percentage of electronic waste which is processed via each method:

Brokering (matching of buyers and sellers)	Yes No	%
Resale or donation of whole, working units (without refurbishment)	Yes No	%
Remanufacturing or refurbishing for donation and/or resale	Yes No	%
Demanufacturing (disassembling into parts and subassemblies)	Yes No	%
Material recovery (physical separation to capture plastics, metals, glass, etc.)	Yes No	%
Material processing and refining (shredding and grinding)	Yes No	%
Incineration	Yes No	%
Land disposal (landfilling)	Yes No	%
Total (should equal 100%)		%

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If the facility handles hazardous materials or waste, please answer the following:

What types and quantities of hazardous materials or waste does the facility handle?

How does the facility handle hazardous materials or waste?

Is the facility fully licensed for the transport, processing, treatment and/or disposal of hazardous materials and wastes by all appropriate governing authorities? Yes
No

How does the facility handle media left in, or part of, received electronic equipment?

<i>Media:</i>	<i>Sanitized?</i>	<i>Method(s):</i>
Paper or microforms	Yes No	Dispose Destroy
Hard drives or other permanent storage components	Yes No	Dispose Clear Purge Destroy
Memory or other temporary storage components	Yes No	Dispose Clear Purge Destroy
Removable electronic media (Floppies, CDs, DVDs, USB removable media, Zip or Jaz disks, removable memory cards)	Yes No	Dispose Clear Purge Destroy
Magnetic cassettes, cards, tapes and ribbon	Yes No	Dispose Clear Purge Destroy
Other electronic equipment Please specify:	Yes No	Dispose Clear Purge Destroy

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What equipment is available and used for media disposal or sanitization?

Software to reset equipment to manufacturers settings List types of equipment that can be reset (e.g., copiers, cellular phones):	Yes No
Software to overwrite media	Yes No
Degausser	Yes No
Equipment that shreds media	Yes No
Equipment that pulverizes media	Yes No
Equipment that disintegrates media	Yes No
Incinerator	Yes No

If media sanitization (clearing, purging or destroying) is performed by the facility, please answer the following questions:

Is the media processed in a controlled area?	Yes No
Are personnel trained in media sanitization procedures and use of the sanitization equipment and/or tools?	Yes No
Does the facility verify media sanitization by testing sanitized media; sanitization equipment and/or tools; and sanitizing personnel?	Yes No
Does the facility document what media are sanitized; when; how; and the final disposition of the media?	Yes No
Is this documentation available to the organization procuring recycling services?	Yes No

List any media sanitization standards followed by the facility (e.g., U.S. Department of Defense 5220.22-M):

ELECTRONIC WASTE OUTPUT

Primary market(s) for the facility's output and the percentage:

Sale/donation of whole working units (either as-is or remanufactured/refurbished)	Yes No	%
Sale/donation of working parts and subassemblies (either as-is or remanufactured/refurbished)	Yes No	%
Recovery of precious metals	Yes No	%
Recovery of other metals	Yes No	%
Recovery of plastics	Yes No	%
CRT glass to lead smelters	Yes No	%
CRT glass to glass manufacturers	Yes No	%
Sale of mixed loads (working and non-working units, parts, and subassemblies)	Yes No	%
Incineration	Yes No	%
Land disposal (landfilling)	Yes No	%
Total (should equal 100%)		%

Is electronic equipment tested to determine viability for resale or donation?

Name(s) of buyers/donees of working equipment:

Yes
No

Is electronic equipment that fails testing, or is otherwise not working, being sold or donated as-is?

Name(s) of buyers/donees of non-working equipment:

Yes
No

For what purpose (repair, parts, recycling)?



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Is electronic equipment transported for reuse or refurbishment packaged in a manner that preserves its value (i.e., adequately protects the equipment from breakage)?

Yes
No

Destination of electronics and components that are not sold or donated for reuse or refurbishment:

<i>Sent to:</i>	<i>Name(s) of recipient(s):</i>	<i>Type(s) of equipment, parts, subassemblies or materials:</i>
Demomanufacturer or shredder		
Precious metals recycler		
Other metals recycler		
Plastics recycler		
Leaded glass recycler		
Batteries recycler		
Other recycler (please specify)		
Incinerator		
Land disposal (landfill)		

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DUE DILIGENCE FOR INCINERATORS AND LANDFILLERS

If the facility acts as an incinerator or landfiller, or sends electronics, components or materials to an incinerator and landfill, please answer the following about the facility(ies) performing incineration or landfilling:

Is the electronics waste evaluated for energy recovery?	Yes No
Does the incinerator practice energy recovery? If no, what is the technical or economic reason for not practicing energy recovery?	Yes No
Is the incinerator or landfiller fully licensed for the treatment and disposal of wastes by all appropriate governing authorities?	Yes No
Does the incinerator or landfiller have an Environmental, Health, and Safety Management System (EHSMS) in place?	Yes No

DUE DILIGENCE FOR RECYCLERS OF FOCUS MATERIALS

Does the facility recycle, or send for recycling, the following focus materials?

Electronic products and components containing or consisting of circuit boards, or shredded circuit boards	Yes No
CRTs and CRT glass	Yes No
Batteries	Yes No
Equipment, components or materials containing mercury	Yes No
Equipment, components or materials containing polychlorinated biphenyl (PCB)	Yes No

If the facility recycles these focus materials, or send them to another facility for recycling, please answer the following questions about the facility(ies) that perform the recycling:

Is the facility licensed by all appropriate governing authorities?	Yes No
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Does the facility have an Environmental, Health, and Safety Management System (EHSMS) in place?	Yes No
Has the facility undergone an EHSMS audit in the past year (or past three years for small businesses)?	Yes No
Does the facility conduct environmental, health and safety (EH&S) training for its personnel?	Yes No
Does the facility have an up-to-date, written hazardous materials identification and management plan?	Yes No
Does the facility have an up-to-date, written plan for reporting and responding to exceptional pollutant releases and emergencies?	Yes No
Does the facility take appropriate measures to protect workers, the general public, and the environment from hazardous dusts and emissions that are the result of material shredding and heating?	Yes No
Does the facility have liability insurance?	Yes No
Does the facility have a monitoring and recordkeeping program?	Yes No
Does the facility have an adequate plan for closure?	Yes No

DUE DILIGENCE FOR EXPORTERS

If the facility exports electronics or components from the U.S., or sends electronics or components to an exporter, please answer the following:

Name of importing facility(ies) and country(ies) of location:

Purpose of export:

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<p>Unless being exported for reuse or refurbishment, or documented as being removed in a member country of the Organisation for Economic Co-operation and Development (OECD), are the following materials removed from exported equipment and handled separately?</p> <ul style="list-style-type: none"> • Batteries • Equipment, components or materials containing mercury • Equipment, components or materials containing polychlorinated biphenyl (PCB) • Whole or shredded circuit boards • CRTs and CRT glass 	<p>Yes No</p>
<p>Are applicable requirements of the U.S., importing, and transit countries complied with?</p>	<p>Yes No</p>

DOWNSTREAM DUE DILIGENCE

<p>Does the facility ensure that downstream processing and recycling operations at other facilities use environmentally sound practices?</p>	<p>Yes No</p>
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DOCUMENTATION AND RECORDS

Were the following documentation and records available for review?

Federal, state, and local permits and licenses	Yes No
Licenses for the transport, processing, treatment and/or disposal of hazardous materials and wastes	Yes No
Licenses for the treatment and disposal of wastes (incinerator or landfiller)	Yes No
Third-party certifications	Yes No
Environmental, health and safety management systems and/or plans	Yes No
Records of environmental, health and safety management system and/or plan audits	Yes No
Hazardous materials identification and management plan	Yes No
Emergency response plan	Yes No
Records of liability insurance	Yes No

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Closure Plan	Yes No
Verification of media sanitization	Yes No
Copies of Certificates of Recycling or similar documents	Yes No
Records demonstrating minimization of incineration and land disposal	Yes No
Records demonstrating adherence to U.S. and foreign requirements with regards to exported electronics and components, including: <ul style="list-style-type: none"> • Notification and consent letters from EPA for CRT monitors for reuse and mixed CRT glass for recycling • Documentation associated with the export of electronics or components that contain mercury, PCBs, batteries, CRT glass, or circuit boards 	Yes No
Records of transfer of electronics and components for reuse and refurbishment, including: <ul style="list-style-type: none"> • Name and address of receiving facility • Description of shipment content and conformance with the receiving facility product specifications • Product specifications of receiving facility • If for-profit transaction, amount paid for the shipped material 	Yes No
Records of downstream due diligence, including documentation that downstream vendors adhere to export requirements	Yes No

PHYSICAL EXAMINATION

While at the facility location, please answer the following questions:

Is the facility clean?	Yes No
Are there any areas on the premises that indicate that a major spill, leak or fire may have occurred?	Yes No
Are the workers outfitted appropriately (e.g., workpants, workshirts, safety glasses, hard hats where appropriate, gloves, etc.)?	Yes No
Where is input electronic waste stored?	Inside Outside Both
Is incoming material inventoried?	Yes No

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Is incoming material weighed, and is the scale calibrated?	Yes No
Is outgoing material inventoried?	Yes No
Is outgoing material weighed, and is the scale calibrated?	Yes No
Is there any evidence of electronics in any trash containers (includes open tops and inside the hopper of the compactor)?	Yes No
How is outbound material shipped (check all that apply)?	Gaylords Bales Lugger Boxes Trailers
Are there shipping containers designed for export on the premises?	Yes No

Comments or Notes:



Confidentiality Notice for On-Site Review of Electronics Recycling Facility

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This Confidentiality Notice has been developed for use by US EPA staff to inform electronics recyclers of their right to claim certain information as confidential, as well as to request the recycler's consent to share information from the on-site electronics recycling facility review with other federal agencies. Staff from other agencies should consult their own agency's procedures with respect to notification of confidentiality.

NOTICE TO ELECTRONICS RECYCLER

This review is being conducted as a pre-solicitation activity in order to ascertain whether the electronics recycling facility handles electronics in a clean, efficient, and environmentally sound manner. It is possible that EPA will receive public requests for release of the information obtained during the on-site review of the facility cited above. EPA will handle such requests in accordance with provisions of the Freedom of Information Act (FOIA), 5 USC 552; and EPA regulations issued there under, 40 CFR Part 2. EPA is required to make this information available in response to FOIA requests unless the EPA determines that the data is entitled to confidential treatment, or may be withheld from release under other exemptions of FOIA.

You may claim any or all of the information that is collected during this site visit as confidential if it relates to trade secrets, commercial, or financial matters that you consider to be confidential business information (CBI). If you assert a CBI claim, EPA will disclose the information only to the extent and by means of the procedures set forth in the regulations (cited above) governing EPA's treatment of CBI. Among other things, the regulations require that EPA notify you in advance of publicly disclosing any information claimed as CBI. If you do not submit a CBI claim, we may share the information with entities outside the EPA.

Please identify (in the space below or on an attached sheet) which information, if any, you would like to claim as CBI:

To be completed by electronics recycling facility official receiving this notice:

I acknowledge receipt of this notice.

I do do not give consent on behalf of this facility for EPA to share all of the information collected during this review, even that which is claimed as CBI, with other **federal agencies** for the exclusive purpose of the Federal Electronics Challenge. For more information on the Federal Electronics Challenge, please visit <http://www.epa.gov/fec/>.

Signature: _____ **Date Signed:**

Name: _____ **Title:**

Facility Name:

Address: