

Electronics Recycling in the Federal Community

FEC Partner Teleconference
September 8, 2011



Overview

- Federal requirements
- Property disposition requirements
- Finding and selecting a recycler
- Preparing equipment
- Recording and reporting
- Upcoming changes to federal recycling requirements
- Resources
- Case study
- Q&A

Federal Recycling Requirements

- Executive Order 13514
 - Federal agencies must ensure they are “employing environmentally sound practices with respect to the agency’s disposition of all agency excess or surplus electronic products”
- Federal agencies and facilities must reuse and recycle electronics to the maximum extent possible

Environmental Hierarchy

Reuse
AND/OR
Refurbishment

Recycling
Incineration /
Landfill

GSA Hierarchy

Reuse Internally

*Declared Excess
Report to GSA*

GSAXcess®

Donation
(Computers for Learning)

Transfer to other
Federal Agencies

Declared Surplus

Donation
(States and Non-Profits)

GSA Auctions®

Public Sales

Abandonment /
Destruction

Time Frame

7 days

14 days

5 days

Regulation

41 CFR 102-36

41 CFR 102-36.475

41 CFR 102-36

41 CFR 102-37

41 CFR 102-38

41 CFR 102-36

Property Disposition Requirements

- Must adhere to Federal Management Regulations for property disposal
 - Property must go through the GSA disposition process
 - Obsolete or broken property with no value may be labeled for abandonment and destruction without going through the complete GSA process
- After following the proper procedures, you can select any recycler you choose

Finding an Electronics Recycler

- Use an *Responsible Recycling (R2)* or *e-Stewards* certified electronics recycler
- Use manufacturer take-back services for electronics recycling
- Select and use another environmentally responsible electronics recycler

Finding a Certified Recycler

- R2 Certified

- <http://www.r2solutions.org/>
- Please follow along on the webinar or in your own browser

- e-Stewards Certified

- <http://e-stewards.org/>
- Please follow along on the webinar or in your own browser

- Ensure the specific location you are using is certified

Find a Manufacturer Take-Back Program

- Check with your vendor
 - Contact your sales representative
 - Check a manufacturer's website
- Confirm that the manufacturer is following environmentally responsible practices and utilizing responsible recyclers
 - Take-back of EPEAT registered equipment
- Remember requirements for exchange sales!

Finding Another Electronics Recycler

- GSA's Environmental Services Schedule (GSA 899-5), a multiple award schedule of electronic waste or hazardous material recycling contractors
 - GSA contractors are not evaluated for their environmental practices
- EPA's eCycling Web site includes links to donation, recycling and manufacturer take-back websites
 - <http://www.epa.gov/epawaste/consERVE/materials/ecycling/donate.htm#mftr>

Finding Another Electronics Recycler

- Check within your agency or with other federal facilities in your area
 - FEC Message Board, Partner Services Contact List
- Contact your local or state environmental or solid waste agency
 - Local collection programs or databases of vendors
- DoD facilities must use the Defense Reutilization and Marketing Service (DRMS)

Evaluating an Electronics Recycler

- If you opt to not use, or can not use, a certified recycler or appropriate take-back program, you must perform due diligence!
- Perform an on-site review or rely on an on-site review completed by another federal entity

FEC Tools for Due Diligence

- Checklist for Selection of Electronics Reuse and Recycling Services
 - <http://www.federalelectronicschallenge.net/resources/docs/select.pdf>
- Guidelines for On-Site Reviews of Electronics Recyclers
 - http://www.federalelectronicschallenge.net/resources/docs/onsite_review.pdf

Checklist for the Selection of Electronic Reuse and Recycling Services

- Checklist to help make a first cut when conducting a market survey of potential recyclers
 - Can be completed over the phone or via email
- Check boxes make for easy comparisons between companies
- Even if using a responsible recycler this can help you to decide what services to request when asking for cost estimates

Guidelines for On-Site Reviews of Electronics Recyclers

- Tool for documenting a detailed on-site visit
 - Provides questions and important considerations
 - Provides a worksheet to record answers and observations
- Review information can be shared among FEC Partners
 - Tool contains Confidentiality Notice and addresses use of Confidential Business Information (CBI)
- Required for FEC Award activities when using a recycler that is not certified

Preparing to Recycle

- Collect all peripherals and cables
- Complete media sanitization of internal and external media
- Remove property decals
- Remove external media (disks, CDs, DVDs, USB drives, paper)
- Properly package equipment to reduce breakage
- Complete necessary property disposal documentation
- Complete checklist at http://www.federalelectronicschallenge.net/resources/docs/prepare_recycle.pdf

Recording and Reporting

- Keep a record of either the number of units, or the weight of equipment, sent for reuse or recycling
 - Reuse generally recorded by unit
 - Recycling generally recorded by weight
- For FEC reporting
 - Required: Desktops, laptops, LCD and CRT monitors
 - Optional: Imaging equipment, TVs, mobile devices, servers

Recording and Reporting

- *Reused*: includes anything reused internally, donated through Computers for Learning, reused in the federal government, or donated to States or non-profits
- *Recycled*: includes anything sent to an electronics recycler or returned to an electronics vendor or manufacturer, even if it may be refurbished and reused
- *Landfilled/Incinerated*: includes anything sent to a landfill or waste-to-energy facility
- *Unknown (including sales)*: includes anything sold at auction, sold through other government sales, or otherwise has an unknown final disposition

Upcoming Changes

- National Strategy on Electronics Stewardship
 - Establish a comprehensive and transparent government-wide policy on used Federal electronics
 - Encourage electronics manufacturers to expand their product take-back programs
 - Require and enable recipients of former Federal equipment to follow environmentally sound practices
 - Improve tracking of used Federal electronics throughout the lifecycle

Y-12 Electronics Recycling Case Study

Jan Jackson
Y-12 Sustainability and Stewardship
Manager/
Y-12 Pollution Prevention Coordinator
September 2011



Y-12 NATIONAL SECURITY COMPLEX **PROTECTING AMERICA'S FUTURE**

B&WY-12
technical services
LLC

Y-12
National Security Complex

NNSA
National Nuclear Security Administration

Y-12's Missions

- Sustain the U.S. nuclear deterrent
- Support the U.S. nuclear nonproliferation agenda
- Fuel the nuclear Navy
- Solve national security challenges



Y-12 Electronics Case Study

- On-Site collection of electronic equipment for recycling
- Recycling vendor selection process
- Benefits of recycling

On-Site Collection of Electronic Equipment for Recycling

- Equipment owner determines if equipment can be upgraded or transferred to another user
- Owner enters an excess request via the Property Accountability Tracking System (PATs)
- Radiological Control automatically notified to conduct a survey of the equipment as necessary

On-Site Collection of Electronic Equipment for Recycling (Continued)

- Upon completion of survey, the excess coordinator is notified that the equipment is ready to be picked up
- Monitors and peripherals are transferred directly to Property Management
- CPUs are transferred to Computer Services for hard drive removal prior to transfer to Property Management

On-Site Collection of Electronic Equipment for Recycling (Continued)

- Property Management consolidates equipment for shipment to off-site recycler and completes Property disposition process
- Hard Drives are sent for recycling separately

Y-12 Initiatives Make DOE-wide Electronic Media Recycling Securely Sustainable

Electronic Media Collected at Y-12 Recycle Center



Furnace For Electronic Media



Shredded Electronic Media if Needed



Business Center for Precious Metals – Contract Utilized

<http://www.y12.doe.gov/mission>



Electronic Media Awaiting Destruction



Awaiting Shipment

Vendor Selection Process

- Utilize competitive bid process
- All recycling vendors must be evaluated and approved by Y-12 Environmental Compliance Organization prior to receiving any materials for recycle

Vendor Selection Process (Continued)

- Evaluation considers items such as:
 - Previous approvals/certifications
 - Operation & maintenance of facility
 - Environmental issues & impacts
 - Permits & licenses
 - Insurance
 - Compliance History

Benefits of EPEAT Purchases & Recycling

- Y-12 recycled more than 121,000 lbs. of electronics in Fiscal Year 2010
- Benefits for Fiscal Year 2010 were calculated utilizing the FEC electronics environmental benefits calculator:

Metric:		Equivalency:	
Energy Savings =	electricity to power	108	US household(s) in a year
Greenhouse Gas Reduction* =	removing	77	passenger car(s) from the road per year
Solid Waste Reduction =	solid waste generated by	23	US household(s) in a year
Primary Material Savings* =	the weight of	6,287	refrigerator(s)
HW Reduction =	the weight of	5,480	brick(s)
Toxic Material Reduction:			
	all toxics, including Hg =	the weight of	24 brick(s)
	mercury only =	the mercury in	8.90 mercury fever thermometer(s)
Air emissions* =		3,014	metric ton(s) of air emissions
Water emissions* =		10	metric ton(s) of water emissions
Cost savings =		\$122,499.83	

* These may be proportionally greater than other metrics as they include all material inputs, including those from upstream processes. These estimates do not account for impacts from product/material substitutions that might replace restricted materials.

Summary

- Supports Goals of Executive Order 13514
- Program enables the safe and secure recycling of electronic equipment
- Turn-key seamless program for generators
- Integrated with Property Management process
- Continuous improvement activities

DISCLAIMER

This work of authorship and those incorporated herein were prepared by Contractor as accounts of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor Contractor, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, use made, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency or Contractor thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency or Contractor thereof.

COPYRIGHT NOTICE

This document has been authored by a contractor/subcontractor of the U.S. Government under contract DE-AC05-00OR-22800. Accordingly, the U.S. Government retains a paid-up, nonexclusive, irrevocable, worldwide license to publish or reproduce the published form of this contribution, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, or allow others to do so, for U. S. Government purposes.

Resources

- ◎ FEC (End-of-life)

- <http://www.federalelectronicschallenge.net/resources/eolmngt.htm>

- ◎ GSA (Personal Property Disposal)

- <http://www.gsa.gov/portal/content/105049>

- ◎ EPA eCycling

- <http://www.epa.gov/epawaste/conserves/materials/ecycling/index.htm>

Contact Us

- FEC Champions

- <http://www.federalelectronicschallenge.net/champions.asp>

- Partner E-mail

- partner@electronicschallenge.net

- Cate Berard

- berard.cate@epa.gov
- 202-564-8847