

# Responsible Recycling Practices (R2)

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# What does R2 Bring to the Table?

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- Standard so you can evaluate a vendor
- These aren't legal requirements
- They don't replace vendor legal obligations

# What are the R2 Practices

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- Stakeholder effort to develop one set of practices
- The R2 Standards are based mostly on environmental, worker safety and public health practices
- Includes 13 general principles and specific practices

# What does R2 Cover

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- E-Waste” computers, peripherals, printers, faxes, cell phones and crts
- Focus Materials:
  - Cathode Ray Tubes
  - Circuit Boards
  - Batteries
  - Items containing mercury or PCBs

# R2 Recommends

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- Environmental, Health and Safety Management Plan
  - Written Goals
  - Plan – Do – Check – Act Model

# End of Life Policy

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- What is the vendor's business plan for end of life of your electronics?
  - Reuse?
  - Recovery?
  - Energy Recovery or Disposal?

# Legal Requirements

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- Has the recycler identified focus materials, those with potential hazards, in the EHS Plan?
- What is their and your export policy?
- If they export is their documentation that a non-OECD country legally accepts such shipments?

# The United Nations University's Solving the E-Waste Problem (StEP)

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## ■ Arizona University Study

- 85% of computers imported into Peru went to reuse
- 80% of PCs sent to Ghana, Nigeria and Pakistan for re-use were trashed.

## ■ Study Recommendation

Globally standardized policies and practice in the management of E-Scrap.



# On-Site Environment, Health and Safety

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- Worker Safety
- Good Housekeeping Standards
- Structural Conditions
- Administrative Controls

# Focus Materials

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- Identification
- Management Plan

# Reuse

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- Testing Procedures
- Down Stream Vendors

# Tracking

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- Records
- Retention Time

# Data Destruction

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- NIST Guidelines – Special Publication 800-88
- Document
- Employee Training
- Review by Third Party

# Storage

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- Security
- Environmental Concerns

# Facility Security

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Appropriate for the equipment they handle and  
customers they serve

# Financial Responsibility

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- Adequate Insurance
  
  
  
  
  
  
  
  
  
  
- Written plan and sufficient financial assurance to assure proper closure.



# Transport

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- Are there written packing and shipping guidelines?
- If the recycler provides the transportation, check the regulatory authorizations for the states they transverse.

# Record Keeping

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- R2 electronics recycler shall maintain, in a single location the documentation to assess its conformity of the R2 requirements.

# Monitors - The CRT Rule

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- Intended to encourage recycling
- Rule is a conditional exclusion: if the rule is complied with, CRTs can be handled as non-waste
- Non Compliance may constitute a RCRA violation

# Processed Glass

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Not Regulated if destined for CRT glass manufacturer or lead smelter

No Speculative Accumulation

No notification needed for export

# Export Requirements

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- Export for recycling/de-manufacturing
  
- Export for Reuse/Refurbishment

# CRT Rule Contact

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# Accreditation for Responsible Recycling Certification Program

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- As of July 27, 2009, The ANSI-ASQ National Accreditation Board is offering accreditation for companies certifying recyclers of electronic equipment under R2 .

# Link to Your Copy of R2

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[http://www.epa.gov/osw/conserves/materials/  
recycling/r2practices.htm](http://www.epa.gov/osw/conserves/materials/ recycling/r2practices.htm)