

Export of Used & Scrap Electronics

What you need to know

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CONTENT OF PRESENTATION

- EXPORT MARKETS
- RECAP OF U.S. EXPORT RULES
- OECD CONTROL SYSTEM
- BASEL CONVENTION
- EPA PLUG-IN GUIDELINES & EXPORTS
- “R2” CERTIFICATION & EXPORTS

CONTEXT

REUSE & RECYCLING MARKETS

- **MOST REUSE MARKETS ARE EXPORT**
 - **LARGE FOR-PROFIT & NON-PROFIT MARKETS IN DEVELOPING COUNTRIES**
- **MANY RECYCLING MARKETS ARE EXPORT**
 - **STRONG FOREIGN DEMAND FOR RAW MATERIALS**
 - **NO U.S. SMELTERS FOR COPPER & PRECIOUS METAL RECOVERY FROM CIRCUIT BOARDS**
 - **NO CRT GLASS FURNACES IN U.S.**
 - **PLASTIC RECYCLING MARKETS ALMOST ALL OVERSEAS**

RECYCLING MARKETS

CIRCUIT BOARDS

- **ONLY 5 COPPER/PRECIOUS METAL SMELTERS IN THE WORLD PROPERLY EQUIPPED TO MINIMIZE DIOXINS**
 - **ALL OECD COUNTRIES**
 - **CANADA**
 - **BELGIUM**
 - **SWEDEN**
 - **GERMANY**
 - **JAPAN**

RECYCLING MARKETS

CRT GLASS CULLET

■ NO N.A. CRT GLASS-MAKING FURNACES

– LESS THAN 20 WORLDWIDE

■ ASIA (approx 15)

**– S. KOREA, MALAYSIA, INDIA, THAILAND, SINGAPORE,
CHINA**

■ POLAND (1)

**– NUMBER OF FURNACES CONTINUES TO SHRINK
RAPIDLY**

**– DEMAND REMAINS STRONG FOR CRT GLASS
CULLET – HOWEVER, GOVERNMENTS
RESTRICTING IMPORT**

RECYCLING MARKETS

- **AS COLLECTION IN THE U.S. INCREASES, EXPORTS WILL INCREASE**
 - **USED, INTACT EQUIPMENT FOR REUSE**
 - **USED PARTS FOR REUSE**
 - **USED EQUIPMENT FOR REFURBISHMENT**
 - **INTACT EQUIPMENT FOR DISMANTLING**
 - **PARTIALLY PROCESSED MATERIALS FOR FURTHER PROCESSING**
 - **FULLY PROCESSED MATERIALS FOR USE AS RAW MATERIALS IN MANUFACTURING**

U.S. EXPORT RULES

■ EPA has export rules for:

- Hazardous waste – Generally, not e-waste
- Federal (not state-only) universal wastes
 - Hazardous waste batteries, lamps, and mercury devices
 - Notification and consent system
- CRTs and CRT glass – As of 1/29/07 exporters must:
 - Provide one-time notification if export for reuse
 - Provide notification and receive consent if export for recycling
 - No notification if export of processed glass

INTERNATIONAL RULES

OECD IMPORT/EXPORT CONTROLS

■ 30 OECD COUNTRIES – MOSTLY DEVELOPED

– NA, WESTERN & NORTHERN EUROPE, AUSTRALIA, JAPAN, S KOREA

– OECD CONTROL SYSTEM

■ Covers recovery (recycling) only & facilitates trade

■ Notice & consent system, but more streamlined than Basel

■ Allows for tacit consent & pre-approved facilities

■ Some difference in lists of hazardous wastes from Basel – more risk-based

■ OECD system is sub-agreement under Basel

– TO DATE, ONLY CRTs HAVE MOVED AS HAZARDOUS WASTE UNDER OECD CONTROLS. OTHER MATERIALS, INCL CIRCUIT BOARDS, CONTINUE TO MOVE AS COMMODITIES

OECD ESM PROGRAM

- **COVERS WIDE ARRAY OF WASTES & SCRAP**
- **NOT MANDATORY, BUT COUNTRIES REPORT ON PROGRESS**
- **ENCOURAGES USE OF THIRD-PARTY CERTIFICATION**
- **TWO TYPES OF GUIDELINES:**
 - **“CORE ELEMENTS” FOR FACILITIES**
 - **WASTESTREAM-SPECIFIC GUIDELINES**
 - **REUSE/RECYCLING OF PERSONAL COMPUTERS**

OECD CORE ELEMENTS

■ FACILITIES SHOULD:

- BE PROPERLY AUTHORIZED/LICENSED

- HAVE AN EMS SYSTEM IN PLACE

 - MEASUREABLE OBJECTIVES/TARGETS

 - REGULAR REVIEW OF PROGRESS

 - COLLECTION & REVIEW OF EH&S DATA

 - REGULAR AUDIT/INSPECTION PROGRAM

 - PERIODIC FACILITY REPORT ON
PROGRESS

 - SIMPLIFIED PROCEDURES FOR SMALL
FIRMS

OECD CORE ELEMENTS

■ FACILITIES SHOULD:

- SUFFICIENTLY PROTECT WORKERS & THE ENVIRONMENT
- HAVE ADEQUATE MONITORING, RECORDKEEPING, REPORTING
 - COMPLIANCE WITH SAFETY REQUIREMENTS
 - EFFLUENTS AND EMISSIONS
 - INCOMING, STORED & OUTGOING WASTE & MATERIALS
- HAVE AN ADEQUATE TRAINING PROGRAM
- HAVE AN ADEQUATE & UP-TO-DATE EMERGENCY PLAN
- HAVE A CLOSURE/POST-CLOSURE PLAN
 - ADEQUATE FINANCIAL GUARANTEE, IF REQUIRED

INTERNATIONAL RULES BASEL CONVENTION

- **U.S. IS NOT A PARTY TO THE CONVENTION, WHEREAS 170 COUNTRIES ARE PARTIES**
- **BASEL CONTROL SYSTEM INTENDED TO PREVENT DUMPING OF HAZARDOUS WASTE IN DEVELOPING COUNTRIES**
- **BASEL CONTROL SYSTEM**
 - **REQUIRES WRITTEN NOTIFICATION & CONSENT OF COUNTRIES OF EXPORT, IMPORT & TRANSIT**
 - **BASED ON PRESENCE OF TOXICS - NOT RISK**
- **NON-OECD COUNTRIES CANNOT LEGALLY ACCEPT HAZARDOUS WASTES FROM U.S. w/o BILATERAL**
 - **U.S. HAS NO SUCH EXPORT BILATERALS**

BASEL CONVENTION

- **BASEL DEFINITION OF “HAZARDOUS WASTE” DIFFERS SIGNIFICANTLY FROM U.S. RULES**
- **THUS, KNOWLEDGE OF THE RULES OF IMPORTING & TRANSIT COUNTRIES IS IMPORTANT – THESE RULES VARY AMONG COUNTRIES**
- **BASEL APPLICABILITY IS SOMETIMES UNCLEAR FOR ELECTRONICS**
 - **PARTNERSHIPS MAY CLARIFY**
 - **SHIPMENTS FOR REPAIR/REFURBISHMENT IS ESPECIALLY UNCLEAR**

BASEL CONVENTION: U.S. ROLE

- **ALTHOUGH THE U.S. IS NOT A PARTY, WE ACTIVELY PARTICIPATE:**
 - TECHNICAL WORK
 - FINANCIAL CONTRIBUTIONS
- **EVERY U.S. ADMINISTRATION HAS BEEN IN FAVOR OF RATIFICATION**
- **TWO ISSUES HELD UP RATIFICATION:**
 - SCOPE OF CONVENTION
 - BAN ON TRADE OECD TO NON-OECD

BASEL CONVENTION IMPLICATIONS OF U.S. RATIFICATION

- **IF THE U.S. BECOMES A PARTY, BASEL DEFINITIONS WILL OVERRIDE RCRA EXEMPTIONS/EXCLUSIONS FOR EXPORTS**
 - **U.S. WOULD IMPLEMENT BASEL DEFINITIONS OF HAZARDOUS WASTE FOR EXPORTS**
- **IF EXPORTED WASTE IS COVERED BY BASEL, THEN EPA DETERMINATIONS OF ESM WOULD BE NECESSARY FOR EXPORT TO NON-OECD COUNTRIES**

BASEL CONVENTION INDUSTRY PARTNERSHIPS

- **CURRENTLY A LOT OF FOCUS ON ELECTRONICS,
USING INDUSTRY PARTNERSHIPS**
- **MOBILE PHONE PARTNERSHIP**
 - **GUIDELINES COMPLETED ON:**
 - **DESIGN, COLLECTION, REFURBISHMENT, RECYCLING**
 - **DUE DILIGENCE & EMS's ESSENTIAL**
 - **DISAGREEMENT REMAINS ON IMPORT/EXPORT**
 - **REPAIR/REFURBISHMENT IS BIG ISSUE**
- **PLANNING ONGOING FOR COMPUTER
PARTNERSHIP**

BASEL INDUSTRY PARTNERSHIPS

■ “CHAIRMAN’S ISSUE PAPER”

- Discusses problems with classification of mobile phones (& other electronics) as Basel “hazardous waste”**
 - Addresses repair/refurbishment & recycling**
 - Includes alternative legal mechanisms for parties to consider**
- Intent is to get Basel parties to holistically look at need for practical approaches to TBM for all electronics**
- U.S. government strongly supports**

EPA PLUG-IN GUIDELINES

- **ISSUED IN 2004: GUIDELINES FOR MANAGEMENT OF USED & SCRAP ELECTRONICS**
- **BASED ON EFFORTS UNDER OECD, NEPSI, FEC & OTHERS**
- **EMPHASIZES DUE DILIGENCE**
- **ADDRESSES EXPORT**

PLUG-IN GUIDELINES REUSE & REFURBISHMENT

- **3 CRITERIA – Applies also to internet sales**
 - SHIPMENT MEETS REUSE OR REFURBISHMENT SPECIFICATIONS
 - EQUIPMENT IS PACKAGED TO PROTECT VALUE FOR REUSE OR REFURBISHMENT
 - PROPER BUSINESS RECORDS KEPT OF TRANSACTION, INCL PRICE PAID
- **REUSE/REFURB DOES NOT INCLUDE MIXED LOADS – RECYCLING GUIDELINES APPLY**

PLUG-IN GUIDELINES

RECYCLING FACILITIES

- **APPROPRIATELY LICENSED**
- **HAVE AN EMS OR WRITTEN PLAN FOR RISK MANAGEMENT WITH REGULAR REEVALUATION**
- **MONITORING AND RECORDKEEPING**
- **CLOSURE PLAN, & IF NECESSARY, FINANCIAL GUARANTEE**

PLUG-IN GUIDELINES

RECYCLING FACILITIES

- **WORKER & ENVIRONMENTAL PROTECTIONS:**
 - **EH&S TRAINING OF PERSONNEL**
 - **WRITTEN HAZARDOUS MATERIALS PLAN THAT ADDRESSES SPECIFIC SUBSTANCES**
 - **SPECIAL CONSIDERATIONS WHERE SHREDDING OR HEATING USED**
 - **WRITTEN PLAN FOR POLLUTANT RELEASES & EMERGENCIES**
 - **LIABILITY INSURANCE**
 - **COMPLETION OF EH&S AUDIT, EVERY 1-3 YEARS**

PLUG-IN GUIDELINES EXPORT FOR RECYCLING

- **REMOVE “DESIGNATED MATERIALS,”
PRIOR TO EXPORT, UNLESS TO OECD
COUNTRY (i.e., domestic or OECD
processing)**
 - **BATTERIES**
 - **MERCURY- & PCB-CONTAINING
COMPONENTS**
 - **CIRCUIT BOARDS, EXCEPT HANDHELD
EQUIPMENT**
 - **CRTs & CRT GLASS & PROCESS PRIOR TO
EXPORT**

PLUG-IN GUIDELINES

REQUIREMENTS OF OTHER COUNTRIES

- **COMPLY WITH ALL REQUIREMENTS OF IMPORTING & TRANSIT COUNTRIES**
- **UNDER BASEL, NON-OECD COUNTRIES CANNOT LEGALLY ACCEPT HAZARDOUS WASTES w/o BILATERAL WITH U.S.**

PLUG-IN GUIDELINES

DUE DILIGENCE

- **DUE DILIGENCE IS A BASIC TENET:**
 - What do downstream customers do and are facilities & practices consistent with guidelines?
- **REUSE/REFURBISHMENT:**
 - Due diligence necessary to assure that reuse/refurb transactions are legitimate - incl internet sales - **KEEP RECORDS TO DEMONSTRATE**
- **RECYCLING:**
 - Objective is to assure consistency with guidelines
 - Due diligence necessary only for “designated materials”
 - Batteries, mercury devices. circuit boards & CRTs/glass

RECYCLER CERTIFICATION

- **INCREASING INTEREST IN RECYCLER CERTIFICATION**
 - MANY STAKEHOLDERS INTERESTED
- **INDUSTRY GROUPS (ISRI & IAER) HAVE OR ARE DEVELOPING PROGRAMS**
- **EPA DOES NOT & WILL NOT “CERTIFY” OR “APPROVE” RECYCLERS**
- **HOWEVER, EPA BELIEVES SUCH PROGRAMS ARE VALUABLE & ALTERNATIVES TO REGULATION**

CERTIFICATION TO “RESPONSIBLE RECYCLER” (R2) PRACTICES

- **EPA SPONSORING MULTISTAKEHOLDER EFFORT FOR DEVELOPMENT OF “R2” PRACTICES**
 - INVOLVES EPA, OSHA, STATES, MANUFACTURERS, RECYCLERS, ENVIRONMENTAL INTEREST GROUPS
- **RECYCLERS WILL VOLUNTEER TO BE CERTIFIED AS TO CONFORMANCE WITH THE R2 PRACTICES**
- **NATURE OF CERTIFYING ORGANIZATIONS STILL UNCLEAR**
- **PROGRESS CURRENTLY BEING MADE, HOWEVER, OUTCOME UNCLEAR; HOPE TO COMPLETE BY SUMMER 2008**

DRAFT “R2” EXPORT PROVISIONS for RECYCLER CERTIFICATION

- 1. Recycler must obtain documentation, in English, from importing and transit countries of legality of import of “materials of concern” by the foreign facility.**
 - Recycler can request EPA to help obtain that documentation.**
 - EPA would post results of contact with foreign governments on a public website.**
 - Website would include lists of foreign facilities that are authorized (and those unauthorized) by their governments to import specific types of “e-waste.”**

DRAFT “R2” EXPORT PROVISIONS for RECYCLER CERTIFICATION

2. If the country is:
 - (a) A non-OECD Basel country; and
 - (b) It considers the material/waste to be hazardous waste; then
 - (c) A bilateral agreement with the U.S. is needed.

3. Recycler must have documentation showing that facility operates in compliance with EH&S laws of host country.