



NEMI Product Take-Back Workshop

Discussion Topics & Actions

Hosted by StorageTek
October 10-11, 2002



Group Discussion Topics

Agenda

- **Take-back and Recycling**
- **Information Management Systems**
- **Quality Systems**
- **Design for Environment**

Time permitting

- **Best Practices of Early Adopters**
- **Alternate Business Models**



Take-back and Recycling

- **Does your company have a product stewardship (life cycle management) program?**
- **What are the roles and responsibilities for customers, OEM's, EMS providers, their suppliers, and the recycling companies?**
- **How is this end-of-life supply chain best managed?**



Information Systems

- **How do you determine/keep track of what materials are actually in your product (right down to the materials used in component manufacturing by your suppliers)?**
 - Substances of Concern
- **What is the optimum way to create the necessary databases across the supply chain?**
- **How can this information be shared across the corporation, including sales and service groups?**



Quality Systems

Electronic Data Interchange (EDI) Challenges

- **How do we transfer electronic data to EMS providers, OEM partners and waste handlers?**
 - RosettaNet
 - IPC Standards
- **What are the needed standards/best practices to achieve compliance in this area?**
 - ISO 14001



Design for the Environment (DfE)

- **What are the key factors that need to be considered?**
 - Design for disassembly
 - Design for reuse and recycling
 - Use of fewer parts
 - Use of fewer plastics
 - Use of recycled materials
 - Removal of hazardous materials
 - Increased energy efficiency
 - Waste minimization
- **How important are tools to perform DfE consistently and effectively?**
- **What additional training is needed for engineers to be successful in implementing DfE?**



AeA Update

**Latest News from Europe
As of Friday, Oct. 11th**



AeA Europe RoHS & WEEE Update

- **Conciliation Committee reached a decision on WEEE and RoHS Directive last night at 2:30 AM**
- **Next Steps: The Parliament and Council now have until December 6 to each adopt the texts (or they fall, which is unlikely)**
- **Preliminary Details from AeA Europe:**
 - **Member States to collect 4 kg of household waste by 2006**
 - **A visible fee is only allowed to pay for the cost of historic waste**
 - **Individual producer responsibility for financing for future waste was agreed**
 - **“Flip chip/clever chip” provision included in the WEEE recital – industry’s initial read is the text is “meaningless”**
 - **RoHS single implementation date of July 1, 2006**



Output of Group Discussion

Will be included in minutes



Opportunities

- **Investigate and develop the establishment of an industry-wide electronic data exchange management system for gathering and/or exchanging information about substances of concern.**
 - Could be secure, web-based tool
 - Should be sure to protect intellectual property
 - Could be a standards element (data organization/format)
- **Suggest companies subscribe to a Regulatory Tracking on a Global Basis (e.g. EIA Tracking tool).**
- **Draft White Paper on Conflict between OECD Trans-boundary Waste and WEEE.**
- **Educate companies about Best Practices for DfE**
 - Design for disassembly
 - Design for reuse
 - Conferences, forums, journals
- **Consider leasing as a strategy for re-use.**



Opportunities (continued)

- **Get to know your supply chain and educate your suppliers.**
- **There is a business opportunity for EMS providers to provide end-to-end solutions (design through end-of-life) – timing based on volume need.**
- **OEMs are interested in outsourcing recycling (although some may keep it in house).**
- **Consider support for the EIA Materials Declaration List**
 - Note: Ensure the EIA list contains the treatment obligations of WEEE
- **Develop and get agreement (through AeA and/or EICTA) to get web-based information about WEEE requirements standardized and provided to the recyclers, treatment facilities, and Member States.**
- **Can NEMI/IPC help change U.S. infrastructure to meet RoHS Directive requirements?**
- **Should NEMI members develop a testing standard for RoHS?**
 - Alternative to data tracking?
 - Supplier certification.
 - Audit function to data tracking.



Opportunities (continued)

- **Establish a standardized quality system for recyclers.**
- **Promote competition in the recycling industry for household waste**
 - Concern that collective financing for historic and orphan household waste could impact cost for recycling of new household waste
- **Companies can consider subscribing to the AeA Europe Environmental Bulletin for Member State legislation updates that will implement WEEE.**
- **Develop white paper on definition of waste that will encourage more re-use.**



Issues

- **How to “certify” a product as “lead free”?**
- **What is definition of product?**
 - Impact to WEEE (what’s covered, what’s not covered)
 - Impact to RoHS (establishing denominator for % HS calculations)
- **Upgrading equipment may lead to components in the waste stream, which could place component manufacturers under the scope of the WEEE Directive.**
- **Define waste (i.e. items that can be reused vs. when it enters waste stream).**
 - Impacts targets that are reported
- **Visible Fee – still being debated by industry in Europe (also not legal in certain Member States)**
- **Intellectual Property, particularly with respect to data exchange and data requirements – liabilities.**



Recommendations

- **Each company should develop an environmental product stewardship statement/mission**
 - Educate suppliers
 - Engage top-level support
 - Include in marketing
 - Educate employees
- **Figure out where your products are installed / located.**
- **Figure out what's in your products**
 - Including through your supply chain/components
 - Prioritize by treatment obligations and substances of concern (See EIA list)
 - Benefit: identify potential resources (business opportunity)
- **Each company to determine strategy for recovering recycling cost.**



Questions

- **How will recycling information get reported from recyclers to the Member States?**
 - Not yet determined. Will be elaborated in MS legislation
- **How can equipment manufacturers get suppliers to notify them when they make changes to what's in their components?**



Information Points

- **EMS 14001 seems to be geared for manufacturing – not involved with design (yet).**
- **Not all companies report environmental performance.**
- **LCA info. is useful in the area of energy consumption.**
- **Member states must collect 4 Kg per person per year for house hold WEEE.**
- **Have labs available so suppliers can certify to material spec's.**
- **0.1% lead is requirement for EOL vehicles (by weight).**
- **RoHS requirements can be specified in purchase specifications/purchase orders.**
- **Knowledge of product content can entice recyclers to capture value.**



Schedule (to be verified)

March '03 - Entry into force.

March '05 - Labeling must begin (new products).

Sept. '05 – All systems “go” for recovery/recycling.

Jan. or July '06 – M/S report on 4 Kg collect target.

July '06 – RoHS enforced for covered new products.

'10 – Storage exemption lapses.

'13 – Historical waste requirements lapse.



Actions

- **Jim McElroy – Start process of developing NEMI project on Data Exchange Systems for RoHS/Annex II data.**
- **Jim McElroy – Contact EIA to discuss pricing structure of EIA Tracking Tool.**
- **Jennifer Guhl, Jennifer Shepherd, Richard Kubin, Jim McElroy – Develop White Paper on OECD Trans-boundary Waste and WEEE.**
- **Bob Pfahl – Send list of DFE references to Rick & Jim for distribution.**
- **Discovery phase for best practices for DFE**
 - Identify leaders, state of art practices, workshops/short courses
 - Tie into EEE legislation (AeA)
- **Educational Forum on RoHS and reporting (inc. Annex II)**
 - Focus on supply chain readiness
- **Jim McElroy – Check to see if there is any market data on size of recycling business in Europe (e.g. ICER).**



Actions

- **NEMI TC – Show visible support for EIA M't'l. Declaration list as standard.**
- **Jennifer Shepherd – Work with AeA to look at standard reporting for recyclers, treatment facilities and member states.**
- **Bob Pfahl – Consider if Moto. Would share test methods for determining HS in RoHS (for use as industry standard).**
- **All participants – Ask the question: should industry develop a standardized system for recyclers?**
- **Jennifer Guhl, Amey Redfern, Jim Dills – Develop white paper on definition of waste to encourage reuse.**
- **Jennifer Guhl – Working on definitions of lead free and what constitutes a product.**
- **Jim McElroy – Publish list of statements by leading companies re: environmental policy/product stewardship programs.**



Future Actions

- **Consider mechanisms for ongoing sharing of company plans:**
 - Approaches to be taken (I.e. business models)
 - Sharing of best practices
 - NEMI role in data sharing
- **Determine timing/venue for follow on meeting:**
 - Use AeA as vehicle to determine optimum timing (based on member state progress).
 - Consider alternate mediums
 - » Web based
 - » Video conference
 - » Alignment with other industry events (IPC, IEEE, etc.)