



StorageTek's RoHS/WEEE Projects

(October 19th, 2004)

Agenda

- **Steps**
- **RoHS Assessments**
- **RoHS Assessment Compliance Issues**
- **RoHS Tracking System**
- **Materials Declaration Requests**
- **Questions**

Steps

- **Established a leadership structure** - Executive Steering Committee and a Working Committee
- **Formed various project teams** - address the many aspects of the directives
- **Identified products** that must become compliant with the RoHS directive (older declining demand products will become end-of-life before the RoHS deadline; newer products will be re-developed in order to achieve compliance)
- **Revised numerous specifications** to communicate the changing material restrictions to our design engineers and our suppliers (long-term activity)
- **Performed an RoHS assessment** of those products expected to live beyond July 1, 2006 (identified compliance issues and developed plans to achieve compliance)
- **Developed a system** to manage the required information that will be obtained from our suppliers as evidence of compliance with the RoHS directive (materials declarations, materials analysis testing and a process to manage compliance)

Steps (continued)

- **Began requesting materials declarations** from our suppliers in September 2004 (only newer products)
- **Product re-development** begins in early 2005 to reduce restricted substances (StorageTek's newer products are expected to become compliant by the end of 2005)
- **Future products** will be developed as compliant products (requirement in Product Contract)
- **Performed environmental regulatory assessment of and are contracting the services of a professional waste management provider in Europe** (the waste management service provider will process our customer's waste and supply the recovery and recycling data required by the WEEE directive)
- **Developing reporting capabilities** required to identify new products shipping into Europe and waste entering Europe's waste stream
- **Will apply the required WEEE label(s)** to our products before August 13, 2005

Compliance Issues (RoHS Assessment)

- **Threaded Fasteners** – Hexavalent chromium found in the plating
- **Motors & Encoders** – Lead
- **Fans, Circuit Breakers & Displays** – Lead
- **Relays** – Cadmium found on contacts
- **Flex Circuits** – Lead found on contact surfaces, solder, and some components (AeA question: Is a flex circuit a circuit card and covered by the exemption?)
- **Cables & Connectors** – Lead was found in a significant number of wires/cables and connectors (suppliers are transitioning to lead-free)
- **Power Supplies** – Lead found in the circuit cards (exemption applies), connectors, wire, various components & sheet steel
- **Circuit Cards** – Lead (use lead solder exemption and closely follow the industry's transition to lead-free components and attachment processes)

RoHS Tracking System (summary)

- **System was added into production August 23rd**
- **Short-term, limited functionality solution that will manage the necessary data (estimated 3 to 5 years)**
 - Risk: Must quickly migrate if we are required to measure restricted substances
- **Features:**
 - Inexpensive (80 hours of report development)
 - Links Materials Declarations from a supplier to the Material Master and to an individual supplier (multiple suppliers for an item requires multiple Materials Declarations)
 - Review BOM at the CCD level (all options, features, and external cables)
 - Identifies exceptions (new components, new suppliers, non-compliant components)

Questions?

RoHS	StorageTek
Resource requirements (people)	1 FT, 15 PT
Program owner (organization)	Sourcing
Compliance target date	End of 2005
Older spares (products on the market)	Non-compliant, exempt
Older products	EOL, "Put on the market"
Newer released products	Re-develop (Sourcing)
Lead-solder exemption	Yes but "close follower" to industry
Joint Industry Guide (list of substances)	No (just the 6 RoHS substances)
Data collection (measure or yes/no)	Yes/No to compliance (ea. substance)
Data collection system ready	Yes (low \$, home-grown)
Materials analysis testing	Limited number (based on process)
WEEE	StorageTek
Resource requirements (people)	4 PT
Program owner (organization)	Sourcing
Compliance target date	Before 8/13/05
Waste management method	Manage trans., outsource recycling
Pay shipping for customers' waste	Yes
Charge fee for waste management	Undecided
Data reporting system ready	No, data currently resides in system

