Plenary Session: Universal Waste
Supreme Asset Management and Recovery, Inc, Lakewood NJ
Large Class D Recycling Center for Universal Wastes (may receive up to 87.23 tpd of universal wastes)

Approved to receive, store, process, or transfer:
- whole cathode ray tubes (CRTs)
- consumer electronics, including but not limited to computers, circuit boards, printers, copiers, facsimiles/faxes, VCRs, stereos, televisions and telecommunication devices.

Approved to receive, store, transfer, but not process:
- Mercury-containing devices
- fluorescent lamps
- Batteries
- non-PCB lighting ballasts
- TSCA-exempt lighting ballasts (contain less than 50 parts-per-million PolyChlorinated Biphenyls or PCBs)
- Non-leaking TSCA-regulated Small Capacitor lighting ballasts that contain 50 parts-per-million or greater PCBs.
Supreme Asset Management and Recovery, Inc, Lakewood NJ
Law Agencies Raid Electronics Recycler

Agents in S.U.V.'s converged on Supreme Asset Management & Recovery's facilities in New Jersey

by Ben Zion and Brian Crow

Just as BusinessWeek was going to press with an in-depth "Examination of the electronic-waste recycling industry" (BusinessWeek, 10/13/03) focused heavily on Supreme Asset Management & Recovery, multiple law-enforcement agencies raided the Lakewood (N.J.) headquarters of the company, a leader in the field.

Dozens of agents in dark S.U.V.'s converged on the company's facilities in central New Jersey on the afternoon of Oct. 16.

Supreme is one of the biggest electronics recyclers in the country, processing 100 million pounds of discarded computer monitors, TV's, cell phones, and other tech gadgets each year. The company is paid to handle the electronic waste of large corporations, such as JVC and Toecom Technologies, as well as municipalities, such as Westchester County, N.Y., and Baltimore County, Md.

MERCURY LEVELS

BusinessWeek's article focused primarily on Supreme's role in the lucrative trade of sending e-waste overseas, where it is being improperly treated, especially in Asia. The article also noted that employees in Nigeria have raised concerns about mercury levels and worker safety at a Supreme affiliate in that state.

On Oct. 15, agents from the U.S. Environmental Protection Agency and the New Jersey state police arrived unannounced at Supreme. The EPA declined to comment, saying the investigation is ongoing. It deferred questions to the U.S. Attorney's Office in Newark, which had no immediate comment.

Supreme says it is not worried by the probe. "We're used to the EPA and D.O.J. dropping in like this," said Fran Kirschner, a spokeswoman for Supreme. "We're following all of the laws and regulations. When the EPA files its report, everything will be fine. We're not worried about it."

Crow is a correspondent in BusinessWeek's Silicon Valley bureau. Zion is a correspondent in BusinessWeek's Atlanta bureau.
Fluorescent Lamp Recycling

February 2009

EPA530-R-09-001
Summary of EPA’s Study of Drum-Top Crushers (DTCs)

- Conducted in August of 2006.
- All the devices released enough mercury to exceed federal OSHA permissible exposure limit (PEL) at least once during the test. One device consistently exceeded the PEL.
- All DTCs caused exceedances of EPA’s chronic inhalation reference concentration (RfC) for mercury.
- Even spent low-mercury lamps can cause mercury exposures of concern in poorly controlled DTC’s.
Other Studies on Mercury Lamp Treatment and Handling

- In a 2003 study, the Minnesota Department of Health determined, “During operation of the DTC, mercury vapor concentrations in the breathing air approached MN OSHA (eight-hour) limits. The measured concentrations were about 25 times greater than an acute health-based criterion for the general public.” The Minnesota Department of Health and the Minnesota Pollution Control Agency determined that “the use and proliferation of drum-top bulb crushers in Minnesota could affect the health of individuals incidentally exposed to bulb crusher exhaust.”

- Also in 2003, Aucott, et al., conducted a study to determine the amount of mercury released into the air when mercury lamps are broken without any controls. They found that “between 17 and 40% of the mercury in broken low-mercury fluorescent bulbs is released to the air during a two-week period immediately following breakage.” Additionally, higher temperatures were found to contribute to higher release rates.
In 2006, Lucas and Emery published a study assessing occupational exposures during the on-site processing of spent lamps. The authors evaluated mercury exposures encountered by workers using a commercially available DTC. Lamps were crushed in outdoor and enclosed work environments, and the impacts of processing tubular fluorescent lamps from a variety of manufacturers were evaluated for each type of work setting.

The findings were similar to those in EPA’s DTC Study. The mercury vapor concentration reached the federal OSHA PEL (100 μg/m3) during both sampling events in the enclosed environment. In addition, one method of measuring mercury vapor concentration suggested that the operator’s personal exposure exceeded the OSHA PEL during the two outdoor studies.

It is interesting to note the high emissions in all tests, even though half of the lamps crushed were lamps that were marketed as “low mercury” lamps.

The authors concluded that many phases of lamp handling pose an occupational hazard and employers should consider all phases of the lamp management process, particularly lamp handling and equipment changeout. The authors also recommended periodic monitoring and sampling to ensure that exposure limits are not exceeded.
Websites

New: Web sites referenced in this document provide additional information that is relevant to fluorescent lamp recycling and may be useful or interesting. However, EPA cannot attest to the accuracy of information provided by non-EPA Web sites. Providing links to non-EPA Web site does not constitute an endorsement by EPA or any of its employees of the sponsors of the site or the information or products presented on the site.

Information on Spent Mercury-Containing Lamp Recycling
www.epa.gov/bulbrecycling
www.nwrecycle.org
www.shine.org

Energy Star Website on Compact Fluorescent Lamps (CFLs)
www.energystar.gov/cfl

EPA’s Web Sites on Mercury and Mercury Containing Products
www.epa.gov/mercury
www.epa.gov/eers/public/money/mercury.htm

Broken Lamp/Clean-up Procedures
www.epa.gov/mercury/public/index.htm#fluorescent

Mercury Lamp Drum Top Crusher Study
www.nrel.gov/csw/based/madebyprofit/waste/default.html

Contact Information for State Environmental Regulatory Agencies
www.epa.gov/epaoswer/regist.html

Information on Handling Disposal of Mercury Mercury
www.epa.gov/epa/matrices/09210.htm
www.epa.gov/epa/matrices/09219.htm (Test Profile)
www.epa.gov/epa/matrices/09268.htm (Test FAQ)

OSHA Guidelines for Mercury Vapors
www.osha.gov/SST Normal/OSHA-Mercury.html

OSHA Information on Respirator Use
www.osha.gov/SST Normal/respirator/techinfo/the.html

OSHA Information on Hazard Communication
www.osha.gov/SST Normal/communic/index.html

Identify Local Recycling Options for Households:
www.epa.gov/bulbrecycling (click on “Where You Live”)
www.epa.gov/-recycling

National Priorities Environmental Partnership (NPEP)
www.epa.gov/npep

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V. References


USEPA. 1995 Methods for Derivation of Inhalation Reference Concentrations (RfCs) and Application of Inhalation Dosimetry. EPA-600/R-95/066F

EPA Fines Lakewood, N.J. Company for Illegal Export of Electronic Waste to Hong Kong

Contact: John Senn (212) 637-3667, sennjohn@epa.gov

(NY, N.Y. – Aug. 17, 2009) As part of a national effort to crack down on the illegal export of electronic waste, the U.S. Environmental Protection Agency (EPA) has fined a Lakewood, N.J. company that unlawfully shipped thousands of computer monitors to Hong Kong. EPA fined Supreme Asset Management and Recovery, Inc., $199,900 for illegally exporting non-working computer monitors to Hong Kong in 2007 and 2008, and for failing to promptly respond to EPA’s requests for information.

“This case demonstrates that the illegal export of electronic waste will be punished to the fullest extent of the law,” said EPA Acting Regional Administrator George Pavlov. “As our society becomes more dependent on electronics like computers and cell phones, we must become more vigilant in ensuring electronic waste is disposed of in a way that does not harm the environment.”

Computer monitors contain cathode ray tubes (CRTs), which are the video display components of televisions and computer monitors. The glass in CRTs typically contains enough toxic lead to require managing it as hazardous waste under certain circumstances. Color computer monitors contain an average of four pounds of lead. CRTs may also contain mercury, cadmium and arsenic, all of which can pose threats to human health.

EPA issued the fine under the federal Solid Waste Disposal Act, a part of the Resource Conservation and Recovery Act, which forbids the export of certain CRTs unless the exporters notify and receive consent from EPA. The fine, part of a compliance order, will automatically become final unless Supreme Asset Management and Recovery requests a hearing on the matter within 30 days.

For more information on cathode ray tubes and electronic waste, visit http://www.epa.gov/epawaste/hazard/hazeylelectron/crt-nea.htm

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2

CONSENT AGREEMENT AND FINAL ORDER


Respondent.

Proceeding under Section 3008 of the Solid Waste Disposal Act, as amended.

This is an administrative proceeding instituted pursuant to Section 3008(k) of RCRA, 42 U.S.C. §§ 6922, of the Solid Waste Disposal Act, as amended by various statutes including the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments of 1984 (“RSWA”), 42 U.S.C. §§ 6922, of the Solid Waste Disposal Act, as amended by various statutes including the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments of 1984 (“RSWA”), 42 U.S.C. §§ 6922, etc.

Pursuant to Section 3008(k) of RCRA, 42 U.S.C. §§ 6922, et al., “Tallying States which seek to administer and enforce a hazardous waste program pursuant to [Subchapter III, Hazardous Waste Management, 42 U.S.C. §§ 6922-6926] may develop and submit to the Administrator of the EPA an application for authorization of such program.” If EPA grants a State’s request to operate such a hazardous waste program, Section 3008 further provides that “[a] State is authorized to carry out such a program under the Federal program and is a State to enforce permits for the storage, treatment, or disposal of hazardous waste...”
<table>
<thead>
<tr>
<th>Company</th>
<th>Status</th>
<th>Status Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closeout Business Solutions</td>
<td>N</td>
<td>No Exports. Facility was in Clifton, NJ and moved to Paterson as Regentech. (GAO List)</td>
<td></td>
</tr>
<tr>
<td>Eagle Ring Freight</td>
<td>N</td>
<td>Not an exporter. They received Return shipment from HK. CRTs returned to shipper.</td>
<td></td>
</tr>
<tr>
<td>Elgot Electronics Recycling</td>
<td>U</td>
<td>Facility claims no Exports but still need to confirm informant claims of Exports. (GAO List)</td>
<td></td>
</tr>
<tr>
<td>Erevival LLC</td>
<td>N</td>
<td>Export for reuse. Notification submitted. (GAO List)</td>
<td></td>
</tr>
<tr>
<td>E-Soap Destruction</td>
<td>N</td>
<td>No direct exports. Referred to Region 3.</td>
<td></td>
</tr>
<tr>
<td>E-Solutions USA</td>
<td>N</td>
<td>Notified for export for reuse.</td>
<td></td>
</tr>
<tr>
<td>Greenworld Recycle</td>
<td>U</td>
<td>No one at facility.</td>
<td></td>
</tr>
<tr>
<td>H &amp; M International</td>
<td>U</td>
<td>Inspection results given to EPA HQ.</td>
<td></td>
</tr>
<tr>
<td>Hessert LLC</td>
<td>N</td>
<td>No Exports</td>
<td></td>
</tr>
<tr>
<td>ICS Industries</td>
<td>N</td>
<td>No Exports</td>
<td></td>
</tr>
<tr>
<td>International Business Machines</td>
<td>N</td>
<td>No Exports</td>
<td></td>
</tr>
<tr>
<td>Laser Save</td>
<td>N</td>
<td>No Exports. No longer handling CRTs.</td>
<td></td>
</tr>
<tr>
<td>Monmouth Wire &amp; Computer Recycling</td>
<td>Y</td>
<td>NOV issued for one export shipment of CRTs for reuse. No longer exporting CRTs.</td>
<td></td>
</tr>
<tr>
<td>National Liquidators</td>
<td>Y</td>
<td>GAO list. Two shipments of CRTs for reuse without notification. Addressed through an NOV. Now in compliance. (GAO List)</td>
<td></td>
</tr>
</tbody>
</table>