

19 May 1997

Re: NEPA Call-In Technical Inquiry 0086 - Fluorescent Light Tube Disposal

Dear NEPA Call-In User:

This letter is in response to your April 29, 1997, request for information on how the GSA National Capitol Region (NCR) is required to dispose of used fluorescent light tubes. You stated you have been contacted by several potential vendors who state you are required to dispose of used fluorescent tubes as a hazardous waste.

#### SUMMARY OF FINDINGS

NEPA Call-In found most fluorescent light tubes in use today should be disposed of as a hazardous waste due to the presence of mercury in the lamp. We have enclosed information on determining if a light tube is a hazardous waste, fluorescent light tube recyclers, and manufacturers of reduced-mercury light tubes. NEPA Call-In's detailed findings are provided below.

#### DETAILED FINDINGS

NEPA Call-In contacted the Resource Conservation and Recovery Act (RCRA) Hotline, (800) 424-9346, for information regarding recent Federal regulations on fluorescent lights. The hotline representative stated there are no recent Federal regulations specific to the disposal of fluorescent lights. However, there was a proposed rule to de-regulate fluorescent light tubes, but this rule was never finalized. As a result, used or spent fluorescent light tubes are managed under current RCRA regulations in which the generator must determine if the solid waste is a hazardous waste. The hazardous constituent of fluorescent lights is mercury, which is required for the lights to function. As a result of mercury content, the tubes may exhibit the hazardous waste characteristic of "toxicity" and be subject to management as a hazardous waste. It is the generator's responsibility to determine if the fluorescent light tubes may be hazardous.

We then contacted the Environmental Protection Agency (EPA) Energy Star customer service center, (888) 782-7937, which provided information on disposal of fluorescent light tubes prepared by the EPA Green Lights Program (enclosed). The document states: "RCRA requires generators of solid wastes containing toxic constituents (such as mercury) to determine whether or not the waste is hazardous by using generator knowledge or testing representative samples of the waste. According to RCRA, generators of used fluorescent and HID [high-intensity discharge] lamps are responsible for determining whether their lamp wastes are hazardous. If you do not test used fluorescent and HID lamps and prove them non-hazardous, assume they are hazardous waste and dispose them accordingly." The publication also states Washington, D.C. follows Federal RCRA regulations for disposal of used fluorescent tubes and does not have additional regulations.

NEPA Call-In obtained from the EPA RCRA docket in Virginia, (703) 603-9230, the report, "Analytical Results of Mercury in Fluorescent Lamps" (enclosed). This report is an evaluation of EPA's proscribed laboratory method, the Toxicity Characteristic Leaching Procedure (TCLP),

used to determine if the lamps meet the RCRA definition of "toxicity." The report also tested numerous types of lamps for toxicity. The report states, "when the TCLP is performed as described in this report, fluorescent lamps consistently exceed the TCLP for mercury." Therefore, unless GSA knows the used lamp requiring disposal is of a newer "reduced mercury" variety (see below), the lamp is likely to fail the EPA test for toxicity and must be disposed of as a hazardous waste.

We are enclosing "Fluorescent Light Tubes," July 1995, provided by PRO-ACT, the Air Force information clearinghouse sponsored by Headquarters Air Force Center for Environmental Excellence (AFCEE). This packet contains information on making hazardous waste determinations of fluorescent light tubes and recycling of fluorescent light tubes.

NEPA Call-In conducted an Internet search and located the company, "Full Circle, Inc." NEPA Call-In contacted Jackie Dickinson, Government Sales Manager for Full Circle, (540) 891-6525. Ms. Dickinson provided the factsheets, "Lamp Recycling," "Ballast Recycling," and "Recycling and Disposal Fact Sheet" on Full Circle's recycling services. Ms. Dickinson also stated that Full Circle has previously recycled fluorescent light ballasts for GSA and provided the following Point of Contact: GSA 5PM-2N, John Weld Federal Building, Cincinnati, Ohio. NEPA Call-In contacted GSA representative, who agreed that fluorescent light tubes must be disposed of as a hazardous waste. The GSA representative stated that he had used Full Circle, Inc. to recycle fluorescent light ballasts and fluorescent light tubes. The GSA representative stated their office now includes the requirement for building managers to recycle the fluorescent light tubes or dispose of them as hazardous waste."

We also contacted Clean Harbors Inc., a hazardous waste disposal company located in Maryland, (410) 244-8200. A representative stated the cost to dispose of one box of 30 four-foot tubes as a hazardous waste is approximately \$15.

NEPA Call-In learned through previous research the Philips Lighting Company has developed low mercury content fluorescent light tubes which may not fail TCLP tests. We contacted Mr. Patrick Murray, Philips Lighting Company, (713) 974-0890, who stated the reduced mercury lights are now commercially available. Current production includes T-12 (1 1/2" diameter) and T-8 (1" diameter) tubes of various lengths. Tube prices are typically \$.40 to .60 higher than traditional fluorescent light tubes. In the future, purchase of reduced mercury lights may be more cost effective for GSA.

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Sincerely,

(Original Signed)

NEPA Call-In Researcher