

MAR 8 1993

Robert M. Quintal, Sales Engineer  
Energy Services  
Eagle Electric Supply Company, Inc.  
195 Old Colony Avenue  
Boston, MA 02127-2457

Dear Mr. Quintal:

Thank you for your letter of January 18, 1993 requesting information on mercury containing fluorescent lamps. The U.S. Environmental Protection Agency (EPA) has received numerous inquiries concerning the proper management of used fluorescent lamps. As you may be aware, recent data indicate that used fluorescent lamps may be a hazardous waste under the Federal hazardous waste identification criteria. Naturally, this has caused considerable concern to those who are responsible for the management of used lamp wastes.

EPA Headquarters is aware of these concerns and is currently working with both the States and the lighting industry to resolve the issues associated with this waste. Although the Agency is evaluating various management options, it is premature to speculate what, if any, changes may be made to the current regulatory program.

The proper disposal of used fluorescent lamps from sources other than households is determined by answering two questions:  
(1) is the used fluorescent lamp a hazardous waste; and, if yes,  
(2) what is your hazardous waste generator status?

1. Hazardous Waste Determination

Under the Resource Conservation and Recovery Act (RCRA) regulations, used fluorescent lamps are subject to evaluation against the RCRA hazardous waste determination requirements. The generator of the waste is responsible for making this determination. The regulations applicable to the identification and listing of hazardous waste are found at 40 C.F.R. Part 261.

CONCURRENCES

COL	HRW	HRW	HRW	HRW			
SURNAME	Alvarez	[Signature]	Parish	CHINS			
DATE	2/26/93	2/26/93	3/2/93	3/3/93			

a. Are used fluorescent lamps a solid waste? Yes.

In order to be considered a Federal hazardous waste, any waste must first meet the definition of a solid waste. A solid waste is defined in 40 C.F.R. § 261.2. Simply stated, a solid waste is any discarded material that is not excluded under 40 C.F.R. § 261.4(a) or by variance granted under 40 C.F.R. §§ 260.30 and 260.31. Under 40 C.F.R. § 261.4(a) there are specific wastes that are excluded from the definition of solid waste, but used fluorescent lamps are not excluded wastes. Therefore, they are a solid waste regardless of whether you dispose of, burn, accumulate, store, treat, or recycle them. Since used fluorescent lamps are a solid waste, generators must then determine whether these lamps are a hazardous waste or not.

b. Are used fluorescent lamps a hazardous waste? They may be.

The definition of a hazardous waste is found at 40 C.F.R. § 261.3. Again, simply put, a solid waste is a hazardous waste if it is:

- A) Not excluded under 40 C.F.R. § 261.4(b);
- B) And it is listed under 40 C.F.R. §§ 261.31, 261.32, or 261.33;
- C) Or it exhibits one of the four characteristics (ignitability, corrosivity, reactivity and toxicity) of a hazardous waste found in 40 C.F.R. §§ 261.21, 261.22, 261.23, or 261.24;
- D) Or it is a solid waste that is mixed with any of the wastes listed in B) above.

Upon reviewing the criteria in 40 C.F.R. Section 261, it can be determined that used fluorescent lamps are not excluded from the definition of hazardous waste nor are they a listed hazardous waste. In most circumstances, used fluorescent lamps would not exhibit the hazardous waste characteristics of ignitability, corrosivity, or reactivity and, therefore, would not be considered hazardous for those characteristics.

A generator must then determine whether or not this waste exhibits a toxicity characteristic (TC). A generator may make this TC determination based either on knowledge of the material used in the waste (fluorescent lamp manufacturers may make information available to their customers to support a hazardous waste determination) or the results of the Toxicity Characteristic Leaching Procedure (TCLP). TCLP is an analysis performed on an extract from a representative sample of the

waste. If the extract from a used fluorescent lamp contains mercury contaminants at the concentration equal to or greater than 0.2 mg/l, the waste is hazardous. EPA is aware that the results of the TCLP on used fluorescent lamps may exceed the regulatory limit for mercury.

Used fluorescent lamps that are NOT a hazardous waste may be disposed of in accordance with applicable state and local solid waste requirements.

Used fluorescent lamps that are a hazardous waste must be managed in accordance with both State and Federal hazardous waste requirements. It is important to point out that the State hazardous waste programs often have additional and more restrictive hazardous waste management and disposal requirements than the Federal program. Since the Department of Environmental Protection (DEP) is the primary agency responsible for implementing the base RCRA program in Massachusetts, generators should contact Mr. James Miller, MA DEP, at 617/292-5853 for assistance in identifying the requirements they must comply with.

## 2. Categories of Hazardous Waste Generators

Under the Federal hazardous waste program, there are three categories of hazardous waste generators and each category has its own specific regulatory requirements. This discussion focuses on disposal requirements and does not discuss on-site management standards and requirements (i.e., storage, training, or accident prevention requirements). To determine a facility's hazardous waste generator category, the generator must include the total of all of its hazardous waste streams (not just used fluorescent lamps) generated per month. It is possible that the only waste some facilities will generate is used fluorescent lamps. The three generator categories and their disposal options are:

- i) Conditionally exempt small quantity generators (CESQGs): Generators of no more than 220 pounds (100 kg) of hazardous waste per month.

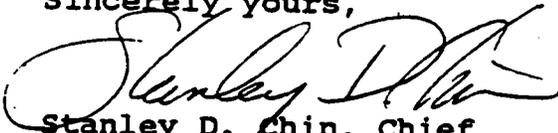
Hazardous waste generated by CESQGs may be disposed of at either a hazardous waste facility, or a landfill or other facility approved by the State for industrial or municipal wastes. Generators do not need to prepare a hazardous waste manifest nor use licensed hazardous waste haulers to deliver the waste to the destination facility.

- ii) Small quantity generators (SQGs): Generators of 220 to 2200 pounds (100-1000 kg) of hazardous waste per month; and,
- iii) Large quantity generators (LQGs): Generators of 2200 pounds (1000 kg) or more of hazardous waste per month.

Hazardous waste generated by SQGs and LQGs must be disposed of at a licensed hazardous waste facility and transported by a licensed hauler. A hazardous waste manifest must accompany each off-site waste shipment. In addition, LQGs should refer to the enclosed September, 1992 EPA Monthly Hotline Report on the applicability of EPA's Land Disposal Restrictions effective date for hazardous debris to used fluorescent light bulbs that exhibit the toxicity characteristic for mercury.

Also included for your information is a recent EPA publication containing information on the disposal of used lamps and ballasts from lighting upgrade projects. If you have additional questions, please contact Ms. Austine Frawley of my staff at 617/573-5758.

Sincerely yours,

  
Stanley D. Chin, Chief  
RCRA Support Section

Enclosures

cc: J. Miller, MA DEP  
L. Papetti, US EPA