



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

JAN 3 2002

Mr. Paul W. Martin
Fluor Hanford Waste Services/
Waste Management Project
P.O. Box 700
T3-04 • MO-279, 200 West Area
Richland, WA 99352-0700

Ref. No. 01-0248

Dear Mr. Martin:

This responds to your facsimiles and telephone conversations with staff members of this office on the correct classification under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) of high-pressure, sodium-vapor lamps being transported for disposal. You state that these lamps will be transported in bulk, and that many will be crushed as they are packaged. I apologize for the delay in responding and any inconvenience it may have caused.

The two material safety data sheets (MSDS) you provided describe one lamp as containing the following materials:

<u>Chemical Name</u>	<u>Percent by Weight</u>
Barium compounds	0.02 < 0.1
Lead solder	0.1 < 1.1
Sodium	0.003 < 0.01
Mercury	0.01 < 0.05
Lead Borosilicate Glass	30-75
Aluminum Oxide	< 15.

The second lamp contains the following materials:

<u>Chemical Name</u>	<u>Percent by Weight</u>
Sodium	< 0.01
Mercury	< 0.02
Lead	no data given.

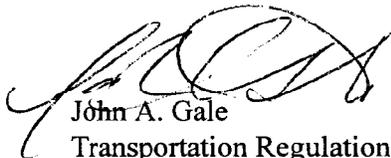
Neither MSDS describes the lamps as meeting an HMR hazard class or provides a protocol for transporting crushed lamps in bulk. One MSDS states the sodium in the lamps may produce heat when in contact with water, but the amount of sodium in a single lamp is so small it generally presents no hazard. Both MSDS's prescribe methods for handling mercury vapor, lead dust, and other chemicals and materials the lamps contain.

173.22

Under § 173.22, it is the shipper's responsibility to determine the hazard class for a hazardous material. This office does not perform that function. However, based on the information you provided, we agree with your determination that a bulk package filled with the crushed lamps would contain a sufficient amount of hazardous material to meet the definition of a Division 4.3 material in § 173.124. You should also determine if the package contains a sufficient amount of lead, mercury, or sodium to meet the definition in § 171.8 for a hazardous substance. Further, we agree with your determination that an uncrushed lamp, provided it is not packaged with or contaminated by material from a crushed lamp, is not regulated as a hazardous material under the HMR.

I hope this information is helpful.

Sincerely,



John A. Gale
Transportation Regulations Specialist
Office of Hazardous Materials Standards

FLUOR HANFORD
WASTE SERVICES
WASTE MANAGEMENT PROJECTS
MANAGER, L. T. BLACKFORD

Edmonson
§ 173.21
§ 173.164
§ 173.124
Classification
01-0248

FACSIMILE TRANSMITTAL SHEET

TO: EILEEN EDMONSON	FROM: PAUL W. MARTIN, ECO
FAX NUMBER: 202-366-3012	DATE: SEPTEMBER 24, 2001
NAME/COMPANY: DOT HOTLINE	NAME/COMPANY: WASTE SERVICES
PHONE NUMBER: 202-366-4481	PHONE NUMBER: 376-6620 (509)
RE: REFAX OF MARCH 15, 2001 FAX FOR SODIUM VAPOR BULB MSDS	PAGES INCLUDING COVER: (7)

Notes/Comments:

Per our telephone conversation on Friday, September 21, 2001, attached is the fax from March 15, 2001. The cover page of the original fax also is included.

And just as a refresher, Charles Te stated that uncrushed sodium vapor lamps would be nonregulated per DOT. However, crushed bulbs would be subject to 173.21, "Forbidden materials and packages". (I was thinking that the crushed and un-reacted bulbs would be, at worse, 4.3, dangerous when wet materials).

Thanks for your help,

Paul W. Martin

Paul W. Martin
Env. Compliance Officer

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FLUOR HANFORD
WASTE SERVICES
WASTE MANAGEMENT PROJECT

MANAGER, L. T. BLACKFORD

FACSIMILE TRANSMITTAL SHEET

TO: EILEEN EDMONDSON	FROM: PAUL W. MARTIN, ECO
FAX NUMBER: 202 366-3012	DATE: MARCH 15, 2001
NAME/COMPANY: DOT HOTLINE	NAME/COMPANY: WASTE SERVICES
PHONE NUMBER:	PHONE NUMBER: 376-6620
RE: SODIUM VAPOR BULB MSDS	PAGES INCLUDING COVER: (6)

Notes/Comments:

Per our telephone conversation just now, attached are the two MSDSs for sodium vapor lamps. I confirmed with a co-worker that the crushed sodium vapor lamps gave off 1 to 2 inch flames when contacted with water. The sodium was in a solid state according to the co-worker who witnessed the deactivation of the lamps.

This reaction conflicts with a manufacturer's claim concerning no DOT applicability to sodium vapor lamps.

Thanks for you help.

Paul W. Martin

Paul W. Martin
Env. Compliance Officer

582
2953

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