



November 5, 2008

VIA FEDEX

Anthony S. Kirkwood, Health Physicist  
State Agreements and Industrial Safety Branch  
Division of Materials Safety and State Agreements  
Office of Federal and State Materials and  
Environmental Management Programs  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: Ushio America, Inc.  
Your Docket No. 030-37832  
Your Mail Control No. 022706

Dear Mr. Kirkwood:

By letter of October 1, 2008, the NRC advised Ushio America, Inc. ("Applicant") that attention is required in respect of certain additional items regarding Applicant's Application for a Material License (exempt distribution license). The additional items referred to in the NRC letter are in regard to (a) labeling, (b) information regarding measurement methods, frequency and calibration methods used by manufacturers Narva and Gulf Advanced Lighting to insure fill quantities, and (c) possession licenses issued by California and South Carolina. These additional items are addressed below.

1. Labeling. Each lamp containing Kr-85 (in the arc tube or in a glow bottle connected to the arc tube) will be separately packaged. The package for each lamp containing Kr-85 will bear the markings "Ushio America, Inc.," i.e. the name of the initial importer and distributor, and "Kr-85." Applicant does not propose to affix labels containing the name of the initial importer and identification of the byproduct material directly to the lamps or glow bottles. The lamps and glow bottles are too small and/or become too hot when in use for it to be practical to affix labels directly to the lamps or glow bottles. By separately packaging each lamp, the required information is presented to the lamp user. Representative sample labels are enclosed.

**USHIO AMERICA, INC.**

5440 Cerritos Avenue

Cypress, CA 90630

714.236.8600 Fax 714.229.3180

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2. Narva and Gulf Advanced Lighting Information We have obtained from Narva and Gulf Applied Lighting the information requested by the NRC.

(a) Narva advises as follows: Narva purchases a mixture of Argon and Kr-85 from a vendor, and the vendor certifies to Narva the content of the purchased gas mixture. Arc tubes for Narva lamps have different internal volumes depending on wattage. The quantity of Kr-85 in any arc tube is a function of the internal volume of the arc tube and the pressure of the gas mixture with which the arc tube is filled. The filling of arc tubes with the gas mixture is computer controlled to assure uniformity of desired pressure in the arc tube. The amount of Kr-85 contained in any arc tube can be determined with certainty by calculation based on proportionate quantity of Kr-85 in the gas mixture, volume of the arc tube and computer controlled fill pressure.

Narva uses the following check procedures: Arc tubes are submitted to burst testing and must be able to withstand pressures of up to 300 psi. Geometry of arc tubes is verified against spec by optical testing. Fill pressure of arc tubes is in a range of 20-40 Torr depending on wattage and geometry, and is checked by Narva designed equipment.

(b) Gulf Advanced Lighting advises as follows: Gulf Advanced Lighting purchases a gas mixture which includes Kr-85. The gas mixture is purchased in cylinders. The vendor is a USA company, and the vendor certifies the concentration of each gas in the gas mixture. Glow bottles are filled with the gas mixture.

The filling pressure of the gas mixture for each glow bottle is controlled by an MKS pressure controller. These MKS pressure controllers are calibrated on site every year by the Gulf Advanced Lighting calibration department using a calibration gauge which is calibrated every 2 years in the USA under the ISO/IEC 17025:2000 requirements.

By maintaining constancy of the desired filling pressure for each glow bottle, it can be determined by calculation that the amount of Kr-85 contained in any glow bottle is under 30  $\mu\text{Ci}$ . To verify the gas mixture in the glow bottles, Gulf Advanced Lighting sends samples of filled glow bottles to a local laboratory of Atomic, Nuclear and Molecular Sciences.

3. Possession Licenses. Applicant has filed an application for a possession license with the State of California. A copy of the acknowledgement receipt received back from the State of California is enclosed for reference. Applicant will forward a copy of a possession license from the State of California to NRC upon receipt.

Applicant intends to file an application for a possession license with the State of South Carolina, but has not yet done so. Applicant has identified an individual in South Carolina to undertake training as a radiation safety officer (RSO) for Applicant's

contract warehouse facility in South Carolina and is in the process of arranging for that individual to sit for a 40 hour RSO course. Therefore, we believe a South Carolina possession license will take longer to obtain than the California possession license for which Applicant has already applied.

Accordingly, Applicant respectfully requests that the NRC maintain Applicant's application to the NRC as an open file pending the grant of a possession license to Applicant by the State of California, that the NRC then complete the NRC licensing procedure based on the California possession license as soon as the California possession license is obtained, and that NRC license be subsequently amended to cover the South Carolina facility as soon as a South Carolina possession license is obtained.

\* \* \* \* \*

In the event you require anything further in connection with this matter, please do not hesitate to contact the undersigned.



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Keith SanGiacomo  
General Manager, Marketing and New Business Development  
Ushio America, Inc.

USHIO



**WARNING**

Make sure lamp fixture is turned off prior to installation or removal of bulb. Install and remove lamp from fixture holding the plastic base. The glow switch in the lamp contains Kr-85.  
USHIO America, Inc.

3000203  
UFL-CF26T/827 GX24D-3



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**WARNING**

Make sure lamp fixture is turned off prior to installation or removal of bulb. Install and remove lamp from fixture holding the plastic base. The glow switch in the lamp contains Kr-85.

USHIO America, Inc.

# USHIO

# EUROFLOOD™

Consistent Color

## Metal Halide Lamp

— /E = Enclosed Fixture Required

### POWER SUPPLY INFORMATION

### INFORMATION SUR LA SOURCE D'ALIMENTATION

Lamp/Lampe	ANSI Ballast	ANSI Fixture Requirement
75W	M85/E	E = Enclosed Fixtures only
150W	M81/E	Luminaire rencontrant le code ANSI /E = Luminaires fermé seulement

Only use the ANSI ballast properly matched to the lamp wattage.  
Utilisez seulement le ballast ANSI approprié au wattage de la lampe.

# USHIO

**(Hg)** - LAMP CONTAINS MERCURY  
Manage in Accord with Disposal Laws

See: [www.lamprecycle.org](http://www.lamprecycle.org) or 1-800-895-8842

# USHIO

# EUROFLOOD™

Couleur Consistente

## Lampe aux halogénures métallique

— Approuvé pour un luminaire fermé

Please read Operating and Safety Instructions printed on the inside of this carton

S'il vous plaît, lisez les instructions d'opérations et de sécurité que vous trouverez imprimées à l'intérieur de cette boîte



0 048777 273678

UHI-70DW/U VP

5000194 Kr85

Made in Germany  
Fabriqué en Allemagne

# USHIO

USHIO AMERICA, INC. CYPRESS, CA U.S.A.



MARK B HORTON, MD, MSPH  
Director

State of California—Health and Human Services Agency  
California Department of Public Health



ARNOLD SCHWARZENEGGER  
Governor

October 15, 2008

Kenji Hamashima, President and CEO  
Ushio America, Inc.  
5440 Cerritos Avenue  
Cypress, California 90630

**NOTICE OF RECEIPT OF APPLICATION FOR REVIEW**

**DOCKET NUMBER: 100908-7749**

**APPLICATION NUMBER: 7749-30**

**APPLICATION DATE: 09/26/08**

The above-noted application has been docketed for review, and will be taken up in the order received.

Correspondence or other communication concerning the above-noted application must be submitted **in duplicate** and should make clear reference to your assigned docket number pertaining to this specific request. Future requests, not related to the above request, will be assigned a new docket number.

Thank you,

**RADIOACTIVE MATERIALS LICENSING SECTION**