From: Charlotte Groves <charlotte@wslusa.com>
Sent: Thursday, December 10, 2015 2:16 PM
To: Reber, Eric; 'Fred Braue'
Cc: 'Beth Balsor'
Subject: [External_Sender] FW: Amendment to exempt distribution license to add UNILAM Co., LTD to NRC License No. 10-23967-10E

Hello Eric,

Below I have answered your questions. Please review and advise is you have further questions or concerns.
Thank you in advance for your cooperation.

Charlotte Groves

From: Reber, Eric [mailto:Eric.Reber@nrc.gov]
Sent: Thursday, December 10, 2015 1:21 PM
To: 'Charlotte Groves'; 'Fred Braue'
Cc: 'Beth Balsor'
Subject: RE: Amendment to exempt distribution license to add UNILAM Co., LTD to NRC License No. 10-23967-10E

Hello Charlotte,

The response that you sent yesterday requires further clarification. Please address the highlighted issues below and the bracketed questions.

Thank you,
Eric

From: Charlotte Groves [mailto:charlotte@wslusa.com]
Sent: Wednesday, December 09, 2015 12:47 PM
To: Reber, Eric; 'Fred Braue'
Cc: 'Beth Balsor'
Subject: [External_Sender] Amendment to exempt distribution license to add UNILAM Co., LTD to NRC License No. 10-23967-10E

Dear Eric,

In response to your email and phone conversation with Mr. Fred Braue this morning, below are the answers to your questions.

Please note we do not alter, modify nor repackage any of the products during importation, nor before delivery to our customers.

1. The chemical and physical form of the byproduct material in each product [10 CFR32.14(b)(1)]

   a. The lamps consist of a quartz body tube that varies in dimension and wall thickness depending primarily on the wattage of the lamp. The wall thickness varies based on the lamp design and wattage. The quartz wall thickness is typically 1.25mm +/-0.13, 1.35mm +/-0.15. 1.4mm +/-0.15, 1.6mm +/- 0.20. The lamps are a single-envelope lamp and or not intended for insertion into an outer lamp envelope.

   b. The materials used to fasten the quartz arc tube to the lamp. [The preceding sentence does not make sense. Please clarify.] ***DISREGARD: The explanation is written below under C.***

   c. The lamps are a single envelope lamp and or not intended for insertion into an outer lamp envelope. They are typically installed directly, and mechanically affixed, into the process equipment in which they are used. These installations require specific positioning, fixturing and attachment of the lamps (mechanically and electrically) to ensure the process of integrity for which they are used.

2. Details of construction and design of each product [10 CFR 32.14(b)(2)] and the method of **containment or binding of the byproduct material in the product** [10 CFR32.14(b)(3)].

   a. The byproduct material (Kr-85) is introduced into the lamp as a gaseous component in a supplier-certified gas pre-mixed fill gas as described below. The fill gas is hermetically sealed into the lamp during the lamp assembly process.

   b. The gas is contained within vacuum sealed quartz tube completely sealed

   c. Under normal use, all gas contained within sealed gas chamber. Only breakage will allow any exposure or evacuation of the gas.

   d. The lamps are a single envelope lamp and or not intended for insertion into an outer lamp envelope. They are typically installed directly, and mechanically affixed, into the process equipment in which they are used. These installations require specific positioning, fixturing and attachment of the lamps (mechanically and electrically) to ensure the process of integrity for which they are used.

   e. After the assembly of each lamp is completed, it is seasoned (activated) for 12-15 minutes to confirm its operating and performance characteristics. The electrical and light-quality characteristics are checked automatically. Any deviation from prescribed limits would indicate either an incorrect fill gas dose. Additionally, visual inspection of the seasoned lamp will indicate the potential over -, or under-filling of the lamp. All lamps that do not pass these tests are recycled to reclaim the fill gas.

   f. The product designs, and its materials of construction, are specifically chosen to withstand the high-temperatures under which the lamp normally operates. Sample lamps are randomly selected from manufacturing lots and subjected to life testing to ensure that the lamps operate to design specifications over the course of their rated life. ***(you are correct, this did not belong below, it must go here under question #2)***

3. The proposed method of labeling or marking each unit and its container with the identification of the manufacturer or initial transferor of the product and the byproduct material in the product [10 CFR 32.14(b)(6)].

a. Lamps may be individually packaged or sold in bulk cartons. Lamps placed in individual packages **AND** packed in bulk cartons will **both** include markings on the outside package that reads as follows: [It is unclear as to what will be labeled. Please indicate specifically that the individual packages and the bulk cartons will be labeled as indicated.] ***The markings on the cartons for individual AND bulk are as noted in original email as listed below. I have bolded it in red. You also were sent a pictures of this information showing labeling of full cartons and individual boxes.***

Each lamp contains an arc tube with a filling gas containing Kr-85 and is distributed by Worldwide Specialty Lamp, 6759 Oak Ridge Commerce Way SW, Austell, GA 30168 USA Tel. (800) 547-9191.

This type of marking is consistent with markings of similar lamps distributed by other lamp companies in the United States. Full information is on packaging only as printing on the lamp would make the information illegible due to the size of the print surface.

[Is something (i.e. the question) missing, or are "b." and "c." misplaced? They don't have anything to do with labeling. Please clarify this.] ***You are correct, I have moved those 2 answers to question 2.***

4. The radiation level at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber and the method of measurement [10 CFR 32.14 (b)(7)]. Please note that 10 CFR30.05 (a)(8) requites that the levels of radiation from each electron tube containing byproduct material not to exceed 1 millirad per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber.

   a. Pending answer from Manufacturer

Please note we have requested the testing meter information used by the manufacturer and will supply it as soon as received.

Feel free to call or email me with any questions or concerns with more lead time prior to deadlines than the day before and thank you in advance for your cooperation .

Charlotte Groves
Office Administrator

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