



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 1, 2021

Jason M. Cook
Vice President of Purchasing
Howard Lighting Products
P.O. Box 1588
Laurel, MS 39441

SUBJECT: HOWARD LIGHTING PRODUCTS REQUEST FOR ADDITIONAL
INFORMATION CONCERNING APPLICATION FOR AN EXEMPT
DISTRIBUTION LICENSE APPLICATION DATED MAY 17, 2021

Dear Mr. Cook:

This letter refers to your application dated May 17, 2021, Agencywide Documents Access and Management System (ADAMS) accession number ML21140A353. In reviewing your application, we found that additional information is required to complete our review.

Your request to authorize lamps containing Thorium (Th-232) and Krypton (Kr-85) for distribution is regulated under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 40 "Domestic Licensing of Source Material" and Part 30 "Domestic Licensing of Byproduct Material" respectively. These regulations require the applicant to submit sufficient information regarding the product pertinent to evaluation of the potential radiation exposure, please submit the following information:

1. 10 CFR 32.14(b)(2) requires the applicant to submit details of construction and design of each product.
2. 10 CFR 32.14(b)(3) requires the applicant to submit the method of containment or binding of the byproduct material in the product. Please describe the method by which Kr-85 gas is introduced and the glass tube is sealed.
3. 10 CFR 32.14(b)(6) requires the applicant to submit 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.
4. 10 CFR 32.14(b)(7) requires the applicant to submit the radiation level and the method of measurement for products for which limits on levels of radiation are specified in Section 30.15. Section 30.15(a)(8)(iv) specifies that each electron tube containing byproduct material does not exceed 30 microcuries of Kr-85. *And provided further*, That the levels of radiation from each electron tube containing byproduct material do not exceed 1 millirad per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber.
5. 10 CFR 40.52(b)(2) requires the applicant to submit details of construction and design of each product containing source material (thorium).

6. 10 CFR 40.52(b)(3) require the applicant submit quality control procedures to be followed in the fabrication of production lots of the product and the quality control standards the product will be required to meet. Specifically address how you will ensure that each lamp will not exceed 50 milligrams of thorium as required under 10 CFR Paragraph 40.13(c)(1)(iv). Please include associated calculations.
7. 10 CFR 40.52(b)(4) require the applicant to submit the proposed method of labeling or marking each unit, and/or its container with the identification of the manufacturer or initial transferor of the product and the source material in the product. Please provide legible copies of the labels that will be used on each type of product (or immediate container where the product is too small to be labeled).
8. 10 CFR 40.42(b)(1) requires applicant to provide the maximum quantity of source material in each product.

In accordance with 10 CFR 2.390 of the U.S. Nuclear Regulatory Commission's (NRC's) "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

To continue review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter. In your response, please refer to the license, docket, and control number specified below. We will assume that you do not wish to further pursue this licensing action if we do not receive a reply within the specified timeframe noted above.

If you have any questions, you may contact me at (301) 415-3257, or by electronic mail at Michelle.Hammond@nrc.gov.

Sincerely,

Michelle M. Hammond, M.Sc.
Materials Safety and Tribal Liaison Branch
Division of Materials Safety, Security, State,
and Tribal Programs
Office of Nuclear Materials Safety
and Safeguards

Docket No. 030-38462
Mail Control No. 625370

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DATE: JULY 1, 2021

ADAMS Accession Number: ML21140A346

OFFICE	MSST/MSTB	MSST/MSTB	MSST/MSTB	MSST/MSTB
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DATE	06/30/2021	07/01/2021	07/01/2021	07/01/2021

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