

APR 18 1984

FCML:JWP
(16181 and 15134)
030-20617 and 030-06068

Nuclear Research Corporation
ATTN: Sabhash Sengupta, Physicist
125 Titus Avenue (Box H)
Warrenton, PA 18976

Gentlemen:

This is in response to your letters dated October 31 and April 29, 1983, requesting renewal of license No. 37-02401-01, and authorization to distribute and manufacture calibration check sources to persons exempt. This will require both an amendment to your current license and a new license authorizing distribution of exempt quantities. Your application for renewal and amendment of license No. 37-02401-04G are being processed separately.

Your April letter indicates a request for authorization to possess any byproduct material (3-83) in unsealed form, up to 1 curie per nuclide. Your current license authorized possession of primarily sealed sources, with only 1 millicurie unsealed for testing and calibration purposes. Because of the much greater potential hazards associated with large quantities of unsealed radioactive material, you should limit your request to actual nuclides and quantities needed. In addition, please provide the following additional information and clarifications:

1. Please clarify whether you intend to distribute both radiation instruments containing internal calibration sources to persons exempt according to 10 CFR Sections 30.15(9) and 32.14, and exempt quantities pursuant to 30.18 and 32.18. If so, you must provide all the information specified in 10 CFR 32.14 and 32.18. We have enclosed copies of the regulations and sealed source and device registration guides to assist you.
2. For both your current program and proposed program, you should provide a diagram of your facility showing your radioisotope use and storage areas, indicate the areas used for manufacturing and for production. Also include a narrative description of the source handling procedures performed in each function.
3. In regard to personnel monitoring, we will need to know whether your workers will be badged for extremity exposures and if you have evaluated the potential for extremity exposures. Please explain.

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4. With regard to your proposed program for unsealed material, describe your periodic surveys and procedures for evaluating removable and or fixed contamination within your facilities (see enclosed Regulatory Guide 8.21).
5. Please submit the name of the firm who will dispose of your radioactive wastes.
6. Please describe how you dispose of sealed sources, if they are no longer needed.
7. In telephone conversations, you indicated interest in possession of Accuray devices. If so, we need a detailed description of your request. We will need more information concerning your step-by-step procedures for receiving and examining Accuray Gauges for damage or radiation leakage, storage and eventual disposal. Please specifically state whether you will perform any activities other than receipt, storage, redistribution and disposal of gauges, with the radioactive source locked in the shield position at all times.
8. Please describe your leak test program in detail, covering gauges waiting to be distributed, gauges at customers' facilities, and gauges received for trade in or disposal. Please confirm that you will analyze customer leak test samples, provide them with results, and maintain records in accordance with Section 31.5 Paragraphs (c)(2)(3) and (4) of 10 CFR Part 31.
9. Your renewal application is not clear as to whether you distribute radioactive gauges to specific licensees. License No. 37-02401-04G authorizes distribution to general licensees only. If you want authorization to distribute to specific licensees, you should provide model numbers and complete information on each device, similar to the information we requested on general licensed devices.
10. For your proposed program involving unsealed radioactive material, we need information demonstrating that the concentrations of licensed material in your air or water effluents will be as low as is reasonably achievable (ALARA). You should include information concerning the actions you will take to ensure that the effluent concentrations in or released from your facilities are maintained below an established action guideline limit (i.e., 1% of the limits specified in 10 CFR Part 20). We will accept your program as meeting the ALARA concept concerning the effluent releases if the information provided by you shows that immediate corrective action will be taken whenever your effluent concentrations exceed the 1% limit at the boundary of your facilities.
11. The ALARA concept is applicable to personnel exposures. Please provide the information to show that you will maintain personnel exposures as low as is reasonably achievable. Refer to the enclosed Regulatory Guide 8.10, (operating philosophy for maintaining occupational radiation exposures as

low as reasonably achievable) for more information. Please note that we will accept your program as meeting the ALARA concept if you submit information to us showing that immediate and appropriate corrective actions will be taken whenever the radiation exposures to an individual exceeds 10% of the limits specified in 10 CFR Part 20.

We will continue our review of your request upon receipt of the above information. Please reply in quadruplicate within 30 days and reference Mail Control Nos. 15134 and 16181.

Sincerely,

James W. Patterson
Material Licensing Branch
Division of Fuel Cycle and
Material Safety

Enclosures:

1. 10 CFR Parts 30, 32, and 20
2. Guidelines for Application for
Registration of Devices
3. Regulatory Guides 8.21 and 10.7

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