

OFFICIAL RECORD COPY

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Tennessee Valley Authority
Occupational Health and Safety
ATTN: Mr. Ron Maxwell
Radiation Safety Officer
P. O. Box 1010
MPB 1B
Muscle Shoals, AL 35660

Gentlemen:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING RENEWAL FOR
RADIOACTIVE MATERIALS LICENSE (REFERENCE DOCKET NO. 030-03571,
CONTROL NO. 255593)

This letter is in reference to your radioactive materials license application dated September 30, 1993. The following information is needed to continue our review of your application:

1. Please confirm that the name and address for the license has changed to Tennessee Valley Authority, Resource Group, 601 Summit Hill Drive, Knoxville, TN 37902-1499 from Tennessee Valley Authority, Occupational Health and Safety, P.O. Box 1010, MPB 1B, Muscle Shoals, AL 35660. A change in the address to Tennessee will require that the license is assigned a new license number.
2. The cumulative possession limit for carbon 14 requested in your application is 70 millicuries. The requested increase requires you to have decommissioning financial assurance of \$750,000 instead of the current \$150,000 stated in a letter of intent submitted previously. The limiting radionuclides authorized by your license determining decommissioning financial assurance are carbon 14 and calcium 45. Review the requested possession limits to insure that they reflect the needs of your program. If you wish to increase the possession limit for carbon 14, please submit a revised letter of intent for \$750,000 decommissioning financial assurance.
3. Confirm that the carbon 14 reservoir studies do not release radioactivity directly into the environment, but instead is released to a sanitary sewerage system. Also, state that wipe surveys of the boats used in the experiment will be taken after each use. The wipe samples may be returned to the laboratory for analysis. Records of the surveys should be maintained. Please verify that the carbon 14 for the reservoir uptake studies is used and stored at the Hickory Valley Building, 283 Hickory Valley Road, Chattanooga, TN and not at Wrinkle Building, 64111 East Brainerd Road, Chattanooga, TN, as currently listed.
4. Please state the quantity of P 32 normally used in tagging fertilizer and methods used to protect users from the bremsstrahlung radiation produced by the P 32 in the stainless steel superphosphate acidulator. Also, individuals handling P 32 in quantities greater than 1 millicurie should use extremity monitoring. NRC typically requires licensees to perform contamination surveys after each day of use with high energy beta emitting radionuclides such as P 32. If you do not perform such surveys, please

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explain your position and discuss measures taken to prevent the potential for spreading contamination and unnecessary radiation exposure.

5. Your application does not address the performance requirements for fume hoods used for handling radioactive materials. Please state the minimum face velocity, the frequency and method for verifying face velocity and the efficiency of filters and where the hoods are vented to, with a description of the nearest fresh air intake for the building.
6. State the method and frequency for checking and changing the HEPA filters in the exhaust system for the radioactive fertilizer laboratory.
7. Submit the procedures followed during the installation, initial radiation surveys, relocation or removal from service of the fixed moisture density gauges authorized by your license. You may state that you will follow the manufacturer's procedures, or you may submit your own procedures.
8. Item 10 of your application states that you possess survey instruments with a range of 1-200mR/hr. This is not adequate for the installation, initial survey, relocation or removal from service of the fixed moisture density gauges authorized by your license. Please state the instruments and their useful detection range used by you and your staff during such activities.
9. Item 10, Activity A, of your application discusses waste disposal procedures for P-32, P-33 and S-35. It is not clear that they conform with the requirements for decay-in-storage authorized by your current license in Condition 21. Please clarify that waste held for decay-in-storage will be held for a minimum of 10 half lives and that it will be surveyed at the container surface with an appropriate meter set on its most sensitive scale with no interposed shielding to determine that its radioactivity cannot be distinguished from background prior to disposal as regular waste.

Our review of your license renewal request will continue upon receipt of the above requested information. Please provide two copies of your reply and refer to Control Number 255593. If you wish, replies may be transmitted via electronic facsimile (FAX) to (404) 331-5559. You should then mail the original copy of any electronically transmitted documents.

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

If you have any questions, please call me at (404) 331-2687.

Sincerely,



Sandra Butler, License Reviewer
Nuclear Materials Licensing Section
Division of Radiation Safety
and Safeguards

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