

SCHOOL OF NUCLEAR ENGINEERING

NUREG REGION II
ATLANTA, GA

TIC

Atlanta, Georgia 30332

(404) 894-3720

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August 31, 1979

Director of Region II
Nuclear Regulatory Commission
101 Marietta Street, N.W.
Suite 3100
Atlanta, Georgia 30303

Dear Sir:

This letter is in response to your letter dated August 10, 1979, and to I. E. Bulletin No. 79-19, which refers to Packaging of Low Level Radioactive Waste for Transportation and Burial.

The Georgia Institute of Technology has complied fully with all federal, state and local rules and regulations pertaining to low level waste shipment. The Office of Radiological Safety (ORS) is responsible for the proper managing of all low level waste on the GIT campus.

In response to your request for action to be taken by licensees, the following is submitted for your review in the order shown on the I. E. Bulletin No. 79-19.

1. The current DOT regulation 49 CFR Parts 170-179, 10 CFR Parts 19-71, 10 CFR Part 150, the appropriate air line tariffs, U. S. Postal regulation publication 6, State transportation requirements, and other rules of good practice are maintained by ORS.
2. Current requirements of burial firms (including copies of their licenses) are maintained by the ORS. Furthermore, before any shipment is made a telephone call is placed to the burial firm to determine the requirements at the time of shipment.
3. These persons are currently designated as responsible for the safe transfer, packaging and transporting of low level radioactive materials:
 - (a) Robert M. Boyd (ORS)
 - (b) Steven N. Millspaugh (ORS)
 - (c) John M. Smith (ORS)
 - (d) Robert S. Kirkland (Nuclear Engineering)
 - (e) Jerry E. Taylor (Nuclear Engineering)

A file of those who are so designated will be maintained by ORS.

4. In the past detailed instructions and operating procedures have been given to those persons listed in item number 3. In the future a file will be maintained showing management approved instructions and procedures.

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GEORGIA INSTITUTE OF TECHNOLOGY

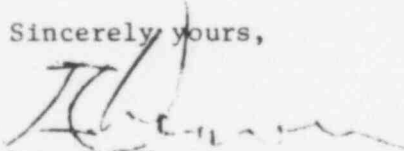
Director of Region II
August 31, 1979
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5. There will be periodic retraining of personnel in the appropriate regulatory requirements (DOT, NRC, and others), the waste burial license requirements, and in local procedures. A record will be maintained for inspection by appropriate regulatory and auditing agencies.
6. Every three months an on-campus Radiological Safety short course is conducted by ORS. Item 6 is a part of this training.
7. An audit by members of either the GIT Nuclear Safeguards Committee or Radiation Protection Committee will be made periodically to assure compliance with all appropriate requirements.
8. A record of all audits will be maintained, the first of which will be completed by October 8, 1979.
9. This plan of action and schedule is submitted within 45 days.

In response to the questions concerning waste shipments made by Georgia Tech during 1978 and the first six months of 1979, the following is submitted:

1. Three low level waste shipments were made to Chem-Nuclear in Barnwell, South Carolina (5/24/78, 1/18/79, 5/17/79). The total volume of waste generated by GIT was 336 ft³ on 5/24/78; 504 ft³ on 1/18/79; and 180 ft³ on 5/17/79 for a total of 1020 ft³.
2. The quarterly amount (curies) shipped was .028 Ci on 5/24/78; 8.2 Ci on 1/18/79; and 2.1 Ci on 5/17/79; for a total of 10.4 Ci. The principal isotopes were H-3 and C-14.
3. Georgia Tech generated some liquid low level waste during the period specified. Liquid waste was absorbed in vermiculite in 5 gallon containers, then placed in vermiculite filled 55 gallon drums.

Sincerely yours,



Lynn E. Weaver
Director

LEW:pf

Attachment: (1)

I. E. Bulletin No. 79-19

xc: Mr. R. M. Boyd
Dr. M. W. Carter
Dr. M. V. Davis

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POOR ORIGINAL

Accession No: 7908070515
SSINS No: 6820

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

August 10, 1979

IE Bulletin No. 79-19

PACKAGING OF LOW-LEVEL RADIOACTIVE WASTE FOR TRANSPORT AND BURIAL

Description of Circumstances:

Low-level radioactive waste is that waste which can be transferred and shipped to one of three waste burial facilities which are located in and licensed by the Agreement States of Nevada, South Carolina, and Washington. On July 10, 1979, the Governors of the three states notified NRC Chairman Hendrie of the serious and repeated disregard for rules governing the shipments of low-level radioactive wastes to these burial facilities.

Examples of violations of Agreement State, DOT and NRC rules follow:

Improperly packaged uranium fines igniting packaged liquid scintillation vials in combustible waste is believed to have caused a fire and destruction of a truck at the Beatty, Nevada burial facility on May 14, 1979.

On July 2, 1979, three of twelve steel containers shipped to the Beatty burial facility were found to be leaking radioactive material. The material was described on the bill of lading as being a solid inorganic salt (evaporator concentrates solidified with urea formaldehyde) from a reactor facility. The Governor of the State of Nevada ordered the drums to be shipped out of the state and the burial facility was temporarily closed.

On July 30, the first shipment into the reopened Beatty facility contained free liquid in "solid" material. The radioactive contents were sand filters used at an insitu leaching process at a uranium mill.

Forty-three shipments with sixty-three deficiencies were observed during the package inspection program between April 10 and July 5, 1979, by the Agreement State of South Carolina, at the Barnwell, S.C. burial facility. The shipments were from reactor, medical, industrial and military facilities.

On June 28, 1979, the Federal Highway Administration issued a Notice of Violation to a reactor facility proposing a \$10,000 fine for truck contamination resulting from improper closures on 55-gallon drums of LSA material and for improper loading of the drums on the vehicle. 754245

There are a few examples of shipments of radioactive material to burial facilities which did not fully meet NRC, DOT and Agreement State requirements which were developed to protect the health and safety of the public. The Governors of the three States with licensed burial facilities have indicated that if the situation is not rectified, they may have to initiate actions which would deny use of the three burial sites by violators.

Sources of Information:

The DOT regulatory requirements can be found in 49 CFR Parts 170-179. The NRC regulatory requirements can be found in 10 CFR Parts 19 to 71. The NRC regulatory requirements for Agreement State licensees in non-agreement states are in 10 CFR Part 150. Copies of the regulations may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402.

Information about licensing requirements for NRC packages can be obtained from the NRC Transportation Branch (301-427-4122). Information about DOT packaging and transport requirements can be obtained by calling the DOT Office of Hazardous Materials (202-426-2311).

Action To Be Taken By Licensees:

To assure the safe transfer, packaging, and transport of low-level radioactive waste, each licensee is expected to:

1. Maintain a current set of DOT and NRC regulations concerning the transfer, packaging and transport of low-level radioactive waste material.
2. Maintain a current set of requirements (license) placed on the waste burial firm by the Agreement State of Nevada, South Carolina, or Washington before packaging low-level radioactive waste material for transfer and shipment to the Agreement State licensee. If a waste collection contractor is used, obtain the appropriate requirements from the contractor.
3. Designate, in writing, people in your organization who are responsible for the safe transfer, packaging and transport of low-level radioactive material.
4. Provide management-approved, detailed instructions and operating procedures to all personnel involved in the transfer, packaging and transport of low-level radioactive material. Special attention should be given to controls on the chemical and physical form of the low-level radioactive material and on the containment integrity of the packaging.
5. Provide training and periodic retraining in the DOT and NRC regulatory requirements, the waste burial license requirements, and in your instructions and operating procedures for all personnel involved in the transfer, packaging and transport of radioactive material. Maintain a record of training dates, attendees, and subject material for future inspections by NRC personnel.
6. Provide training and periodic retraining to those employees who operate the processes which generate waste to assure that the volume of low-level radioactive waste is minimized and that such waste is processed into acceptable chemical and physical form for transfer and shipment to a low-level radioactive waste burial facility.

7. Establish and implement a management-controlled audit function of all transfer, packaging and transport activities to provide assurance that personnel, instructions and procedures, and process and transport equipment are functioning to ensure safety and compliance with regulatory requirements.
8. Perform, within 60 days of the date of this bulletin, a management-controlled audit of your activities associated with the transfer, packaging and transport of low-level radioactive waste. Maintain a record of all audits for future inspections by NRC or DOT inspectors. (Note: If you have an established audit function and have performed such an audit of all activities in Items 1-6 within the past six months, this audit requirement is satisfied.)
9. Report, in writing within 45 days, your plan of action and schedule with regard to the above items. In addition, provide responses to the three questions below. Reports should be submitted to the Director of the appropriate NRC Regional Office and a copy should be forwarded to the NRC Office of Inspection and Enforcement, Division of Fuel Facility and Materials Safety Inspection, Washington, D.C. 20555.

Provide answers for 1978 and for the first six months of 1979 to the following questions:

1. How many low-level radioactive waste shipments did you make? What was the volume of low-level radioactive waste shipped?

(Power reactor licensees who report this information in accordance with Technical Specifications do not need to respond to this question.)

2. What was the quantity (curies) of low-level radioactive waste shipped? What were the major isotopes in the low-level radioactive waste?

(Power reactor licensees who report this information in accordance with Technical Specifications do not need to respond to this question.)

3. Did you generate liquid low-level radioactive waste? If the answer is 'yes,' what process was used to solidify the liquid waste?

Licensees who do not generate low-level radioactive waste should so indicate in their responses and do not need to take other actions specified in the above items.

Approved by GAO, B180225 (R0072); clearance expires 7-31-80. Approval was given under a blanket clearance specifically for identified generic problems.