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UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-0001

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October 15, 1996

Dr. William D. Travers
Director, Spent Fuel Project Office
Office of Nuclear Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Dr. Travers:

Subject: Advance Route Approval - Docket No. 50-184

NIST requests approval of the following proposed route for shipment of its research reactor spent fuel. This is the same route that was used in nine shipments before. The following information is provided.

a. Cargo description

- (1) There will be 40-84 fuel sections per shipment depending on the cask used. The fuel is MTR-plate-type research reactor element. Each shipment will contain approximately 2-5 Kg U-235.
- (2) Any of the following three licensed shipping casks will be used depending on availability.
 - (i) BMI-1, Certificate of Compliance #5957
 - (ii) GE-2000, Certificate of Compliance #9228
 - (iii) NAC-LWT, Certificate of Compliance #9225
- (3) For the BMI-1, the loaded weight of the transport vehicle is approximately 29 tons and the weight of the loaded cask assembly is approximately 12 tons.
For the GE-2000 the loaded weight of the transport vehicle is approximately 34 tons and the weight of the loaded cask assembly is approximately 17 tons.
For the NAC-LWT, the loaded weight of the transport vehicle is about 46 tons and the weight of the loaded cask assembly is approximately 29 tons.

b. Anticipated Schedule

- (1) Approximately four shipments are anticipated in 1997.
- (2) The duration of each shipment from point of origin to destination is about one day.
- (3) The tentative schedule is for two shipments in April, 1997 and two shipments in July, 1997.

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c. Route Information

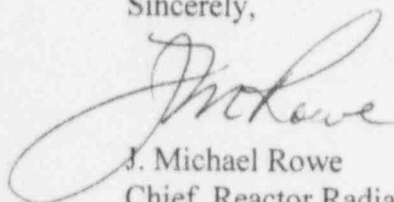
- (1) Shipments will originate at the NIST site, I-270 and Quince Orchard Road, Gaithersburg, Maryland with destination to U. S. DOE facilities at the Savannah River Site near Aiken, South Carolina.
- (2) The proposed routing is:
NIST - I-270 - I-70 - I-81 - I-77 - I-40 - I-26 - SC-121 - SC-19 - DOE-SRS.
- (3) The estimated distance over the proposed route is about 725 miles.
- (4) The estimated travel time is about 18 hours based on an average speed of 40 miles per hour.
- (5) The designated heavily populated areas which would be traversed on the proposed route are:
 - (i) Roanoke, Virginia.
 - (ii) Gaithersburg, Maryland to the edge of Germantown, Maryland (I-270 and Maryland Route 118).

d. Physical Protection Arrangements Planned for Heavily Populated Areas

- (1) At Roanoke, Virginia, arrangements will be made with the local law enforcement. At Gaithersburg, Maryland, escort will be provided by the NIST Police.
- (2) Communications will be provided between the transport and escort vehicles and between the transport and the transport company communication center.

If you need additional information, please contact my deputy, Tawfik Raby, at 301-975-6257.

Sincerely,



J. Michael Rowe
Chief, Reactor Radiation Division