



STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC HEALTH

BYRON J. FRANCIS, M.D.  
ACTING DIRECTOR

July 13, 1979

Robert G. Ryan, Director  
Office of State Programs  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Director Ryan:

This is the fourth quarter progress report for the surveillance period of March 7, 1979, to June 7, 1979, regarding the joint study on surface transportation of radioactive materials within the State of Illinois.

During the fourth quarter, the following information was obtained from the state troopers involved in the study:

- A. There were twenty-one (21) surveillance stops.
- B. Of the twenty-one (21), eight (8) were contract carriers, six (6) were common and six (6) were private carriers. One surveillance stop resulted from the driver of a passenger auto who had recently had an Iodine-131 thyroid scan. This illustrates the excellent sensitivity of the scintillation detectors utilized by the troopers.
- C. A total of 283.582 curies of radioactive material was present for twelve (12) shipments. There was no indication of the total quantity of material being shipped in eight (8) surveillance stops involving fuel cycle and waste-fuel cycle LSA radioactive material, only gross weight.
- D. The radiation readings conducted in the cab of the vehicles varied from 0.1 to 0.8 mR/hr with an average of 0.23 mR/hr.
- E. The application class for the radioactive material shipment's stops was eight (8) fuel cycle LSA, six (6) waste-fuel cycle LSA, five (5) industrial, and one (1) medical waste.
- F. The Transport Index varied between 0.3 and 7.5 with an average of 2.68 for twelve (12) shipments as indicated on the shipping papers or determined by the state troopers.

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- G. Complete and accurate shipping papers (e.g. Transport Index, hazard class, shipment activity, etc.) were present in only twelve (12) instances.
1. The Transport Index was not indicated for eight (8) surveillance stops.
  2. The shipping label (i.e. Yellow-11) was not indicated in two (2) instances.
  3. The shipping papers were absent in five instances.
- H. The normal form in which the radioactive material was shipped was solid in all instances.
- I. Citations were issued in three (3) instances. The reasons for the notice of apparent violation related to transportation of radioactive materials were the following:
1. Drums not properly marked containing natural uranium.
  2. Shipping papers not present for an isotope gauge used for pipeline radiography.
  3. Package content and Transport Index not indicated on a radiography camera source.
- J. Surveillance shipment stops occurred in the following districts.
1. Elgin district had one (1) stop.
  2. Joliet district had twelve (12) stops.
  3. Rock Island district had two (2) stops.
  4. Peoria district had one (1) stop.
  5. Springfield district had two (2) stops.
  6. DuQuoin district had three (3) stops.
- K. The vehicles surveyed were of exclusive use in sixteen (16) instances.

Six additional troopers have been trained during the month of May for participation in the transportation surveillance study. During the fourth quarter, unfortunately only seven (7) troopers were partially involved in implementing the transportation study, but all sixteen (16) troopers had been actively involved in other duties (e.g. training, law enforcement, etc.)

The first quarter report for the next contract year should have a significant

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increase in surveillance stops conducted since on July 1, 1979, the primary duty of those troopers involved in the study will be hazardous materials.

If you have any questions or desire additional information, please feel free to contact Maury Neuweg, Chief, Division of Radiological Health at (217) 782-2342.

Very truly yours,

*Byron J. Francis, M.D.*

Byron J. Francis, M.D.  
Acting Director of Public Health

cc: Dan K. Webb, Director  
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