



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

PDR:HQ

April 13, 1979

License No. SUA 551

Petrotomics Company
ATTN: Mr. J. H. Whitman
Resident Manager
P.O. Box 2508
Shirley Basin, Wyoming 82615

Gentlemen:

This refers to the investigation conducted by Ms. J. Dawson and Mr. R. J. Everett of this office on March 23-25, 1979, of the circumstances surrounding the spill of Uranium Concentrate near Wichita, Kansas on March 22, 1979.

Areas examined during the investigation and our findings are discussed in the enclosed investigation report. Within these areas, the investigation consisted of interviews with personnel and observations by the inspector.

Clean-up operations associated with the spill were under the jurisdiction of the State of Kansas Health Department since Kansas is an Agreement State.

In accordance with Section 2.790 of the NRC "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed investigation report will be placed in the NRC's Public Document Room. If this report contains any information that you believe to be proprietary, it is necessary that you make a written application within twenty (20) days to this office to withhold such information from public disclosure. Any such application must include a full statement of the reasons it is claimed that the information is proprietary. It should be prepared so that proprietary information identified is contained in a separate part of the document, since the application, excluding this separate part, will also be placed in the Public Document Room. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

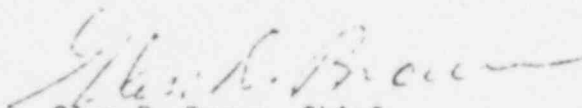
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April 13, 1979

Should you have any questions concerning this letter, please let me know.

Sincerely,



Glen D. Brown, Chief
Fuel Facility and Material
Safety Branch

Enclosure:

IE Investigation Report No. 79-01

cc:

1. Department of Transportation
2100 2nd Street, S.W.
Washington, D.C. 20590
2. Kansas Department of Health and Environment
Mr. Gerald N. Allen
535 Kansas Avenue
Topeka, Kansas 66603

U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region IV

Report of Investigation

IE Investigation Report No. 79-01

License No. SUA-551

Subject: Spill of Uranium Concentrate on I-235,
Wichita, Kansas

Licensee: Petrotonics Company
Shirley Basin, Wyoming

Carrier: Salt Creek Frieghtways

Period of Investigation: March 23-25, 1979

Investigators: J. M. Dawson 4-11-79
J. M. Dawson, Radiation Specialist Date

Glen D. Brown for R. J. Everett 4/11/79
R. J. Everett, Radiation Specialist Date

Reviewed by: Glen D. Brown 4/11/79
Glen D. Brown, Chief, Fuel Facility and
Material Safety Branch Date

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REASON FOR INVESTIGATION

Collect facts concerning the spill and provide a point of NRC contact for all interested parties. Liaison with the State of Kansas on appropriate release limits for contaminated land and equipment.

SCOPE OF INVESTIGATION

Visit the wreck site and establish a chronology of the recovery operations.

CONCLUSION

Responsibility for decontamination was assumed by Salt Creek freightways under the regulatory authority of the state of Kansas. Salt Creek contracted with Allied Nuclear (Houston) for health physics services. Allied Nuclear relied on the shipper (Petrotomics) and the Kansas Industrial Environment Service company for the workers used in the clean-up operation.

The spill caused no public health problems and decon worker exposure is expected to be minimal.

Decontamination limits for the truck and van and other equipment were those described in the NRC document, "Guidelines for Decontamination of Facilities and Equipment prior to release for unrestricted use" (See attached Summary Report).

SUMMARY OF FACTS

The spill occurred at 0900 hours, March 22, 1979. Region IV was notified by the DOE, Albuquerque, New Mexico at 9:35 a.m. on March 22, 1979. Region IV notified IE:HQ, EPA, and DOT, Kansas City. Contacts were made with the Petrotomics Company and state of Kansas officials. A Region IV Radiation Specialist was at the site March 23, 1979. A second Radiation Specialist was on the site March 24, 1979. NRC representation continued through March 25, 1979.

Summary Report, Spill of Uranium Concentrate
Wichita, Kansas

At 0900 hours, March 22, 1979, a commercial carrier, carrying 54 drums of uranium concentrate, overturned on Interstate 235 at the North Meridian Avenue overpass. Twenty-eight drums were breached along seams or at the lid. Two thousand pounds was estimated to have been spilled in the truck trailer and on the ground.

The Kansas Highway patrol diverted traffic, and an ambulance took the truck driver to the hospital. A local Kansas State Department of Health representative was at the accident scene within thirty minutes and a county civil preparedness team provided radiation survey capabilities. News media interest was high. RIV was notified by DOE, Albuquerque at 9:35 a.m. on March 22, 1979. Region IV contacted the Petrotomics Company and state Kansas officials on March 22, 1979.

Due to heavy rain, a dike was built to prevent uranium concentrate from escaping the immediate area. Plastic was laid over loose concentrate in the truck trailer and on the pavement. Salt Creek frieghtways (the carrier) contracted with Allied Nuclear of Houston, Texas for clean-up support. Due to a shortage of Allied Nuclear personnel, Kansas Industrial Environmental Services and Petrotomics personnel began decontamination procedures with Allied Nuclear monitoring.

On March 23, 1979, a Region IV Radiation Specialist visted the site, finding weather conditions were hampering the decontamination procedure. Intact and plastic wrapped breached drums had been transferred to a Santa Fe trucking company trailer and removed to the Kerr McGee Sequoyah plant. As rain diminished, decon operations resumed. The state of Kansas provided regulatory control of the decon operation working closely with Allied Nuclear personnel.

Acceptable levels following clean-up were set at background for the soil and pavement and for equipment, in accordance with the NRC document, "Guidelines for Decontamination of Facilities and Equipment prior to Release for unrestricted use", dated December, 1975.

On March 24, 1979, a second Region IV Radiation Specialist visited the site. The weather cleared and the soil and roadway began to dry out. Airborne radioactivity surveys were made by Allied Nuclear personnel as well as contamination monitoring on equipment and personnel leaving the site. The state of Kansas personnel verified contamination levels had been met on all released equipment.

On March 25, 1979, the truck and trailer was decontaminated to nearly acceptable levels, and road shoulders were graded to clean contaminated soil. Contaminated soil and debris will be loaded into barrels for disposal as waste. Water in the ditches will be pumped into tanks for disposal. It was

estimated that 100 pounds of uranium concentrated remained on the ground and roadway at the end of the day on March 25, 1979. Completion of all decon work was expected to take another seven-ten days. Decon worker exposure, if any, is expected to be minimal. Urine bioassay will be conducted on all workers associated with the incident to confirm adequacy of health physics procedures used during decon operations.

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