

APPENDIX A

NOTICE OF VIOLATION

Based on the results of an NRC inspection conducted on June 13-15 and 20-21, 1977, it appears that certain of your activities were not conducted in full compliance with conditions of your NRC License No. DPR-50 as indicated below. A and B are infractions and item C is a deficiency.

- A. 10 CFR 20.203(c)(1) requires that each high radiation area shall be conspicuously posted with a sign or signs bearing the radiation caution symbol and the words: CAUTION-HIGH RADIATION AREA, and your procedure OP 1104-28 "Solid Waste Disposal" in Section 28.2.1.8 requires that radiation warning signs shall be utilized prior to the start of any packaging operation as required to restrict access of personnel into areas which may be subject to high radiation levels.

Contrary to this requirement at 4 P. M. on June 15, 1977, a high radiation area around two solidified radwaste containers in the Auxiliary Building, an area accessible to personnel, was not posted as a high radiation area. The sign had been removed earlier in the day even though the radiation level was 150 mR/hr at 12-inches from each of these containers.

This item is recurrent in that an item of this nature was found during an inspection conducted during April, 1977.

- B. Technical Specifications Section 6.8 "Procedures" requires that written procedures be established and maintained that meet or exceed the requirements of Sections 5.1 and 5.3 of ANSI N18.7-1972 subsection 5.3.7 of which requires written and approved procedures for the control, treatment and management of radioactive waste. Procedures nos. AP 1003 "Radiation Protection Manual;" OP 1104-28 "Solid Radwaste Disposal System-Packaging and Solidification of Solid and Liquid Radwaste", and OP 1104-29 "Liquid Waste Disposal System" which were prepared pursuant to this requirement state that:

1. "All shipments of radioactive materials will comply with DOT Regulations." (1003.6.3.1.3)

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- a. Contrary to this requirement solidified radioactive waste shipment no. 77-60 was not provided adequate leak-resistant and corrosion-resistant inner containers, enough absorbent material and an adequate secondary container to retain the radioactive contents under normal conditions of transport as required by 49 CFR 173.393(g) (1), (2) and (3) and this resulted in releasing in excess of 105 microcuries of liquid radioactive material into the transport trailer and dripping a small but detectible quantity of radioactive material on the public highway on June 13, 1977.
 - b. Contrary to this requirement the containers used for shipment no. 77-60 were not marked with the shipping name of the hazardous material, the transport index and the gross weight of each container, and the proper size letters for some of the information as required by 49 CFR 172.100, -173.310 (a)(1) and (2), and this could have caused errors in transporting and receiving this shipment.
 - c. Contrary to this requirement specific instructions to the carrier for maintenance of vehicle exclusive use controls were not provided in the shipping papers as required by 49 CFR 173.393(j) even though six of the containers of shipment no. 77-60 each had a transportation index greater than 10 and the aggregate transport index was greater than 50, and this could have caused errors in transporting this shipment.
2. "The Shift Foreman shall enter instructions for the sampling, analysis and packaging of batches of waste...in the "Process Instruction and Data Sheet" prior to the initiation of any transfer from these tanks and the operator(s) performing these function(s) shall enter all subsequent data concerning sampling, analysis and packaging of a batch of solid waste." (1104-28.2. 1.1)

Contrary to this requirement no entries were made on "Process Instruction and Data Sheets" for any batch of solid waste prepared during the period January 1 to June 13, 1977, and specifically there was no information on the eight solidified radioactive waste containers composing shipment no. 77-60, and this could have resulted in errors in managing this material, and prevented any such errors being identified.

3. "The Supervisor of Operations, or his designee, designates on the applicable data log that a sufficient amount of radwaste has accumulated in a specified tanks to warrant initiation of the packaging operation." (1104-28.3.1.a)

Contrary to this requirement, no such data log appeared to be maintained, and this could have resulted in errors in radwaste operations.

4. "All work or entry for surveillance purposes in radiation areas that could cause exposure to radiation in excess of the following limits will require a Radiation Work Permit - 5 mrem/hr...greater than 2200 DPM/100 cm² Beta-Gamma," and "...it is the responsibility of the personnel involved to adhere to instructions listed on the Radiation Work Permit. (1003-2.10)

Contrary to this requirement an individual was found on June 21, 1977, at 2 P. M. who was in a posted high radiation area and contaminated area, wherein 150 mR/hr and 50,000 DPM removable contamination existed, without the shoe covers, gloves and protective garment listed in the applicable Radiation Work Permit, No. 11962.

5. Contrary to the referenced requirement of ANSI N18.7-1972 no written approved procedure was provided for the draining of solid radwaste containers and for patching radwaste containers that leaked prior to shipment, and the failure to effectively perform these operations resulted in radioactive liquid escaping from four containers during shipment No. 77-60 on June 13, 1977, releasing in excess of 105 microcuries of radioactivity into the transport trailer and dripping a detectible quantity on the public highway.
- C. 10 CFR 20.203(f)(1) and (2) require that each container of licensed material shall bear a label showing the radiation caution symbol and the words "Caution-Radioactive Material", and identification of the radioactive contents.

Contrary to this requirement, on June 15, 1977, there were two 50 cu. ft. containers of solidified radioactive waste stored in the Auxiliary Building, an area accessible to personnel, without labels showing the required information, and the radiation level was measured to be 150 mr/hr at 12-inches from each of these containers which were not part of any shipment or immediate planned shipment.