

ENCLOSURE 1

NOTICE OF VIOLATION

Virginia Electric and Power Company
Surry Power Station

Docket Nos.: 50-280 and 50-281
License Nos.: DPR-32 and DPR-37

During the Nuclear Regulatory Commission (NRC) inspection conducted on February 9-13, 1987, a violation of NRC requirements was identified. The violation involved a failure to comply with the requirements of the Department of Transportation and to provide adequate radiation control procedures. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1986), the violation is listed below:

Technical Specification 6.4.B requires that radiation control procedures be provided and made available to all station personnel.

10 CFR 71.5a requires that each licensee who transports licensed material outside of the confines of its plant or other place of use, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation in 49 CFR Parts 170 through 189.

49 CFR 172.401(a)(2) requires that no person may offer for transportation any package bearing a label specified in this subpart unless the label represents the hazardous material in the package.

49 CFR 172.403(g)(2) requires that the activity of the package, expressed in appropriate curie units must be entered in the blank space on the Radioactive label.

49 CFR 172.310(a)(1) requires that each package of radioactive materials in excess of 110 pounds must have its gross weight plainly and durably marked on the outside of the package.

49 CFR 173.475(i) requires that before each shipment of any radioactive materials package, the shipper shall ensure by examination or appropriate tests, that external radiation levels are within allowable limits.

49 CFR 173.441(b)(2) requires that radiation levels at any point on the outer surface of exclusive use vehicles, including the top and underside of the vehicle, must not exceed 200 millirem per hour during transportation.

Contrary to the above, the licensee failed to comply with the requirements of the Department of Transportation and to provide adequate radiation control procedures in that:

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1. Radioactive Waste Shipment Number 1186-295-A, transferred to the low level radioactive waste disposal site near Barnwell, SC was found upon its arrival on November 21, 1986, to have:
 - (a) Displayed an "empty" label which did not represent an actual condition of the package.
 - (b) No units of activity recorded on the Yellow II Radioactive label.
 - (c) No marking of the gross weight on the outside of the package.
2. Licensee procedure HP 3.2.9, Radwaste Packaging and Shipment of Solid Radioactive Waste to Barnwell, South Carolina, dated January 8, 1986, neither included the top of the vehicle in the description of outer vehicle surfaces which must be surveyed prior to shipment nor stated indirect evaluation criteria that could be used in lieu of actual measurements to determine compliance with external vehicle radiation limits.

This is a Severity Level IV violation (Supplement V).

FOR THE NUCLEAR REGULATORY COMMISSION


J. Philip Stohr, Director
Division of Radiation Safety
and Safeguards

Dated at Atlanta, Georgia
this 30th day of June 1987

ENCLOSURE 2

Staff Assessment of Licensee Response

Summary of Licensee's Response

The licensee's response stated that the "examination or appropriate tests" required by 49 CFR 173.475(i) does not imply that direct radiation surveys of all vehicle external surfaces are the only means to ensure that radiation levels are within allowable limits. Direct surveys of the sides and bottom of closed transport vehicles are performed as required by procedure. Direct surveys of the tops of closed transport vehicles are not required by procedure due to personnel safety concerns. Rather, indirect surveys (package surveys, vehicle interior surveys, etc.) are performed and evaluated to ensure that the top outer surface of the vehicle could not exceed 200 millirem per hour.

The licensee contends, for the two shipments cited in the Notice, radiation levels in excess of 200 millirem per hour could not have been present on the top outer surface of the vehicle due to the low contact dose rates on the packages and the configuration of the packages in the vehicle. In summary, the licensee stated that, for both shipments, the container and vehicle survey data was evaluated by knowledgeable radwaste personnel to assure that vehicle radiation levels, including the top outer surface, were well below allowable limits. This evaluation was performed prior to shipment certification and vehicle departure.

NRC Evaluation

The NRC staff agrees that indirect means of assuring that external radiation levels on tops of transport vehicles are within limits may be used. Such indirect means should include documented criteria and controls in applicable procedures to limit individual package dose rates and to configure the packages within the vehicle. In development of the indirect criteria, the licensee must consider the potential dose rates on the top vehicle surface from an accumulation of individual packages in addition to single packages. However, it was noted during the inspection that the licensee had no formal system in place, direct or indirect, to determine the dose rates on the tops of vehicles. The staff believes, therefore, that a more appropriate reference in the Notice of Violation is the Technical Specification 6.4.B requirement that radiation control procedures be provided.

With respect to the argument that direct surveys of tops of vehicles are not performed due to personnel safety concerns, the staff believes that these surveys can easily be performed in a safe manner. Methods commonly used by other licensees to perform these surveys were discussed with the licensee during the inspection. The NRC staff agrees that actual contact dose rates on the top surfaces of the vehicles for the two shipments cited were likely less than the allowable limit.

NRC Conclusion

For the above reasons, the NRC staff concludes that a revised Notice of Violation should be issued.