



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30303

Report Nos. 50-280/79-16 and 50-281/79-24

Licensee: Virginia Electric and Power Company
 P. O. Box 26666
 Richmond, Virginia 23261

Facility Name: Surry Power Station

License Nos. DPR-32 and DPR-37

Inspection at Surry Site near Williamsburg, Virginia

Inspectors:	<u><i>S. E. Ewald</i></u>	<u>5/15/79</u>
	S. E. Ewald	Date Signed
	<u><i>C. M. Hosey</i></u>	<u>5/15/79</u>
	C. M. Hosey	Date Signed

Accompanying Personnel: G. Cwalina
 R. Emch

Approved by:	<u><i>G. R. Jenkins</i></u>	<u>5/15/79</u>
	G. R. Jenkins, Acting Section Chief, FFMS Branch	Date Signed

SUMMARY

Inspection on March 27-30, 1979.

Areas Inspected

This routine unannounced inspection involved 60 inspector-hours on site in the areas of solid radioactive waste, reactor coolant pipe decontamination, radiation protection aspects of the steam generator replacement project, and previously identified items.

Results

Of the 4 areas inspected, no apparent items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

Licensee Employees

- *W. L. Stewart, Station Manager
- *J. L. Wilson, Superintendent Operations
- *J. A. Peebles, Superintendent Technical Services
- *R. M. Smith, Health Physics Supervisor
- *P. P. Nottingham, IV, SGRP Assistant Supervisor Health Physics
- *A.L. Parrish, III, SGRP Project Manager
- H. Gant, SGRP Shift Supervisor

NRC Resident Inspector

- *D. L. Burke

2. Exit Interview

The inspection scope and findings were summarized on March 30, 1979 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Closed (280/78-27-01; 281/78-27-01) Unresolved item. Determination of activity in packaged solid waste. An inspector reviewed the licensee's revised procedure for determining curies/package for solid radioactive waste. The inspector concluded the new conversion factors are conservative when compared with inspector derived numbers. The Solid Waste is discussed further in paragraph 5.

Open (280/79-27-02; 281/79-27-02) Unresolved item. Man-Rem dose commitments from resin systems. Discussions with licensee representatives revealed resin liners for use in the liquid waste treatment system are still being filled inside the Decon Building. Health Physics representatives stated that, as of April 1, 1979, the resin liners would be filled in a nonrestricted area.

Closed (281/79-22-16) Unresolved Item. Locked High Radiation Areas in Containment. An interpretation of regulatory requirements by the NRC concluded it is acceptable for the licensee to exercise positive access controls at the containment entrance hatch. The inspector had no further questions.

Open (280/79-09-03; 281/79-10-03) Noncompliance. Failure to label contaminated waste drums. On March 28, 1979, the inspector observed the

following items of radioactive material which were not labeled in accordance with 10 CFR 20.203(f): (1) five filters temporarily stored on the radioactive waste storage pad. The highest radiation level on contact with each filter was approximately 1.6 R/hr. (2) A section of reactor coolant system piping temporarily stored outside Unit 2 equipment hatch. The highest radiation level on contact with the outside of the package was 2.5 mr/hr. These are additional examples of failure to label radioactive containers reported as noncompliance with 10 CFR 20.203(f) in IE Report Nos. 50-280/79-9 and 50-281/79-10 of March 28, 1979. It should be noted that the licensee had not formally responded to the item of noncompliance prior to the inspector identifying the additional examples of noncompliance.

4. Radioactive and Contaminated Material Control

- A. By review of records, observations, and discussions with licensee representatives, the inspector evaluated the licensee's program for radioactive material control, including handling of radioactive material, intra-site transfers, identification, labeling, storage of material and the disposal of radioactive waste. Specific comments concerning the program are contained in the paragraphs below.
- B. On the evening of March 28, 1979, the inspector surveyed a loaded trailer containing low specific activity radioactive material that the licensee was preparing for shipment to a licensed burial facility. The inspector found an area approximately 6 inches in diameter on the side of the trailer that read 340 mr/hr on contact with the trailer. A survey performed by the licensee on March 13, 1979, indicated the highest radiation levels on contact with the trailer was 8 mr/hr. The inspector brought this apparent discrepancy to the attention of a licensee representative. The licensee representative stated the truck would be resurveyed prior to leaving the site. However, on March 29, 1979, a licensee representative informed the inspector that the truck had not been resurveyed prior to leaving the site. 49 CFR 173.393(j) requires, in part, that the radiation levels on the external surface of a closed vehicle which has been consigned for exclusive use must be less than 200 mr/hr. At the request of the licensee, the operator of the burial ground surveyed the truck upon arrival. The highest radiation level reported was 225 mr/hr. 49 CFR does not require any notification when radiation limits are exceeded. The inspector selectively reviewed shipping records for radioactive material shipped out between February 9, 1979 and March 28, 1979 and identified the following discrepancies in the shipping papers. 49 CFR 172.200 specifies the information which must be included on the shipping papers for hazardous material.
- a. The proper shipping name prescribed for the material was not used on the shipping papers as required by 49 CFR 172.101.

- b. The category of label applied to each package was omitted on shipping papers for several shipments.
- c. The transport index was omitted on shipping papers for one shipment.
- d. The material for one shipment was described as "Radioactive Material - Limited Quantities" and exempted from specification packaging, marking and labeling in accordance with 49 CFR 173.391. However, the shipping papers indicated the highest radiation levels on the package was 0.7 mr/hr which exceeded the maximum allowable dose rate of 0.5 mr/hr for limited quantities of radioactive material.

A licensee representative stated that the individuals responsible for preparation and review of shipping papers would be reinstructed in the proper preparation of shipping papers. This was identified as an open item (280/79-16-02; 281/79-24-02).

- C. During a tour of the site on March 28, 1979, the inspector observed approximately twelve 55-gallon drums of industrial oil stored on the same outdoor pad as radioactive material. The concrete slab below the drum storage rack was covered with oil. A licensee representative stated that smoking was permitted in the area surrounding the radioactive material storage area. The licensee representative stated that drums of oil would be removed from the area. Wrappings on some of the radioactive material in the outside storage area were torn and some of the covers had been partially removed. The inspector stated that this situation would increase the potential for rain water to seep into the package and for radioactivity to leak out to the surrounding area. A licensee representative stated that the storage of radioactive material would be reviewed. The inspector identified this as an open item (280/79-16-03; 281/79-24-03).

6. Decon Building Drain

During a tour of the radiation controlled area on March 28, 1979, an inspector took several contamination smears in the area of the roll up equipment door to the Decon building. One₂ smear indicated removable activity of approximately 15,000 dpm/100cm². Health Physics representatives were notified and the area was promptly surveyed, posted, and roped off. Further investigation by the inspectors and licensee health physics staff revealed contamination around a yard drain near the roll-up door. A sample of dirt and silt from the drain was analyzed indicating activities of approximately 0.001 μ ci/cc (comprised of Cobalt 58 and 60, Cesium 134 and 137, and Manganese 54). Licensee representatives stated

the source of the activity might be the subsurface drain system which is sampled on a routine basis. The inspectors discussed the yard drain system with licensee representatives and determined the drain in question leads straight to the discharge canal. Licensee representatives stated they would investigate this item further to identify the source of the activity. The inspector stated this item would be reviewed during future inspections (280/79-16-01; 281/79-24-01).

7. Reactor Coolant Pipe Decontamination

- a. An inspector reviewed portions of the ETA addressing decontamination of removed sections of reactor coolant pipe. Decontamination involves removal of end shield plugs, removal of slag from the pipe, and decontamination using an electropolishing technique. The removal of shield plugs and slag are carried out in a tent in Unit 2 containment with a special filtered ventilation system. Workers wear supplied air respirators as a precaution against airborne particulates. In addition, air samples are taken during grinding and cutting operations.
- b. An inspector observed the removal of shield plugs on March 28 involving the cutting and grinding of tack welds holding the shield plugs in place. The inspector observed workers removing slag from a section of pipe on March 29. The slag was being removed using a pneumatic grinding disc. When the air sample particulate filter was removed, it was found to be radioactive by gamma analysis. The inspector was told the filter had surface radiation levels of about 35 mrem/hr. In addition, the interior of the tent was found to be contaminated in excess of normal levels. Reactor coolant pipe decon operations were temporarily suspended. Some questions as to the validity of the air sample were raised in that the sampler had been placed on the floor and was subject to contamination and the sampler (high volume) ran in excess of one hour. Subsequent air samples indicated no significant airborne activity. The worker involved was whole body counted and showed no uptake of radioactive materials. In addition, the radiation work permit was reissued prohibiting the use of grinding equipment for removal of slag.