

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

October 9, 1987

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Serial No. 87-581
NO/GDM:pms
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
NRC INSPECTION REPORT NOS. 50-280/87-22 AND 50-281/87-22

We have reviewed your letter of September 9, 1987, in reference to the inspection conducted at Surry Power Station on August 3-7, 1987 and reported in Inspection Report Nos. 50-280/87-22 and 50-281/87-22. Our response to the two Notices of Violation is addressed in the attachment.

We have no objection to this inspection report being made a matter of public disclosure.

If you have any further questions, please contact us.

Very truly yours,



W. L. Stewart

Attachment

cc: U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N.W.
Suite 2900
Atlanta, GA 30323

Mr. W. E. Holland
NRC Senior Resident Inspector
Surry Power Station

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RESPONSE TO NOTICE OF VIOLATION ITEMS REPORTED DURING
NRC INSPECTION CONDUCTED ON AUGUST 3-7, 1987
INSPECTION REPORT NO. 50-280/87-22 AND 50-281/87-22

NRC COMMENT:

During the Nuclear Regulatory Commission (NRC) inspection conducted on August 3-7, 1987, violations of NRC requirements were identified. The violations involved the inability to perform a source check on a liquid effluent monitor and failure to conduct an evaluation to determine concentrations of radioactive materials in sewage sludge. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10CFR Part 2, Appendix C (1987), the violations are listed below:

- A. Technical Specification Table 4.1-1(a) requires the licensee to perform a source check on radiation monitor 1-RM-IW-108 prior to each liquid radwaste release. Technical Specification Section 1, states that a source check shall be the qualitative assessment of radiation monitor response when the channel sensor is exposed to a radioactive source.

Contrary to the above, the licensee was unable to perform an adequate source check on radiation monitor 1-RM-IW-108 prior to each liquid radwaste release in accordance with the Technical Specification in that the monitor background was so high that the radiation monitor response could not be assessed when the channel sensor was exposed to the radioactive check source.

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

RESPONSE TO NOTICE OF VIOLATION
INSPECTION REPORT NOS. 50-280/87-22 AND 50-281/87-22

1. Admission or Denial of the Alleged Violation:

The violation is correct as stated.

2. Reason for the Violation:

The violation resulted from the failure to perform a proper source check of radiation monitor 1-RM-LW-108 due to misinterpretation of the verification of operability requirements. Free needle movement of the monitor was verified to prove monitor operability since verification by source check was not possible due to high background.

3. Corrective Steps Which Have Been Taken and the Results Achieved:

An Engineering Work Request (EWR) has been prepared and approved by the Station Nuclear Safety and Operating Committee. The modifications will facilitate source checks of 1-RM-LW-108 by removing the contamination causing the high background and by installing a flushing system for future contamination concerns.

In the interim, a source check will be performed manually at the detector 1-RM-LW-108 prior to the release of liquid waste. This will be accomplished by inserting a radioactive source with an activity level greater than background into the detector and verifying proper detector response.

4. Corrective Steps That Will Be Taken to Avoid Further Violations

The EWR will be implemented to remove the contamination causing the high background and to install the flushing system for 1-RM-LW-108.

Also, Periodic Test 26.1, Radiation Monitoring Equipment Check, will be revised to eliminate the option of verification of free needle movement in lieu of a source check to verify radiation monitor operability.

5. The Date When Full Compliance Will Be Achieved:

Implementation of the EWR and revision of PT 26.1 will be accomplished by November 30, 1987.

NRC COMMENT

- B. 10CFR 20.201(b) requires that each licensee make or cause to be made such surveys as may be necessary to comply with the regulations in 10 CFR 20 and surveys that are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present.

10 CFR 20.301 and 20.302 specify methods of disposal of radioactive material and specify radioactivity limits on such disposals.

Contrary to the above, the licensee failed to conduct an evaluation and to determine if concentrations of radioactive materials were contained in licensee-generated sanitary sewage sludge.

This is a Severity Level IV Violation (Supplement IV).

RESPONSE TO NOTICE OF VIOLATION
INSPECTION REPORT NOS. 50-280/87-22 AND 50-281/87-22

1. Admission or Denial of the Alleged Violation:

The violation is correct as stated.

2. Reasons for the Violation:

The violation resulted from a management oversight to recognize the potential for contamination of the sanitary drains system. Therefore, no surveys had been conducted to determine if sewage sludge contained radioactivity.

3. Corrective Steps Which Have Been Taken and the Results Achieved:

The sludge at Surry's sewage treatment facility has been found to contain radioactivity and, therefore, must be controlled as such. Access to the sludge storage area is controlled by a locked, gated fence with keys maintained by the station Chemistry Department. The Chemistry Department has been advised that the sludge is considered radioactive material and must remain on site at the sanitary waste treatment facility until disposal can be authorized.

In addition, an evaluation was conducted to determine the source of the sludge contamination. Piping interconnections were evaluated, sanitary drain inputs identified and all sewage collection stations were sampled. Samples were counted in a 1000 ml marinelli beaker for thirty minutes on a gamma spectroscopy system. The results of this analysis indicated that there was no detectable activity present in the samples.

Based upon the information available and the results of the sampling and analysis program, the source of the sewage sludge contamination could not be found.

4. Corrective Steps Which Will Be Taken to Avoid Further Violations:

The source of sludge contamination has not been determined at this time, since sampling and analysis of the input collection tanks found no activity above background. Also, a review and walkdown of the sanitary drains system revealed no cross-ties to a contaminated or potentially contaminated system that could periodically contaminate the sewage water.

The most likely source of the contamination may be undetectable levels of radioactivity in cleaning water used to mop floor areas adjacent to the restricted controlled area. This cleaning water may have been disposed of in the sanitary drains with radioactivity build-up in the sewage treatment tanks. The low level of contamination that was found in the sludge and the large volume of sewer water that this sludge represents lends to the possibility that the sludge contamination was a chronic build-up over a long period of time.

Since grab sampling of the collection tank inputs did not identify radioactivity, sampling of concentrated sludge is the only means to monitor this pathway. The dried sludge generated from operation of the treatment plant will be considered as potentially contaminated, and, prior to any sludge removal, samples will be collected and analyzed to determine the extent of contamination, if any, and the proper means of disposal.

5. The Date When Full Compliance Will Be Achieved:

Full compliance has been achieved.