VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

January 19, 1981

Mr. James P. O'Reilly, Director Office of Inspection and Enforcement U. S. Nuclear Regulatory Commission Region II 101 Marietta Street, Suite 3100 Atlanta, Georgia 30303 Serial No. 1021 NO/RMT:ms Docket Nos. 50-280 50-281 License Nos. DPR-32 DPR-37

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Dear Mr. O'Reilly:

Attachment

We have reviewed your letter of December 18, 1980 in reference to the special Appraisal of the health physics program at Surry Power Station on August 4-15, 1980 and reported in IE Inspection Report Nos. 50-280/80-29 and 50-281/80-33. Our responses to the specific significant appraisal findings are attached.

We have determined that no proprietary information is contained in the reports. Accordingly, the Virginia Electric and Power Company has no objection to these inspection reports being made a matter of public disclosure.

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Very truly yours,

B. R. Sylvia Manager - Nuclear Operations and Maintenance

cc: Mr. Steven A. Varga, Chief Operating Reactors Branch No. 1 Division of Licensing

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APPENDIX A

NOTICE OF SIGNIFICANT APPRAISAL FINDINGS

Based on the Health Physics Appraisal conducted August 5-15, 1980, the following item appears to require corrective actions (Section references are to the Details portion of NRC Inspection Report 50-280/80-29, 50-281/80-33).

An adequate maintenance/operations program for air filtration/ventilation systems did not exist. This inadequate program directly contributed to the first two items of noncompliance listed in Appendix B (Sections 12.b.1 and 12.b.2).

CONFIRMATION OF ACTION - UPDATE

- 1. The major upgrade of the entire ventilation system in the auxiliary building is approximately 30% completed with an expected completion date of approximately November 1, 1981.
- 2. The engineering review for the process vent design change has been reviewed by the Station Nuclear Safety and Operating Committee. The final design will address the prevention of water sources from entering the process vent system and provides for a knock-out drain and filter housing drains. The design is scheduled to be completed by June 30, 1981.
- 3. The above mentioned design change includes the addition of filter drains, and therefore will meet the same completion schedule.
- 4. The standing order has been effective. No flooding has been experienced during the four month period from the special appraisal and the request for describing our corrective action for the significant weaknesses.
- 5. The program for filter replacement requires prefilter change-out on a quarterly basis with immediate change-out if indicated by an excessive pressure differential and main filtration section change-out if required on a quarterly basis.

Last change out of filters occured as follows:

FILTER	MR NUMBER	DATE
1 VS FL 3A 1 VS FL 3B	1011270500	12-04-80
1 GW FL 1A & 1B	1012040900	12-04-80

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APPENDIX B

NOTICE OF VIOLATION

Based on the NRC inspection conducted August 5-15, 1980, certain of your activities were apparently not conducted in full compliance with NRC requirements as indicated below. These items have been categorized as described in correspondence to you dated December 31, 1974.

A. As required by Technical Specification 4.9.A "...equipment which has been installed to maintain control over radioactive materials in gaseous... effluents produced during normal reactor operations...shall be maintained and used to keep levels of radioactive materials in effluents released to unrestricted areas as low as practicable."

Contrary to the above, on August 13, 1980, with Unit 1 at power operation, the process vent filters and adsorbers, through which the effluents from the waste gas decay tanks are discharged, were not maintained in that the HEPA filters and charcoal adsorbers had been previously submerged half way in water and the prefiters and HEPA filters were caked with dust. No pressure drop instrumentation was provided across the filter banks to ascertain their state of loading.

This is an infraction.

This item is correct as stated.

1) Corrective steps which have been taken and the results achieved:

The filter media was replaced and returned to an operable status and is performing satisfactory. Installed ΔP instrumentation is provided and is operational to measure pressure drop across the filter unit.

2. <u>Corrective steps which will be taken to avoid further item of non-</u> compliance

A standing order was issued to Operations Department. (September 5, 1980) to exercise extreme caution to prevent water from entering the Process Vent System and to perform an inspection of the filter media should water enter the system. The standing order also will provide for an isolated, protected, back-up filter. A design change has been prepared to provide a water trap and drains to protect the system. A written program for filter replacement is in effect.

3. The date full compliance will be achieved:

We have experienced no similar problems with the system during the period. We are in full compliance with the exception of completing the design change to protect system from water ingress. The design change will be completed on or about June 30, 1981.

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As required by Technical Specification 4.12.A.4, "Instrumentation, equipment, and procedures shall generally conform to the recommendations in ORNL-NSIC-65, "Design, Construction, and Testing of High-Efficiency Air Filtration Sytems for Nuclear Application", C. A. Burchsted and A. B. Fuller, Oak Ridge National Laboratory, USAEC, January 1970". Section 2.9.3 entitled "Instrumentation" of ORNL-NSIC-65 states, "Safe and reliable operation of ventilating system requires instrumentation to monitor critical conditions. These include air flow resistance (pressure drop) across each bank of filters...".

Contrary to the above, on August 13, 1980, the pressure drop gages across the Auxiliary Building filter banks exceeded five inches, which is offscale high. This condition had existed since May 1980.

This is an infraction.

R.

This item is correct as stated:

1. Corrective steps which have been taken and the result achieved:

The filter media was replaced and returned to an operable status and is performing satisfactory.

2. <u>Corrective steps which will be taken to avoid further items of non-</u> <u>compliance:</u>

A major upgrade of the entire ventilation system in the auxiliary building is currently in progress. This work has been on-going for the past year at a controlled pace to allow continued operation and concurrently accomplish the design change work. Also, a written program for filter replacement is in effect. This program replaces filters on a set time period or when Hi ΔP indicates a loss of filter capacity. (Refer to Attachment 1, Para. 5)

The date when full compliance will be achieved:

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We are in full compliance with exception to the completion of the design change. We are approximately 30% complete and expect to complete the design on or about November 1, 1981.

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As required by 10 CFR 50.59, the holder of the license authorizing operation of a production or utilization facility may make changes in the facility as described in the safety analysis report, without prior Commission approval, unless the proposed change involves a change in the technical specifications incorporated in the license or an unreviewed safety question. The licensee shall maintain records of changes in the facility which shall include a written safety evaluation which provides the basis for the determination that the change does not involve an unreviewed safety question.

Contrary to the above, on August 12, 1980, temporary lead shielding blankets were wrapped around the discharge piping of the Unit 1 A, B, and C charging pumps. The unit was at 68% power at the time. No safety evaluation had been performed to determine if such installation involved an unreviewed safety question.

This is an infraction.

C.

This item is correct as stated.

1. Corrective steps which have been taken and the results achieved:

Licensee personnel immediately removed the lead blankets from the charging pump piping. An investigation of the infraction revealed that the shielding was lead sheeting draped across the piping to provide a shelf for maintenance activities that were in progress. Station engineering inspected the piping, valves, and supports within the Unit 1 charging pump cubicles and could find no damage attributable to the lead blankets.

2. <u>Corrective steps which will be taken to avoid further items of non-</u> compliance:

A memorandum is being issued to station and contractor personnel instructing them that safety related piping is not to be used to support temporary shelves or scaffolding unless a safety evaluation is performed to determine if an unreviewed safety question will be created.

3. The date full compliance will be achieved:

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No further infractions of this nature have been observed. We are in full compliance. The aforementioned memorandum was issued January 16, 1981.

NRC COMMENT:

D. As required by Technical Specification 6.4.D, procedures prescribed by Specification 6.4.B.1, Health Physics Procedures, must be followed.

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- 1. Procedure HP3.1-15, Section D.2, requires a twice daily background count when whole body counting is in progress.
- 2. The Radiation Protection Manual (RPM), paragraph 2.1.A.l requires the use of an RWP when so indicated by signs.
- 3. Section 2.2.C.l.c of the Radiation Protection Manual requires that anti-C's be worn properly.
- 4. Section 1.3.1.B of the RPM requires TLD's to be worn on the upper front portion of the body.
- 5. Section 1.3.1.G.2 requires individuals to survey themselves when leaving a potentially contaminated area.
- 6. Section 1.3.E of the RPM requires the use of protective clothing when entering a contamination area.
- 7. The Standing Radiation Work Permit for the Laundry Area requires the use of lab coats for protective clothing.

Contrary to the above:

1. Prior to the appraisal period (August 5-15, 1980) only one daily background count for the whole body counter was being performed;

 on August 7, workers and supervisors were found working without an RWP in the Unit 2 cable vault which was properly posted requiring an RWP;

- 3. during the appraisal period, workers were observed not properly wearing their anti-C's in that the hoods were tied back;
- 4. on August 8, an individual was observed to be wearing his TLD on his right rear hip belt loop;
- 5. on August 7, approximately 5 workers bypassed a frisking station without surveying themselves for contamination and entered the uncontrolled Turbine Building from the Radiation Control Area;
- 6. on August 14, a station worker was observed reaching across a barrier in the Unit 2 Turbine Building on which was attached a sign indicating that an RWP and protective clothing were required for entry. The worker was not properly clothed; and,

7. on two occasions during the appraisal period, workers in the laundry area were observed not wearing lab coats or equivalent protective clothing.

This is an infraction.

NRC COMMENT:

D. As required by Technical Specification 6.4.D, procedure prescribed by specification 6.4.B.1, Health Physics Procedures, must be followed.

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1. Procedure H.P. 3.1-15, Section D.2, requires a twice daily background count when whole body counting is in progress.

Contrary to the above, prior to August 5-15, 1980 only one daily background count for the whole body counter was being performed.

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RESPONSE:

During the appraisal period, the above item was questioned by the inspector. It was explained that during a period of continuous use (i.e., whole body counting for more than one shift) a background check was performed at least twice a day. The results were logged in the Whole Body Counter Background and Calibration Log. Contrary to the above statement, background and count level are logged twice a day during periods of continuous use. It was recommended that the procedure more clearly state the requirements for daily background checks.

a. Corrective steps which have been taken and the results achieved:

On November 12, 1980, the Surry Radiation Protection Manual was revised. The procedure for Whole Body Counter Operation, HP-3.1.14, Section 4.1.2, was revised to read:

"The background count shall be taken anew at least once per shift, or whenever an increase in background is suspected, while whole body counting is in progress."

b. Corrective steps which will be taken to avoid further non-compliance:

No further corrective steps are necessary.

c. Date when full compliance will be achieved:

Full compliance has been achieved.

2. The Radiation Protection Manual (RPM), paragraph 2.1.A.1 requires the use of an RWP when so indicated by signs.

Contrary to the above, on August 7, workers and supervisors were found working without an RWP in the Unit 2 cable vault, which was properly posted requiring an RWP.

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RESPONSE:

The item is correct as stated. The posted area required the notification of Health Physics and an R.W.P. before entry.

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a) Corrective Steps Which Have Been Taken and Results Achieved:

After discovering the infraction, the work was stopped and workers told to leave the area. The individuals involved received disciplinary action, including the suspension of supervisors involved.

b) Corrective Steps Which Will Be Taken To Avoid Further Non-compliance:

Radiation Work Permits and posting requirements have been stressed Annual General Employee Training/Retraining. In addition, health physics technicans assigned to the turbine building were instructed to increase their surveillance of the cable vault area.

c) Date When Full Compliance Will Be Achieved:

Full compliance has been achieved.

3. Section 2.2.C.l.c of the Radiation Protection Manual requires that Anti-C's be worn properly.

Contrary to the above, workers were observed not properly wearing their Anti-C's in that the hoods were tied back.

RESPONSE:

The above item is correct as stated.

a) Corrective Steps Which Have Been Taken And The Results Achieved:

The individuals involved were instructed to don their protective clothing in accordance with Section 2.2.C.1.c of the Radiation Protection Manual.

b) Corrective Steps Which Will Be Taken To Avoid Further Non-compliance:

Individuals entering the restricted controlled area must pass the RWP desk. At the desk, the health physics technician monitors radiation workers for the proper wearing of protective clothing. In addition, proper donning and removal of protective clothing is stressed in the Annual General Employee Training Class.

c) Date When Full Compliance Will Be Achieved:

Full compliance has been achieved.

Section 1.3.1.B of the R.P.M. requires TLD's to be worn on the upper front portion of the body.

Contrary to the above, an individual was observed to be wearing his TLD on his right rear hip belt loop.

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<u>RESPONSE</u>:

The above item is correct as stated.

a) Corrective Action Which Has Been Taken And Results Achieved:

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The individual discovered wearing his TLD improperly was instructed to remove the dosimeter from his belt loop and place it on the upper portion of his body. He was also instructed that the TLD was to be worn in that position at all times when inside the restricted area.

b) Corrective Steps Which Will Be Taken To Avoid Further Non-compliance:

Prior to the Health Physics Appraisal Team Inspection, Surry had instituted the RWP desk checkpoint. Individuals entering an area requiring self-reading dosimetry are required to sign in, stating job location and the RWP the individual will be working under. At this time, Health Physics personnel examine the individuals for proper dosimetry. The proper wearing of dosimetry is stressed in the General Employee Training given to all workers at the station.

c) The Date When Full Compliance Will Be Achieved:

Full Compliance has been achieved.

5. Section 1.3.1.G.2 requires individuals to survey themselves when leaving a potentially contaminated area.

Contrary to the above, approximately 5 workers were observed bypassing a frisking station without surveying themselves for contamination and entered the uncontrolled Turbine Building from the Radiation Control Area.

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RESPONSE

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a. Corrective steps which have been taken and the results achieved:

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The individuals observed bypassing the friskers were instructed to frisk themselves, and disciplinary action was taken against those involved.

b. Corrective steps which will be taken to avoid further non-compliance:

The Annual General Employee Training Program stresses the method and the need for frisking upon exit of a potentially contaminated area. Periodic surveillance by Health Physics personnel and immediate instruction and/or disciplinary action is used to minimize this problem. The date when full compliance will be achieved:

Full compliance has been achieved.

6. Section 1.3.E of the RPM requires the use of protective clothing when entering a contamination area.

Contrary to this, a station worker was observed reaching across a barrier in the Unit 2 Turbine Building on which was attached a sign indicating that an RWP and protective clothing were required for entry. The worker was not properly clothed.

RESPONSE

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The above item is correct as stated.

a. Corrective steps which have been taken and the results achieved:

The individual was informed of the requirements posted on the barrier signs and of his violation of the radiation barrier. Disciplinary action was taken against the individual involved.

b. Corrective steps which will be taken to avoid further non-compliance:

The observance of radiation barriers and signs are stressed in the Annual General Employee Training Program offered at the Surry Training Center.

. The date when full compliance will be achieved:

Full compliance has been achieved.

7. The standing Radiation Work Permit for the Laundry Area requires the use of lab coats for protective clothing.

Contrary to the above, on two occasions, workers in the laundry area were observed not wearing lab coats or equivalent protective clothing.

RESPONSE

The above item is correct as stated. While contaminated laundry is being handled in the laundry area, protective clothing is required.

a. Corrective steps which have been taken and the results achieved:

The individuals involved were questioned concerning the RWP requirements for work in the Laundry Area. Disciplinary action was taken against the individuals involved.

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b. Corrective steps which will be taken to avoid further non-compliance:

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Additional surveillance of the Laundry Area by Health Physics personnel will assure that protective clothing requirements are being followed.

Adherence to the requirements of Radiation Work Permit is stressed in the Annual General Employee Training Classes.

c. The date when full compliance will be achieved:

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Full compliance has been achieved.