



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 231B5
ATLANTA, GEORGIA 30303-8931**

October 26, 2001

Virginia Electric and Power Company
ATTN: Mr. David A. Christian
Sr. Vice President and
Chief Nuclear Officer
Innsbrook Technical Center - 2SW
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

**SUBJECT: SURRY NUCLEAR POWER STATION - NRC INTEGRATED INSPECTION
REPORT NOS. 50-280/01-03 AND 50-281/01-03**

Dear Mr. Christian:

On September 29, 2001, the NRC completed an inspection at your Surry Power Station, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on October 12, 2001, with Mr. R. Blount and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selective procedures and records, observed activities, and interviewed personnel. No findings of significance were identified by the NRC.

Since September 11, 2001, your staff has assumed a heightened level of security based on a series of threat advisories issued by the NRC. Although the NRC is not aware of any specific threat against nuclear facilities, the heightened level of security was recommended for all nuclear power plants and is being maintained due to the uncertainty about the possibility of additional terrorist attacks. The steps recommended by the NRC include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with local law enforcement and military authorities, and limited access of personnel and vehicles to the site.

The NRC continues to interact with the Intelligence Community and to communicate information to you and your staff. In addition, the NRC has monitored maintenance and other activities which could relate to the site's security posture.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system

(ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

/RA Paul Fredrickson for/

Kerry D. Landis, Chief
Reactor Projects Branch 5
Division of Reactor Projects

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

Enclosure: Integrated Inspection Report

cc w/encl.:

Stephen P. Sarver, Director
Nuclear Licensing and
Operations Support
Virginia Electric & Power Company
Electronic Mail Distribution

Richard H. Blount, II
Site Vice President
Surry Power Station
Virginia Electric & Power Company
Electronic Mail Distribution

D. A. Heacock,
Site Vice President
North Anna Power Station
Virginia Electric & Power Company
Electronic Mail Distribution

Virginia State Corporation Commission
Division of Energy Regulation
P. O. Box 1197
Richmond, VA 23209

Donald P. Irwin, Esq.
Hunton and Williams
Electronic Mail Distribution

Attorney General
Supreme Court Building
900 East Main Street
Richmond, VA 23219

Distribution w/encl.:
 G. Edison, NRR
 RIDSNRRDIPMLIPB
 PUBLIC

PUBLIC DOCUMENT (circle one): YES NO

OFFICE	Rll	Rll	Rll	Rll	Rll	Rll	Rll
SIGNATURE	Randall Musser	WKPoertner	GM	SVias	RDG	Mark A. Giles	SWalker
NAME	RMusser	KPoertner	GMcCoy	SVias	RGibbs	MGiles	SWalker
DATE	10/24/2001	10/24/2001	10/25/2001	10/23/2001	10/24/2001	10/24/2001	
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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SIGNATURE	KBarr for	KBarr for	LG				
NAME	RHamilton	DJones	LGarner				
DATE	10/23/2001	10/23/2001	10/24/2001				
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

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

Report Nos.: 50-280/01-03, 50-281/01-03

Licensee: Virginia Electric and Power Company (VEPCO)

Facility: Surry Power Station, Units 1 & 2

Location: 5850 Hog Island Road
Surry, VA 23883

Dates: July 1 - September 29, 2001

Inspectors: R. Musser, Senior Resident Inspector
K. Poertner, Resident Inspector
G. McCoy, Resident Inspector
R. Gibbs, Senior Reactor Inspector (Sections 1R02, 1R17)
M. Giles, Resident Inspector, Catawba (Sections 1R11, 1R23 and
portions of 1R13, 1R15 and 1R19)
R. Hamilton, Health Physicist (Sections 2PS1, 2PS3, 4OA1.4)
D. Jones, Senior Health Physicist (Sections 2PS1, 2PS3, 4OA1.4)
S. Vias, Senior Reactor Inspector (Sections 1R02, 1R17)
S. Walker, Reactor Inspector (Sections 1R02, 1R17)

Approved by: K. Landis, Chief, Reactor Projects Branch 5
Division of Reactor Projects

Attachments: (1) Supplemental Information
(2) List of Documents Reviewed

Enclosure

SUMMARY OF FINDINGS

IR 05000280-01-03, IR 05000281-01-03, on 07/01-09/29/2001, Virginia Electric and Power Co., Surry Power Station, Units 1 & 2. Resident Integrated Inspection Report.

The inspection was conducted by the resident inspectors, two senior reactor inspectors, a senior health physicist, a reactor inspector, a health physicist and a resident inspector from Catawba. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

A. Inspector Identified Finding

None.

B. Licensee Identified Violation

A violation of very low significance which was identified by the licensee has been reviewed by the inspectors. Corrective actions taken or planned by the licensee appear reasonable. This violation is listed in Section 4OA7 of this report.

Report Details

Plant Status

Unit 1 and Unit 2 operated at power the entire reporting period. Unit 1 began its end of cycle power coastdown on September 12, 2001.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

The inspectors reviewed the licensee's instructions for severe environmental conditions as described in Abnormal Procedure 0-AP-37.01, "Abnormal Environmental Conditions," Revision 15, the "Hurricane Response Plan (Nuclear)," Revision 6, Operations Checklist OC-33, "Hurricane and Vacuum Breaker Equipment Audit," General Maintenance Procedure GMP-031, "Emergency Service Water (ESW) Pump House and Stop Log Installation and Removal," Revision 2, and The Surry Power Station Emergency Plan, to verify that those instructions limited the risk to the plant from weather related initiating events. The focus of the review was on the readiness of the station for a hurricane. The inspectors also reviewed applicable sections of the Updated Final Safety Analysis Report (UFSAR) to ensure that the activities described were being appropriately implemented in station procedures to minimize risk in the event of a hurricane.

b. Findings

No findings of significance were identified.

1R02 Evaluations of Changes, Tests or Experiments

a. Inspection Scope

The inspectors reviewed selected samples of safety evaluations to verify that the licensee had appropriately considered the conditions under which changes to the facility or procedures may be made, and tests conducted, without prior NRC approval. The inspectors reviewed safety evaluations for 12 design and procedure changes. There were no experiments reviewed. The inspectors verified, through review of additional information such as calculations, supporting analyses and drawings whether the licensee had appropriately concluded that the changes could be accomplished without obtaining a license amendment. The 12 safety evaluations reviewed are listed in Attachment 2.

The inspectors also reviewed samples of design/engineering packages and procedure changes for which the licensee had determined that evaluations were not required to verify whether the licensee's conclusions to "screen out" these changes were correct and

consistent with 10 CFR 50.59. The 13 “screened out” changes reviewed are listed in Attachment 2.

The inspectors reviewed the licensee’s corrective action program and self assessments of the 10 CFR 50.59 process and noted that no significant problems had been identified in the area of 10 CFR 50.59 evaluations.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

The inspectors reviewed plant documents, including the procedures listed below in parentheses, to determine correct system lineup and observed equipment to verify that the system was correctly aligned for the:

- Number 3 Emergency Diesel Generator (EDG) (0-OP-EG-001A, Revision 5)
- Unit 2 Battery Chargers and Inverters (2-MOP-EP-003, Revision 6)
- Number 3 EDG (0-OP-EG-001A, Revision 5), with Number 2 EDG removed from service.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Fire Area Walkdowns

a. Inspection Scope

The inspectors conducted tours of the following areas to assess the adequacy of the fire protection program implementation. The inspectors checked for the control of transient combustibles and the condition of the fire detection and fire suppression systems (using “SPS Appendix R Report,” Revision 18) in the following areas:

- Unit 1 Normal Switchgear Room
- Unit 2A and 2B Battery Rooms
- Number 3 Emergency Diesel Generator Room
- Mechanical Equipment Room Number 5
- Unit 2 Cable Vault
- Unit 2 Emergency Switchgear Room.

b. Findings

No findings of significance were identified.

.2 Annual Fire Brigade Drill

a. Inspection Scope

On July 19, 2001, the inspectors observed a fire brigade drill to evaluate the readiness of the licensee's personnel to fight fires. Specific aspects evaluated were: use of protective clothing and self contained breathing apparatus; fire hose deployment and reach; approach into the fire area; effectiveness of communications among the fire brigade members and the control room; sufficiency of fire fighting equipment brought to the fire scene; and the drill objectives and acceptance criteria.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspections Scope

The inspectors observed licensed operator performance during simulator training session RQ-01.6-ST-1, "Steam Generator Tube Rupture Emergency Contingency Actions," Revision 0, to determine whether the operators:

- were familiar with and could successfully implement the procedures associated with recognizing and recovering from the tube rupture
- recognized the high-risk actions in those procedures
- were familiar with related industry operating experiences.

The inspectors also attended the licensee's critique to evaluate its effectiveness.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

For the equipment issues described in the plant issues listed below, the inspectors reviewed the licensee's implementation of the Maintenance Rule (10 CFR 50.65) using VPAP 0815, "Maintenance Rule Program," Revision 11, and the Surry Maintenance Rule Scoping and Performance Criteria Matrix, Revision 12, with respect to the characterization of failures, the appropriateness of the associated a(1) or a(2) classification, and the appropriateness of either the associated a(2) performance criteria or the associated a(1) goals and corrective actions:

- S-2001-1728, WGDT oxygen analyzer inoperable
- S-2001-2153, EDG 1 stol2 relay would not time out during relay testing
- S-2001-2154, 2-PL-P-2A and B flow capacity degraded
- S-2001-2146, 1-VS-MOD-101C did not open automatically
- S-2001-1870, 1-SW-RI-120 declared inoperable
- S-2001-2093, 1-MS-PR-1475 inoperable.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluations

a. Inspection Scope

The inspectors verified the adequacy, accuracy, and completeness of plant risk assessments performed prior to any changes in plant configuration for maintenance activities or in response to emergent conditions. When applicable, inspectors verified the licensee entered the appropriate risk category in accordance with plant procedures. Specifically, the inspectors reviewed:

- Simultaneous removal from service of the Unit 1 A low head safety injection pump (1-SI-P-1A), Unit 1 B containment instrument air dryer (1-IA-D-4B), 3B central air conditioning water chiller (1-VS-E-3B), A auxiliary building central area exhaust fan (1-VS-F-9A), and performance of 2-PT-8.1 (reactor protection logic test for normal operations)
- Removal from service of the number 1 EDG (1-EE-EG-1), Unit 2 instrument air compressor (2-IA-C-1) and B auxiliary building central area exhaust fan (1-VS-F-9B) for maintenance
- Removal from service of the Unit 2 C charging pump with the performance of 0-OPT-VS-001 (Main Control Room Chiller Testing) and 1-IPT-CC-CW-L-103 (Canal Level Transmitter Loop Calibrations)
- Removal from service of the Unit 1 C charging pump, Unit 1 control room air handling unit, the 2C boric acid transfer pump, and the alternate breaker for the 4A control room chiller
- Removal from service of the number 1 EDG (1-EE-EG-1) for corrective maintenance with the performance of 1-PT-8.5 (Consequence Limiting Safeguards Logic testing)
- Removal from service of the number 2 EDG (2-EE-EG-1) for corrective maintenance, the Unit 2 A service water to bearing cooling water supply valve (2-SW-MOV-201A), and the alternate breaker for the 4A control room chiller.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors evaluated the technical adequacy of the operability evaluations to ensure that operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The operability evaluations were described in the engineering transmittals (ET), plant issues, or review of specific circumstances listed below:

- ET S 01-0147, Revision 0, Emergency Diesel Generator Vibration Analysis
- Plant Issue S-2001-2225, Charging Pump Service Water Valve Failure
- Plant Issue S-2001-2170, EDG 1 ZS, ES and VS Relays Exhibited Repeatability and Tolerance Discrepancies
- Plant Issue S-2001-2448, EDG 1 DC Motor Driven Fuel Oil Pump not Running During Surveillance Test
- Plant Issue S-2001-2741, MOD-VS-200A did not Reposition to the Filter Mode During Special Test.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

During this inspection period, the inspectors reviewed the licensee's list of identified operator workarounds to determine whether any identified workarounds affected either the functional capability of the related system or human reliability in responding to an initiating event. During these reviews, the inspectors specifically considered whether any identified workaround affected the operators' ability to implement abnormal or emergency operating procedures. The two operator workarounds reviewed were 1999-ODA-011, Unit 1 and 2 individual rod position indications, and 2000-ODA-001, 1-VS-F58A and B will not function as designed.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors evaluated design change packages (DCPs) for 17 modifications in two cornerstone areas to verify that the modifications did not affect system availability, reliability, or functional capability, and that the modifications had not placed the plant in an unsafe condition. The evaluations included whether the DCPs appropriately considered the following: (1) energy requirements could be supplied by supporting systems; (2)

materials and replacement components were compatible with physical interfaces; (3) replacement components were seismically qualified for application; (4) code and safety classification of replacement system, structures, and components were consistent with design bases; (5) the appropriateness of modification design assumptions; (6) post-modification testing would establish operability; (7) failure modes introduced by the modification were bounded by existing analyses; and (8) appropriate procedures or procedure changes were initiated. For selected modification packages, the inspectors assessed whether the as-built configuration accurately reflected the design documentation. The DCPs reviewed are listed in Attachment 2.

The inspectors also reviewed additional information, as necessary, such as applicable sections of the UFSAR, supporting analyses, Technical Specifications (TSs), drawings and procedures.

The inspectors also reviewed the results of the licensee's recent self assessments of the design change process. The self assessment did not identify any major problems in the modification area.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed the post maintenance test procedures and activities associated with the repair or replacement of the following components to determine that the procedures and test activities were adequate to verify operability and functional capability following maintenance of the following equipment:

- Work Order (WO) 446600 - Return to service testing after breaker replacement for valve 1-CS-MOV-100A
- WO 440921 - Replace turbine driven auxiliary feedwater pump relief valve
- WO 453074 - Test/adjust Number 1 EDG start circuit relays
- WO 453873 - Replace Number 1 EDG ECR relay
- 2-MOP-EP-002 - Return to service testing of regulating line conditioner 2A-2
- WO 456518, Replace breaker 25H3 control switch.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the surveillance tests listed below, the inspectors examined the test procedure and either witnessed the testing and/or reviewed test records to determine whether the scope of testing adequately demonstrated that the affected equipment was functional and operable:

- PT-8.8, "Intake Canal Level Logic Testing," Revision 8

- 1-OPT-FW-003, "Turbine Driven Auxiliary Feedwater Pump 1-FW-P-2," Revision 14
- 0-EPT-0104-01, "Semi-Annual Station Battery Test," Revision 7-OTO1
- 0-OPT-VS-008, "Control Room Air Filtration System Flow Test," Revision 8
- 0-OPT-EG-001, "Number 3 Emergency Diesel Generator Monthly Start Exercise Test," Revision 19
- 2-IPT-FT-RC-T-422, "Delta T and Tavg Protection Set II Loop T-422 Functional Test," Revision 19.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed Procedurally Controlled Temporary Modification S1-01-013, "Installation of a Portable Battery Charger on 1B Main Station Battery," to determine whether system operability/availability was affected, that configuration control was maintained, and that the associated Safety Evaluation No. 92-189 adequately justified implementation.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

On July 19, 2001, the inspectors observed a simulator based training evolution to verify that proper emergency plan classifications (in accordance with EPIP-1.01, "Emergency Manager Controlling Procedure"), and notifications (in accordance with EPIP-2.01, "Notification of State and Local Governments" and EPIP-2.02, "Notification of NRC") were made.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

a. Inspection Scope

The inspectors reviewed the licensee's most recent Radioactive Effluent Release Report which delineated the quantities of radionuclides released in liquid and gaseous effluents during calendar year (CY) 2000 and the radiation doses to the public resulting from those releases. The inspectors evaluated the report to determine whether it included the information and data required to be reported to demonstrate conformance with 10 CFR 20.1302, 10 CFR 50.36a, and 10 CFR 50, Appendix I. The inspectors reviewed the recent changes to Offsite Dose Calculation Manual (ODCM) and evaluated whether those changes were technically justified and consistent with the guidance provided by Regulatory Guide 1.109 and NUREG-0133. The inspectors toured the plant and assessed whether the major components of the radioactive effluent release and monitoring equipment were configured as described in Chapter 11 of the UFSAR. During the tours the inspectors observed whether the following radioactivity monitors were in service as specified by the UFSAR: RM-RRM-131, 2-SW-RM-220, 1-SW-RM-107A, B, C, & D, 1-GW-RM-102, 1-GW-FT-100, 1-SV-RM-111, 2-SV-RM-211, 1-VP-FI-1A & B, RRM-101, 1-VG-RM-104, and 1-VG-RM-110. The inspectors assessed whether compensatory sampling and analyses were performed as required for randomly selected monitors which were out-of-service during the previous twelve months. The inspectors observed the collection and analysis of samples from a liquid radwaste batch release and from the number 2 ventilation exhaust stack. The inspectors assessed whether sampling, analytical, and liquid batch release procedures were followed. The inspectors reviewed the records for the most recent calibrations of selected effluent monitors and one gamma spectroscopic instrument in the count room to determine whether their calibrations were current with respect to ODCM requirements. The effluent monitors selected included RM-RRM-131, 1-SV-RM-111, 1-SW-RM-120, 1-GW-RM-102, 1-VP-FI-1B, and 1-GW-FT-100. The inspectors reviewed the results of interlaboratory comparisons made during CY 2000 and 2001 for samples typical of plant effluents and determined whether the licensee had maintained the quality of analyses consistent with the program guidance provided by Regulatory Guide 4.15. The effectiveness of characterization and resolution of selected effluent monitoring related issues identified since April 2001 were evaluated by the inspectors. Attachment 2 lists the licensee documents and procedures examined during the inspection.

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope

The inspectors reviewed the licensee's most recent Annual Radiological Environmental Operating Report which described implementation of the REMP during the year 2000 and provided an assessment of the program results. The review assessed whether the report included the information required to be reported regarding surveillance results, analysis of data, land use census, interlaboratory comparison program results, and permitted program deviations. The review also evaluated whether the REMP was implemented as required with respect to sampling locations, monitoring and measurement frequencies. The inspectors observed collection of air particulate filters and charcoal cartridges at 4 air sampling stations to determine whether the samples were collected in accordance the sampling procedures and whether good techniques were used. Calibration procedures and records for the 3 most recent calibrations of the air sampling stations were reviewed to determine whether the calibrations were current. The inspectors also observed eight monitoring locations to determine whether thermoluminescence dosimeters (TLDs) were in place as described in the ODCM. The inspectors reviewed REMP Self-Assessment Report dated March 16, 2001, to determine whether substantive issues were identified and adequately addressed. Calibration procedures and records for the most recent calibrations of the Meteorological Monitoring instruments for air temperature and for wind speed and direction were also reviewed. The inspectors assessed whether the instruments were operable and whether current meteorological conditions were available in the Control Room. Surveys of potentially contaminated materials being released from the RCA for unrestricted use were also observed. The inspectors assessed whether appropriate criteria were used for unrestricted release of potentially contaminated materials, whether appropriate instrumentation was used for those surveys, and if the instruments were calibrated with appropriate sources. The effectiveness of characterization and resolution of selected radiation monitoring related issues identified during April 2000 through June 2001 was evaluated by the inspectors. Through the above reviews and observations, the licensee's practices and implementation of their radiological monitoring program, meteorological monitoring program and radioactive material control program were evaluated by the inspectors for consistency with the ODCM, the UFSAR, TSs and 10 CFR Part 20 requirements. Attachment 2 lists the licensee documents and procedures examined during this inspection.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Review

.1 Scrams with Loss of Normal Heat Removal PI (Cornerstone: Initiating Events)

a. Inspection Scope

The inspectors performed a periodic review of the Scrams with Loss of Normal Heat Removal PI for Units 1 and 2. Specifically, the inspectors reviewed this PI for the third quarter of 2000 through the second quarter of 2001. Documents reviewed included applicable monthly operating reports, licensee event reports, and operator logs.

b. Findings

No findings of significance were identified.

.2 Safety System Unavailability PI (Cornerstone: Mitigating Systems)

a. Inspection Scope

The inspectors performed a periodic review of the Safety System Unavailability - Emergency AC Power PI for both Units 1 and 2. Specifically, the inspectors reviewed this performance indicator for the first two quarters of 2001. Documents reviewed included applicable maintenance rule reports, operator logs, and plant issue reports.

b. Findings

No findings of significance were identified.

The licensee has modified the PI data collection process for the Safety System Unavailability PI such that the hours associated with the periodic overhaul of the EDGs are no longer counted as planned unavailability hours. This is in accordance with the guidance provided by NEI 99-02, Revision 1. The counting of planned unavailability hours for the EDGs during the performance of surveillances is still the subject of a frequently asked question (FAQ) under discussion by NRR and NEI.

.3 Unplanned Power Changes per 7000 Critical Hours PI (Cornerstone: Initiating Events)

a. Inspection Scope

The inspectors performed a periodic review of the Unplanned Power Changes per 7000 Critical Hours PI for Units 1 and 2. Specifically, the inspectors reviewed this PI for the third quarter of 2000 through the second quarter of 2001. Documents reviewed included applicable monthly operating reports, licensee event reports and operator logs.

b. Findings

No findings of significance were identified.

.4 Occupational Exposure Control Effectiveness PI (Cornerstone: Occupational Radiation Safety) and Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual (RETS/ODCM) PI (Cornerstone: Public Radiation Safety)

a. Inspection Scope

The inspectors assessed the accuracy of the Occupational Exposure Control Effectiveness and the RETS/ODCM Radiological Effluent Occurrence PI. To evaluate the PI data, the inspectors reviewed the January 2001 through June 2001 monthly files generated pursuant to procedure HPAP-2802, "NRC Performance Indicator Program," Revision 1. The inspectors assessed whether the procedurally specified sources of information for the radiation safety PIs were collected each month and whether potential occurrences were accurately assessed for reportability. The inspectors reviewed the Monthly Recurring Documents: Regulatory Assessment Performance Indicators Radiological Protection (dated 1/4/2001, 2/6/2001, 3/5/2001, 4/3/2001, 5/7/2001, 6/4/2001, 7/2/2001).

b. Findings

No findings of significance were identified.

40A5 Other

Review of World Association of Nuclear Operators (WANO) Report

The inspectors reviewed the interim WANO report for the January 2001 evaluation. There were no safety significant issues discussed that warranted additional NRC attention.

40A6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. R. Blount, the Site Vice President, and members of licensee management on October 12, 2001.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

40A7 Licensee Identified Violation

The following finding of very low significance was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned a Non-Cited Violation (NCV). The licensee was informed that if this NCV is denied, a response, with the basis for the denial, should be provided, within 30 days of the date of this inspection report, to the United States Nuclear Regulatory Commission, Attn: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Surry Power Station.

NCV Tracking NumberRequirement Licensee Failed to Meet

NCV 50-280, 281/01003-01

Technical Specification 6.4.B.3 requires that written procedures shall be established and implemented covering implementation of the Offsite Dose Calculation Manual. Attachments 7 and 9 to Procedure VPAP-2103S, "Offsite Dose Calculation Manual (Surry)," specify the sampling and analysis frequency and the analytical detection capabilities for radiological environmental monitoring program. Analytical frequency and detection capability requirements were not met for several milk samples collected during the 3rd and 4th quarters of CY 2000 due to the vendor laboratory's failure to analyze samples in a timely manner. As a result, the licensee' ability to evaluate the milk-to-man pathway was impaired. This issue was included in the licensee's corrective action program as Plant Issue S-2001-1208. (Green)

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

M. Adams, Manager, Engineering
R. Allen, Manager, Maintenance
R. Blount, Site Vice President
M. Crist, Manager, Nuclear Oversight
C. Luffman, Security Manager
B. Foster, Director, Nuclear Station Safety and Licensing
D. Llewellyn, Manager, Training
M. Small, Supervisor, Licensing
T. Sowers, Director, Nuclear Station Operations and Maintenance
T. Steed, Manager, Radiological Protection
J. Swientoniewski, Manager, Operations

ITEMS OPENED AND CLOSED

Opened and Closed

50-280, 281/01003-01	NCV	Analytical frequency and detection capability requirements were not met for several milk samples collected during the 3 rd and 4 th quarters of CY 2000 (Section 4OA7)
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ATTACHMENT 2

LIST OF DOCUMENTS REVIEWED

Sections 1R02 AND 1R17:

Virginia Power Administrative Procedures (VPAP), Instructions and other Documents

VPAP-0301 "Design Change Process," Revision 15
VPAP-3001 "Safety Evaluations," Revision 6
VPAP-3001, "Safety and Regulatory Reviews," Revision 7
STD-GN-0041 "Instructions for Engineering Transmittals," Revision 15
STD-GN-0001 "Instructions for DCP Preparation," Revision 23
Technical Specifications (TS), Surry Power Station
Updated Final Safety Analysis Report (UFSAR)

Safety Evaluations

DCP-00-025 EP Degraded Voltage/Loss of Voltage Setpoints
DCP-00-050 Installation of Time Delays on the 58 Fan Control Circuits
DCP-00-049 EP EDG Output Breaker Circuit Modification and Relay Setpoint Change
DCP-98-056 Inside Recirculation Spray Pump & 1-SI-P-1B Motor Trip Device Replacement
DCP-00-006 480V Load Center Coordination
DCP-99-090 RWST Cross-Tie Opening from Header to Line Signal
DCP-00-018 Ventilation System Setpoint Change 01-VS-FS-117A/117B
DCP-99-009 Emergency Service Water Pump Speed Modifications
DCP-00-019 Miscellaneous NSSS Protection and Control Setpoints and Scaling Changes
2-OP-RC-011, R/14 Pressurizer Relief Tank Operations
0-TOP-VS-001, R/0 Auxiliary Ventilation Filter Train Test to Validate DCP-00-066
0-ECM-1205-01, R/0 EDG Battery Temperature Monitoring

Screened Out Safety Evaluations:

DCP-00-011 EP Instrument Air Dryer, MCC Circuit Breaker & Fuse Replacement
DCP-98-005 SW Valve Replacement (1-SW-MOV-104A,B,C,D & 1-SW-MOV-105A,C,D)
DCP-01-024 Switchgear and Cable Tray Room Air Conditioner Control Upgrade
DCP-99-108 Instrument Air Flow Station Modification
DCP-00-044 Installation of Instrument Valves at 1-VS-PI-600A/608
DCP-01-020 1-RS-MOV-155B Worm Speed Modification
DCP-00-045 Air Supply to 1-VS-NRV-100A/B / SPS / 1
DCP-98-066 SI Flow Transmitter 02-SI-FT-2963 Replacement
0-AP-10.15, R/4 Loss of the 469 Line
0-OP-FH-007, R/0 Inspection of Fuel Assemblies with Thimble Sleeves
2-NPT-RX-001, R/4 Reactivity Anomalies
1-MOP-FW-002, R/6 Removal from and Return to Service of Turbine Driven AFW Pump 1-FW-P-2
0-OSP-EG-001, R/4 Number 3 Emergency Diesel Generator Local Alarm Panel Functional Test

Design Change Packages (DCPs)

DCP-98-005	SW Valve Replacement (1-SW-MOV-104A,B,C,D & 1-SW-MOV-105A,C,D)
DCP-00-018	Ventilation System Setpoint Change 01-VS-FS-117A/117B
DCP-99-009	Emergency Service Water Pump Speed Modifications
DCP-00-019	Miscellaneous NSSS Protection and Control Setpoints and Scaling Changes
DCP-00-044	Installation of Instrument Valves at 1-VS-PI-600A/608
DCP-01-020	1-RS-MOV-155B Worm Speed Modification
DCP-00-045	Air Supply to 1-VS-NRV-100A/B / SPS / 1
DCP-98-066	SI Flow Transmitter 02-SI-FT-2963 Replacement
DCP-99-090	RWST Cross-Tie Opening from Header to Line Signal
DCP-00-011	EP Instrument Air Dryer, MCC Circuit Breaker & Fuse Replacement
DCP-00-025	EP Degraded Voltage/Loss of Voltage Setpoints
DCP-00-050	Installation of Time Delays on the 58 Fan Control Circuits
DCP-01-024	Switchgear and Cable Tray Room Air Conditioner Control Upgrade
DCP-99-108	Instrument Air Flow Station Modification
DCP-00-049	EP EDG Output Breaker Circuit Modification and Relay Setpoint Change
DCP-98-056	Inside Recirculation Spray Pump & 1-SI-P-1B Motor Trip Device Replacement
DCP-00-006	480V Load Center Coordination

Program and Self Assessment Documents

ENGSA - 00-010	Site DCP Critique - DCP -99-068
ENGSA - 00-013	Site DCP Critique - DCP -00-050
ENGSA - 00-015	Site DCP Critique - DCP -99-028
ENGSA - 01-003	Critique Quarterly Assessments of DCP Modifications Critiques
Nuclear Oversight Audit Report #01-08	Independent Review Activities [covering revised 50.59 Process]
Nuclear Oversight Audit Report #00-04	Design Control and Engineering Programs

Section 2PS1:

VPAP-2103S Offsite Dose Calculation Manual
 CH-31.362 Liquid Waste Monitor Tank B: Sampling Liquid at Sink
 HP-3010.021 Radioactive Liquid Waste Sampling and Analysis
 HP-3010.020 Radioactive Liquid Waste Release Permits
 ROP-1.04 Releasing Liquid Waste Monitor Tank 1-RLW-TK-4A or B Using DCS
 HP-3010.031 Radioactive Gaseous Waste Sampling and Analysis
 0-IPM-CC-RRM-LIQD-001 Radwaste Facility Liquid Effluent Monitor Calibration
 0-IPM-RM-G-003 Model 943-5GM Tube Detector Calibration
 0-ICP-MIS-G-001 Miscellaneous Instrument Calibration
 CAL-817 Model 942 Log Ratemeter Scintillation Detector Source Calibration
 0-IPM-RM-G-001 Digital Ratemeter Model 942B Process Monitor Calibration
 1-Cal-68 F-GW-100 Process Vent Blower
 Audit 99-13: Radiological Environmental Monitoring, Offsite Dose Calculation Manual, and Process Control Program

Section 2PS3:

"Annual Radiological Environmental Operating Report" and transmittal letter 01-249
 Letter: Teledyne Brown Engineering to Pete Blount Dominion Virginia Power dated 6/12/2001,
 RE: L14058-I, I-131 analysis

Plant Issues and Root Cause Evaluations

Plant Issue S-2001-1208
 Category 3 Root Cause Evaluation Response - S-2001-1208-E1
 Plant Issue Resolution-S-2001-1208-R1
 Plant Issue S-2001-0462
 Category 3 Root Cause Evaluation Response - S-2001-0462-E1
 Plant Issue S-2001-0324
 Category 3 Root Cause Evaluation Response - S-2001-0324-E1
 Plant Issue S-2000-1245
 Category 3 Root Cause Evaluation Response - S-2000-1245-E1
 Plant Issue S-2000-0690
 Category 3 Root Cause Evaluation Response - S-2000-0690-E1
 Plant Issue Resolution S-2000-0690-R1
 Plant Issue S-2000-0186
 Category 3 Root Cause Evaluation Response - S-2000-0186-E1
 Plant Issue Resolution S-2000-0186-R1
 Plant Issue 1999-2721
 Plant Issue S-2000-1259
 Plant Issue S-2000-1698

Calibration Documents: Meteorological Tower

Work Order 38-00-MM-RCDR-REC-INDREC (5/12/2001)
 CAL-092 Revision 5 5/12/98 "Temperature Loop"
 Work Order 38-00-MM-RCDR-REC-5-INDREC (5/12/2001)
 CAL-155 Revision 4 5/12/98 "Wind Speed Lower Loop"
 Work Order 38-00-MM-RCDR-REC-4-INDREC (5/12/2001)
 CAL-193 Revision 4 5/12/98 "Wind Speed Upper Loop"
 Work Order 38-00-MM-RCDR-REC-2-INDREC (5/12/2001)
 CAL-196 Revision 4 5/12/1998 "Wind Direction Lower Loop"
 Work Order 38-00-MM-RCDR-REC-1-INDREC (5/12/2001)
 CAL-195 Revision 4 5/12/1998 "Wind Direction Upper Loop"

Calibration Documents: Environmental Samplers

C-HP-1033.620 Revision 1 "Portable Air Samplers Calibration and Operation"
 C-HP-1033.620 Attachment 2 "Calibration Certificate -Portable Air Sampler" (Last 3 calibrations
 for all 8 environmental air samplers)

Other Procedures

HP-1032.070 Revision 2-P1 "Radiological Surveys for Releasing Oil, Sewage, and Other Bulk
 Materials"
 C-HP-1032.040 Revision1 "Contamination Surveys"
 HP-1033.440 Revision 2 "NE Technology SAM9/SAM11 Calibration and Operation"

HP-3010.031 Revision 8 "Radioactive Gaseous Waste Sampling and Analysis"
0-HSP-REMP-001 Revision 2 "Land Use Census"
0-HPT-REMP-002 Revision 1 "Annual Radioactive Effluent Release Report and Annual Radiological Environmental Operating Report"
HP-3051.010 Revision 6 "Radiological Environmental Monitoring Program"
0-HPT-REMP-001 Revision 0 "Environmental Radiation Monitors."
VPAP-2103S Revision 3 "Offsite Dose Calculation Manual (Surry)"
Confirmatory Measurements Using Spiked Samples

Self Assessment: "REM Program Surveillance and Evaluation" covering 1/1/2000-12/31/2000
Surry UFSAR Chapter 11

Recurring Memoranda

First Quarter 2000 Confirmatory Measurements
Third Quarter 2000 Confirmatory Measurements
First Quarter 2001 Confirmatory Measurements