UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

Report Nos.: 50-280/95-03 and 50-281/95-03

Licensee: Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

Docket Nos.: 50-280 and 50-281

License Nos.: DPR-32 and DPR-37

Facility Name: Surry 1 and 2

Inspection Conducted: January 22 through February 11, 1995

Inspector: L. W Garner for — 3-7-95
M. W. Branch, Senior Resident Inspector — Date Signed

Other Inspectors: D. M. Kern, Resident Inspector
S. G. Tingen, Resident Inspector

Approved by: G A Belisle — 3/7/95
G. A. Belisle, Section Chief — Date Signed
Division of Reactor Projects

SUMMARY

Scope:

This routine resident inspection was conducted on site in the areas of plant status, operational safety verification, maintenance inspections, surveillance inspections, onsite engineering review, plant support and action on previous inspection items. Inspections of backshift and weekend activities were conducted on January 25, 28, and February 3 and 4, 1995.

Results:

Operations

Although operators were challenged by equipment problems, Unit 2 was shutdown and cooled down in a slow and deliberate manner (paragraph 3.1).

Exceeding the Unit 2 pressurizer heatup rate was identified as an unresolved item pending a fatigue analysis review (paragraph 3.2).

Lowering reactor coolant system level was conducted in accordance with procedures, equipment response was as expected, and operators properly focused on safety (paragraph 3.3).

Maintenance

Failure to use approved detailed written procedures for maintenance activities associated with turbine driven auxiliary feedwater pump (TDAFWP) governor replacement, turbine speed control system linkage assembly and governor post installation maintenance/adjustment/testing was identified as a violation (paragraph 4.1).

The pre-evolution briefing for Unit 2 safety bus logic testing was very good. Safety focus and communications were clearly emphasized. Operations personnel safely resolved unexpected occurrences and maintained excellent control of the evolution (paragraph 5.2).

Engineering

Evaluation and initial corrective actions associated with the Unit 2 C high head safety injection pump motor power requirements were implemented in a timely manner and were conservative (paragraph 5.1).

Procurement, storage, and handling of TDAFWP model PG-PL governors was acceptable. Warehouse cleanliness, storage, purchase orders, design change development, and commercial grade dedication processes were generally good. Two isolated weaknesses regarding design change development and shelf-life evaluation were identified (paragraph 6.1).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*V. Armentrout, Licensing
*W. Benthall, Supervisor, Licensing
*M. Biron, Supervisor, Radiation Engineering
H. Blake, Jr., Superintendent of Nuclear Site Services
*R. Blount, Superintendent of Maintenance
*B. Bryant, Licensing
*D. Christian, Station Manager
J. Costello, Station Coordinator, Emergency Preparednes
D. Erickson, Superintendent of Radiation Protection
*B. Garber, Licensing
B. Hayes, Supervisor, Quality Assurance
*D. Hayes, Supervisor of Administrative Services
*A. Keagy, Superintendent of Materials
D. Llewellyn, Superintendent of Training
*C. Luffman, Superintendent, Security
*J. McCarthy, Assistant Station Manager
*A. Price, Assistant Station Manager
*S. Sarver, Superintendent of Operations
*R. Saunders, Vice President, Nuclear Operations
*K. Sloane, Superintendent of Outage and Planning
E. Smith, Site Quality Assurance Manager
*T. Sowers, Superintendent of Engineering
*B. Stanley, Supervisor, Station Procedures
J. Swientoniewski, Supervisor, Station Nuclear Safety
*J. Winebrenner, Supervisor, Procurement Engineering

Other licensee employees contacted included plant managers and supervisors, operators, engineers, technicians, mechanics, security force members, and office personnel.

NRC Personnel

*M. Branch, Senior Resident Inspector
*D. Kern, Resident Inspector
*S. Tingen, Resident Inspector

*Attended Exit Interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Plant Status

Unit 1 operated at power for the entire inspection period. On February 10, power was reduced to 60% to repair the B main feedwater pump. The unit was returned to full power operation on February 12.

Unit 2 was in end of cycle coastdown up to February 2. The Unit was shutdown on February 3, from 84% power, to perform a RFO. The unit was in a RFO at the end of the inspection period.

3. Operational Safety Verification (71707)

The inspectors conducted frequent tours of the control room to verify proper staffing, operator attentiveness and adherence to approved procedures. The inspectors attended plant status meetings and reviewed operator logs on a daily basis to verify operational safety and compliance with TSs and to maintain overall facility operational awareness. Instrumentation and ECCS lineups were periodically reviewed from control room indication to assess operability. Frequent plant tours were conducted to observe equipment status, fire protection programs, radiological work practices, plant security programs and housekeeping. DRs were reviewed to assure that potential safety concerns were properly addressed and reported.

3.1 Unit 2 Shutdown

The inspectors witnessed selected portions of the Unit 2 shutdown and subsequent cooldown conducted on February 3. Although operators were challenged by equipment problems the inspectors noted that the unit was shutdown and cooled down in a slow and deliberate manner. Communications during plant cooldown were good. Pressurizer and RCS cooldown rates were closely monitored and the inspectors independently verified that TS cooldown rates were not exceeded. Unit 2 RCS integrity was good. Few signs of leakage were observed during the hot containment walkdown.

The following equipment problems were encountered during the shutdown:

The steam dump valve master controller stuck at approximately ten percent demand which resulted in two of the eight steam dump valves remaining partially open. This problem caused operators to deviate from the normal plant shutdown procedure. DR S-95-0194 was issued to ensure that this deficiency was resolved.

Source range nuclear instrument N-31 failed to operate after being energized. Operators entered 2-AP-4.00, Nuclear Instrument Malfunction, revision 3, which required that adequate shutdown margin be verified within one hour and then every twelve hours. The inspectors reviewed TS Table 3.7.1, Item 4, Nuclear Flux Source Range, which also

required that adequate shutdown margin be verified within one hour and then every twelve hours. The licensee verified the shutdown margin in accordance with TS. DR S-95-0195 was issued to ensure that this deficiency was resolved.

Auxiliary spray valve 2-CH-HCV-2311 seat leakage significantly complicated RCS pressure control. The problem hampered operators' ability to control pressure throughout the RCS depressurization process. The inspectors independently verified that RCS pressure and temperature were maintained within the allowable regions of the plant operation curve. DR S-95-0206 was issued to ensure that the spray valve deficiency was resolved. The inspectors confirmed that a WO to disassemble, inspect, and repair 2-CH-HCV-2311 was written and scheduled for completion prior to reactor startup.

The containment particulate radiation monitor indicated an increased trend in containment radiation level. The containment gas radiation monitor indicated that radiation levels were not increasing. An air sample obtained from containment indicated normal particulate activity. Containment sump in-leakage rate was calculated and was normal. Operators assessed the aggregate indications and concluded that containment radiation levels were normal. A deficiency card was issued to investigate and repair the containment particulate radiation monitor.

3.2 Unit 2 Pressurizer Excessive Heatup Rate

On February 4, the licensee degassed the RCS in preparation for the RFO. The unit was in cold shutdown with a bubble in the pressurizer. The evolution required that charging pump flow rate be increased to compensate for the increased letdown flow rate. Pressurizer level increased while operators were balancing RCS inventory during the degas evolution and a decrease of 129 degrees F was noted in pressurizer water temperature. The TS allowable cooldown rate is 200 degrees F per hour. Operators were concerned that they were approaching this limit and adjusted charging pump flow to slowly decrease pressurizer level. During the following one hour, water temperature in the pressurizer increased by 146 degrees F which exceeded the TS allowable heatup rate of 100 degrees F per hour. The licensee was recording pressurizer water temperature every 30 minutes and identified that the TS allowable heatup rate was exceeded. At the end of the inspection period, the licensee was performing a fatigue analysis for the pressurizer. Until the inspectors review the licensee's fatigue analysis, this is identified as URI 50-281/95-03-01, Unit 2 Pressurizer Excessive Heatup Rate.

3.3 Unit 2 Reactor Vessel Draindown to Flange Level

On February 8, the inspectors witnessed draining the Unit 2 RCS from a level of 5 percent in the pressurizer (approximately 29 feet) to a level of 17.6 feet on the reactor vessel standpipe. Draining to this level was required to support refueling activities. This evolution was accomplished in accordance with procedure 2-OP-RC-004, Draining the RCS to Reactor Flange Level, revision 4. During the initial drain down phase, the pressurizer level was monitored. For the three and one-half feet region that the reactor vessel standpipe level indicator and the pressurizer level instrumentation do not overlap, an inventory balance was utilized to monitor the amount drained. Upon reaching the 24 foot level, the reactor vessel standpipe was used to monitor level in the reactor vessel. The inspectors concluded that the draindown evolution was conducted in accordance with procedures, equipment response was as expected, and that operators properly focused on safety.

Within the areas inspected, one URI was identified.

4. Maintenance Inspections (62703)

NRC Inspection Report Nos. 50-280/94-33 and 50-281/94-33 described the December 1994 outage work on the Unit 1 TDAFWP and the January Unit 1 reactor trip and failure of the TDAFWP on demand. At the conclusion of that inspection the licensee's RCE was not complete and several items were identified as URI 50-280/94-33-01 for subsequent followup. The URI had five parts and this section will address parts 1 and 4, control of work activities and vendor instructions. Parts 2, 3 and 5 of the URI are discussed in section 6 of this report.

4.1 Control of Work Activities

Through review of the Unit 1 TDAFWP maintenance activities conducted on December 24 and 25, 1994, and January 10 through 11, 1995, the inspectors concluded the following:

On December 24 and 25, 1994, and January 11, 1995, the TDAFWP governor was replaced using WOs 301919 02, 301919 03 and 306913 08 respectively. Approved detailed maintenance procedures were not used.

On December 24 and 25, 1994, and on January 11, 1995, vendors performed maintenance/adjustment/testing on the TDAFWP governor using WOs 301919 01 and 02, 301919 03 and 306913 08 respectively. Approved detailed maintenance procedures were not used.

On January 10, 1995, the TSCS linkage was disassembled and reassembled using WO 306913 01. An approved detailed maintenance procedure was not used.

The inspectors reviewed the station maintenance training program for the TDAFWP contained in JPM-O-51, Perform Maintenance to Terry Turbine, revision 4. The inspectors concluded that details such as installation of the governor valve lever block and governor valve control air pressure inlet vent plug were not specifically addressed. According to the licensee's training department, only one maintenance engineer had attended a Woodward governor training course. The inspectors concluded that TDAFWP governor installation and TSCS linkage assembly were complex maintenance activities and that maintenance personnel did not have the training to perform these activities without detailed procedures.

After reviewing TM 38-W971-00001, Woodward PG-PL Governor, revision 1, and procedure O-MCM-1403-01, Terry Turbine Overhaul, 1-FW-T-2 and 2-FW-T-2, the inspectors concluded that the TM instructions for performing governor post installation maintenance/adjustments/testing were not incorporated into O-MCM-1403-01. The inspectors were informed that the post installation maintenance/adjustments/testing was performed by the vendor. The inspectors observed the vendor perform this evolution on January 11, 1995. The inspectors concluded that TDAFWP governor post installation maintenance/adjustments/testing was performed by the vendor without approved procedures.

TSs 6.4.A.7, 6.4.C and 6.4.D as implemented in part by VPAP-0801, Maintenance Program, revision 4, require that maintenance activities which would have an effect on the safety of the reactor be performed in accordance with detailed written procedures approved by SNSOC. VPAP-0801, Section 6.3.3.c requires the safety significance of the maintenance activity, complexity of the maintenance activity and experience and training of personnel performing the activity be considered when determining whether a detailed maintenance procedure or skill of the craft should be used to accomplish a maintenance activity. VPAP-0801, Section 6.18.2.a requires that maintenance activities performed by a vendor at the station be accomplished in accordance with approved procedures. Failure to use approved detailed written procedures for maintenance activities associated with TDAFWP governor replacement, TSCS linkage assembly and governor post installation maintenance/adjustment/testing is identified as Violation 50-280/95-03-02, Failure to Use Approved Detailed Procedures.

4.2 Control of Vendor Information

The licensee's initial RCE identified possible concerns with control of vendor information. The inspectors reviewed the control of vendor information that applied to the TDAFWP. VPAP-0602, Vendor Technical Manual Control, revision 1 and ENAP-0023, Technical Manual Preparation and Revision, revision 2, were reviewed and the inspectors concluded that the licensee was

maintaining TDAFWP vendor information in accordance with their program.

Within the areas inspected, one violation was identified.

5. Surveillance Inspections (61726, 37551)

The inspectors reviewed the following surveillance activities to assure compliance with appropriate procedure and TS requirements.

5.1 Unit 2 HHSI Pump C Testing

During a recent engineering review of HHSI pump flow rates, the licensee identified that Unit 2 HHSI pump C motor power requirements exceeded the design value of 690 horsepower. On January 30 PPR 95-007 was issued documenting this issue. On January 31 the PPR was reviewed by the Management Problem Review Team and DR S-95-0177 was subsequently issued. Unit 2 HHSI pump C was declared inoperable and removed from service on January 31.

On February 8 the inspectors witnessed the performance of sections 6.6 and 6.7 of 2-OPT-SI-006, SI Accumulator Discharge Check Valves Full Open Test and 2-CH-P-1C Flow Test, dated February 7, 1995. This procedure was revised to test HHSI pump C. The inspectors attended the pre-evolution brief and witnessed the test from the control and switchgear rooms. Motor currents and voltages were measured at selected pump flow rates. The licensee calculated that the motor power requirements were 711 horsepower based on data obtained during the test.

At the end of the inspection period, the licensee was evaluating this issue. Resolution of the issue will be addressed during the unit startup assessment at the end of the RFO. The inspectors concluded that the evaluation and initial corrective actions implemented to resolve this issue were timely and conservative.

5.2 Periodic Safety Bus Logic Testing

On February 4, the inspectors observed Unit 2 safety bus logic testing. Procedure 2-OPT-ZZ-002, ESF Actuation With Undervoltage and Degraded Voltage - 2J Bus, revision 5, is a complex evolution which verified proper logic circuit actuation for over twenty safety related protective signals. A senior operations manager provided an additional level of test oversight in accordance with VPAP-0108, Infrequently Conducted or Complex Tests or Evolutions, revision 0. Procedure 2-OPT-ZZ-002 had recently been revised to incorporate TS revisions and eliminate a redundant EDG start. The test director, a licensed SRO, conducted personal briefings with over thirty individuals during the prior week specifically discussing their responsibilities during the test. The pre-evolution brief emphasized communications and self checking.

The inspectors concluded that station preparations for the test and management oversight were very good.

Two unexpected occurrences were encountered early in the test. First, during degraded voltage EDG cold start testing, EDG No. 3 did not align to the Unit 2 safety bus as required. The test director quickly recognized the cause to be an error in the recently revised procedure. The EDG loaded properly for the switch alignment which had been established in the procedure. The test director temporarily halted the test to ensure the EDG alignment and plant conditions were clearly understood. Following discussion with system engineers and the test director, the senior operations manager directed the test director to proceed with the test. System engineers initiated an appropriate procedure revision to correct the EDG alignment problem. The second problem occurred when operators experienced difficulty unloading the No. 3 EDG due to an apparent voltage mismatch. Operations, maintenance, and engineering personnel conducted non-intrusive troubleshooting and identified the cause to be a loose connector on a voltage meter within the remote EDG control cabinet. The connector was tightened and the test continued. The shift supervisor appropriately controlled plant activities to ensure operators were not unduly challenged during conduct of logic bus testing. The inspectors concluded that operations personnel resolved unexpected occurrences during the test evolution in a deliberate and safe manner. The test director maintained clear communication and oversight throughout the test.

Within the areas inspected, no violations or deviations were identified.

6. Onsite Engineering Review (37551, 38703)

6.1 Procurement of TDAFWP Governors

On January 8 the Unit 1 TDAFWP tripped on demand due to a turbine overspeed condition. While the initial licensee's RCE did not identify a definite cause, degraded governor performance was postulated to be the most likely cause. Improved Woodward model PG-PL governors had previously been installed for Unit 1 (1990) and Unit 2 (1991) in accordance with DCP 88-16-3, AFW Turbine Governor Replacement Unit 1&2. In December 1994, the Unit 1 TDAFWP governor was replaced with a spare governor (serial no. 2435227) which had been stored in the warehouse since procurement in 1990. The inspectors reviewed the procurement and CGD of these governors to determine whether governor quality and performance had been properly validated for their safety related application.

6.1.1 Purchase Orders and Material Specification

Three PG-PL governors were purchased commercial grade using PO CNT 299814 and were dedicated by a third party under PO CNT 301368 for use in safety-related applications. Both POs

incorporated material specification NUS-2203/NAP-0007, revision 3, which detailed the technical and QA requirements for the fabrication, testing, inspection, documentation, and shipment of the governors. The inspectors noted that responsibility for performing the various specified tests was not clearly stated in the material specification. Three tests specified in the POs were not performed by the vendors. Project engineers stated that the three tests which were not performed by vendors were intended to be post-installation licensee tests, not vendor tests. The licensee informed the inspectors that responsibility and scheduling of specific tests were clarified at post award conferences with the vendors. The inspectors independently confirmed that each of the tests listed in NUS-2203/NAP-0007 were satisfactorily completed for the two governors installed in 1990 and 1991 by DCP 88-16-3. Both POs were well written and NUS-2203/NAP-007 was thorough in specifying governor performance criteria, QA criteria, and support requirements (i.e., vendor technical manuals, drawings, material handling information).

6.1.2 Storage and Handling

The inspectors toured material storage facilities, interviewed personnel, and reviewed receipt records to determine whether the model PG-PL governors were properly stored after procurement. The POs specified Level C packaging and storage requirements consistent with ANSI N45.2.2 - 1972, Packaging, Shipping, Receiving, Storage, and Handling of items for Nuclear Power Plants. No special packaging or storage instructions were specified by the vendor. Governor 2435227 was stored in a Class B storage area, which fully satisfied the requirements of Level C storage, upon receipt in 1990. The storage warehouses were clean, dry, and properly monitored for temperature extremes.

In November 1994, governor 2435227 was directly transported by a company employee to and from a test facility in a clean, climate controlled vehicle. The inspectors noted that the governor had not been packaged in a waterproof enclosure which would be typical for Level C shipments. Materials management stated that in this instance, delivery under the direct control of a company employee provided equivalent protection from the environment as would have been obtained by using Level C packaging and shipping the governor via contract carrier. The inspectors determined that packaging/handling of the spare governor during delivery to the test facility was acceptable. Management subsequently initiated appropriate action to ensure that packaging requirements for direct off-site deliveries of material, which bypass the normal contract carrier shipment process, are evaluated on a case-by-case basis. The

inspectors determined that storage and handling of the spare governor was acceptable based on licensee's program controls.

Subsequent to the January 1995 TDAFWP failure, the licensee obtained additional storage recommendations from the vendor which had not been provided under the original PO. The licensee is reviewing this information for future applications. Governor 2435227 was disassembled and visually inspected after the January 1995 failure. Material condition appeared good with no indications of improper storage. The inspectors concluded that storage and handling of model PG-PL governors was acceptable.

6.1.3 Test Records

Test requirements for the PG-PL governors were specified in NUS-2203/NAP-0007. Initial vendor testing was performed at the manufacturer's facility under the oversight of licensee QA personnel and third party engineers. Seismic testing to support the third party CGD was performed at an independent safety related test facility. The inspectors reviewed the third party CGD test plan performed under PO CNT 301368 and verified that critical component characteristics such as dimensions and testing were identified for model PG-PL governor and that these had been successfully demonstrated.

Post installation testing of the model PG-PL governor was performed on Unit 1 and Unit 2 while implementing DCP 88-16-3. The DCP was generally well written. However, the inspectors noted that the Functional Testing Requirements and Acceptance Criteria section did not include two of the tests specified in NUS-2203/NAP-0007. This was a weakness in the development of the DCP. The inspectors discussed this observation with project engineers who stated that recent improvements in the DCP process have clarified what items are to be listed as functional test requirements and thereby reduced the likelihood of similar omissions. The inspectors reviewed STD-GN-0001, Instructions for DCP Preparation, revision 13, and noted that the current procedure provides good instruction for identifying functional test requirements.

VPAP-0301, Design Change Processes, revision 4, specifies that the post modification test plan be developed based upon the functional test requirements section of the DCP. System engineers recognized that although not listed in the DCP, a post installation system stability test was needed. Engineers added the speed regulation and maximum speed rise tests as described in NEMA SM 23-1985, Steam Turbines for Mechanical Drive Service. These were the same two tests identified in NUS-2203/NAP-0007 which were not listed in the

DCP functional test section. The inspectors reviewed DCP 88-16-3 test records and determined that all tests specified in the original material specification, were successfully completed by the final post modification test plan. The inspectors noted that the post installation stability testing performed on Units 1 and 2 during implementation of DCP 88-16-3 was not performed when the Unit 1 governor was replaced in December 1994. The inspectors specifically questioned why the speed rise test was not performed for governor 2435227. Project engineers stated that governor 2435227 had been dedicated for safety related use by PO CNT 301368 and that critical component characteristics of the governor type were verified. Additionally, engineers indicated that the post installation testing specified in DCP 88-16-3 was intended to be a design validation test. Therefore, similar testing of a like-for-like replacement governor was not necessary as part of the PMT. The inspectors agreed with the licensee's position.

6.1.4 Governor Shelf-Life

The CGD test report from a safety-related vendor recommended a 10 year PG-PL governor design life based on the presence of Buna-N materials internal to the governor. Project engineers evaluated the recommendation and determined that the PG-PL governor should not be assigned a design or shelf-life of less than 40 years. This conclusion was based upon oral communications with the vendor who indicated that the Buna-N components had most likely been upgraded to Viton material which has a longer design life. The manufacturer had begun using Viton in place of Buna-N in the 1990 timeframe. The material list provided with the governor and the CGD test report indicated that the components were made of Buna-N. The inspectors questioned whether the licensee had sufficient assurance that the governors were upgraded to Viton internal components. The inspectors determined that absence of documentation to support the governor shelf-life determination was an isolated weakness. VPAP-0704, Shelf Life Evaluation and Control, revision 2, provided good instructions for shelf-life evaluations. Procurement engineers requested that the vendor provide an updated governor material list and report the material type identified during the recent (February 1995) diagnostic disassembly of governor 2435227. The inspectors determined that these actions were appropriate to verify the correct material composition of the governors.

6.1.5 Commercial Grade Dedication

The model PG-PL governors were commercially grade dedicated in 1990 by a third party vendor under PO CNT 301368. The inspectors confirmed that the licensee had properly

certified the third party vendor to perform safety-related services. The governors were received as safety-related material.

In November 1990 the licensee issued PO BNT 484751 to a non-safety related vendor to adjust the governor 2435227 high speed stop and perform associated governor performance testing. The inspectors reviewed procurement documents and interviewed licensee personnel to determine whether vendor services were appropriately dedicated. PTE SSER0019.002 and CGIE SSER0019.002 were developed to identify critical performance characteristics to be tested and specify acceptance criteria. The PTE and CGIE were detailed and properly written in accordance with station procedures. The licensee provided QA and technical oversight at the vendor's test facility. The QA VFIR properly documented successful verification of each critical characteristic listed in CGIE SSER0019.002. No parts were replaced on governor 2435227 at the vendor's facility. Procurement engineers demonstrated indepth knowledge regarding the CGD processes. The inspectors concluded that the licensee appropriately commercial grade dedicated the vendor services provided under PO BNT 484751.

6.1.6 Summary

Model PG-PL TDAFWP governors were purchased commercial grade and were commercially grade dedicated for use in safety-related applications by a third party. Procurement documents including the material specification were detailed. Isolated weaknesses regarding DCP development and shelf life evaluation were identified. Appropriate actions to address these weaknesses were initiated. Storage, handling, and CGD of the vendor services were appropriate.

6.2 Effectiveness of RCE Process

The licensee's RCE for the January 8, Unit 1 TDAFWP failure was discussed in NRC Inspection Report Nos. 50-280/94-33 and 50-281/94-33. The licensee's RCE team concluded that the most probable causal factors were "Equipment Condition" and "Maintenance/Testing Practices." The team's findings indicated that governor 2435227, which was in-place during the January 8 overspeed trip was suspect since diverging oscillations were only experienced with that governor. Additionally, the team determined that maintenance/testing was a causal factor because of inadequate vendor TM instructions and PMT instructions. In this area the team concluded that the vendor had critical information to set-up the governor and linkage in the field. This information was not contained in a written procedure or available to the Virginia Power personnel who performed governor replacement and linkage refurbishment during the December 1994 SGCC outage.

Based on review of the RCE team's log book and meeting with team members, the inspectors noted that although their efforts were extensive the RCE failed to determine why governor 2435227 behaved as it did on January 8.

Within the areas inspected, no violations or deviations were identified.

7. Plant Support (71750)

The inspectors observed radiological control practices and radiological conditions throughout the plant. Radiological posting and control of contaminated areas was good. Workers complied with radiation work permits and appropriately used required personnel monitoring devices. The protected area security perimeter was well maintained with no equipment or debris obstructing the isolation zones.

Within the areas inspected, no violations or deviations were identified.

8. Action on Previous Inspection Items (92702)

(Closed) URI 50-280/94-33-01, Issues Relating to Unit 1 TDAFWP Failure. This item resulted from the NRC's review of the January 8, 1995, overspeed trip of the TDAFWP. The inspectors identified the following topics as part of URI 50-280/94-33-01:

1. Acceptability of controlling work activities using WOs in lieu of detailed SNSOC approved procedure.

2. Possible impact of CGD process used for governor procurement, repairs and testing conducted by the vendor.

3. Storage requirements for the governor in the warehouse.

4. Control of vendor information and vendor activities.

5. Effectiveness of root cause process.

The inspectors' review of these items is discussed in sections 4.1, 4.2, 6.1 and 6.2 of this report.

Within the areas inspected, one violation as discussed in section 4.1 was identified.

9. Exit Interview

The inspection scope and findings were summarized on February 15, 1995, with those persons indicated in paragraph 1. The inspectors described

th areas inspected and discussed in detail the inspection results addressed in the Summary section and those listed below.

Item Number	Status	Description/(Paragraph No.)
URI 50-281/95-03-01	Open	Unit 2 Pressurizer Excessive Heatup Rate (paragraph 3.2).
VIO 50-280/95-03-02	Open	Failure to Use Approved Detailed Procedures (paragraph 4.1).

Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

10. Index of Acronyms and Initialisms

AFW	AUXILIARY FEEDWATER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
CFR	CODE OF FEDERAL REGULATIONS
CGD	COMMERCIAL GRADE DEDICATION
CGIE	COMMERCIAL GRADE ITEM EVALUATION
DCP	DESIGN CHANGE PACKAGE
DR	DEVIATION REPORT
ECCS	EMERGENCY CORE COOLING SYSTEM
EDG	EMERGENCY DIESEL GENERATOR
ESF	ENGINEERED SAFETY FEATURE
F	FAHRENHEIT
HHSI	HIGH HEAD SAFETY INJECTION
NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
NRC	NUCLEAR REGULATORY COMMISSION
PMT	POST MAINTENANCE TESTING
PO	PURCHASE ORDER
PPR	POTENTIAL PROBLEM REPORT
PTE	PROCUREMENT TECHNICAL EVALUATION
QA	QUALITY ASSURANCE
RCE	ROOT CAUSE EVALUATION
RCS	REACTOR COOLANT SYSTEM
RFO	REFUELING OUTAGE
SGCC	STEAM GENERATOR CHEMICAL CLEANING
SI	SAFETY INJECTION
SNSOC	STATION NUCLEAR SAFETY AND OPERATING COMMITTEE
SRO	SENIOR REACTOR OPERATOR
TDAFWP	TURBINE DRIVEN AUXILIARY FEEDWATER PUMP
TM	TECHNICAL MANUAL
TS	TECHNICAL SPECIFICATION
TSCS	TURBINE SPEED CONTROL SYSTEM
URI	UNRESOLVED ITEM
VFIR	VENDOR FINAL INSPECTION REPORT
VIO	VIOLATION
VPAP	VIRGINIA POWER ADMINISTRATIVE PROCEDURE
WO	WORK ORDER
%	PERCENT