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

Report Nos.: 50-280/94-24 and 50-281/94-24

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: August 7 through September 2, 1994

Inspectors: FW Gamer For 9/8/94
M. W. Branch, Senior Resident Inspector — Date Signed

FW Gamer For 9/8/94
S. G. Tingen, Resident Inspector — Date Signed

FW Gamer For 9/8/94
D. M. Kern, Resident Inspector — Date Signed

Accompanying Personnel: D. M. Tamai, Intern
D. R. Taylor, Resident Inspector North Anna

Approved by: for G. A. Belisle, Chief 9/9/94
Reactor Projects Section 2A — 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 and surveillance inspections, Licensee Event Report followup, and action on previous inspection items. Inspections of backshift and weekend activities were conducted on August 11, 18 and 26 and September 2.

Results:

Plant Operations functional area

The operator's prompt response to the August 20 Unit 2 C steam generator main feed regulating valve closure prevented an automatic reactor trip (paragraph 3.2).

Maintenance functional area

The licensee responded to a turbine driven auxiliary feedwater pump trip with the appropriate amount of management attention and reasonable corrective actions (paragraph 4.1).

The corrective action audit performed by the licensee identified an area that warranted improvement. The audit identified that root cause evaluations were not always effective in preventing equipment problems from recurring (paragraph 4.2).

An apparent violation with two parts was identified for failure to promptly identify and implement effective corrective actions for conditions adverse to quality. The first part of the apparent violation involved not promptly sampling both the auxiliary ventilation exhaust filter system trains following a chemical release that occurred in the Unit 2 containment on June 16, 1994. The second part of the apparent violation involved not promptly correcting a condition adverse to quality when an engineering review identified that certain circuits were not fully being functionally tested on a monthly basis (paragraphs 6.1 and 6.2).

REPORT DETAILS

1. Persons Contacted

1.1 Licensee Employees

*W. Benthall, Supervisor, Licensing
*H. Blake, Jr., Superintendent of Nuclear Site Services
R. Blount, Superintendent of Maintenance
*D. Boone, Quality Assurance
*D. Christian, Station Manager
J. Costello, Station Coordinator, Emergency Preparedness
J. Downs, Superintendent of Outage and Planning
D. Erickson, Superintendent of Radiation Protection
*A. Friedman, Superintendent of Nuclear Training
*B. Garber, Licensing
B. Hayes, Supervisor, Quality Assurance
*D. Hayes, Superintendent of Administrative Services
M. Kansler, Station Manager
C. Luffman, Superintendent, Security
*J. McCarthy, Assistant Station Manager
*D. Miller, Radiation Protection
*A. Price, Assistant Station Manager
*R. Saunders, Vice President, Nuclear Operations
*K. Sloane, Operations
E. Smith, Site Quality Assurance Manager
T. Sowers, Superintendent of Engineering
*B. Stanley, Station Procedures
J. Swientoniewski, Supervisor, Station Nuclear Safety
*G. Thompson, Supervisor, Maintenance Engineering
*E. Turko, Engineering
G. Woodzell, Nuclear Training

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

1.2 Management Changes

The following personnel changes were effective September 1: W. Wigley, Manager, Nuclear Operations Support - Corporate, was reassigned to a special project. M. Kansler, Surry Station Manager, replaced W. Wigley. D. Christian, Assistant Station Manager, replaced M. Kansler. J. McCarthy, Superintendent of Operations, replaced D. Christian. S. Sarver, Quality Assurance Supervisor, Plant Operations, replaced J. McCarthy.

1.3 NRC Personnel

*M. Branch, Senior Resident Inspector
*D. Kern, Resident Inspector
*D. Tamai, Intern
D. Taylor, Resident Inspector, North Anna
*S. Tingen, Resident Inspector
*D. Verrelli, Branch Chief, Region II

*Attended Exit Interview

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

2. Plant Status

Units 1 and 2 operated at power for the entire inspection period. Condenser water box fouling from hydroids and eels increased during this period necessitating water box cleaning and power reduction.

3. Operational Safety Verification (71707, 42700)

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. Deviation reports were reviewed to assure that potential safety concerns were properly addressed and reported.

3.1 Biweekly ESF Inspections

3.1.1 EDG Fuel Oil System

The inspectors walked down the EDG fuel oil transfer system located in the EDG rooms and diesel fuel oil transfer pump buildings. Correct breaker position and valve alignment were verified. Completed procedures for monthly fuel oil system tests for 1994 were reviewed for completeness and adequacy. Equipment appeared to be in good overall condition and housekeeping was acceptable.

3.1.2 Control Room Bottled Air System

The inspectors walked down the control room bottled air system located in MER 3, Unit 1 cable vault and control room stair well. Correct valve alignment, PCV regulator pressure and bottled air pressure were verified. Equipment was in good overall condition and housekeeping was adequate.

3.2 Operator Response to Unit 2 C MFRV Closure

On August 20, the Unit 2 C MFRV failed closed. The MFRV's controller was in the automatic mode of control when the valve failed shut. Steam flow/feed flow mismatch and SG level error annunciator alarms and closed position indication on the control board for the C MFRV alerted the operator that an abnormal condition existed. The operator immediately analyzed the condition and placed the MFRV controller in manual and opened the MFRV. The lowest level noted in the C SG was 22%. Failure of the steam flow/feed flow signal comparator was determined to have caused the MFRV to close. The signal comparator was replaced and the C MFRV controller was returned to the automatic mode of operation. The inspectors concluded that the operator's prompt response to this event prevented the unit from automatically tripping.

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

4. Maintenance and Surveillance Inspections (62703, 61726, 40500)

During the reporting period, the inspectors reviewed the following maintenance and surveillance activities to assure compliance with the appropriate procedures.

4.1 TDAFW Pump Turbine Overspeed Trip

On August 22, the Unit 2 TDAFW pump tripped on overspeed during monthly surveillance test, 2-OPT-FW-003, Turbine Driven AFW 2-FW-P-2, revision 3. The turbine operated for approximately 13 seconds and tripped on overspeed. WO 297664-01 was initiated to investigate/repair the governor valve. The valve bonnet, stem and packing were replaced. The cause of the trip was determined to be corrosion buildup on the stem in the area of the stuffing box adjacent to the valve disc.

As immediate corrective action, the licensee initiated a new surveillance for both units. Procedure O-MPM-1403-03, Terry Turbine Governor Valve Stem Movement Check, revision 0, provided instructions to manually exercise the governor valve stem in each unit on a weekly interval. The procedure required the governor power cylinder shaft pin and nut to be disconnected, and measurements taken of the initial movement (breakaway) torque, full stroke torque and full stroke length. These measurements were followed by additional strokes to ensure free stem movement and by linkage reconnection. The inspectors witnessed this surveillance test performance on August 31. Unit 1 tested satisfactory. On Unit 2, some governor valve stem binding was exhibited. Five pounds of torque greater than the breakaway torque was required during stem travel. The licensee determined that the governor had sufficient margin to overcome the binding. However, the licensee reduced the time interval for the next

surveillance performance on Unit 2. The next surveillance was performed September 2 in lieu of waiting an entire week. The inspectors witnessed the surveillance on September 2. Some corrosion was evident; however, stem binding was not exhibited.

The inspectors reviewed the safety evaluation for this new surveillance and attended the SNSOC meeting that approved it. The SNSOC members also determined that a station JCO was needed to adequately track the corrective action progress for governor valve stem binding. The surveillance procedure was effective for 30 days. After 30 days, SNSOC will review the effectiveness of the corrective action.

As part of the longer term corrective action, the licensee ordered chrome plated valve stems. The chromed plated stems do not exhibit the same corrosion as the nitrated stainless steel stems which are currently utilized. Previously, the licensee had not considered this as appropriate corrective action because these stems are subject to blistering and peeling. However, the licensee determined that the chrome plated stems will provide a greater assurance of pump availability than the nitrated stainless steel stems are currently providing.

The licensee has experienced previous TDAFW pump trips. The corrective actions are addressed in NRC Inspection Report Nos. 50-280, 281/94-17, 93-26 and 93-07. The licensee's task team is continuing to evaluate the trips to determine the root cause. Differences have been identified in manufacturing the valve parts. However, the consequences of these differences have not be determined. Due to recurring TDAFW pump trips, the licensee performed a Substantial Safety Hazard Evaluation in accordance with VPAP 2802, Notifications and Reports, revision 4. As a result of the evaluation, the licensee determined that a 10 CFR 21 report was necessary due to the recent TDAFW pump overspeed trips that were attributed to corrosion in the governor valve which caused the stem to bind.

The inspectors concluded the licensee was giving the issue the appropriate amount of management attention and that corrective actions were reasonable. The inspectors will continue to monitor the licensee's long term and short term corrective actions.

4.2 QA Corrective Action Audit Review

The inspectors reviewed QA Audit 93-15, Corrective Action, dated February 2, 1994. This audit satisfied TS requirement 6.1.C.2.h.3. Areas inspected during the audit were the corrective action associated with work requests, DRs, human performance, operating experience, RCEs, nonconformance reports, potential problem reports, LERs, JCOs, 10 CFR 21 reports and records. The audit concluded that with the exception of RCEs, the corrective action program was effectively implemented.

The audit concluded that the RCE program was not always effective in preventing recurring equipment problems. Control Rod Urgent Failures, Kaman Radiation Monitors, Appendix R emergency lighting and IRPI were identified as examples of ineffective corrective actions. The following criteria were utilized in determining if corrective actions were effective:

The deficiency was two or more years old.

The deficiency had been identified and corrected three or more times.

The deficiency was significant based on TSs or UFSAR requirements and/or the high number of occurrences.

Corrective actions had been completed and closed but had not prevented recurrence.

As corrective action, the licensee generated a Corporate Level 1 assignment to evaluate current methods for identifying recurring problems. Additionally, a review of the existing RCE program and self-assessment of the station corrective action program was performed.

The inspectors concluded that QA corrective action audit was effective in identifying an area that needed improvement and was identified as a strength.

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

5. Licensee Event Report Followup (92700)

The inspectors reviewed the LER listed below and evaluated the adequacy of the corrective action. The inspectors' review also included followup of the licensee's corrective action implementation.

(Closed) LER 50-281/92-09, Engineering Safety Feature (ESF) Actuation, Auxiliary Feedwater MOVs Receive an Open Signal.

The details of this event were described in NRC Inspection Report Nos. 50-280, 281/92-17. Because the event involved several equipment problems and human performance errors, the licensee initiated a formal root cause evaluation. The results of RCE 92-06 and proposed corrective action were reviewed and found to be adequate in NRC Inspection Report 50-280, 281/92-25.

The inspectors reviewed implementation of the RCE proposed corrective actions. The inspectors verified that revisions and training related to several non-safety related procedures associated with the mechanical chillers and power supplies were complete. In addition, the chiller's operating logic was verified and adequately documented by the licensee.

The inspectors concluded that actions recommended by the RCE were satisfactorily implemented.

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

6. Action on Previous Inspection Items (92702)

6.1 (Closed) URI 50-280, 281/94-21-01, Time Constraints For Sampling/Testing AVEF System Following Exposure To Chemicals

6.1.1 The Event

On June 16, 1994, a hydrazine concentration of 6 ppm and an ammonia concentration of 30 ppm were detected in the Unit 2 containment. These fumes were identified after a manway was removed from the A SG which had just completed chemical cleaning. Trains A and B of the AVEF system were operated in order to remove the hydrazine and ammonia fumes from containment. Containment was evacuated as a precaution. The supplier of the charcoal utilized in the AVEF system was contacted by the licensee to evaluate potential effects of these chemicals on the charcoal. The charcoal supplier informed the licensee that exposing charcoal to the measured concentration of fumes should not be not detrimental to the charcoal.

6.1.2 AVEF Surveillance Performed

On June 28, 1994, charcoal samples were obtained from the train A AVEF system and sent to a contractor for analysis. This sample was obtained to meet the TS 4.12.A.8.d requirements. TS 4.12.A.8.d requires that laboratory analysis on charcoal samples be performed following painting, fire, or chemical release in an area communicating with the AVEF system. On July 15, 1994, the licensee was notified that the sample's methyl iodide removal efficiency was 93.43%. The minimum acceptable methyl iodine removal efficiency specified in TS 4.12.B.4 was 96%. Train A of the AVEF system was declared inoperable on that same day. The charcoal was replaced and DOP and halogenated hydrocarbon leakage tests were performed as post-maintenance testing prior to returning the train to service on July 20.

On July 28, 1994, charcoal samples were obtained from the train B AVEF system and sent to a contractor for analysis. On August 4, 1994, the licensee was notified that the sample's methyl iodide removal efficiency was 90.7%. This was below minimum TS

requirements. Train B of the AVEF system was declared inoperable on that same day. The charcoal was replaced and DOP and halogenated hydrocarbon leakage tests were performed prior to returning the train to service on August 5.

6.1.3 Event Evaluation and AVEF Testing Performed

Without extensive testing of the charcoal removed from the AVEF trains, the licensee was unable to positively identify what caused the AVEF system charcoal to degrade. However, the licensee did conclude that the cause was associated with the chemical release event in the Unit 2 containment that occurred on June 16. As previously stated, both trains of the AVEF system were aligned to take a suction from containment in order to remove the ammonia and hydrazine fumes. At that time the manway had just been removed from the secondary side of the A SG and the manway from the C SG had been removed several days earlier. Operating both trains of the AVEF system decreased pressure in the containment which allowed fumes from residual SGCC chemicals to be exhausted from the SGs via the removed manway covers into containment and then discharged from the containment to the atmosphere via the AVEF system. Based on conversation with the charcoal supplier, the licensee concluded that the noted concentrations of ammonia and hydrazine should not have damaged the charcoal in the AVEF system but that other residual SGCC chemical may have degraded the charcoal. The licensee determined that if fumes from SG cleaning chemical EDTA were drawn through the AVEF system, the fumes could have degraded the charcoal.

TS 4.12.A.8.d required that laboratory analysis on charcoal samples be performed following painting, fire, or chemical release in an area communicating with the AVEF system. After the A train AVEF system charcoal sample results were identified as not meeting minimum TS acceptance criteria, the inspectors questioned the licensee what time constraints were associated with TS 4.12.A.8.d. The inspectors were informed that there were no time constraints specified in TSs and "following" meant when practical.

The inspectors also noted that the A train was sampled and returned to service before the B train was sampled. The AVEF system is common to both units and is required by TSs to be operational prior to RCS temperature and pressure exceeding 350 degrees F and 450 psig respectively in either unit. TSs allow one train of the AVEF system to be inoperable for a period

not to exceed seven days. Once the A train was declared inoperable on July 15, sampling of the B train would have required the B train to also be declared inoperable. TSs do not recognize both trains of the AVEF system being inoperable and entry into TS 3.0.1 would have been required. The licensee's policy is not to enter TS 3.0.1 on a voluntary basis. The inspectors determined that the B train sample was not promptly taken after the A train was returned to service.

TS 4.0.4 specifies that entry into an operational condition shall not be made unless the surveillance requirements associated with a LCO have been performed within the stated surveillance interval or as otherwise specified. The inspectors noted that on June 23, Unit 2 entered the mode where the AVEF system was required to be operable. The inspectors questioned the licensee why a mode change was made in Unit 2 prior to sampling/testing the AVEF system in accordance with TSs 4.12. The inspectors were informed that the AVEF system was operable to support operation of Unit 1 and therefore operable to support Unit 2 operations as well.

The inspectors reviewed the licensee's basis for determining sampling priorities for the charcoal trains. The A train of the AVEF system was sampled and returned to service prior to sampling the B train. Station policy is to test one train at a time. Also, the A train operated for most the time (approximately 484 hours) during the Unit 2 SGCC outage. The operating time on the B train during the outage was significantly less (approximately 117 hours). On June 16, the day of the chemical release in Unit 2 the A train of the AVEF system operated approximately 23 hours and the B train operated for approximately 8 hours. The licensee thought that if there was a problem, it would show up on the A train because it was operated the most during the outage and on the day of the chemical release.

The inspectors reviewed previous test results for the charcoal trains to determine if there were any trends that would indicate chronic charcoal degradation. TSs requires that the AVEF system charcoal be sampled every 720 hours of operation. The results of the last charcoal samples obtained to meet the 720 hour sampling requirement were reviewed. The A train was sampled on February 2, 1994. The sample results indicated a methyl iodide removal efficiency of 99.73%. The A train had operated for approximately

657 hours between February 2 and June 28, 1994. The B train was sampled on March 6, 1994. The results of this sample indicated a methyl iodide removal efficiency of 96.57%. The B train had operated for approximately 360 hours between March 6 and July 28, 1994. The inspectors concluded that the A train had operated more than the B train but noted that the initial methyl iodide removal efficiencies obtained from the previous samples were lower in the B train than the A train. A lower initial methyl iodide removal efficiency in the B train may not have been considered by the licensee when determining which train should be sampled first following the chemical release.

Following the chemical release in the Unit 2 containment on June 16, it was 12 days before the A train AVEF system charcoal was sampled and 42 days before the B train charcoal was sampled. The inspectors concluded that the amount of time taken to obtain these samples was excessive in that the TS 4.12.A.8.d requirement to sample following a chemical release was not expedited. As a result, Unit 1 was operated from June 16 through June 28 with the A train and through July 28 with the B train AVEF system degraded. Unit 2 operated from June 23 through June 28 with the A train and July 28 with the B train degraded.

6.1.4 Safety Consequence of the Event

Although the AVEF system charcoal did not meet minimum TS methyl iodide removal efficiency acceptance criteria and was therefore degraded, the licensee's analysis concluded that the AVEF system was still capable of mitigating the consequences of the design basis accidents.

The inspectors reviewed engineering analysis NAF-94063, Explanation of Filter Efficiency Used in FHA and LOCA Analysis Surry Power Station, Units 1 and 2, revision 0, which the licensee provided to address the inspectors' concerns as to whether the function of the system was compromised. This analysis addressed the radiological consequences of several accident scenarios which provide the design basis for the AVEF system. The LOCA scenario resulted in the most severe off-site radiological consequences. However, station accident analysis do not credit the AVEF system for methyl iodide removal following a LOCA. The most limiting scenario for which the AVEF system is credited for methyl iodide removal is the FHA.

Engineering analysis NAF-94063 assumed filter removal efficiencies of 70% for methyl iodide and 90% for elemental iodide following a FHA. The inspectors independently confirmed that the assumptions used in NAF-94063 were consistent with those specified in NRC Regulatory Guide 1.25, Assumptions Used for Evaluating the Potential Radiological Consequence of a FHA in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors. The licensee evaluation concluded, that based on 30 days of AVEF system operation following a FHA, both off-site and on-site exposures would remain within 10 CFR 100 regulatory limits.

The results of the A and B train AVEF charcoal filter efficiency analysis, measured under laboratory test conditions, were above the 70% value used in NAF-94063. However, the inspectors observed that TS 4.12 states that the laboratory test conditions are less severe than the design accident environment. The TS further state that 96% methyl iodide removal efficiency provides assurance that the AVEF will function sufficiently under accident conditions to meet regulatory requirements for protection of the public. The inspectors questioned whether the measured AVEF charcoal filter efficiencies of 90% and 93% were sufficient to assure design requirments. Engineering analysis NAF-94063 did not specifically correlate laboratory test conditions to the environment present following a design accident. The inspectors expressed concern that the AVEF system was degraded in that the charcoal filters did not meet TS required performance criteria. The licensee maintained that the AVEF system remained functional and indicated that further technical assessment of this issue was in progress at the end of this report period.

6.1.5 Regulatory Issues

In summary, samples were not promptly taken after a chemical release; when sampling was performed, it was sequential, not simultaneously; and, the B train was not sampled promptly after the A train's sample results were known nor after the A train was returned to service.

10 CFR 50, Appendix B, Criterion XVI, Corrective Action, requires that measures be established to assure that conditions adverse to quality are promptly identify and implement corrective action following the chemical release that damaged the AVEF system charcoal

on June 16, 1994, was identified as part 1 to Apparent Violation 50-280, 281/94-24-01, Failure to Identify and Promptly Correct Conditions Adverse to Quality.

6.2 (Closed) URI 50-280, 281/94-21-02, TS Monthly Testing That Requires Installation of Jumpers or Disconnection of Leads.

During the licensee's review of TS surveillance compliance, engineering identified three instances where reactor protection/ESF circuits were not being fully tested on a monthly basis with the unit at power because testing required the use of jumpers or disconnecting leads to complete. The licensee concluded that the following circuits were not designed to test at power and therefore not required to be tested monthly:

Between 10% and 35% power, low RCS flow on two out of three loops automatically opens the reactor trip breakers. TS Table 4.1-1, Minimum Frequencies For Check, Calibrations And Test Of Instrument Channels, Items 5 and 26 require that this circuit be functionally tested on a monthly interval. The review identified that the circuit was being tested on a RFO interval but the entire circuit was not tested monthly. The inspectors noted that without modification, lifting of leads/installation of jumpers would be required to completely test this circuit at power.

Low-low level on two out of three SGs automatically start the respective unit's TDAFW pump. TS Table 4.1-1, Item 32.a, requires that this circuit be functionally tested on a monthly interval. The review identified that the circuit was being tested on a RFO interval but not monthly. The inspectors noted that without modification, testing at power would render two of the three AFW pumps inoperable. This condition would require entry into TS 3.0.1.

Undervoltage on two out of the three RCP buses automatically starts the respective unit's TDAFW pump. TS Table 4.1-1, Item 32.b, requires that this circuit be functionally tested on a monthly interval. The review identified that the circuit was being tested on a RFO interval but not monthly. The inspectors noted that without modification, testing this circuit would render the TDAFW pump inoperable during the test.

The licensee concluded that a clarification to TSs would be requested in the future and that a TS change was not immediately required. The licensee did implement changes to the surveillance intervals for the above circuits as a result of the review. In addition to testing the circuits during RFOs, the circuits are required to be tested prior to starting a unit up if the circuit was not tested during the previous 30 days. The inspectors discussed the requirements of TS Table 4.1-1, Items 5, 26 and 32.a

and b with the cognizant NRC staff and concluded that TSs required each of the above circuits to be tested on a monthly interval.

Through a review of the circuits in question the inspectors noted that it was not practical to test these circuits monthly at power and that this issue had minor safety significance.

10 CFR 50, Appendix B, Criterion XVI, Corrective Action, requires that measures be established to assure that conditions adverse to quality such as deviations and nonconformances are promptly identified and corrected. The failure to promptly correct a condition adverse to quality when an engineering review identified that certain circuits were not fully being functionally tested on a monthly basis was identified as part 2 to Apparent Violation 50-280, 281/94-24-01, Failure to Identify and Promptly Correct Conditions Adverse to Quality.

Within the areas inspected, one apparent violation with two parts was identified.

7. Exit Interview

The inspection scope and findings were summarized on September 2, 1994, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results addressed in the Summary section and those listed below.

Item Number	Status	Description/(Paragraph No.)
EEI 50-280, 281/94-24-01	Open	Failure to Identify and Promptly Correct Conditions Adverse to Quality (paragraphs 6.1 and 6.2)
URI 50-280, 281/94-21-01	Closed	Time Constraints for Sampling/Testing AVEF System Following Exposure to Chemicals. (paragraph 6.1).
URI 50-280, 281/94-21-02	Closed	TS Monthly Testing That Requires Installation of Jumpers or Disconnection of Leads (paragraph 6.2)
LER 50-281/92-09	Closed	Engineering Safety Feature (ESF) Actuation, Auxiliary Feedwater MOVs Receive an Open Signal (paragraph 5).

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

8. Index of Acronyms and Initialisms

AFW	AUXILIARY FEEDWATER
AVEF	AUXILIARY VENTILATION EXHAUST FILTER
CFR	CODE OF FEDERAL REGULATIONS
DOP	PENETRATION OF DIIOCTYL PHTHALATE
DR	DEVIATION REPORT
ECCS	EMERGENCY CORE COOLING SYSTEM
EDG	EMERGENCY DIESEL GENERATOR
EDTA	ETHYLENE DIAMINE TETRA-ACETIC ACID
ESF	ENGINEERED SAFETY FEATURE
F	FAHRENHEIT
FHA	FUEL HANDLING ACCIDENT
IRPI	INDIVIDUAL ROD POSITION INDICATION
JCO	JUSTIFICATION FOR CONTINUED OPERATION
LER	LICENSEE EVENT REPORT
LCO	LIMITING CONDITIONS OF OPERATION
LOCA	LOSS OF COOLANT ACCIDENT
MER	MECHANICAL EQUIPMENT ROOM
MFRV	MAIN FEEDWATER REGULATING VALVE
MOV	MOTOR OPERATED VALVE
NRC	NUCLEAR REGULATORY COMMISSION
PCV	PRESSURE CONTROL VALVE
PPM	PARTS PER MILLION
PSIG	POUNDS PER SQUARE INCH GAGE
QA	QUALITY ASSURANCE
RCE	ROOT CAUSE EVALUATION
RCP	REACTOR COOLANT PUMP
RCS	REACTOR COOLANT SYSTEM
RFO	REFUELING OUTAGE
SG	STEAM GENERATOR
SGCC	STEAM GENERATOR COMPONENT COOLING
SNSOC	STATION NUCLEAR SAFETY AND OPERATING COMMITTEE
TDAFW	TURBINE DRIVEN AUXILIARY FEEDWATER
TS	TECHNICAL SPECIFICATION
UFSAR	UPDATED FINAL SAFETY ANALYSIS REPORT
URI	UNRESOLVED ITEM
VIO	VIOLATION
VPAP	VIRGINIA POWER ADMINISTRATIVE PROCEDURE
WO	WORK ORDER