



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

Report Nos.: 50-280/92-14 and 50-281/92-14

Licensee: Virginia Electric and Power Company
 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: June 7 through July 4, 1992

Inspectors: *A. Ruff Fox* 7/27/92
 M. W. Branch, Senior Resident Inspector Date Signed

A. Ruff Fox 7/27/92
 J. W. York, Resident Inspector Date Signed

A. Ruff Fox 7/27/92
 S. G. Tingen, Resident Inspector Date Signed

Approved by: *P. E. Fredrickson* 7/27/92
 P. E. Fredrickson, Section Chief Date Signed
 Division of Reactor Projects

SUMMARY

Scope:

This routine resident inspection was conducted on site in the area of operations, maintenance, surveillance, action on previous inspection items, quality verification and safety assessment review, unresolved safety issue A-46, and NRC Bulletin No. 92-01. Additionally, in the corporate office a review of electrical engineering interface with the nonnuclear electrical engineering group that develops electrical protective setpoints was performed. During the performance of this inspection, the resident inspectors conducted review of the licensee's backshifts or weekend operations on June 11, 17, 18, 21, 25, 28, and 29, and July 2.

Results:

In the operations area, the following items were noted:

Review of the preliminary results of an operations audit showed no immediate action problems (paragraph 3.a).

Review of operations shift relief check list OC-03 revealed that the charging pump alignments were not updated in the instructions. This was identified as a weakness (paragraph 3.b).

Observed that the response to a potential fire in a transformer cooling fan was prompt and adequate (paragraph 3.c).

One example of a poor quality Technical Procedure Upgrade Program procedure was identified (paragraph 4.d).

Several plant material conditions hindered the evolution of filling the low head safety injection pump seal head tank, but the tank was able to be filled per the procedure (paragraph 5.c).

In the maintenance/surveillance functional area, the following items were noted:

Specific post-maintenance tests were thorough and complete (paragraph 4).

Control room ventilation system testing was accomplished in accordance with the procedure, but was hampered by the breaching of control room envelope openings during the test (paragraph 4.a).

During the removal of one channel of the new resistance temperature detectors (RTD) in the C loop hot leg of Unit 1, the instrumentation and control (I&C) technicians were very thorough, and had the support of the system engineer at the work site (paragraph 4.b).

Two periodic tests that did not overlap resulted in an untested portion of the RWST low level initiation of the refueling mode transfer (RMT) function (paragraph 5.b).

The licensee did not have a program to routinely test the control room envelope bottled air system (paragraph 5.c).

In the safety assessment/quality verification area, the following item was noted:

Station Nuclear Safety Operating Committee normal procedure review process evaluates the procedure's overall purpose and ensures that it conforms to the stations policies and that the plant is not adversely effected. This review is not a detailed technical review; however, in some cases, the committee does perform detailed technical reviews of procedures (paragraph 4.d).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- * W. Benthall, Supervisor, Licensing
- R. Bilyeu, Licensing Engineer
- H. Blake, Superintendent of Site Services
- * R. Blount, Superintendent of Engineering
- * B. Bryant, Licensing Engineer
- D. Christian, Assistant Station Manager
- J. Downs, Superintendent of Outage and Planning
- * R. Gwaltney, Superintendent of Maintenance
- M. Holdsworth, Supervisor, Security
- * M. Kansler, Station Manager
- A. Keagy, Superintendent of Materials
- * J. McCarthy, Superintendent of Operations
- A. Meekings, Supervisor, Administrative Services
- * A. Price, Assistant Station Manager
- * E. Smith, Site Quality Assurance Manager
- * R. Saunders, Assistant Vice President, Nuclear Operations

NRC Personnel

- * M. Branch, Senior Resident Inspector
- * S. Tingen, Resident Inspector
- * J. York, Resident Inspector

*Attended Exit Interview

Other licensee employees contacted included control room operators, shift technical advisors, shift supervisors and other plant personnel.

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

2. Plant Status

Unit 1 began the reporting period in power operation. The unit was at power at the end of the inspection period, day 59 of continuous operation.

Unit 2 began the reporting period in power operation. The unit was at power at the end of the inspection period, day 199 of continuous operation.

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 operations safety and compliance with TSs and to maintain awareness of the overall operation of the facility. 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 program implementation, radiological work practices, plant security and housekeeping. Deviation reports were reviewed to assure that potential safety concerns were properly addressed and reported.

a. QA Audit of Operations

On June 9, the inspectors attended the entrance meeting for the biannual QA audit for operations (Audit No. 92-11). Discussions were held with the auditors and a review of the audit plan and check list was performed. Areas assessed included: organization, facilities and equipment, procedures and logs, conduct of operations, plant status controls, and maintenance of records. The audit addressed previously identified NRC, INPO, and QA issues. Performance was evaluated through observations of various routine operational activities, shift turnovers, and test control. The inspectors discussed the preliminary audit results and noted that no immediate concerns were identified. The final audit exit for Surry will be conducted on July 21.

b. Review of Shift Relief Checklist

During the backshift on June 20, the inspectors reviewed several of the completed CRO shift relief checklists (OC-03) dated February 25, 1992, that had been performed for the mid-shift turnover. The review indicated that the checklist had been completed as required. However, the inspectors noted a problem with the checklist as it applied to the required number of charging pumps for power operations. Specifically, item 16 of the checklist for required charging pumps contained a note that stated that no more than two out of the three charging pumps can be out of PTL position and capable of providing flow on safeguards actuation. The actual charging pump configuration as required by the procedure changes directed by DCP 91-021 were for all three charging pumps to be out of the PTL position. At the time the inspectors discovered the checklist problem all three pumps were out of the PTL position.

When questioned by the inspectors, the operators could not explain why they were signing the checklist when the actual configuration was different from that specified. The inspector contacted the SS who indicated that the checklist was in error and would be corrected. The inspectors discussed the item with the Operations

Superintendent and also verified that the checklist was changed to specify that all three pumps should be normally out of PTL. The Operations Superintendent could not explain why the operators were signing the checklist, but he did add that their review indicated that the practice to qualify checklist signoff was not well understood and may have contributed to a signoff of an item that was not in accordance with the actual configuration. The Operations Superintendent also indicated that they were reviewing the overall checklist practice. Since the checklists are not considered procedures, they do not receive the same indepth review of an operations procedure. They also are not tied to the design change process and would not automatically get updated when affected by a modification.

Proper charging pump configuration was maintained at all times and was controlled by approved procedures. However, not recognizing the need to update the checklist when the DCP was implemented and the operators signing the checklist without stopping to get the checklist corrected is considered a weakness. Checklists, if properly utilized, could prevent an unacceptable configuration from going unnoticed for extended periods of time.

c. Response to Fire in Unit 2 Emergency Switch Gear Room

At 1:14 pm on June 26 a fire watch in the Unit 2 switch gear room reported the smell of smoke. Two minutes later an operator confirmed the smell of smoke coming from transformer 2H-1. The fire team was dispatched and abnormal procedure O-AP-48.00, Fire Protection-Operations Response, dated December 5, 1991, was entered. No visible smoke was noted and the electricians removed the panels from the transformer so that a visual inspection could be performed. One of the three cooling fans for the transformer was found not operating.

The inspectors observed the response of the licensee's team and was at the fire scene when some of the team arrived. The response of the team was prompt and adequate. The leads to the suspect fan were lifted at 2:10 pm and no further characteristics of a potential fire were noted. The inspectors discussed the loss of the cooling fan with an electrical design supervisor and were told that the transformer was designed to run, if necessary, with all three cooling fans inoperable.

d. Operations TPUP Review

On May 17, 1992, DR S-92-0894 was written against an upgraded procedure for being technically incorrect. Section 5.6 of 1/2-OP-CH-004, Charging Pump C Operations, dated December 19, 1991, provided instructions for the transfer of charging pump C from its normal power supply to its alternate power supply. The procedure placed charging pump A in service and charging pumps B and C in PTL. On a loss of offsite power concurrent with SI

initiation in this configuration, charging pump A would have tripped. Manual operator action would be required to start a charging pump. Operators realized that the procedure was incorrect and initiated the DR. After the DR was initiated, the procedure was revised by disabling the undervoltage trip interlock on the A charging pump prior to placing the C charging pump in the PTL position.

The inspectors reviewed the original copy of 1/2-OP-CH-004 and agreed that Section 5.6 of the procedure improperly configured the charging pumps. As discussed in previous IRs, the quality of TPUP procedures has been good, however, procedure 1/2-OP-CH-004 is one example of a poor quality TPUP procedure. The inspectors questioned the SNSOC Chairman concerning SNSOC approval and were informed that procedures normally do not get a technical review during the SNSOC approval process. SNSOC looks at the procedure's overall purpose and ensures that it conforms to the station's policies and that the plant is not adversely effected. However, in some cases, SNSOC does perform a detailed procedure review, if determined necessary.

DR S-92-0894 also stated that this problem was originally identified in December, 1991. The inspectors questioned why the procedure was not corrected when originally identified and were informed that other problems with the procedure were identified and corrected but this problem was not. The inspectors were also informed that station management was aware of the procedural problems identified in December and directed that the procedure be revised at that time.

The inspectors reviewed TPUP procedure, 1-OP-CH-001, CVCS Operations, dated December 19, 1991. This procedure required a major revision prior to its initial performance. The majority of the changes in the revision were to valve line-up sheets that changed the designated location of valves in the containment. The inspectors were informed that when the procedure was issued, the unit was operating and the system could not be walked down. After the unit was shutdown, a walk-down of the system was conducted and the procedure was revised accordingly. The licensee's procedure process requires that operational procedures be validated by operations personnel prior to issuance. During the validation process, systems are walked down if practicable.

Within the areas inspected, no violations were identified.

4. Maintenance Inspections (62703) (42700)

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

The following maintenance activities were reviewed:

a. Control Room Ventilation Fan Flow Adjustment

Following the drive belt replacement on control room ventilation fan, 2-VS-F-41, the fan was tested in accordance with PT 32.5, Control Room Filter Flow Test, dated March 29, 1989. The test failed because the flow rate of air through the fan was too low. The fan was retested and during this test, the flow rate was too high. The fan was tested a third time and the flow rate was too high. Adjustments were made to decrease the fan's flow rate. The reason for the initially low fan flow rate was not evident. The inspectors monitored this maintenance activity and subsequent testing. The maintenance was accomplished in accordance with WO 128267 and procedure MCM-0205-1, Belt Replacement, Adjustment and Tightening, dated March 26, 1992. The fan is driven by a motor via a drive belt. The fan's flow rate is proportional to the speed of the fan which can be adjusted by changing the diameter of the pulley. A Maintenance Engineering Transmittal was utilized for providing the specifications for increasing the diameter of the pulley in order to decrease the fan speed. The inspectors reviewed the maintenance package which included the PMT requirements. No discrepancies were identified. Subsequent testing indicated that proper flow rates were achieved, and is discussed in paragraph 5.a.

b. Troubleshooting High Delta T Protection-Unit 1

On June 20 at 0856 an annunciator alarm was received in the control room that a delta T deviation existed. Channel 3 for the over pressure over temperature delta temperature was declared inoperable and placed in trip. The C loop delta T was fluxuating approximately four percent and the over temperature delta temperature set point was erratic. A low level amplifier and a failed module were replaced but failed to correct the problem. Further analysis by the I&C technicians revealed that RTD 1-RC-TE-432P1 and the spare RTD were failed low. The two RTDs had low megger readings and the output of the active element had decreased significantly indicating a cable or RTD failure. The system has three T-hot RTDs in the C loop. The three signals are fed into a "divide by 3" summator to give a T-hot average. A review of the safety evaluation shows that the design of the system allows the removal of a failed RTD and a subsequent change to a "divide by 2" summator versus the "divide by 3".

The licensee decided to remove the RTDs using temporary modification No. S1-92-31 and to issue a work request to repair them during the next outage. The inspectors observed the I&C technicians removing the two leads and the summing resistor. A system engineer was also present during this maintenance. No discrepancies were identified.

c. Troubleshooting Unit 2 LHSI Pump Seal Head Tank Alarm

On July 1, pump 2-SI-P-1B was operated for ten minutes in order to perform testing. Approximately two hours after securing the pump, the seal head tank low level alarm actuated. The seal tank also had a high level indicating light that was lit showing that the tank was full. Because there were conflicting indications of seal head tank level, operators declared the pump inoperable, entered the appropriate TS LCO, notified the system engineer, and initiated a DR. The seal head tank was filled and the low level alarm cleared. It was determined that the tank's high level light indication was malfunctioning, and the pump was declared operable because the level of the seal head tank was known. Troubleshooting was initiated on the tank's high level limit switches.

On July 2, the inspectors witnessed the troubleshooting of the pump 2-SI-P-1B seal head tank level switches. This maintenance was accomplished in accordance with procedure O-TOP-4051, LHSI and OSRS Seal Head Tank Level Setting Verification, dated July 2, 1992 and OP 7.3.4, Filling LHSI and OSRS Seal Head Tanks, dated May 29, 1992. The troubleshooting revealed that the high level limit switch was out of adjustment. The switch was adjusted and the tank was drained and filled in order to verify proper switch operation. The inspectors reviewed the PMT requirements for this maintenance and considered them correct. The procedures for this evolution were adequate and were followed. The inspectors noted several material conditions that hindered the evolution of filling the seal head tank. These material conditions included broken pressure gages on the pressure regulator that was used to fill the tank, and a pressure regulator that was difficult to adjust. Because the seal head tank cooling coils were horizontal in lieu of vertical, rapid valve manipulations were required to prevent air from being trapped in the system. A work request was initiated to repair the regulator and gages. The problem with the cooling coils has been previously identified and modifications are scheduled for a future RFO. The inspectors noted that during this maintenance the system engineer and assistant shift supervisor were present to provide assistance to maintenance and operations personnel involved with this evolution. The inspectors consider that the corrective actions associated with 2-SI-P-1B seal head tank alarm on July 1 and 2 were satisfactory.

Within the areas inspected, no violations were identified.

5. Surveillance Inspections (61726) (42700)

During the reporting period, the inspectors reviewed surveillance activities to assure compliance with the appropriate procedure and TS requirements.

The following surveillance activity was reviewed:

a. Control Room Filtration Flow Test

On June 12, the inspectors witnessed the testing of control room ventilation fan, 2-VS-F-41, in accordance with PT 32.5. Once the fans was started, the velocity of air passing through the fan was measured with an anemometer. The inspectors noted that the test was able to be accomplished in accordance with the procedure but was hampered by the breaching of control room envelope openings during the test. PT 32.5 required a ten minute stabilization period after the fan was started. However, during the test, personnel would enter and exit the control room envelope which caused the fan's flow rate to oscillate. The operator measuring the flow rate had to continuously monitor flow rates and determine when the control room envelope doors were shut and flow rates restabilized.

b. Refueling Water Storage Tank Level-RMT

During review of procedural changes necessary to support a TS change, a deficiency was discovered in the surveillance testing for the RWST low level initiation of the RMT system. An untested area was discovered on June 29, when the licensee identified that two periodic tests (PT-2.19 and PT 8.6), which are used to test this circuitry, did not overlap. Consequently, a six hour LCO to cold shut down (TS 3.01) was entered at 2:20 pm on June 29. The licensee modified PT-2.19, Refueling Water Storage Tank Level, dated May 21, 1992, for each of the units so that the nontested area of the circuitry would be tested. The inspectors observed the testing from the emergency switchgear room and the control room. The periodic tests were successful and the licensee exited the LCO at 5:18 pm for Unit 1 and 4:49 for Unit 2. A supplement to an existing LER will be written. No discrepancies were noted during the testing.

c. Control Room Envelope Compressed Bottled Air System Testing

The inspectors reviewed the licensee's program for testing the active components in the control room envelope compressed bottled air system. The control room, control room annex, Units 1 and 2 ESGRs, and MER 3 make up the control room envelope. Upon receipt of an SI signal from either unit, the control room envelope's air supply and exhaust automatically isolate and the compressed bottled air banks located in MER 3 and Unit 1 cable vault automatically begin to depressurize. The two bottled air banks are redundant and designed such that actuation of a single air bank will maintain the control room envelope pressure higher than atmospheric pressure for one hour.

Dampers 1-VS-MOD-103A, control room envelope exhaust, and 1-VS-MOD-103B, control room envelope supply, shut on an SI signal. The closure of 1-VS-MOD-103A initiates the depressurization of the MER 3 air bank and the closure of 1-VS-MOD-103B initiates the depressurization of the cable vault air bank. The inspectors reviewed procedures 1-OPT-ZZ-001, ESF Actuation With Undervoltage and Degraded Voltage 1H-Bus, dated February 27, 1992, and 2-OPT-ZZ-002, ESF Actuation With Delayed Undervoltage 2J-Bus, dated August 29, 1991, and verified that the circuitry up to and including these dampers were properly tested.

The inspectors reviewed PT 33.1, Control Room Leakage, Bottled Air, dated June 27, 1989 and concluded that the licensee did not have a program to routinely test the circuitry and components that actuate upon the closure of 1-VS-MOD-103A and B. These components include SOVs, pressure regulating valves and their associated electrical circuitry. The licensee did have a program, PT 33.1, to routinely verify that control room envelope leakage was not excessive. PT 33.1 allowed the use of the air bank in MER 3 or in the Unit 1 cable vault as a pressure source when pressurizing the control room envelope. When performing this test, the circuitry and components that actuate to pressurize the control room envelope are properly tested for the air bank used during the test. This test was performed on November 29, 1990, utilizing the air bank in MER 3 as a pressure source. This testing was performed on May 19, 1991, and April 15, 1992, utilizing the air bank in the Unit 1 cable vault as a pressure source. At the end of the inspection period, approximately 19 months has elapsed without testing the MER 3 air bank components. PT 33.1 is currently scheduled to be performed in the first half of 1993 during the Unit 1 RFO.

Section 9.13.3.6 of the UFSAR states that automatic closure of the dampers causes an automatic discharge of the control room bottled air system. The inspectors reviewed TSs and concluded that they did not contain a requirement to test the components that automatically actuate to pressurize the control room envelope. Item 15 of TS Table 4.1-2A requires each refueling interval that the control room ventilation system be tested for the ability to maintain a positive pressure for one hour using a volume of air equivalent to or less than that stored in the bottled air supply. This TS requirement was added by Amendments Nos. 72 and 73 which were approved by SER dated April 24, 1980. The inspectors reviewed the SER and concluded that additional test requirements were not specified for the bottled air system. The inspectors reviewed the IST requirements for bottled air system pressure regulating valves and concluded that there were no requirements to periodically exercise the valves.

The licensee agreed with the inspectors that the components associated with the automatic initiation of the bottled air system should be routinely tested. At the end of the inspection period

the licensee was in the process of revising procedures to ensure routine testing. Also, the licensee was evaluating the need to test the MER 3 air bank components prior to the upcoming RFO.

Within the areas inspected, no violations were identified.

6. Action On Previous Inspection Items (92701) (92702)

(Closed) VIO 280,281/91-14-02, Failure to Identify and Correct Conditions Adverse to Quality. This issue involved inadequate corrective actions associated with LHSI and OSRS seal head tank alarms. The licensee responded to this violation in a letter dated August 7, 1991. In that letter, the licensee stated that annunciator response procedures were revised to provide guidance to operators on receipt of a low level alarm and enhance seal tank cooling fill procedures to ensure the air is vented from the system. The inspectors reviewed the annunciator response for the seal head tank low level alarm and considered that adequate guidance was provided. The seal head tank fill procedures were reviewed and discussed in paragraph 4.c.

Within the areas inspected, no violations were identified.

7. Safety Assessment and Quality Verification (40500)

During the inspection period, the Unit 2 pressurizer safety valve, 2-RC-SV-2551A, began to leak excessively by the seat creating operational problems. In an attempt to reduce the leakage the licensee temporarily modified the ventilation in the pressurizer cubicle to lower the ambient temperature. The ventilation system was modified by installing a temporary duct at a ventilation header to direct cooling air into the cubicle. This was accomplished in accordance with Temporary Modification S2-92-09, dated June 16, 1992. The inspectors reviewed the safety evaluation that accompanied the temporary modification and concluded that the safety evaluation was adequate. The safety evaluation properly addressed the effect the change of ambient temperature had on valve set point and loop seal temperature.

Within the areas inspected, no violations were identified.

8. Engineering Activity Review (37828)

a. Unresolved Safety Issue A-46

On June 17, the inspectors received an update on the licensee's status on unresolved safety issue A-46, Seismic Qualification of Equipment in Operating Plants. The update was thorough and informative. The licensee must respond in writing to the NRC by September 21, 1992, to Generic Letter 87-02 concerning this unresolved safety issue.

b. Review of Interface Between Nuclear and Non-Nuclear Electrical Engineering

On June 23, the inspectors performed an engineering interface review at the licensee's corporate office. The purpose of the review was, in part, to evaluate the type of controls that NEE had over the safety-related power distribution protection setpoint design work performed by the Grayland Avenue Substation and System Protection Engineering group. The inspectors reviewed the required personnel qualifications and output reviews that were specified in the interface procedure NDCIM-14 revision 2 dated January 15, 1991.

The inspectors determined that SS&SP was the design authority for transmission and distribution equipment and was responsible for the review and approval of protective relaying for medium and high voltage systems (4160 volts and above). The interface procedure required that when safety-related equipment was involved, the NEE group would review the calculation (i.e. outputs) and that the NDCM applied. The procedure also required that trained and qualified personnel be assigned to the work performed, and that the nuclear design change process must be used for changes associated with setpoints. The interface procedure also invokes 10CFR 21 and 10CFR 50 appendix B requirement for the safety-related work performed by SS&SP.

The inspectors reviewed the 10CFR appendix B requirements associated with personnel qualifications and determined that TS 5.1.B and QA Topical requirement for personnel qualification allow both degreed and non-degreed personnel to fill the position of engineer. This requirement would apply to both NEE and SS&SP engineers performing safety-related work. The inspectors also interviewed NEE personnel associated with the review of SS&SP outputs and verified that the NEE reviewer was well experienced and qualified for the position. The inspectors review concentrated on the controls that are currently in place and have been in place since January 1991 and did not review past controls methods in this area.

Within the areas inspected, no violation was identified.

9. NRC Bulletin No. 92-01

On June 25, the inspectors discussed with the licensee NRC Bulletin No. 92-01, Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free From Fire Damage. The bulletin required in part that immediately upon receipt, the licensee should determine the areas of the plant where this material was used and evaluate the consequences. A detailed discussion was held between the licensee and NRC personnel. The inspectors reviewed justification for continued operation No. C-92-005 which contained

compensatory measures for the Thermo-lag fire barriers. The licensee is required to respond to the bulletin within 30 days.

10. Exit Interview

The inspection scope and results were summarized on July 8, with those individuals identified by an asterisk in paragraph 1. The following summary of inspection activity was discussed by the inspectors during this exit:

Item Number	Status	Description
VIO 280,281/91-14-02	Closed	Failure to Identify and Correct Conditions Adverse to Quality. (Paragraph 6)

The licensee acknowledged the inspection conclusions with no dissenting comments. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

11. Index of Acronyms and Initialisms

CRO	-	CONTROL ROOM OPERATOR
CVCS	-	CHEMICAL AND VOLUME CONTROL SYSTEM
DCP	-	DESIGN CHANGE PACKAGE
DR	-	DEVIATION REPORT
ECCS	-	EMERGENCY CORE COOLING SYSTEM
ESF	-	ENGINEERED SAFETY FEATURE
ESGR	-	EMERGENCY SWITCHGEAR ROOM
I&C	-	INSTRUMENTATION AND CONTROL
INPO	-	INSTITUTE OF NUCLEAR POWER OPERATION
IR	-	INSPECTION REPORT
IST	-	INSERVICE TEST
LCO	-	LIMITING CONDITIONS OF OPERATION
LHSI	-	LOW HEAD SAFETY INJECTION
NDCM	-	NUCLEAR DESIGN CONTROL MANUAL
MER	-	MECHANICAL EQUIPMENT ROOM
NEE	-	NUCLEAR ELECTRICAL ENGINEERING
NRC	-	NUCLEAR REGULATORY COMMISSION
OP	-	OPERATING PROCEDURE
OSRS	-	OUTSIDE RECIRCULATION SPRAY SYSTEM
PMT	-	POST MAINTENANCE TEST
PTL	-	PULL TO LOCK
QA	-	QUALITY ASSURANCE
RFO	-	REFUELING OUTAGE
RMT	-	REFUELING MODE TRANSFER
RTD	-	RESISTANCE TEMPERATURE DETECTOR
RWST	-	REFUELING WATER STORAGE TANK
SER	-	SAFETY EVALUATION REPORT
SI	-	SAFETY INJECTION
SNSOC	-	STATION NUCLEAR AND SAFETY OPERATING COMMITTEE

SOV - SOLENOID OPERATED VALVE
SS - SHIFT SUPERVISOR
SS&PP- SUBSTATION AND SYSTEM PROTECTION
TS - TECHNICAL SPECIFICATIONS
TPUP - TECHNICAL PROCEDURE UPGRADE PROGRAM
UFSAR- UPDATED FINAL SAFETY ANALYSIS REPORT
VIO - VIOLATION
WO - WORK ORDER