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

Report No.: 50-395/91-05

Licensee: South Carolina Electric & Gas Company
Columbia, SC 29218

Docket No.: 50-395 License No.: NPF-12

Facility Name: V. C. Summer Nuclear Station

Inspection Conducted: March 1-31, 1991

Inspector: _____ 4/11/91
R. C. Haag, Senior Resident Inspector Date Signed

Accompanying Personnel: L. A. Keller

Approved by: _____ 4/11/91
Floyd S. Cantrell, Section Chief Date Signed
Reactor Projects Branch 1
Division of Reactor Projects

SUMMARY

Scope:

This routine inspection was conducted by the resident inspectors onsite in the areas of monthly surveillance observations, monthly maintenance observation, operational safety verification, ESF system walkdown, review of nonconformance reports, and onsite follow-up of events at operating power reactors. Selected tours were conducted on backshift or weekends. Backshift or weekend tours were conducted on seven occasions.

Results:

The plant operated at or near 99 percent power until March 8, 1991, when power was decreased to 60 percent. Operation at 60 percent power was continued till March 25, 1991, when power was increased to 99 percent. The reduced power operation was for fuel conservation and to allow continued plant opertion until the next refueling outage in September 1991. The plant remained at the 99 percent power level through the remainder of the inspection period.

Two violations were identified. The first violation involved the failure of the surveillance program to capture all relevant information for the performance of the semi-annual EDG test (paragraph 2). The second violation involved the failure to implement adequate equipment controls for safety-related equipment that was mispositioned during a maintenance activity (paragraph 7). An

additional example of damage to plant equipment due to improper transport of a circuit breaker was identified. Due to the occurrence of two previous similar events, the adequacy of control for breaker movement and transport was discussed with the licensee (paragraph 4). Two examples of mispositioned bistable switches during operational testing identified the need for greater attention to detail. The inspector noted that for the new self checking program to be effective to prevent recurrence, detailed self checking methods are needed due to the unique labeling and layout of the bistable switches (paragraph 6).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

W. Baehr, Manager, Chemistry and Health Physics
C. Bowman, Manager, Maintenance Services
*J. Brooks, Associate Engineer, Nuclear Licensing
*M. Browne, Manager, Systems & Performance Engineering
*R. Campbell, Senior Engineer, Operating Experience
B. Christinsen, Manager, Technical Services
*H. Donnelly, Senior Engineer, Nuclear Licensing
*R. Fowlkes, Associate Manager, Shift Engineering
*S. Furstenberg, Associate Manager, Operations
*G. Gibson, Manager, Nuclear Protection Services
*D. Goldston, Supervisor, Test Unit
D. Haile, Engineer, Nuclear Licensing
W. Higgins, Supervisor, Regulatory Compliance
*A. Koon, Manager, Nuclear Licensing
*T. McAlister, Supervisor, Quality Assurance
*D. Moore, General Manager, Station Support
*H. O'Quinn, Associate Manager, Maintenance
*C. Price, Manager, Technical Oversite
*M. Quinton, General Manager, Engineering Services
*L. Shealy, Senior Engineer, ISEG
*J. Skolds, Vice President, Nuclear Operations
G. Soult, General Manager, Nuclear Plant Operations
G. Taylor, Manager, Operations
*R. White, Nuclear Coordinator, Santee Cooper
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Other licensee employees contacted included engineers, technicians, operators, mechanics, security force members, and office personnel.

D. M. Verrelli, Chief, Reactor Projects Branch 1, DRP was on site February 28 through March 1, 1991, to review resident inspector activities and meet with licensee management.

F. S. Cantrell, Section Chief, DRP was on site March 12 through 13, 1991, to review resident inspectors activities and meet with licensee management.

*Attended exit interview

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

2. Monthly Surveillance Observation (61726)

The inspectors observed surveillance activities of safety related systems and components listed below to ascertain that these activities were conducted in accordance with license requirements. The inspectors verified that required administrative approvals were obtained prior to initiating the test, testing was accomplished by qualified personnel in accordance with an approved test procedure, test instrumentation was calibrated, limiting conditions for operation were met. Upon completion of the test, the inspectors verified that test results conformed with technical specifications and procedure requirements, test results were reviewed by personnel other than the individual directing the test, any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel, and the systems were properly returned to service. Specifically, the inspectors witnessed/reviewed portions of the following test activities:

* Weekly and monthly inspection and testing of class 1E battery XBA 1A (EMP 115.011). In addition the inspector observed the daily voltage and current reading that are used for the detection of a ground in the DC system. Previously the licensee had identified a ground on the negative side of "A" battery. The ground was traced down to the DC control circuitry for "A" MSIV. Due to the potential for an inadvertent actuation of the MSIV during additional troubleshooting activities, the licensee has added the identification and correction of the ground into the trip work package. Based on the inspector's review of the engineering evaluation for this ground and discussions with electrical site personnel, the licensee's decision to delay correction of the ground until the next outage of sufficient duration appears appropriate.

* Monthly test of "A" RHR pump XPP0031A (STP 105.004).

* Monthly stroke test of the main turbine control valves and the weekly stroke test of the turbine stop valves and the intercept/intermediate stop valves (PTP 102.001).

* Bimonthly functional testing of the ATWS mitigation system actuation circuitry (ICP 345.046).

* Semi-annual inspection and testing of reactor trip breaker XSW0001-RTA (STP 506.009).

* Monthly surveillance test of "A" emergency diesel generator XEG 1A (STP 125.002). The following areas were pursued by the inspectors based on observations during the STP.

- The inspectors noted that the initial loading of the EDG did not occur until 15 minutes after the EDG was started. During this time a large amount of diesel exhaust smoke accumulated in the EDG room. However once loading of the EDG started, the smoke quickly dissipated. Step 6.16.e of the STP states to run the EDG at no load for three to five minutes until fluid pressures and temperatures are stable, then the following step starts the EDG loading sequence. An operator informed the inspectors that the 15 minute time period resulted from a lack of available operators and confusion on access to a voltage regulator switch. The inspectors suggested to the licensee that additional preplanning for future EDG testing could reduce the time period from EDG starting to loading, and thereby reduce the smoke accumulation in the EDG room. Based on the inspectors comments the licensee has initiated procedural changes to reduce the time period.

- During a previous EDG operability test, the licensee had identified fluctuations with the generator output (kilowatts) after the test load of 4250 kw had been obtained. During this surveillance the inspectors observed the kw fluctuations from the main control board. The operator at the MCB would correct the swing after a plus or minus 200 kw deviation by adjusting the generator speed control. The licensee has determined that a maximum 500 kw swing could occur if there were no operator intervention. The licensee has subsequently determined that the probable cause of the fluctuations was an incorrectly set speed droop for the EDG governor. This was determined after a conversation with the vendor revealed that the licensee's procedure for setting the speed droop was incorrect. The licensee has elected not to adjust the speed droop until their next outage due to the surveillance test that must be performed when the speed droop is adjusted. Specifically, the licensee does not want to perform a load rejection test for the EDG during power operations. The operability of the EDG is not in question since the speed droop circuit is only used when the EDG is being operated in parallel with another power source. For a loss of offsite power event the EDG is the only power source, therefore the speed droop circuit is not used for control of the EDG.The inspectors noted that there is an increased risk of damage to the EDG during parallel operation with the grid with the speed droop incorrectly set. The licensee stated that should a grid disturbance occur, the EDG protective features will prevent any EDG damage.

- While reviewing STP 125.13 for the 184 day (semi-annual) test of the EDG, the inspector noted the requirement that the monthly EDG test be performed prior to the semi-annual test. During the performance of these two tests on March 12, 1991, the semi-annual test was started approximately 30 minutes after the completion of the monthly test. The semi-annual test, which satisfied TS surveillance requirement 4.8.1.1.2.f, fast loaded the EDG to 4150-4250 kw in less than 60 seconds and verified that the EDG

reached rated voltage and frequency in less than 10 seconds. The monthly test sequentially loaded the EDG (approximately 20 minutes to achieve full load) and does not measure the EDG start time.

The requirement to fast load the EDG was changed from a monthly to a semi-annual test by Amendment No. 50 to TS. The NRR Safety evaluation for Amendment No. 50 states, in part, "...the requirement to fast load the DGs is maintained but on a reduced frequency of once per 184 days by inserting a new T.S. surveillance requirement 4.8.1.1.2.f to start and load the DGs from ambient conditions (fast start) within the time required for accident conditions." Additionally, NRC Generic Letter 84-15 which promoted the reduction in fast starts states, in part, "...the staff has also determined that the demonstration of a fast start test capability for emergency diesel generators from ambient conditions cannot be totally eliminated because the design basis for the plant, i.e., large LOCA coincident with loss of offsite power, requires such a capability." In discussion with the licensee, the EDG vendor, Colt Industry, stated that it would take two to three hours for the EDG to return to ambient conditions after a run similar to the monthly test.

With the current EDG testing methodology, the inspectors were concerned that the semi-annual tests were not started with the EDG at ambient conditions. Therefore, the previous starting times and fast load verification did not accurately reflect the EDG's performance from ambient conditions. The failure to perform the semi-annual surveillance test of the EDGs from true ambient conditions is a violation of TS (91-05-01). After discussions with the inspectors and a review of their records involving EDG STP's, the licensee satisfactorily performed the semi-annual test for both EDGs from ambient conditions.

3. Monthly Maintenance Observation (62703)

Station maintenance activities for the safety-related systems and components listed below were observed to ascertain that they were conducted in accordance with approved procedures, regulatory guides, and industry codes or standards and in conformance with TS.

The following items were considered during this review: that limiting conditions for operation were met while components or systems were removed from service, approvals were obtained prior to initiating the work, activities were accomplished using approved procedures and were inspected as applicable, functional testing and/or calibrations were performed prior to returning components or systems to service, quality control records were maintained, activities were accomplished by qualified personnel, parts and materials used were properly certified, and radiological and fire prevention controls were implemented. Work requests were reviewed to

determine the status of outstanding jobs and to ensure that priority was assigned to safety-related equipment maintenance that may affect system performance. The following maintenance activities were observed:

* Preventive maintenance on "A" RHR pump circuit breaker XSW 1DA1 06A (EMP 405.002).

* Adjustment of the output signal from the power range detectors (STP 310.007). All four power range detectors were adjusted based on the results of the recent incore detector flux map.

* Measurement of temperature inputs to delta T and Tavg parameters for full power operations (REP 107.015). The inspectors observed voltage measurements being taken from the process cabinets for RCS narrow range RTD's. These voltages were averaged and converted into loop average temperatures. This data was used to calculate 100 percent power loop delta T and Tavg which is used in various temperature control and protection channels (rod insertion limits, over temperature delta T, etc.). As a result of the measurements, it was determined that some minor RTD voltage drift had occurred, resulting in the loop A over temperature delta T trip setpoint drifting in the non-conservative direction, but well within the 2.2 percent of delta T span allowed by technical specifications. The licensee has indicated that the channels utilizing 100 percent loop delta T and Tavg will be recalibrated using the data from this surveillance.

* Repair of auxiliary building charcoal exhaust fan breaker XSW 1DA1 06D and the breaker cubical. The breaker had previously been removed from the switch gear cabinet for preventive maintenance. While investigating the high fan running currents, after initial start of the fan, electricians noticed smoke damage at the front of the breaker. After removing the breaker, an inspection revealed residual smoke and charred surfaces on the breaker and in the cubical, damage to the cubical line stabs and a bent ground stab. Cleaning and repair of the breaker cubical required de-energizing 480 volt emergency bus 1DA1 and entering the applicable eight hour TS LCO. Repairs to the cubical were completed and bus 1DA1 was re-energized. The breaker was also repaired and satisfactorily retested.

  The licensee believes the ground strap on the breaker was bent over in close proximity with one of the breaker load stabs, while the breaker was being "racked" into the cubical. This resulted in arcing between the ground and load stab and the subsequent damage. While the exact cause of the bent ground stab could not be determined, it most likely occurred during transport of the breaker for PM. The inspector noted two additional cases of recent damage to plant equipment that involved breaker movement. The first case occurred after the removal of a breaker from a MCC when an electrician was

placing the output leads back into the MCC and the aluminum sheathing on the lead came into contact with a MCC bus bar. The second case involved damage to the control device for a SW booster pump breaker that was noted during reinstallation of the breaker. While discussing these instances of damage resulting from breaker movement, the licensee informed the inspector of their similar concerns on the control of these activities. The licensee is reviewing this issue to determine what actions are required to prevent recurrence.

* Replacement of a section of cooling water supply piping to "A" SW pump motor bearing cooler (NCN 4118). An approximate two foot section of carbon steel pipe was removed due to a pin hole leak. The reduced pipe wall thickness and the resulting pin hole leak was limited to a small localized area at a weld joint. The other portions of the removed pipe had only a small reduction in wall thickness due to corrosion. The licensee believes the leak was caused by microbiological induced corrosion (MIC) and general corrosion of the carbon steel pipe. The licensee stated that while the current biocide treatment of the SW reduces the susceptibility to MIC, this type of SW pipe with low flow rates may experience similar pin hole leaks. The ability to detect and correct any future leaks prior to it adversely affecting the SW system is the basis for continued use of these cooling lines.

* Investigation of the "Non-Urgent Rod Control" annunciator alarm (MWR 910042).

* Investigation of chiller XHC 1C surging and failing to carry a load when initially started (MWR 9100551 and 91M0177).

No violations or deviations were identified.

4. Operational Safety Verification (71707)

The inspectors conducted daily inspections in the following areas: control room staffing, access, and operator behavior; operator adherence to approved procedures, TS, and limiting conditions for operations; examination of panels containing instrumentation and other reactor protection system elements to determine that required channels are operable; and review of control room operator logs, operating orders, plant deviation reports, tagout logs, jumper logs, and tags on components to verify compliance with approved procedures.

The inspectors conducted weekly inspections in the following areas: verification of operability of selected ESF systems by valve alignment, breaker positions, condition of equipment or component(s), and operability of instrumentation and support items essential to system actuation or performance.

Plant tours included observation of general plant/equipment conditions, fire protection and preventative measures, control of activities in progress, radiation protection controls, physical security controls, plant housekeeping conditions/cleanliness, and missile hazards. In addition, the inspectors toured the switchyard with maintenance and engineering personnel. The switchyard's general configuration, the control of personnel access and maintenance activities were discussed during the tour.

The inspectors conducted biweekly inspections in the following areas: verification review and walkdown of safety related tagout(s) in effect; review of sampling program (e.g., primary and secondary coolant samples, boric acid tank samples, plant liquid and gaseous samples); observation of control room shift turnover; review of implementation of the plant problem identification system; verification of selected portions of containment isolation lineup(s); and verification that notices to workers are posted as required by 10 CFR 19.

Selected tours were conducted on backshifts or weekends. Inspections included areas in the cable vaults, vital battery rooms, safeguards areas, emergency switchgear rooms, diesel generator rooms, control room, auxiliary building, containment, cable penetration areas, service water intake structure, and other general plant areas. Reactor coolant system leak rates were reviewed to ensure that detected or suspected leakage from the system was recorded, investigated, and evaluated; and that appropriate actions were taken, if required. On a regular basis, RWP's were reviewed and specific work activities were monitored to assure they were being conducted per the RWP's. Selected radiation protection instruments were periodically checked, and equipment operability and calibration frequency were verified.

On March 5, 1991, "A" train of the chill water system was tagged out of service to allow removal of two check valves and capping of the pipe. This action rendered "A" train ECCS inoperable due to the reliance on chill water for cooling to "A" train charging (high head injection) pump and component cooling water pump. At the same time "A" residual heat removal (low head injection) pump was removed from service due to other unrelated PMs. The licensee entered the applicable TS LCO which allows this plant configuration for 72 hours. However, the inspector questioned the rational of intentionally removing both the high head and low head injection capacity of a redundant ECCS train as a result of preplanned maintenance. The total length of time both high head and low head injection remained inoperable for "A" train was approximately 27 hours. After discussion with the licensee, the inspector requested that this practice be reviewed to determine if a more conservative approach to scheduling similar maintenance activities was beneficial.

No violations or deviations were identified.

5. ESF System Walkdown (71710)

The inspectors verified the operability of an ESF system by performing a walkdown of the accessible portions of the safety injection system. The inspectors checked the licensee's system line-up procedures against plant drawings and the as-built configuration. The inspectors looked for equipment conditions and items that might degrade performance (i.e., corrosion, housekeeping, etc.). The inspectors verified that valves, including instrumentation isolation valves, were in proper position, power was available, and valves were locked as appropriate. The inspectors compared both local and remote position indications. The inspectors verified that instrument calibration dates were current.

During the walkdown inspection, several minor deficiencies were identified. The licensee reviewed these items and initiated appropriate corrective actions.

No violations or deviations were identified.

6. Review of Nonconformance Reports (71707)

NCNs and ONOs were reviewed to verify the following: TS were complied with, corrective actions as identified in the reports were accomplished or being pursued for completion, generic items were identified and reported, and items were reported as required by the TS.

ONO 91-014 reported the lifting of a SW relief valve for train "A" reactor building cooling units and the resulting 300 gallons of water in the RB sump. At the time of the event the surveillance test for "A" SW booster pump was being performed. The STP required that the normal flow of industrial cooling water be secured, then the start of SW flow through the RB cooling units. The licensee believes that the sequence of the STP which started the booster pump first, then opened the discharge valve from the cooling units caused a pressure surge and the opening of the relief valve. A rise in the RB sump level provided the indication that the relief valve had lifted.

A similar event occurred while testing the SW booster pump during the last refueling outage when the same relief valve lifted. The relief valve was subsequently removed and verified to have the correct lift setpoint of 170 ±5 psi. The licensee attributed that event to air that entered the system during maintenance and resulted in a pressure surge when the booster pump was started. After the second event, the STP was revised to open the minimum recirculation valve prior to starting the booster pump. This will reduce the initial pump discharge pressure until the RB cooling unit discharge valve can be opened. Additionally, engineering is reviewing the event and the system configuration to determine if any additional

corrective action is required. A MWR was also written to test the relief valve during the next refueling outage. The inspector will follow-up on the results of the engineering review of this event.

During the review the inspectors noted that this event was not documented in the official station log. A recent event involving the lifting of a relief valve for the CRDM cooling system in the RB was also not included in the station log. The procedural guidance for station log entries requires that major operational events, i.e., RX trips, power maneuvers etc., be documented. The inspectors are concerned that without logging events such as the lifting of relief valves in the RB or similar events, the oncoming shifts may not be provided with this information. The licensee informed the inspectors of other methods used to capture and pass on information concerning plant events and operation. However, the inspector noted some of these methods appear awkward and have limited control. The licensee stated they are reviewing the current practices involving station log entries and will implement changes as necessary.

ONO 91-007 and 91-013 reported two separate occasions of mispositioned bistable test switches in the reactor protection system while performing instrument operational tests. In both cases, which occurred approximately one month apart, the I&C technicians immediately recognized the error and returned the test switch to the normal position. Neither case caused an inadvertent actuation of plant equipment.

A human performance evaluation completed by the licensee identified that an insufficient degree of attention by the I&C technician was the cause of the mispositioned switches. The evaluation also concluded that the failure to standardize and promote self checking methods contributed to these events. The licensee's proposed corrective action centers on the implementation of a formal self checking program and improved communication between the control room and the I&C technicians. While observing a simulation of the actions that had taken place when the switch was mispositioned, the inspector noted the unique labeling/numbering for the switches on the 7300 process cards and the closeness of the individual switches. Each switch has a switch number on one side of the card and a location number on the other side of the card. The STP provides both numbers but gives no direction on which number to use when locating the switch. Additionally, since each card in a cabinet has the same outward appearance (with the exception of the labeling), the retention of an individual switch once located is very difficult unless direct eye contact is maintained.

Currently the licensee has provided only limited instruction on self checking while performing test involving the 7300 process cards. The licensee plans to proceduralize and present formal training on the self checking program. Based on the uniqueness of the labeling and layout of the 7300 process cards, the inspector noted that detailed self checking

instructions are needed to ensure success of the program. The licensee agreed with the inspector on the need for detailed instruction. The inspector will monitor the future implementation and effectiveness of the self checking program.

7. Onsite Follow-up of Events at Operating Power Reactors (93702)

On March 17, 1991, at 9:00 a.m., an operator discovered that the bearing lube oil temperature was greater than 250 degrees Fahrenheit (off the thermometer scale) for "A" charging pump (XPP 43A). The pump, which had been started approximately ten hours earlier, was immediately secured and "C" charging pump was started. The following day at 11:45 a.m., high lube oil temperatures (225 degrees Fahrenheit) were discovered on "C" charging pump. The pump was secured and the 72 hour TS LCO was entered. Normal bearing lube oil temperatures are in the range of 120-125 degrees Fahrenheit. Train "A" of the chill water system had been supplying cooling water to both pumps and was the most obvious cause of the high lube oil temperatures.

During the previous week, the "A" VU pump discharge orifice was replaced with a smaller orifice to reduce VU flow rates. Chill water flows were reduced due to a concern that high flow velocities through various cooling coils would accelerate erosion of the coils. The new orifice reduced flow by 80 gpm and discharge pressure by 46 psi. However, flow was still within the 550 gpm limit set by design engineering. The start of XPP 43A on March 17, 1991, was the first time any charging pump had been supplied cooling water by "A" VU pump with the smaller orifice.

Inspection of the bearings on XPP 43A revealed carbon scoring on the outboard thrust bearing and metal flakes inside the bearing housing. The thrust bearing was replaced and the lube oil system was cleaned and flushed to remove any additional foreign material. Due to slight discoloration on the outboard thrust bearing for XPP 43C, it was also replaced. Initial testing by the licensee verified no physical blockage or obstruction in the VU piping that would have prevented cooling water flow to the charging pumps. In addition, the licensee attempts to vent the system to remove any air pockets that may have been introduced from previous maintenance activities.

The licensee next attempted to measure various flow rates and balance individual flows as necessary to ensure all components received adequate VU flow. The initial VU flow measurements to the charging pumps were low. Several flow balancing attempts were performed until sufficient flow (approximately four gpm) was verified for the charging pumps. On March 20, 1991, XPP 43C was verified operable and the TS LCO exited after the pump was run and stable bearing lube oil temperatures were verified. While the actual cause of the high lube oil temperatures could not be verified, the licensee believes that the lack of adequate VU flow to the charging pumps

and resulting high temperatures was caused by a combination of: reduced VU system flow due to the smaller orifice and the VU system not being properly balanced; and voiding in the system due to air introduction while performing maintenance. The licensee has scheduled a management review board to evaluate this event and determine the need for any additional corrective action.

After the "A" charging pump repair work, the inspector observed the maintenance run on March 21, 1991. The pump was secured after 20 minutes of operation due to lube oil temperatures reaching the 150 degree Fahrenheit limit set by design engineering. While reviewing the valve lineup for XPP 43A, the inspector noted that the VU inlet valve (XVT 6436A) to XPP 43A was closed. The inspector contacted the shift supervisor who verified that XVT 6436A should have been opened prior to running the pump. After consultation with engineering the pump was run again, however, higher than expected vibrations prevented returning the pump to operable status. The thrust bearing was disassembled and the axial clearance was changed to correct the vibration problem. After subsequent running of XPP 43A, while monitoring the pump vibration and lube oil temperatures, the licensee declared XPP 43A operable.

While reviewing the details involving the mispositioning of valve XVT 6436A, the inspector noted the use of the "Equipment Misalignment Status Log" for documenting the closure of XVT 6436A. During the initial high lube oil temperature troubleshooting effort, an NCN disposition directed that XVT 6436A be closed. To track the closed (abnormal) status of XVT 6436A, operation personnel elected to use the misalignment log in lieu of the danger tagging system. Controls for the misalignment log are provided in OAP 105.2, "Equipment Misalignment Status". Step 5.1 of OAP 105.2 states the shift supervisor/CR supervisor should review the misalignment log periodically for changes and updates that have occurred. However, no controls are provided to ensure responsible personnel are aware of log entries that could adversely effect the return of equipment to operable status. Also, step 6.3 states that the misalignment log cannot be used if the alignment makes the equipment TS inoperable. The inspector received different views from operation personnel regarding this statement. One of the views indicated that the misalignment log could not be used for equipment that could be used to satisfy TS operability requirements while the other view concluded that use of the misalignment log was only prohibited for equipment currently being used for TS compliance. Based on the wording in step 6.3 and it's interpretation by some of the operations staff, the misalignment log could be used for swing component that at the time were not satisfying TS requirements but could in the future. Yet controls do not exist for the misalignment log to ensure that applicable log entries are cleared prior to returning equipment to service.

In the case of XPP 43A, the misaligned valve (XVT 6436A) was identified during the maintenance run because temperatures were being closely

monitored due to previous problems. However, a typical maintenance run does not monitor all critical parameters required for operability. The use of the misalignment log for tracking of safety related equipment is an apparent violation (91-05-02) due to lack of adequate controls in the program to ensure the restoration of the equipment. The inspector noted that the danger tagging program, which does contain adequate equipment control requirements, was not used for the tracking of XVT 6436A.

8. Exit Interview (30703)

The inspection scope and findings were summarized on April 1, 1991, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed the inspection findings. The two violations were discussed in detail. While the licensee was in agreement with the first violation in that the previous 184 day testing of the EDGs was not in strict compliance with TS surveillance requirements, they believe that the testing which had been performed verified that the EDGs were capable of performing their safety function. For the second violation on equipment control, the licensee agreed that the misalignment log program did not ensure equipment restoration. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during the inspection.

VIO 91-05-01 Failure to perfor[illegible]mi-annual fast start test of EDG from ambient conditions.

VIO 91-05-02 Inadequate controls in equipment misalignment procedure to prevent pump operation with chill water isolated.

9. Acronyms and Initialisms

ATWS	Anticipated Transient Without Scram
CR	Control Room
CRDM	Control Ride Drive Mechanism
DC	Direct Current
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EMP	Electrical Maintenance Procedures
ESF	Engineered Safety Feature
GPM	Gallons Per Minute
ICP	Instrumentati[illegible] Control Procedures
KW	Kilowatt
LCO	Limiting Conditions for Operations
LER	Licensee Event Reports
MCC	Motor Control Center
MSIV	Main Steam Isolation Valve
MWR	Maintenance Work Request
NCN	Nonconformance Notice

NRC	Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
OAP	Operations Administrative Procedures
ONO	Off Normal Occurrence
PM	Preventive Maintenance
PMTS	Preventive Maintenance Task Sheet
PSI	Pounds Per Square Inch
PTP	Plant Test Procedures
RB	Reactor Building
RCS	Reactor Coolant System
REP	Reactor Engineering Procedures
RHR	Residual Heat Removal
RTD	Resistance Temperature Detector
RWP	Radiation Work Permits
SAP	Station Administrative Procedures
SPR	Special Reports
STP	Surveillance Test Procedures
SW	Service Water
TS	Technical Specifications
VU	Chill Water