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

Report Nos.: 50-413/91-28 and 50-414/91-28

Licensee: Duke Power Company
P.O. Box 1007
Charlotte, N.C. 28201-1007

Docket Nos.: 50-413 and 50-414 License Nos.: NPF-35 and NPF-52

Facility Name: Catawba Nuclear Station Units 1 and 2

Inspection Conducted: December 11, 1991 - January 11, 1992

Inspectors: _____ 1/30/92
for W. T. Orders, Senior Resident Inspector Date Signed

_____ 1/30/92
for P. C. Hopkins, Resident Inspector Date Signed

_____ 1/30/92
for J. Zeiler, Resident Inspector Date Signed

Approved by: _____ 1/30/92
George A. Belisle, Chief Date Signed
Projects Section 3A
Division of Reactor Projects

SUMMARY

Scope: This routine, resident inspection was conducted in the areas of plant operations; engineered safety features system walkdown; surveillance observations; maintenance observations; licensee event reports; and followup of previously identified items.

Results: Two violations were identified involving configuration control problems associated with the operation of the 2B Containment Spray Pump without a suction source of water (Paragraph 4.0) and the inadvertent turbine roll during post-modification testing of the new turbine control system (Paragraph 5.0). These issues are considered additional examples of a previous violation identified in NRC Inspection Report Nos. 50-413/91-27 and 50-414/91-27 and as such, are not being cited separately.

Two Non-Cited Violations were identified involving an inoperable Refueling Water Storage Tank (FWST) and boration flowpath during Unit 2 fuel load. (Paragraph 6.0) and three missed Technical Specification (TS) surveillances (Paragraph 7.b).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

S. Bradshaw, Shift Operations Manager
J. Forbes, Engineering Manager
S. Frye, Operations Support Manager
*R. Futrell, Regulatory Compliance Manager
*E. Geddie, Operations Superintendent
*T. Harrall, Safety Assurance Manager
J. Lowery, Compliance
*W. McCollum, Station Manager
*K. Seasely, Compliance
*M. Tuckman, Catawba Site Vice-President

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

NRC Resident Inspectors

*W. Orders
P. Hopkins
*J. Zeiler

*Attended exit interview.

2. Plant Status

Unit 1 Summary

Unit 1 operated the entire report period at essentially full power with no major problems.

Unit 2 Summary

Unit 2 began the report period in Mode 5, Hot Shutdown, in day 55 of a scheduled 65 day End-of-Cycle 4 (EOC4) refueling outage. Engineered Safety Features (ESF) testing was successfully completed on December 8 and preparations for entering Mode 4, Hot Shutdown, were underway. Mode 4 was entered on December 15 and following completion of reactor coolant pressure valve boundary testing the next evening, Mode 3, Hot Standby, was entered. Following testing of the Control Rod Drive System, the reactor was taken critical on December 22. Zero Power Physics Testing (ZPPT) was completed on December 23, after which the Unit entered Mode 1, Power Operation. Power Escalation Testing was conducted between December 23 through December 28, at the end of which, 100 percent power was attained. On January 4, 1992, testing of the new Digital Feedwater and Turbine

Control Systems were completed with the successful accomplishment of the Loss of One Feedwater Pump Test (from 100 percent power) and Load Rejection Test (from 65 percent power). Following recovery from the these transients, the Unit attained full power operation on January 6, and continued at full power operation the remainder of the report period.

3. Plant Operations Review and ESF System Walkdown (71707 and 71710)

The inspectors reviewed plant operations throughout the report period to verify conformance with regulatory requirements, Technical Specifications and administrative controls. Control Room logs, the Technical Specification Action Item Log, and the Removal and Restoration (R&R) logs were routinely reviewed. Shift turnovers were observed to verify that they were conducted in accordance with approved procedures. The complement of licensed personnel on each shift inspected, met or exceeded the requirements of Technical Specifications (TSs). Further, daily plant status meetings were routinely attended.

Plant tours were performed on a routine basis. The areas toured included but were not limited to the following:

Turbine Buildings
Auxiliary Building
Units 1 and 2 Diesel Generator Rooms
Units 1 and 2 Vital Switchgear Rooms
Units 1 and 2 Vital Battery Rooms
Standby Shutdown Facility

During the plant tours, the inspectors verified by observation and interviews that measures taken to assure physical protection of the facility met current requirements. Areas inspected included the security organization, the establishment and maintenance of gates, doors, and isolation zones in the proper conditions, and that access control badging were proper and procedures followed.

In addition, the areas toured were observed for fire prevention and protection activities and radiological control practices. The inspectors also reviewed Problem Investigation Reports (PIRs) to determine if the licensee was appropriately documenting problems and implementing corrective actions.

During this report period, the inspectors conducted a detailed walkdown of accessible portions of both trains of the Unit 2 Residual Heat Removal (ND) System following the Unit's return to full power operation. Portions of the as-built configuration were reviewed against plant ND system drawings to ensure that the as-built system reflected the current system design. Using the licensee's ND system lineup procedure, OP/2/A/6200/04,

the inspectors verified that main system flowpath valves and assorted system drain and vent valves were in their proper positions. This lineup verification was accomplished by using the control room board indication as well as comparing local valve indication where possible. No discrepancies were identified.

The condition of selected ND system valves was examined to ensure that they were installed correctly, with no bent stems, missing handwheels, or improper labeling. Outstanding work requests on components in the ND system were examined to ensure that no major maintenance, which could possibly affect the system performance, had not been performed. Selected process instrumentation was examined to ensure their proper installation, functioning, and that local indications were consistent with expected values and matched control room indications. No major discrepancies were identified from the above inspections.

On January 9, 1992, the inspectors witnessed the conduct of the inservice test for the 2A ND Pump. To perform the test, the pump was isolated and operated in minimum recirculation from the Refueling Water Storage Tank (FWST) for a period of 15 minutes. The pump operating parameters, such as differential pressure, flowrate, vibration, and bearing temperatures were measured, and were within acceptable performance ranges. The inspectors also reviewed the last four inservice tests for both Unit 2 ND pumps. No discrepancies were identified from the inspection activities in this area.

No violations or deviations were identified.

4. Containment Spray Pump 2B Operation Without a Suction Source (71707)

On December 10, 1991, with Unit 2 in Mode 5, Cold Shutdown, Performance Department technicians were in the process of conducting inservice testing (IST) of the Train B Containment Spray (NS) pump. Due to an improper valve alignment, the pump was started without a suction source, and ran for approximately 4-5 minutes before being secured. Subsequent testing determined that no pump damage had occurred.

Quarterly IST of the NS pumps is performed by operating the pumps in recirculation to the FWST for a period of at least 5 minutes. Operating parameters are measured and analyzed to ensure that conditions have not degraded since previous testing.

In Mode 5, the NS system is not required to be operable by TS. On December 8, Train B of the NS System was removed from its standby alignment to facilitate maintenance. Procedure OP/2/A/6200/07, Containment Spray System, Enclosure 4.2, Removing the NS System from Standby Alignment, had been used by operations personnel to accomplish this activity. As part of the valve lineup for removing the system from service, valve 2NS-3B, the NS pump 2B suction from the FWST, was closed as prescribed by the procedure.

On December 10, Performance Technicians were in the process of performing the IST on the Train B NS pump using procedure PT/2/A/4200/04C, Containment Spray Pump 2B Performance Test. A prerequisite of the procedure required that operations personnel have the pump operating in recirculation to the FWST using procedure OP/2/A/6200/07, Enclosure 4.4, NS Pump 2B Recirculation. Item 1.3 of the prerequisites to this enclosure required that the NS System be aligned for standby readiness according to Enclosure 4.1 of the same procedure. The Non-Licensed Operator (NLO), assigned to complete Enclosure 4.4, realized that the system was not in the standby alignment, and requested help from the Unit 2 Senior Reactor Operator (SRO) in completing Item 1.3. The SRO erroneously directed the NLO to sign off the step as "Not Applicable" and to continue with completing the rest of the enclosure. When the SRO was later questioned as to why he had given the NLO these instructions, he replied that he had thought that the system was already in its standby alignment. As part of the valve alignment for standby readiness according to Enclosure 4.1, valve 2NS-3B would have been opened. However, since the enclosure was not performed, the pump was subsequently started without a suction source.

Technical Specification 6.8.1 requires that adequate written procedures be established, implemented, and maintained covering activities referenced in Appendix A of Regulatory Guide 1.33, Revision 3, February 1978. This issue is identified as a violation of TS 6.8.1 for failure to follow the procedural requirements of OP/2/A/6200/07, Enclosure 4.4.

This issue is considered an additional example of a violation previously identified in NRC Inspection Report Nos. 50-413, 414/91-27 and will, therefore, not be cited separately.

5. Inadvertent Unit 2 Turbine Roll (71707)

On December 16, 1991, at approximately 7:35 a.m., Unit 2 was in Mode 4 in the process of starting up from the EOC4 refueling outage. Instrumentation and Electrical (IAE) personnel were performing post-modification testing of a new main turbine control system installed during the outage when an inadvertent main turbine roll occurred.

IAE personnel were using station procedure IP/0/A/3890/01, Controlling Procedure for Troubleshooting and Corrective Maintenance, a general trouble shooting procedure to facilitate the post-modification testing. Step 10.1.3 of this procedure was signed off by Operations on December 15, 1991. The step, in effect, states that IAE had conferred with Operations and the determination had been made that the work to be performed would not adversely affect any system tag outs, boundaries, equipment, or components. It should be noted; however, that the unit was in Mode 5 at that time.

IP/0/A/3890/01 is a general trouble shooting procedure. As such, there was no pre-planned, documented means for assuring the isolation of the turbine from the steam generators. This had been recognized by test personnel, who later stated that they had thought about plans to gag the turbine stop valves closed before the unit entered Mode 3, but that nothing was formalized/documented.

On the afternoon of December 15, 1991, as restart activities continued, the Unit achieved Mode 4. As unit temperature reached 200°F, the Main Steam Isolation Valves (MSIVs) were opened leaving only the main turbine stop valves as isolation between the steam generators and the turbine. At the end of the day shift, turbine control system testing was secured for the night.

On the following morning, IAE personnel notified the control room operators that testing would be continuing on the turbine control system. The IAE personnel were not aware that the MSIVs had been opened, nor were the control room operators aware that IAE would be opening the turbine stop valves as part of the testing.

As IAE continued testing, the procedure required disconnecting the main turbine speed input lead wires to inject a simulated load reference. Lifting these leads also removed the turbine speed indication from the control room.

When IAE injected a load reference signal into the turbine control system, the main turbine stop and control valves opened, passed steam to the turbine, and ultimately resulted in an inadvertent turbine acceleration to 1400 rpm. This resulted in a significant perturbation on both the secondary and primary sides. It should be noted that virtually all control room turbine indication was not functional at this time, since the ongoing testing had most of it disconnected. Eventually, the shift supervisor, in surveying the situation, correctly surmised that the turbine may be rolling. Ultimately, IAE tripped the turbine and all systems were returned to normal. The turbine stop valves were subsequently secured and the testing completed.

There were no administrative procedures or tagouts delineating the change in the condenser vacuum boundary even though the turbine test period was longer than usual and required the turbine control and stop valves to be open at the same time. During original planning of the test activities, there had been no recognition of the need for special administrative controls associated with the configuration of the condenser boundary. In this case the procedure being used, IP/0/A/3890/01, did not provide adequate instructions to personnel for the tasks to be performed.

Technical Specification 6.8.1 requires that adequate written procedures be established, implemented, and maintained covering activities referenced in Appendix A of Regulatory Guide 1.33, Revision 3, February 1978. Implicit in this requirement is the stipulation that the procedure be adequate for the task being performed.

Contrary to the above, station procedure IP/0/A/3890/01, Controlling Procedure for Troubleshooting and Corrective Maintenance, did not provide adequate written guidance to personnel to place the condenser vacuum boundary in proper configuration for turbine control system testing.

This issue is considered an additional example of a violation previously identified in NRC Inspection Report Nos. 50-413/91-27 and 50-414/91-27 and will, therefore, not be cited separately herein.

6. Inoperable FWST and Boration Flowpath During Unit 2 Core Reload (71707)

On November 20, 1991, Unit 2 was in Mode 6, Refueling, with fuel loading in progress. During routine chemistry sampling of the FWST, it was discovered that the boron concentration of the tank was below the TS required minimum limit of 2000 ppm. Upon confirmatory chemistry results, fuel loading was halted, the FWST was declared inoperable, and activities were initiated to makeup to the tank with borated water. Following makeup to the tank, boron sampling confirmed that the boron concentration was within specifications. The TS Action Requirement for an inoperable FWST and boration flow path was then exited.

The licensee determined that the FWST dilution problem resulted when erroneous Boric Acid Tank (BAT) boron concentration values were used for calculating a makeup which was made to the FWST on November 18, 1991. On this day, Unit 2 was operating in Mode 6 with fuel loading in progress. The FWST was being used as the operable source of emergency borated water. Level was at 14 percent and the boron concentration was 2162 ppm. At approximately 5:00 p.m., makeup to the FWST was initiated in order to increase the FWST level to provide additional volume margin. At this time, the two Unit 2 BATs were technically inoperable due to modifications being performed on the recirculation loop of the tanks. The contents of boric acid in the tanks; however, was determined to be acceptable for use as makeup to the FWST. The Chemistry staff had sampled the BATs, with the intent of obtaining an "information only sample," recognizing that without an adequate recirculation loop, the sample may not be representative of the actual BAT boron concentration. However, a chemistry person erroneously provided this information sample result of 7870 ppm to Operations personnel, who used this value to calculate the amount of makeup from the BAT necessary to keep the FWST within the proper boron concentration. It was later determined that the actual BAT boron concentration was 7450 ppm, which explained why the FWST was at a lower boron concentration than expected after makeup.

The minimum boron concentration in the FWST, due to the use of the erroneous sample, was 1973 ppm. The licensee performed a safety analysis to determine the consequences of the FWST being slightly below the required boron specifications. It was determined that the actual minimum boron concentration required to maintain a 5 percent shutdown margin for a fully reloaded core was 1767 ppm. Thus, the capability of the FWST as a viable boration source for this particular situation was not lost.

In Modes 5 and 6, TS 3.1.2.1 requires an operable boration flow path from either the Boric Acid Tank (BAT) or the FWST. Also, per TS 3.1.2.5, the FWST must contain at least 45,000 gallons of borated water with a minimum concentration of 2000 ppm.

This issue is identified as a violation of TSs 3.1.2.1 and 3.1.2.5, in that refueling activities were ongoing for approximately 16 hours while the FWST was below the required boron concentration. This licensee identified violation is not being cited because the criteria specified in Section V.G.1 of the NRC Enforcement Policy were satisfied. Accordingly, this issue is documented as Non-Cited Violation 414/91-28-01: Inoperable FWST and Boration Flowpath While in Mode 6.

7. Surveillance Observation (61726)

a. Surveillance Activities Reviewed

During the inspection period, the inspectors verified plant operations were in compliance with various TS requirements. Typical of these requirements were confirmation of compliance with the TS for reactivity control systems, reactor coolant systems, safety injection systems, emergency safeguards systems, emergency power systems, containment, and other important plant support systems. The inspectors verified that: surveillance testing was performed in accordance with approved written procedures, test instrumentation was calibrated, limiting conditions for operation were met, appropriate removal and restoration of the affected equipment was accomplished, test results met acceptance criteria and were reviewed by personnel other than the individual directing the test, and any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspectors witnessed or reviewed the following surveillances:

PT/0/A/4200/17	Standby Shutdown Facility Diesel Test
PT/1/A/4150 0	NC System Leakage Calculation
PT/1/A/4200/ A	Monthly Outside Containment Integrity Verification
PT/1/A/4250/02B	Weekly Main Turbine Valve Movement

PT/1/A/4250/06	CA Pump Head and Valve Verification (CA pump 1A)
PT/1/A/4350/02A	Diesel Generator 1A Operability Test
PT/1/A/4600/03A	Monthly Surveillance Items
PT/2/A/4200/10A	ND Pump 2A Performance Test
PT/2/A/4200/30A	SM Valve Inservice Test
PT/2/A/4250/03C	Turbine Driven CA Pump #2 Performance Test

No discrepancies were noted from the review of the above surveillances.

b. Observation

During the inspection period, the licensee identified three TS Surveillances which were not performed in the required surveillance interval. The inspectors reviewed these events to determine if a generic problem with the scheduling of TS surveillances existed. At Catawba, each Department, i.e., Operations, Performance, IAE, Chemistry, etc., are responsible for ensuring that the TS surveillances in their area are performed in a timely manner. Following review of these events, it was dertermined that there did not appear to be a common root cause indicating a generic problem. However, the licensee indicated at the Exit Meeting conducted on January 14, 1992, that additional management attention would be given in this area to prevent missed TS surveillances in the future. The three missed TS surveillances are discussed below.

(1) Missed Radiation Monitoring Sample

On November 20, 1991, with Unit 1 at 100 percent power, the Condenser Air Ejector Exhaust Monitor, 1EMF-33, was declared inoperable due to a loss of operating indication. A Work Request (WR) was written by the Operations Staff to repair the monitor. Personnel from the Radiation Protection (RP) staff were contacted in order for manual sampling of the condenser air ejector exhaust to begin.

Instrument 1EMF-33 is part of the Process Radiation Monitoring System and continuously monitors the gaseous activity released to the Unit Vent from the condenser air ejector exhaust. The condenser air ejector exhaust may contain airborne radioactivity in the event of a primary to secondary leak in the steam generators. Technical Specification 3.3.3.11.g states that with less than the minimum number of channels operable, take the action shown in Table 3.3-13. Table 3.3-13, Action 47, specifies that with an inoperable monitor, effluent releases via the Unit Vent may continue for up to 30 days provided "grab" samples are taken at least once per 12 hours, and these samples are analyzed for radioactivity within 24 hours.

On November 20, at 10:00 p.m., RP Technicians began acquiring grab samples as required by TS. The next sample was taken as required on November 21 at 10:00 a.m. The next required sample was due at 10:00 p.m. that same day, however, the RP Technician on-shift lost track of the required sampling time due to his involvement in other activities, and subsequently, the sample was not acquired until 10:50 p.m., fifty minutes after the sample was required to be taken. The sample was analyzed by 11:50 p.m., well within the 24 hour requirement.

As part of the licensee's corrective actions, the grab sample frequency for inoperable gaseous EMF monitors was increased from the required 12 hours per TS to 6 hours in order to prevent future incidents. This event was discussed in LER 413/91-30. This licensee identified violation is not being cited because the criteria specified in Section V.G.1 of the NRC Enforcement Policy were satisfied. This issue is identified as one of three examples of failure to perform required TS Surveillances within the allowable timeframe and is documented as Non-Cited Violation 413/91-28-01: Three Missed TS Surveillances.

2. Missed Turbine Startup Pressure Switch Alarm Surveillance

On November 26, 1991, with Unit 1 at 100 percent power, the Operations Support Group identified that the TS surveillance requirement for testing portions of the Turbine Emergency Trip System prior to turbine startup, had not been performed on Unit 1 for seven previous turbine startups dating back from June 13, 1991. The surveillance for testing the Turbine Startup Pressure Switch Alarm was subsequently performed that day in order to verify its operability. No problems were identified during conduct of the surveillance.

The Turbine Emergency Trip System initiates a Reactor Trip signal by sensing conditions that indicate the turbine has tripped. The Reactor Trip is actuated by a low pressure signal from turbine stop valve electro-hydraulic fluid pressure switches. TS 4.3.1.1 states that each Reactor Trip System instrumentation channel and interlock and the automatic trip logic shall be demonstrated operable by the performance of the surveillance requirements specified in Table 4.3-1. Item 16.a. of this table specified that the turbine stop valve electro-hydraulic fluid low pressure indication channel shall be tested during each unit startup.

Periodic Test PT/1/A/4250/02B, Weekly Main Turbine Valve Movement Test, is used to satisfy the surveillance requirement of Table 4.3-1, Item 16.a. The licensee indicated that the procedure had been revised on March 27, 1991, due to a major modification the Turbine Control System. It was during this

revision that the surveillance requirement for the turbine startup pressure switch alarm was inadvertently left out of the procedure by the Operations Support Engineer responsible for the Turbine Control System.

This licensee identified violation is not being cited because the criteria specified in Section V.G.1 of the NRC Enforcement Policy were satisfied. This issue is identified as one of three examples of failure to perform required TS Surveillances within the allowable timeframe and is documented as Non-Cited Violation 413/91-28-01: Three Missed TS Surveillances.

3. Missed IWV Quarterly Valve Test of 1CA-64

On November 30, 1991, with Unit 1 operating at 100 percent power, a Performance Department Technician identified that the Technical Specification 4.0.5 quarterly Inservice Test (IWV) for valve 1CA-64, Auxiliary Feedwater (CA) Pump Discharge to Steam Generator A, was not performed within the allowable surveillance interval. Upon discovery, the 72 hour action requirement was entered for an inoperable CA train. The valve was subsequently stroke timed locally and found to be within acceptable limits.

On November 5, Performance Technicians attempted to perform the IWV stroke test, however, due to problems with the Operator Aid Computer (OAC) not providing adequate valve position indication, the technicians were unable to complete the test from the Control Room. The technicians initiated a WR to repair the OAC indication problem and it was indicated on the WR that the repair needed to be completed by November 30, 1991, the last date to complete the IWV test with the TS 25 percent grace period applied. The associated work was not completed by this date. During a Performance Technician's review of the last date for completing valve stroke times, it was identified that the IWV had not been completed for valve 1CA-64. The stroke test was subsequently performed locally using a stop watch. It was noted that this method of testing the valve could have been utilized intially, without having to repair the OAC indication problem.

This licensee identified violation is not being cited because the criteria specified in Section V.G.1 of the NRC Enforcement Policy were satisfied. This issue is identified as one of three examples of failure to perform required TS Surveillances within the allowable timeframe and is documented as Non-Cited Violation 413/91-28-01: Three Missed TS Surveillances.

One NCV with three examples was identified in this area.

8. Maintenance Observations (62703)

a. General

Station maintenance activities of selected systems and components were observed/reviewed to ensure that they were conducted in accordance with the applicable requirements. The inspectors verified licensee conformance to the requirements in the following areas of inspection: activities were accomplished using approved procedures, and functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities performed were accomplished by qualified personnel; and materials used were properly certified. Work requests were reviewed to determine the status of outstanding jobs and to assure that priority was assigned to safety-related equipment maintenance which may affect system performance.

b. Maintenance Activities Reviewed

The inspectors witnessed or reviewed the following maintenance activities:

WR 91101578	Inspection of Main Turbine Thrust Bearing
WR 91101103	Inspect/Repair Oil Seal Leak on 2B Centrifugal Charging Pump
WR 91100701	Auxiliary Feedwater Control Valve Throttle Flow Balance
WR 91101662	Calibrate Frequency, Voltage, Power Span for Visicorder of 2A Diesel Generator

No violations or deviations were identified.

9. Review of Licensee Event Reports (92700)

The below listed Licensee Event Reports (LERs) were reviewed to determine if the information provided met NRC requirements. The determination included: adequacy of description, verification of compliance with Technical Specifications and regulatory requirements, corrective action taken, existence of potential generic problems, reporting requirements satisfied, and the relative safety significance of each event.

a. (Closed) LER 414/90-07: Potential Loss of Residual Heat Removal Safety Function As a Result of a Low Voltage Cell in Unit 2 Diesel Generator Battery Bank A.

On August 11, 1990, with Unit 2 in Mode 6, Diesel Generator (DG) Battery Bank 2A was found by the licensee to have a cell below the TS required voltage during performance of the monthly battery inspection. The low voltage condition could have prevented the DG

from starting automatically in the event an emergency start signal, therefore, the 2A DG was declared inoperable. The cell was jumpered out by a Temporary Station Modification and the DG was declared operable. The cell was later replaced.

The degraded cell voltage was attributed to the high temperature environment in the DG room where the batteries are located. As corrective action, the licensee plans to replace the batteries and to add additional air conditioning to keep the DG room cooler in order to prevent the degradation of the battery cells. The air conditioning is scheduled to be added during Unit 1 EOC6 and Unit 2 EOC5 refueling outages. In the interim, the quarterly battery inspections were changed to a weekly frequency to more closely monitor battery cell performance. In addition, spare batteries are being maintained in a state of readiness to ensure timely degraded cell replacement. The inspectors consider the licensee's corrective action to be adequate to prevent recurrence of this equipment failure.

b. (Closed) LER 413/90-15: Technical Specification 3.0.3 Entered When Both Trains of Containment Valve Injection Water System Rendered Inoperable Due to Incorrect Valve Positioning.

On April 2, 1990, with Unit 1 in Mode 3, it was discovered that Nuclear Service Water (RN) had erroneously been isolated from both trains of the Containment Valve Injection Water (NW) System. The RN is assured makeup source of water to the NW System and is required for the system to be operable. TS 3.0.3 was entered upon this discovery due to both trains of the NW System being inoperable. The RN valves which had been erroneously closed were opened and TS 3.0.3 was exited. The cause of the incident was due to the inappropriate action on the part of the Unit 1 Supervisor, who failed to enter the correct restoration position on an R&R sheet that returned the system to service. The Supervisor indicated the return position for the valves to be closed when he should have indicated open.

This incident was discussed in detail in NRC Inspection Report No. 50-413, 414/90-09 and was the subject of Violation 413/90-09-05 for failure to establish measures to accurately indicate the operating status of system components. As corrective action, the OMP procedure for controlling the R&R process was changed to require the person performing component restoration per an R&R to ensure that the position listed is correct. This would be accomplished by referring to the appropriate procedure which specifies the component lineup for normal operation. The person performing the independent verification, if it was required, would also verify the return position. The inspectors considered the action taken by the licensee to be adequate to prevent this particular type incident from reoccurring.

No violations or deviations were identified.

10. Exit Interview

The inspection scope and findings were summarized on January, 14 1992, with those persons indicated in paragraph 1. The inspector described the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

Item Number	Description and Reference
NCV 414/91-28-01	Inoperable FWST and Boration Flowpath During Unit 2 Core Reload (Paragraph 6.0).
NCV 413/91-28-01	Three Missed Technical Specification Surveillances (Paragraph 7.b).