U. S. NUCLEAR REGULATORY COMMISSION

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Licensee:	GPU Nuclear Corporation P.O. Box 480 Middletown, PA 17057
Facility:	Three Mile Island Station, Unit 1
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Inspection Summary

The NRC Staff conducted safety inspections of Unit 1 power operations. The inspectors reviewed plant operations, maintenance, engineering, radiological controls, and security activities as they related to plant safety.

Results: An overview of the inspection results is in the executive summary.

EXECUTIVE SUMMARY
Three Mile Island Nuclear Power Station
Report No. 50-289/95-01

Plant Operations

The licensee conducted overall plant operations in a safe and conservative manner.

The licensee's evaluation of and corrective actions for a previous violation involving an inadvertent level reduction of the sodium hydroxide tank were good. The actions taken by the licensee to address the event were more in depth than those taken for a previous similar event. Also, the licensee went beyond the initial corrective actions that they had identified in the Licensee Event Report for the current incident by identifying the need to take additional corrective actions in the areas of communications and supervisory oversight of the auxiliary operators. Although the licensee's evaluation and corrective actions were good, the effectiveness of the actions will depend upon the amount of management emphasis given to improving in those areas.

Maintenance

The overall conduct of maintenance and surveillance activities was good. A conscientious use of the "SURE" (Stop-Understand-Respond-Evaluate) self checking technique by plant personnel was observed.

Activities associated with the failure of the 'B' air start solenoid valve for the 'B' emergency diesel generator were conducted well. The licensee's scheduled replacement of the carbon steel air start lines with stainless steel pipe is a positive step to correct the diesel air start problems.

The licensee's corrective actions regarding a building spray transmitter valve misalignment were comprehensive and thorough. The actions extended beyond the building spray transmitter issue and included the potential impact on similar safety related transmitter calibrations.

Maintenance management and the Plant Review Group had indications that preventive maintenance tasks were being deferred on a routine bases prior to September 1994 when the NRC Operational Safety Team Inspection (OSTI) identified the issue. However, the licensee's performance was weak in that the plant corrective actions were neither timely or formally monitored. As a result, the licensee missed an opportunity to address and correct the preventive maintenance program problems prior to the OSTI.

Engineering

The licensee has taken appropriate action regarding a preliminary safety concern identified by B&W Nuclear Technologies for the calculated design bases accident data. The concern involved the effects of initial conditions used for large break loss of coolant accident (LBLOCA) analyses for emergency core cooling system (ECCS) evaluations and a condition of nonconservative data handling regarding fluid enthalpies in the Evaluation Model. When corrected,

this results in a change in the fuel element peak clad temperature (PCT) of greater than 50°F and a resultant PCT greater than 2200°F. However, because of the conservatism imposed by the operating limits in the licensee's Core Operating Limits Report (COLR), the changes have not affected TMI-1 conformance to the ECCS design criteria stated in 10 CFR 50.46(b)(1) for the maximum fuel element temperature of 2200°F PCT.

Licensee activities associated with an inoperable smoke detector in the control building ventilation system were appropriate. The hourly firewatch tours were performed on time and properly documented as required by the administrative procedure. The licensee properly documented the inoperable smoke detector and the Plant Review Group correctly concluded that the detector condition was not reportable to the NRC. The smoke detectors were cleaned, inspected and tested to restore system operability.

Plant Support

The licensee took prompt and appropriate corrective actions for a concern regarding the processing of material into the protected area.

Safety Assessment and Quality Verification

The licensee's evaluation and corrective actions regarding two previous violations involving ineffective corrective actions for previous events were very good and reflected positively on their recent initiatives in the area of improving human performance. Evaluations and corrective actions for the routine incidents will continue to be monitored to determine the overall effectiveness of the licensee's initiatives.

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DETAILS

1.0 SUMMARY OF FACILITY ACTIVITIES

1.1 Licensee Activities

Unit 1 remained at 100% power throughout the inspection period.

1.2 NRC Staff Activities

The inspectors assessed the adequacy of licensee activities for reactor safety, safeguards, and radiation protection, by reviewing information on a sampling basis. Information was obtained through actual observation of licensee activities, interviews with licensee personnel, and documentation reviews.

Licensee activities were observed during both normal and backshift hours; 45 hours of direct inspection were conducted on backshift. The times of backshift inspection were adjusted weekly to assure randomness.

2.0 PLANT OPERATIONS (71707, 92901)

2.1 Operational Safety Verification

The inspectors observed overall plant operation and verified that the licensee operated the plant safely and in accordance with procedures and regulatory requirements. Regular tours were conducted of the following plant areas:

--Control Room
--Switch Gear Areas
--Access Control Points
--Protected Area Fence Line
--Fuel Handling Building
--Auxiliary Building
--Turbine Building
--Intake Structure
--Intermediate Building
--Diesel Generator Building

Plant conditions were observed through control room tours to verify proper alignment of engineered safety features and compliance with Technical Specifications. Facility records and logs were reviewed to determine if entries were accurate and identified equipment status or deficiencies. Detailed walkdowns of accessible areas were conducted to inspect major components and systems for leakage, proper alignment, and any general condition that might prevent fulfillment of their safety function.

The inspectors concluded that the licensee conducted overall plant operations in a safe and conservative manner.

2.2 (Closed) Violation (50-289/94-13-01) Inadvertent Level Reduction of Sodium Hydroxide Tank

On May 23, 1994, during the performance of prerequisites for Technical Specification (TS) Surveillance Procedure 1303-5.1, "Reactor Building Cooling and Isolation System Logic Channel/Component Test," an auxiliary operator (AO) incorrectly opened four building spray valves, which initiated draining of the sodium hydroxide (NaOH) tank to the auxiliary building sump. Failure to

maintain the NaOH tank level at 8 feet +/- 6 inches lower than the borated water storage tank (BWST) level was a violation of TS 3.3.1.3b. The inspectors considered exercising discretion for this violation. However, although the licensee had identified the violation, the inspectors found that it was a violation that could reasonably be expected to have been prevented by the licensee's corrective action for a previous violation that occurred within the past two years of the inspection. That violation involved an event which had occurred on January 29, 1993, which resulted in an AO bypassing both decay heat service coolers. Therefore, in the response to the violation, the licensee was requested to address the reasons why their corrective actions for the previous event did not prevent this event from occurring.

During this inspection, the inspectors reviewed Licensee Event Report (LER) 94-003, dated June 20, 1994, and the licensee's October 4, 1994, response to the Notice of Violation. In the LER, the licensee determined that the root cause of the event was personnel error, in that, communication and administrative practices were less than adequate. The task had been acknowledged at shift turnover and understood. However, the AO failed to adequately communicate his intent in accordance with Administrative Procedure (AP) 1029, "Conduct of Operations," which provides management expectations for this type of activity. As required by AP 1029, he did not notify the control room personnel immediately prior to opening valves on an engineered safeguards (ES) system and did not notify the control room personnel following completion of the task. In addition, the AO should have questioned his actions since AP 1029 does not permit concurrent work affecting operability, such as operating valves on redundant trains of an ES system, without the Operations Director's permission.

The licensee identified their planned corrective actions in LER 94-003. In addition, in their October 4, 1994, letter, the licensee identified additional corrective actions to address the communications between the auxiliary operator and the shift foreman being less than adequate. They also noted that they had determined that the supervisory oversight of the tasks was less than adequate and corrective actions to address this cause were identified. The licensee stated that the corrective actions for the previous event, identified in LER 93-002, were ineffective for three reasons. First, the shift work controls and practices were not effectively communicated to the AOs. Second, supervision did not maintain effective implementation of shift work control practices and coaching of the AOs. Specifically, revision zero of Operations Memorandum 93-01, issued January 13, 1993, did not provide adequate detail for the in-plant foreman duties and responsibilities in order to link supervisory duties with in plant operator tasks. And third, the AO and control room communications have not maintained the expected standard. The licensee stated that the additional corrective actions described in the letter were designed to provide additional assurance that these types of events will not recur.

The corrective actions the licensee completed since the May 23, 1994, event included:

- A Memorandum was issued from the Plant Operations Director to the Shift Supervisors on November 8, 1994, regarding shift work controls and practices, highlighting the two events and their significance.

- A Memorandum was issued from the Director, Operations & Maintenance to the Shift Supervisors and plant management personnel on November 8, 1994, regarding communication guidelines for interface with the control room team to minimize human performance problems.

- Operations Memorandum 93-01 was revised on September 30, 1994, and January 27, 1995, to better define the Shift Foreman in-plant activities, including duties and responsibilities.

- The licensee evaluated the practice of performing prerequisites for ES testing and determined that the practice needed to be proceduralized. Therefore, Surveillance Procedures 1303-5.1 and 1303-5.2, "Emergency Loading Sequence and High Pressure Injection Logic Channel/Component Test," were revised to include the prerequisite steps.

- SP 1301-1, "Shift and Daily Checks" was revised to ensure that the alarm setpoints for BWST/NaOH tank differential pressure indicator were set to alarm prior to exceeding the allowable range.

During this period, the inspectors reviewed the documents associated with the licensee's corrective actions, discussed the actions with several licensee personnel, including the Plant Operations Director, and observed ongoing work activities to determine the effectiveness of the licensee's corrective actions in the area of communications. Some of the activities observed included troubleshooting of problems with the turbine supervisory panel, engineered safeguards actuation system (ESAS) testing, the 'B' emergency diesel generator (EDG) operability run, and various instrumentation and controls (I&C) surveillance tests. The inspectors noted that the quality of communications was mixed. Communications from the control room operators, and between I&C personnel and the control room personnel were good. However, weaknesses were noted in communications between the AOs and the control room personnel, and between a Shift Supervisor and his crew. The inspectors discussed these observations with operations management. The licensee stated that they were aware that weaknesses still existed and that work was still needed to have communications and the supervisory oversight for the AOs meet the management expectation. The licensee noted that communications training for the AOs is scheduled to be conducted during 1995.

The inspectors determined that the licensee's corrective actions are acceptable. The actions taken by the licensee to address the May 1994 event were more in depth than those for the previous event. Also, the licensee went beyond the initial corrective actions that they had identified in the LER for the current incident by identifying the need to take additional corrective actions in the areas of communications and supervisory oversight. However, the inspectors noted that although the licensee's evaluation and corrective actions were good, the effectiveness of the actions will greatly depend on the management emphasis given to improving in the areas of communications and supervisory oversight. This violation is closed.

3.0 MAINTENANCE (61726, 62703, 71707, 92902)

3.1 Maintenance Observations

The inspector reviewed selected maintenance activities to assure that: the activity did not violate Technical Specification Limiting Conditions for Operation and that redundant components were operable; required approvals and releases had been obtained prior to commencing work; procedures used for the task were adequate and work was within the skills of the craft; maintenance technicians were properly qualified; radiological and fire prevention controls were adequate; and equipment was properly tested and returned to service.

Maintenance activities reviewed included:

- Job Order No. 97783, "Clean and Inspect Control Building Ventilation Smoke Detectors."
- Job Order No. 100839, "Troubleshooting of Turbine Supervisory Control Panel."
- Job Order No. 89566, "DH-V-4B, Decay Heat Removal Motor Valve Limitorque Operator Limit Switch and Torque Switch Adjustment."
- Job Order No. 100173, "'B' Emergency Diesel Generator Air Start Solenoid Valve Clean and Inspect."

The inspectors determined that the overall conduct of the above maintenance activities was good. Job Orders 100173 and [illegible]3 are discussed in detail in Sections 3.4 and 4.2.

3.2 Surveillance Observations

The inspectors observed the conduct of surveillance tests to verify that approved procedures were being used, test instrumentation was calibrated, qualified personnel were performing the tests, and test acceptance criteria were met. They verified that the surveillance tests had been properly scheduled and approved by shift supervision prior to performance, control room operators were knowledgeable about testing in progress, and redundant systems or components were available for service as required. The inspectors routinely verified adequate performance of daily surveillance tests including instrument channel checks and reactor coolant system leakage measurements.

Surveillance activities reviewed included:

- Surveillance Procedure 1303-11.45, "PORV Setpoint Check."
- Surveillance Procedure 1303-4.23B, "'B' Post LOCA Containment Hydrogen Monitor Test."
- Surveillance Procedure 1303-5.2, "'B' Engineered Safeguards Actuation System (ESAS) Test."

- Surveillance Procedure 1107-3, "'A' Emergency Diesel Generator One Hour Run."

The inspectors determined that the licensee's activities were acceptable. Instrumentation and control (I&C) technicians and plant operators used the "SURE" (Stop-Understand-Respond-Evaluate) self checking technique to resolve a difference between the expected and actual equipment response during the performance of Surveillance Procedure (SP) 1303-11.45, "PORV Setpoint Check." The plant personnel's decision to stop, troubleshoot and correct the unexpected equipment response, before proceeding with the test, was a positive step to prevent inadvertent equipment actuations. Conduct of the 'B' ESAS testing is further discussed in Section 3.3 below.

3.3 Engineered Safeguards Actuation System Test

On February 15, 1995, during the 'B' emergency diesel generator (EDG) quick start for ESAS testing, the EDG frequency output was less than the surveillance procedure acceptance criteria (59.77 Hz vs. 60.2 to 61.0 Hz). The diesel was considered operable by the shift supervisor (SS) because the "ready to load" indicator in the control room was illuminated when the diesel frequency was 59.77 Hz. The ready to load light signifies that the diesel generator is capable of accepting all safety related electrical loads during a postulated accident.

To address the problem, the SS initiated a surveillance deficiency report (SDR) to document the problem. I&C technicians and plant engineering personnel monitored the diesel frequency during the second of three test starts conducted on February 15th, and determined that the EDG governor speed setting had drifted low. The EDG governor was adjusted and the frequency response was retested satisfactorily before completion of the test on day shift. The communications between the control room and plant personnel were clear and concise throughout the test. The SS satisfactorily completed the closure of the SDR paperwork.

The inspectors reviewed the diesel operability requirements, related to the quick start test, listed in Technical Specifications (TSs) 4.5.1 and 4.6.1 b. To satisfy the TS surveillance requirements the EDG must start and be "ready to load" in less than or equal to 10 seconds. The operator verified that the 'B' EDG control room "ready to load" light was illuminated for each quick start test.

In summary, the inspector determined that the shift supervisor's operability determination for the emergency diesel generator met TS requirements 4.5.1 and 4.6.1b. Test personnel consistently provided clear directions, repeat backs and acknowledgements between the control room and plant.

3.4 Failure of the 'B' Emergency Diesel Generator Air Start Solenoid Valve

On February 4, 1995, the 'B' EDG was declared inoperable during the performance of the monthly surveillance test due to the 'B' air start solenoid valve opening too slowly. The diesel operability was restored after a successful start with the 'A' air start solenoid valve in service.

The air start solenoid valves are located in parallel piping to allow the flow of pressurized air from the two air start receiving tanks through the air start valves and into the diesel engine. One of the two solenoid valves is electronically isolated, to keep the valve closed, for each monthly test. The in service solenoid valve is timed during the manual diesel start to monitor valve performance and trend potential degradation. The air start valves are required to open in less than two seconds to ensure the diesel will meet the TS required 10 second start time for postulated accident conditions. The 'B' valve has been slow to open on the average of once per year in the past three years during the monthly surveillance test.

The 'B' diesel was removed from service to troubleshoot and correct the faulty 'B' air start solenoid valve. I&C technicians removed the isolated valve from the carbon steel piping system. The valve internal parts were coated with a light dust. The dust was determined to be iron oxide (rust) particles. The technicians performed a thorough cleaning and inspection of the 'B' solenoid valve. After the diesel plant engineer inspected the valve and piping, the system was restored to a normal configuration. A post maintenance test run was performed to prove the operability of the 'B' air start solenoid valve. The valve opened in less than two seconds as required for the manual diesel start.

The air start solenoid corrosion particles were attributed to the corrosion of the carbon steel air start lines. The air start lines from the air receivers to the air start solenoid valves contain low points in the piping system where moisture can collect and form rust. The carbon steel air start lines from the air receivers to the air start solenoid valves are scheduled for replacement with stainless steel pipe in April 1995, during the annual diesel outages. Also, a new design of air start solenoid valves is scheduled for installation. The carbon steel air start piping was recently replaced with stainless steel piping on the non-safety related station blackout diesel due to similar corrosion concerns.

The inspectors found the I&C technicians performed a thorough cleaning and inspection of the 'B' solenoid valve. Plant personnel were aware of the air start valve problems and the impact on diesel operability. The operators performed a successful post maintenance test to prove the operability of the 'B' air start solenoid valve. The scheduled replacement of the carbon steel air start lines with stainless steel pipe is a positive step to correct the diesel air start problems.

3.5 (Closed) Violation (50-289/94-19-01) Building Spray Flow Instrument Not Returned to Service

This item concerned a September 1994 violation that was issued in response to the licensee's inadequate corrective actions taken for a June 1993 building spray (BS) transmitter valve misalignment. The corrective actions were inadequate in that they did not preclude the repetition of a similar event in September 1994. The licensee did not incorporate the independent verification requirements described in Administrative Procedure (AP) 1071 into the I&C transmitter calibration procedures, and they did not address the associated transmitter human factor problems identified following the June 1993 event.

Following the September 1994 BS transmitter valve misalignment event, the licensee performed a formal root cause investigation, and identified and implemented several initial corrective actions in a timely fashion. The BS equalizing valve is physically located on the back side of the transmitter with approximately four inches of space between the valve and the room wall. The I&C technician turning the equalizing valve cannot face the valve, which increases the probability that a valve manipulation error could occur. A plaque was installed on an interim basis to address the non standard transmitter equalizing valve human factor concerns. An engineering evaluation report (EER) was initiated and approved to permanently switch the transmitter instrument lines, thereby moving the equalizing valve, so that it faces the technician. Inaccessible transmitters in the Reactor Building will be evaluated when the plant is shutdown. Also, an independent verification requirement was incorporated into procedure AP 1071, and I&C procedures IC-1, 1430-Y-17, 1430-Y-17A and 1430-Y-17B. Procedure cautions were added to the above I&C procedures to provide information about the equalizing valve configuration to the technicians.

The inspectors determined that the plant corrective actions were comprehensive and extended beyond the BS transmitter problem. The actions included the potential impact on similar safety related transmitter calibrations. Even though a few corrective actions were not complete, the item will be closed based on the review and status of the documentation related to the performance of the remaining items. This item is closed.

3.6 (Update) Violation (50-289/94-80-01) Preventive Maintenance Program

In September 1994, the NRC Operational Safety Team Inspection (OSTI) identified that scheduled preventive maintenance (PM) activities for safety related components were deferred or cancelled without proper technical justification.

The inspectors reviewed additional information related to the deferral of PMs. Prior to the OSTI, during a November 1992 Plant Review Group (PRG) meeting, a PRG concern was identified about the potential generic problem of maintenance personnel deferring PMs on a routine basis. Maintenance personnel were assigned a PRG action item (3200-92-9011) to report back to the group the following month with more information regarding deferral of PMs.

A review of the PRG action item tracking log showed that the PM item due date was extended several times in 1993. An October 1993 update reported that plant personnel were working on a method to track and trend the deferred PMs. The due date was again extended until April 4, 1994, and a person was assigned to talk with maintenance regarding the tracking method. The delay in implementing a tracking method was attributed to difficulties in writing a computer software program to trend and track deferred PMs. On September 30, 1994, the priority was increased due to the OSTI finding.

The inspectors determined that maintenance management and the PRG had indications that preventive maintenance tasks were being deferred on a routine bases prior to the OSTI finding. The plant corrective actions for these

indications were neither timely or adequately monitored. As a result, the licensee missed an opportunity to address and correct the PM program problems prior to the OSTI.

4.0 ENGINEERING (37551, 71707)

4.1 Preliminary Safety Concern Related to Large Break LOCA ECCS Analysis

On January 27, 1995 the licensee was informed by B&W Nuclear Technologies (BWNT) of a potential safety concern regarding the effects of initial conditions used for large break loss of coolant accident (LBLOCA) analyses for emergency core cooling system (ECCS) evaluations of the B&W operating plants, and to report a condition of nonconservative data handling regarding fluid enthalpies in the evaluation model (EM). When the nonconservatisms are corrected, they result in a calculated change in the fuel element peak clad temperature (PCT) of greater than 50°F and a resultant PCT greater than 2200°F. However, because of the conservatism imposed by the operating limits in the licensee's Core Operating Limits Report (COLR), the changes have not affected TMI-1 conformance to the ECCS design criteria stated in 10 CFR 50.46(b)(1) for the maximum fuel element temperature of 2200°F PCT. The licensee discussed the issue with the inspectors on January 27, 1995. 10 CFR 50.46 (a)(3)(ii) requires that licensees report to the NRC within 30 days the nature of any changes or errors in an acceptable EM or in the application of such a model which affect the PCT calculation by greater than 50°F. The licensee submitted the required report to the NRC on February 21, 1995.

The concern relates to the initial core flood tank (CFT) conditions of pressure and inventory and their potential effects on peak clad temperature predictions. Historically, the CFT conditions assumed for calculations at the 2-foot (ft) core elevations have been based on the minimum CFT pressure and liquid inventory. These inputs, which represent the range of Technical Specification limits plus instrument uncertainty, were considered to be the most limiting initial conditions for the 2-ft LBLOCA PCT analysis. Recently, a sensitivity study performed with a new, unapproved EM, concluded that the most limiting 2-ft PCT is calculated when the maximum CFT liquid inventory and minimum pressure were input as the initial conditions. When the initial conditions of maximum CFT liquid inventory and minimum pressure were applied in the currently approved EM, the peak clad temperature change was found to be greater than 50°F. BWNT found that the 2-ft LOCA linear heat rate (LHR) analysis limits for all operating plants require preliminary reductions ranging from approximately 0.3 to 1.3 Kw/ft, depending on the plant and fuel designs, to ensure that calculated PCT's do not violate the 2200°F acceptance criteria contained in 10 CFR 50.46. A preliminary review of all core operating limits for plants for which BWNT performs the power distribution, with administrative reductions in the LOCA limits appropriate for the fuel and plant in question, suggest that the current operating limits will be unchanged by these reductions. BWNT expects all analyses to be completed by August 1, 1995.

The inspector discussed the issue further with the licensee's lead nuclear engineer. TMI-1 is currently in Cycle 10 operation with both Mark-B8 and Mark-B9 fuel assemblies in the reactor core. The BWNT preliminary analysis

has focused on Mark-B9 and Mark-B10 fuel assemblies, and a LHR penalty of 1.3 Kw/ft at the 2-ft elevation has been recommended for TMI-1. Based on this LHR penalty, the TMI-1 operating limits for the remainder of the cycle will be unchanged. In addition, to being bounded by the current operating limits, TMI-1 has incorporated a second level of conservatism via the Kw/ft monitoring program (Table 2 of the TMI-1 COLR). Specifically, the alarm limits from zero (0) effective full power days (EFPD) to end of cycle (EOC) for all Mark-B9 fuel assemblies are more conservative than the LOCA limits, even with a 1.3 Kw/ft penalty at the 2-ft core elevation.

Mark-B8 assemblies are unaffected by the CFT input changes because LOCA limits at the 2-ft elevation were established for these assemblies using nominal CFT conditions. However, the analysis for all current fuel designs is subject to the nonconservative enthalpy data transfer. The adjustment related strictly to the Mark-B8 enthalpy contribution is expected to be smaller than that estimated for the Mark-B9.

Based on review of the available data from BWNT and the discussions with the licensee, the inspector concluded that the licensee had taken appropriate action regarding this preliminary safety concern.

4.2 Ventilation Smoke Detector Operability

During a vendor recommended cleaning and inspection, I&C personnel noticed that the high side flow nozzle was mounted backwards for smoke detector AH-TS-677 and that rubber stoppers for both the inlet and outlet nozzle tubes were missing. The smoke detectors are Pyrotronics model CDA-1/CDA-2 duct mounted ionization detectors. A high and low nozzle tube provide a representative ventilation system air flow to the detector mounted external to the duct work. The backward flow nozzle and missing tube plugs rendered the smoke detector inoperable because there would be zero differential pressure (D/P) across the detector. With zero D/P, ventilation system air and potential smoke would not circulate through the tubes into the detector.

Engineering performed an evaluation of the discrepancy to determine the detector operability. The evaluation and potential reportability for the smoke detectors were reviewed at a Plant Review Group (PRG) meeting. The PRG personnel did not consider the event reportable and did not have any concerns with the engineering evaluation. Event Capture Form No. 95006 was submitted to document the need to review and incorporate an appropriate preventive maintenance activity to perform routine cleaning and inspections of the smoke detectors.

The detector was declared inoperable based on the requirements of administrative procedure AP-1038, "Administrative Controls - Fire Protection Program." An hourly firewatch check was established to verify the affected area in the lower relay room remained free of fire and smoke. The shift supervisor properly documented the inoperable smoke detector and implementation of the actions required by AP-1038. I&C technicians corrected the position of the flow nozzle, installed the inlet and outlet tube rubber stoppers and tested the smoke detector satisfactorily.

A material noncomformance report (MNCR) was submitted to document the smoke detector condition. The quality verification (QV) personnel documented that the smoke detector was satisfactorily restored to the original technical manual configuration. A post maintenance test was performed to ensure the detector closed the associated ventilation damper and provided the proper control room alarm.

The inspectors observed the I&C technicians perform Job Order (JO) No. 97783, "Clean and Inspect Control Building Ventilation Smoke Detectors," for two detectors. The technicians performed a thorough cleaning of the flow nozzles, measured the smoke detector ventilation system flows, verified the inlet and outlet tube rubber stoppers were installed, and performed the satisfactory post maintenance retests. A total of eleven smoke detectors were cleaned and inspected. Of the eleven, only the first detector, AH-TS-677, required the plant to declare the ventilation fire protection system administratively inoperable and set a firewatch until the detector was repaired.

The inspectors verified that the hourly firewatch tours were performed on time and properly documented as required by AP-1038. The licensee properly documented the inoperable smoke detector and the PRG review correctly concluded that the detector condition was not reportable to the NRC. The smoke detectors were properly cleaned, inspected and tested to restore system operability.

5.0 PLANT SUPPORT (71750, 71707)

5.1 Radiological Controls

The inspectors examined work in progress to verify proper implementation of health physics procedures and controls. The inspectors monitored ALARA implementation, dosimetry and badging, protective clothing use, radiation surveys, radiation protection instrument use, and handling of potentially contaminated equipment and materials. In addition, the inspectors observed personnel working in radiation work permit (RWP) areas and verified compliance with RWP requirements. During routine tours, a sampling of high radiation area doors was verified to be locked as required.

The inspectors determined that overall radiological controls practices were properly implemented.

5.2 Security

The inspectors monitored security activities for compliance with the accepted Security Plan and associated implementing procedures. The inspectors observed security staffing, operation of the Central and Secondary Alarm Stations, and licensee checks of vehicles, detection and assessment aids, and vital area access to verify proper control. On each shift, protected area access control and badging procedures were observed. In addition, protected and vital area barriers, compensatory measures, and escort procedures were routinely inspected.

During the period, the inspectors identified concerns regarding the processing of material into the protected area. The licensee Security Manager promptly addressed the inspectors' concerns and took appropriate corrective actions.

The inspectors concluded that, for those areas inspected, the Security Plan was being properly implemented.

6.0 NRC MANAGEMENT MEETINGS AND OTHER ACTIVITIES (30702)

At periodic intervals during this inspection, meetings were held with senior plant management to discuss licensee activities and areas of concern to the NRC. At the conclusion of the reporting period, the resident inspector staff conducted an exit meeting with licensee management summarizing inspection activities and findings for this report period. Licensee comments concerning the issues in this report were documented in the applicable report section. No proprietary information was identified as being included in the report.

6.1 INPO Evaluation

During August 1994, the inspectors reviewed the report from the INPO Evaluation conducted in April 1994. No additional regional follow-up is planned.