

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 93-26  
Docket No. 50-289  
License No. DPR-50  
Licensee: GPU Nuclear Corporation  
P.O. Box 480  
Middletown, PA 17057  
Facility: Three Mile Island Station, Unit 1  
Location: Middletown, Pennsylvania  
Inspection Period: December 7, 1993 - January 17, 1994  
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Approved by:

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2/3/94  
Date

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 inspection results is in the executive summary.

**EXECUTIVE SUMMARY**  
Three Mile Island Nuclear Power Station  
Report No. 50-289/93-26

Operations

The licensee conducted overall plant operations in a safe and conservative manner. The licensee's actions on December 23, 1993, and January 5, 1994, to maintain emergency diesel generator operability in response to minor equipment problems were excellent.

The licensee effectively implemented an adequate program to protect safety-related systems against extreme cold weather.

Maintenance

Overall, the licensee's conduct of maintenance activities was good.

The licensee's performance in conducting the radiation monitoring system surveillance was weak in that the I&C technician who performed calculations and the independent verifier signed the procedure calculation enclosure prior to completion of all of the calculations. This is a violation of Administrative Procedure 1001J, "Technical Specification Testing Program." This violation will not be subject to enforcement action because the licensee's efforts in correcting the violation met the criteria specified in Section VII.B of the Enforcement Policy, dated January 1, 1993.

Plant Support

The licensee's planned corrective actions were proactive for correcting the ambiguous key card reader visual and audible indications which plant personnel use to determine if they have access to the associated vital area.

The licensee took appropriate corrective action regarding two individuals who may not have received the appropriate fire brigade support training required by Administrative Procedure.

Safety Assessment/Quality Verification

The licensee's corrective actions in response to previous unresolved items or violations involving emergency diesel generator testing, operation of Fuel Handling Building ventilation without the effluent radiation monitor in service, and reporting of missed Technical Specification surveillances were adequate.

The inspector concluded that a recent TMI-1/TMI-2 management transition should not impact the safe operation and maintenance of TMI-1, since the change is organizational in nature with no change in staffing.

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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. The inspectors obtained information through actual observation of licensee activities, interviews with licensee personnel, and documentation reviews.

The inspectors observed licensee activities during both normal and backshift hours: 22 hours of direct inspection were conducted on backshift. The times of backshift inspection were adjusted weekly to assure randomness.

### 2.0 PLANT OPERATIONS (71704, 71707, 92701)

#### 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. The inspectors conducted regular tours of the following plant areas:

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

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

On December 23, 1993, the trouble alarm for the 'A' emergency diesel generator actuated. Licensee investigation revealed that the standby lube oil pump was not running due to a loss of power to the auxiliaries panel for the diesel. Inspection of the feeder breaker by electrical maintenance personnel revealed a thermally hot phase due to high resistance caused by a loose connection. The licensee repaired the loose connector and returned the breaker to

service in a timely manner. During the troubleshooting and repair, the licensee appropriately verified lube oil temperature in the sump to be greater than 90°F to ensure diesel operability. Minimum temperatures recorded were 104°F in the lube oil sump and 103°F in the jacket coolant system. In addition, the Plant Review Group (PRG) met to discuss the operability of the diesel generator. Specifically, they discussed the options available to maintain the diesel generator operable, if the repair could not be made prior to the lube oil temperature reaching 90°F. The inspector found the PRG discussions to be thorough and proactive.

On January 5, 1994, an auxiliary operator reported a leaking unloader valve on the air compressor for the 'A' emergency diesel generator starting air receiver. [The unloader valve relieves the air pressure in the cylinder while the compressor comes up to speed.] The auxiliary operator noted that the compressor was running continuously to maintain 236 psi in the starting air receiver. The compressor normally starts at 225 psi and turns off at 250 psi. A shift foreman shut the compressor discharge valve and secured the compressor. The licensee stationed an auxiliary operator at the air receivers to ensure that pressure remained within the normal operating band during the repair of the unloader valve. The air receiver pressure decreased only a small amount during the 3.5 hours that was required to repair the unloader valve. The inspector concluded that the performance of the auxiliary operator who discovered the air leak was excellent. In addition, the licensee's actions on both December 23 and January 5 to maintain diesel operability were excellent.

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

## **2.2 Cold Weather Preparations**

The inspector reviewed the licensee's cold weather preparations to determine if they had effectively implemented a program to protect safety-related systems against extreme cold weather. The licensee performs Operations Surveillance OPS-S85, "Operations Winterization Checks," which includes a checklist to ensure that exposed instrumentation and piping is adequately protected from seasonal and sudden cold weather elements. It includes requirements to check the antifreeze in the emergency diesel generators for fluid level and freeze protection and to check all heat trace panels listed in Operating Procedure (OP) 1104-46, "Electric Heat Tracing" for proper operation and trouble lights. In addition, OPS-S85 includes verification that Preventive Maintenance Procedure (PM) M-87, "Fire System Anti-Freeze Loop Maintenance," has been performed. The licensee also implements a preventive maintenance program per PM E-70, "Heat Trace Inspection," which includes instructions for inspection and testing of heat trace systems. The PM includes visual inspection of the heat trace to ensure that wiring is terminated correctly, heater cable is not damaged, and that piping insulation is intact and properly installed. The PM frequencies for heat trace panels are between one and two years.

The inspector reviewed OPS-S85 and PM M-87 which had been completed in October 1993 and found that they had been adequately performed. At that time, several trouble lights were noted on the heat trace panels and work requests were either verified to be written or were generated. The inspector also verified that PM E-70 had been satisfactorily performed for heat trace panels HT-P-4A, 4B, 7A, 7B, and 8B within the required frequency. On January 13 and 14, 1994, the inspector observed heat trace panels in areas of the Auxiliary Building, Intermediate Building and yard area near the borated water storage tank (BWST.) The inspector noted that heat trace panel HT-P-3B, breaker #13 (for waste disposal liquid valve-268) in the auxiliary building and heat trace panel HT-P-8A (heater 6 for the BWST), light #10 were lit (alarming). An alarming condition indicates either there is no current flow through a sensing circuit or that the pipe temperature is less than the thermostat setpoint. The inspector verified that a work request (WR #773644) had been generated for HT-P-3B. However, no work request had been generated for HT-P-8A. The licensee generated a work request (WR #774101) on January 14, 1994. The inspector noted that operability of the BWST was not affected by the presence of this alarm. The heater for heat trace panel HT-P-8A is not safety-related and redundant to the BWST safety-related immersion heaters; however, the BWST temperature is normally maintained above the heater setpoints by routine plant operations.

The primary and secondary auxiliary operator daily log sheets also include the requirement to check during plant tours that the heat trace panels listed in OP 1104-46 are operable or that work requests are submitted. The inspector found that the auxiliary operators did not note on their log sheets for January 13 and 14, 1994, that the light on HT-P-8A was lit. The inspector discussed this with the licensee who was unable to determine whether the auxiliary operators did not notice the alarm or that they had noticed it previous to January 13, but a work request was not generated. In order to ensure that the auxiliary operators observe each heat trace panel during their tours, the licensee revised the daily log sheets to include individual steps for each heat trace panel instead of one step for all panels. The inspector found this action to be appropriate.

The inspector concluded that the licensee had effectively implemented an adequate program to protect safety-related systems against extreme cold weather.

### **2.3 (Closed) Unresolved Item (URI 50-289/93-13-02) Emergency Diesel Generator Testing**

In June 1993, the inspector observed the daily testing of one of the emergency diesel generators (EDG) while the other EDG was out of service for its annual maintenance inspection. The inspector noted that although Operating Procedure (OP) 1107-03, "Diesel Generator," stated that the EDG should be operated at least one hour, the licensee was operating the EDG for only twenty minutes. The OP states that operating the EDG for at least one hour allows the engine to reach thermal equilibrium and reduces lube oil and carbon in the exhaust system. The inspector reviewed minutes from a Plant Review Group (PRG) meeting in July 1991 and found that running the diesel for only twenty minutes was

contrary to the recommended guidance of the PRG, Plant Engineering and the diesel vendor, at that time. Plant Operations management stated in June 1993 that they would reevaluate when the EDGs could be operated for less than one hour and would change OP 1107-03, accordingly.

The licensee held a PRG meeting on June 29, 1993, to discuss Procedure Change Request (PCR) 1-OS-93-0314 to OP 1107-03 to clearly establish their position regarding the required run time on the diesel for this daily testing. The PRG noted that experience has shown no long term degradation of the diesel design that was attributable to the twenty minute runs. The PRG concluded that twenty minutes is adequate to ensure that the diesel has reached operating equilibrium. Plant Engineering stated that their position is that a daily twenty minute run of the diesel, when required, does not degrade the diesel compared to a one hour run, and that the twenty minute run is preferable from the standpoint of maximizing availability of the diesel being tested. In addition, the regularly scheduled one hour monthly diesel surveillance satisfies the vendor's recommendation to periodically perform a one hour run to clean out the carbon and lube oil in the exhaust system.

Based on the PRG position, OP 1107-03 was revised to state that during periods of time where one diesel is out of service and the alternate diesel is tested to satisfy TS requirements, or during prerequisites/support of engineered safeguards actuation systems testing, a twenty minute full load run is acceptable. Reduced running times of twenty minutes for other conditions requires the Plant Operations Director or designee permission with notification to the Plant Engineering and Plant Maintenance Directors.

The inspector reviewed the revised OP 1107-03 and the PRG meeting minutes and found the licensee's position and procedure change to be acceptable. This item is closed.

### **3.0 MAINTENANCE (61726, 62703, 71707, 92701, 92702)**

#### **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 trade; 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:

- Preventive Maintenance Procedure E-21, "Thermal Overload Devices Inspection and Testing," on MU-V-14A.

- Preventive Maintenance Procedure E-62, "Molded Case Circuit Breaker Testing," on RR-S-1B.
- Corrective Maintenance Procedure E-13, "Limitorque Valve Operator Maintenance."
- Corrective Maintenance Procedure 1420-LTQ-8A/B, "Limitorque Operator Disassembly/Reassembly."
- Job Order Number 077887, "A High Temperature Connection was found at 'B' Phase Connection on the Load Side of the Breaker. Clean and Repair/Tighten Connection."
- Job Order Number 081024, "Emergency Diesel Generator 'A' Air Start Air Compressor."

Overall, the inspectors found that individuals involved in maintenance activities were knowledgeable and work was conducted using appropriate procedures. The inspector had no concerns with the performance of Preventive Maintenance Procedure E-21 or E-62. The emergency diesel generator maintenance associated with Job Orders 077887 and 081024 are further discussed in section 2.1 of this report.

### 3.2 Surveillance Observations

The inspectors observed 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. The inspectors 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 measurement.

Surveillance activities reviewed included:

- Surveillance Procedure 1302-3.1, "Radiation Monitoring System Calibration." on RM-A-8.
- Surveillance Procedure 1301-4.6, "Station Storage Battery Weekly."
- Surveillance Procedure 1303-11.55, "Pressurizer Heater Emergency Power Functional Test."

The inspector found that the overall performance of surveillance procedures was good. The

inspector identified one concern during observation of the performance of Surveillance Procedure 1302-3.1, "Radiation Monitoring System Calibration." The I&C technician was performing the surveillance on the iodine channel for RM-A-8. This surveillance requires the technician to perform a series of calculations to determine the decay-corrected  $^{137}\text{Cs}$  source reading. There are two places for signatures at the bottom of the Appendix G calculation worksheet that are labeled "Calculations Performed By" and "Independently Verified By." The inspector noted that both signatures had been signed off, but Appendix G, steps 2.4, 2.5 and 2.6 had not been completed. The other steps in Appendix G had been completed. The technician had not yet reached step 8.3.3.1 which collects the necessary data (corrected  $^{137}\text{Cs}$  source counts per minute) to perform Appendix G, steps 2.4, 2.5 and 2.6. The inspector noted the surveillance procedure had not yet been completed and submitted for review and approval.

The inspector discussed this issue with licensee management who agreed that it was improper to make the signatures prior to completion of the calculations. The mistake was attributed to carelessness. Both individuals were counselled and a memorandum was prepared concerning this incident that will be discussed with all maintenance personnel. The technician ultimately collected the necessary data and performed the required calculations which were independently verified prior to completion of the surveillance. In addition, a supervisor (in addition to the independent verification) verifies the calculations as part of his review of the completed surveillance test prior to approval of the completed work package. Therefore, the inspector considered this error to be a weakness with minor safety significance and found the licensee's corrective actions to be acceptable. Administrative Procedure (AP) 1001J, "Technical Specification Surveillance Testing Program," step 4.2.5, states that the test performer will collect data as specified in the procedure and will complete the data sheet(s) and line item signatures as applicable. The failure of the test performers to complete the calculations prior to signing the data sheet is a violation of AP 1001J. This violation will not be subject to enforcement action because the licensee's efforts in correcting the violation met the criteria specified in Section VII.B of the Enforcement Policy, dated January 1, 1993.

### **3.3 (Closed) Unresolved Item (URI 50-289/92-22-02) Operation of the Fuel Handling Building Ventilation without the Effluent Radiation Monitor**

This item involved the performance of Surveillance Procedure (SP) 1303-11.56, "Fuel Handling Building Engineered Safety Feature (ESF) Air Treatment System Air Filter Efficiency Test," without the Fuel Handling Building effluent radiation monitor, RM-A-14, in service. Technical Specification 3.21.2 requires that the RM-A-14 noble gas activity monitor (or suitable equivalent), the iodine cartridge, the particulate filter, the effluent flow recorders, and the sampler flow rate be operable during Fuel Handling Building ESF air treatment system operation. Due to the failure to properly follow and sign off SP 1303-11.56, the 'A' train of the ESF ventilation was operated for 5.5 hours with the RM-A-14 pump turned off. The licensee unknowingly met the requirements of the RM-A-14 action statements and, therefore, no Technical Specifications were violated. However, the lack of

preparation for surveillance tests had been a noted weakness in the past, especially during surveillances which are only performed once per refueling outage.

The licensee prepared Plant Experience Report 92-011 to review this incident. The licensee determined that the root cause of the event was the failure to properly designate a Test Supervisor. Plant Engineering or Plant Maintenance did not assume accountability for the performance of the test procedure which resulted in the failure to properly follow and sign off the procedure as written. If the procedure was followed and signed off using proper administrative methods, the ventilation system would have been required to be started in accordance with Operating Procedure 1104-15D, "Fuel Handling Building ESF Air Treatment System Operating Procedure," and this would have placed RM-A-14 in service.

The licensee has completed several corrective actions as a result of this incident: 1) The licensee trained Plant Engineering and Utility personnel on Administrative Procedure 1001J, "Technical Specification Surveillance Testing Program"; 2) The licensee reviewed this incident with licensed and non-licensed operators to ensure their understanding of ESF ventilation operation and the requirements for RM-A-14. In addition, the licensee stressed the need for the Shift Supervisor to fully understand the work scope prior to authorizing work and to maintain control of shift activities; 3) The licensee placed a sign at the control switch for the ESF ventilation fans that states that RM-A-14 is required to be in service during fan operation; 4) The licensee enhanced SP 1303-11.56 to clearly identify Technical Specification actions and require signoffs to ensure compliance and; 5) The licensee defined the Test Supervisor or Department accountability on the Technical Specification scheduling sheets.

The inspector verified that the licensee's corrective actions had been completed by reviewing the training records, SP 1303-11.56, OP 1104-15D, and the Technical Specification scheduling sheets. The inspector determined that the licensee's corrective actions are adequate to prevent recurrence. This item is closed.

#### **3.4 (Closed) Violation (VIO 50-289/92-20-01) Licensee Failed to Report a Missed Core Flood Tank Sampling Surveillance**

In December 1991, the licensee missed a core flood tank sampling surveillance required per Technical Specification (TS) 4.1.2. The licensee's response to the missed surveillance was appropriate and the results were acceptable. The licensee's Plant Review Group (PRG) evaluated whether the TS violation was reportable. The PRG determined that since the results of the sample (taken after identification that the surveillance was missed) determined the boron concentration to be within the limits of the Limiting Condition for Operation, no operation or condition prohibited by TS had occurred and the event was not reportable under 10 CFR 50.72 or 50.73.

On December 1, 1992, the inspector with the aid of the NRR Project Manager referred this specific situation to the NRC Technical Staff for their understanding of the intent of the data

that is collected by the LER rule (10 CFR 50.73). The NRC Technical Staff considered missing a surveillance interval information that the Staff desired to gather using the LER rule. This position was clarified in Generic Letter (GL) 87-09 dated June 4, 1987, addressing Limiting Conditions for Operation and Surveillance Requirements for Standard Technical Specifications. In the Generic Letter, the NRC stated that the failure to perform a surveillance within the allowable surveillance interval defined by Specification 4.0.2 constitutes a reportable event under 10 CFR 50.73(a)(2)(i)(B), because it is a condition prohibited by the plant's TS. Section 4.0.3 of the Standard Technical Specifications addresses the operability of equipment associated with the failure to perform a Surveillance Requirement within the allowable surveillance interval. This requirement for TMI Unit 1 is addressed in the plant's TS, Section 4 introductory paragraph. The equipment testing and system sampling frequencies specified in the surveillance section of the TS are used to maintain the equipment and systems in a safe operational status. Exceeding the surveillance time interval was considered by the inspector as a condition prohibited by TMI TS 4.1.2 that established minimum frequencies and was reportable per 10 CFR 50.73(a)(2)(i)(B). Based on this information, the inspector disagreed with the PRG's reportability evaluation. The inspector discussed the reportability issue with the licensee and they still maintained that the incident was not reportable. A Notice of Violation for failure to submit an LER within 30 days after discovery of the missed surveillance was issued in NRC Inspection Report 50-289/92-20 on December 28, 1992.

In the licensee's "Reply to the Notice of Violation," dated January 29, 1993, the licensee disagreed with the statement that set forth the basis for the Notice and denied that a violation occurred. However, based on NRC Staff discussion in Inspection Report 92-20, the licensee stated that they understood that the Staff intended for "missed surveillance" information to be data to be gathered using the LER rule. Therefore, for purposes of accuracy of the record pending resolution of the issue of reportability under the current TMI-1 TS, the licensee filed a "voluntary LER" addressing the subject missed surveillance.

The NRC Staff reviewed the licensee position for denying the violation occurred. In a letter dated May 11, 1993, the staff maintained that the overdue surveillance constituted a condition prohibited by the TMI-1 TS as discussed in the Inspection Report, therefore, the original citation remained valid and should not be withdrawn. The letter further noted that the licensee had correctly pointed out that Standard Technical Specification Surveillance Requirement (STS SR) 3.0.3, published in NUREG-1430, allows a delay period of up to 24 hours to perform a missed surveillance before a Limiting Condition of Operation is considered not met. This provision was also offered on a voluntary basis in GL 87-09 to all licensees, including those with custom TSs. However, GPU Nuclear did not elect to incorporate this provision into the TMI-1 TS. Therefore, GPU Nuclear could not take advantage of the delay period in STS SR 3.0.3. The letter stated that if GPU Nuclear had incorporated the provision into the TMI-1 TS, there would not have been a violation of the TS and an LER would not have been required pursuant to 10 CFR 50.73(a)(2)(i)(B).

Upon receipt of the May 11, 1993 letter, the licensee issued a policy statement dated June 2,

1993, which required reporting of a missed TS surveillance to the NRC as a condition prohibited by TS and reportable in accordance with 10 CFR 50.73. On December 22, 1993, Amendment No. 181 to the TMI-1 Facility Operating License No. DPR-50 was issued. The amendment changed the plant TS to adopt the STS provision that allowed a period up to 24 hours to complete a surveillance requirement upon discovery that the surveillance had been missed.

During the period December 1992 through December 1993, the inspector noted that the licensee appropriately reported missed surveillance tests. Upon issuance of the TS amendment, the licensee now has 24 hours from identification of a missed TS surveillance to complete the test, prior to having to report it per the LER rule. Based on these actions, this item is closed.

#### **4.0 ENGINEERING (40500, 71707, 90712)**

##### **4.1 (Closed) Licensee Event Report (LER 93-009-00) Limitorque Valve Operator Failures**

This item concerned an incident where four motor operated valves were rendered inoperable and 26 other valves were potentially inoperable after maintenance technicians used a hammer to install a modified declutch lever. This incident is described in detail in Inspection Report 50-289/93-25.

The inspector reviewed the licensee's corrective actions described in LER 93-009-00 which included the following: 1) repairing and/or testing all of the affected valves to verify operability; 2) training maintenance and operations personnel on the potential consequence of declutch lever replacement, and; 3) changing Preventive Maintenance Procedure E-13 "Limitorque Valve Operator Inspection," Corrective Maintenance Procedure (CMP) 1420-LTQ-1 "Limitorque Valve Operator Maintenance" and CMP 1420-LTQ-8A/B, "Limitorque Operator Disassembly/Reassembly," to provide a caution for installing a declutch lever. The inspector determined that the licensee's corrective actions are adequate to prevent recurrence.

#### **5.0 PLANT SUPPORT (71707)**

##### **5.1 Radiological Controls**

The inspectors examined work in progress in Unit 1 to verify proper implementation of health physics (HP) 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 RWP areas and verified compliance with RWP requirements. During a routine tour of Unit 1, the inspectors verified a sampling of high radiation area doors to be locked as required. The inspectors did not identify any concerns.

## 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, the inspectors observed protected area access control and badging procedures. In addition, the inspectors routinely inspected protected and vital area barriers, compensatory measures, and escort procedures. The inspector had one concern which is described below.

### 5.2.1 Key Card Access System

The inspector questioned the licensee concerning the ambiguous visual and audible indications on the key card access system. In 1990, the licensee installed a new key card access system. The system was designed such that when a key card is held in front of the reader, if the individual has access to the area, the green "Access Granted" light will turn on and the security door can be opened. If the individual does not have access, the red "Access Denied" light will turn on and the security door will not open. When the new key card access system was first installed, the security door needed to be closed after each person. In 1992, the licensee modified the key card access system so that when a number of people needed to pass through the door, the reader would read the card but the door would not have to close after each person. The inspector was concerned that with the modified system, only the first person has a positive indication (green light) that he is authorized access. Other persons passing through the door will not receive a green light that access is granted; they only receive a red light when access is not granted. The modification also included installing an audible tone when the card reader has read the card; the tone does not mean that access has been granted. This tone creates confusion because in the absence of the green light, the inspector found that many personnel thought that the tone meant access was granted. As a result of this, the inspector noted that many personnel do not look at the card reader for the red light, they only wait to hear the tone. In addition, the licensee's General Employee Training is incorrect in stating that the individual should receive a green light if access is granted because this is only true for the first person. The training does not mention the tone or what the tone means.

The inspector discussed this concern with the licensee who stated that although there has been no incident of an unauthorized individual being found in a vital area, they agreed that the key card reader indications were ambiguous. The licensee plans to change the General Employee Training to reflect the modified card readers. Although it is not a requirement, the licensee is also considering adding a new distinguishable tone when access is denied to audibly alert the individuals who do not look for the red light. The inspector concluded that the licensee's planned corrective actions are preventive in nature and should correct the ambiguity in the key card access system.

## 5.3 Fire Brigade Support Training

Administrative Procedure 1038, "Administrative Controls - Fire Protection Program," section 4.13 indicates that certain support personnel from Plant Operations, Maintenance, Security and Radiological Controls shall attend an annual training program. This program will review their support role in assisting the fire brigade. AP 1038 also indicates that this training may be incorporated into normal department training requirements if covered on an annual basis.

The inspector selected two radiological control support personnel assigned to fire brigade duties on November 14 and 18, 1993 to verify that they had received the training required by AP 1038. The inspector found that one of the individuals had not received the annual training since July 1992. The inspector discussed this with licensee training personnel and the licensee initiated a Quality Deficiency Report (QDR 932022). The licensee stated that there was a misunderstanding by radiological controls management regarding the requirement for this training. The licensee believed that the training was not a requirement since radiological control technicians do not actually fight fires. Their duties on the fire brigade are to control the area as needed based on radiological conditions. Therefore, radiological controls management believed that routine radiological control technician qualifications met the requirement of fire brigade support training and did not have a mechanism in place to track the fire brigade support training course to assure the training requirement was met. However, the Fire Protection Engineer had not reviewed the radiological control technician qualification training to determine if appropriate material was covered regarding fire brigade support training. Therefore, the routine qualification training may not have met the AP 1038 requirement for support training.

The licensee reviewed the training records for the radiological control technicians who could serve on the fire brigade and identified another individual who had not received the training within the required time. The licensee restricted these two individuals from fire brigade support duties until they received appropriate make up training. The licensee also reviewed training records for other fire brigade support personnel (Operations, Maintenance and Security personnel) and did not find any additional discrepancies. The licensee intends to review, and revise if necessary, the lesson plans from the routine radiological control technician training and to revise AP-1038 to clarify the fact that routine radiological control technician qualifications meet the requirement of fire brigade support training. The inspector found the licensee's actions to be acceptable.

## **6.0 TMI-1/TMI-2 Management Transition (30702)**

On December 28, 1993, the TMI-2 Post Defueling Monitored Storage (PDMS) Technical Specifications were issued and TMI-2 entered PDMS. On January 10, 1994, TMI-1 management officially accepted responsibility for TMI-2 PDMS. Effective that date, the TMI Division was created with responsibility for both TMI-1 Operations and TMI-2 PDMS. The licensee established a PDMS Organization, lead by a PDMS Manager who reports directly to the Director, Operations and Maintenance, TMI (formerly Director, Operations and Maintenance TMI-1.)

The inspector reviewed the licensee's plans for staffing the PDMS Organization to determine if there would be any affect on the safe operation and maintenance of TMI-1. The inspector discussed the new organization in detail with the PDMS Manager. The licensee has maintained the operations and maintenance staff who were previously working at TMI-2 and they have been integrated into the TMI Division. A Maintenance Foreman and an Operations Foreman are assigned permanently to the PDMS Manager to support TMI-2 PDMS work. Additional auxiliary operators and maintenance personnel will be assigned to TMI-2 PDMS work as needed. However, if additional work should emerge for TMI-1 (as a result of a transient or an outage) these individuals will support TMI-1 operations and maintenance.

The inspector also attended several licensee turnover meetings and noted that the licensee was using a detailed check list to identify the scope of activities that the TMI-1 organization was accepting responsibility for upon transition to the new organization. The check list included engineering/technical issues, licensing, operations/maintenance, and administrative items.

The inspector concluded that the TMI-1/TMI-2 management transition should not impact the safe operation and maintenance of TMI-1, since the change is organizational in nature with no change in staffing. The inspectors will routinely monitor operations and maintenance activities considering the newly acquired TMI-2 PDMS responsibilities to determine if the change has any effect on TMI-1 in the future.

## **7.0 NRC MANAGEMENT MEETINGS AND OTHER ACTIVITIES**

At periodic intervals during this inspection, meetings were held with senior plant management to discuss licensee activities and areas of concern to the inspectors. At the conclusion of the reporting period, the resident inspector staff conducted an exit meeting on January 21, 1994, 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.