U. S. NUCLEAR REGULATORY COMMISSION
Region I

Docket No.: 50-293

Report No. 50-293/89-01

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800 Boylston Street
Boston, Massachusetts 02199

Facility: Pilgrim Nuclear Power Station

Location: Plymouth, Massachusetts

Dates: February 6 - March 10, 1989

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Inspection Summary:

Areas Inspected: Restart staff inspection to assess licensee management controls, conduct of operations and startup testing activities during the licensee's Power Ascension Program.

Results: The report documents the licensee's successful completion of the Residual Heat Removal system boundary leak rate test and the Main Steam Isolation Valve opening test (Sections 3.3 and 3.6). These tests were directly responsive to the technical issues associated with NRC Confirmatory Action Letter 86-10.

Violation: The licensee failed to identify the presence of Iron-55 and the activity resulting from the radionuclide on the shipping papers for seventeen shipments of contaminated laundry between January 1988 and February 1989 (Section 8.1.2).

Unresolved Items:

1. The licensee's root cause evaluation for observed foreign material intrusion into the MSIV 4-way valves and development of an inspection schedule for the valves will be reviewed (Section 5.1).

2. Licensee to review its policy regarding determination of reportability of missed Technical Specification Fire Watches (Section 7.4).

Strengths:

1. Operational evolutions continue to be performed in a competent and professional manner (Section 2.0).

2. The licensee's approach to determining the root cause and formulating corrective measures following the March 4, 1989, reactor scram was prudent, thorough, and consistent with good engineering practices (Section 2.3.7).

3. Good coordination between the engineering department and the station maintenance section was noted during the HPCI outboard steam isolation valve repair work (Section 5.4).

Weakness: Lack of preplanning to backfeed electrical power to the plant delayed recovery from the loss of offsite power (Section 2.3.5).

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DETAILS

1.0 Summary of Facility Activities

At the end of the last report period, the plant remained in cold shutdown while the licensee performed modifications and repairs to the air supply system of the torus vacuum breaker block valve accumulators. Due to indications of increased air leakage on the valve accumulators, the licensee had commenced a reactor shutdown on January 27, 1989. The licensee determined that the air leakage was due to the relief valves on the two accumulators lifting at varying pressures and not tightly reseating. The licensee installed spare relief valves to correct the problem and the plant returned to criticality at 9:25 a.m. on February 10, 1989. The licensee subsequently completed MSIV testing at 270 psig, SRV testing at 350 psig, RHR system and drywell leakage inspections at 600 and 950 psig, and HPCI and RCIC testing at 950 psig.

Following the licensee's successful completion of their planned testing activities up to the 5% power plateau the licensee formally requested NRC release to proceed with power ascension from 5% to 25% power on February 16, 1989. On February 18, 1989, the licensee initiated a controlled plant shutdown to perform maintenance and await NRC approval to proceed. Cold shutdown was achieved on February 19, 1989.

On February 21, 1989, at 1:00 a.m., a partial loss of offsite power occurred due to an electrical fault in a cable associated with the startup transformer. The two station emergency diesel generators automatically started as designed to provide station power. The licensee restored offsite power to the plant via a second transformer at 4:20 p.m.

Following repairs to the damaged electrical cable associated with the startup transformer, the licensee brought the reactor critical at 9:00 a.m. on February 28, 1989, and commenced plant heatup while awaiting NRC approval to continue startup testing to the 25% power plateau. The reactor was at rated pressure of approximately 1000 psig on March 1, 1989, at approximately 4% of rated power.

At 1:30 p.m. on March 3, 1989, Mr. James M. Allan, acting for the Region I Regional Administrator, approved the NRC Restart Assessment Panel's recommendation to release the licensee from the second NRC approval point (5% to 25% of rated power) in the Power Ascension Test Program. The program includes NRC Regional Administrator approval points at 5%, 25%, 50% and 75% of full power as well as a licensee formal assessment and NRC review after completion of the Power Ascension Program, including testing at full power.

At 3:40 p.m. on March 4, 1989, the turbine generator was synchronized to the grid. The licensee experienced minor vibrations on two turbine bearings and removed the turbine generator from service after about an hour of operation. At 5:49 p.m., a turbine bypass valve system anomaly occurred causing the bypass valves to close then fully open, producing a reactor pressure drop which resulted in an automatic MSIV closure and reactor scram. All safety systems responded as designed. The licensee performed a plant cooldown and placed the reactor in cold shutdown on March 5, 1989. The licensee's investigation was unsuccessful in determining the root cause of the turbine bypass valve behavior. Licensee management presented the results of their investigation at a management meeting conducted on March 9, 1989, at NRC Region I. The results of that meeting are documented in NRC meeting report 89-043.

NRC inspection activities during this report period were conducted by the onsite Pilgrim Restart Staff led by Mr. Clay C. Warren, Senior Resident Inspector and Restart Manager. The Pilgrim Restart Staff is composed of the Pilgrim resident inspectors, resident inspectors from other plants, NRC regional-based and headquarters-based inspectors and NRC contractors. On February 8, 1989, the Pilgrim Restart Staff began 24-hour shift coverage in anticipation of plant startup. This coverage was reduced to extended day shift coverage at times, consistent with reduced testing activity and plant conditions.

2.0 Operations

2.1 Sustained Control Room Observations

Based on over 400 hours of around-the-clock on-shift observations, the inspectors determined that control room activities were conducted in a safety-conscious professional manner. Communications in the control room continued to be clear and formal. Information flow among shift personnel was generally good, such that all members were aware of plant status and planned evolutions. However, a weakness was noted in the control room staff's knowledge of maintenance activities near the end of the shift as described below. Shift turnovers were conducted in a formal manner and information about system status and work in progress was conveyed to the on-coming shift through individual operator turnovers and pre-shift briefings. The pre-shift briefings by the offgoing Watch Engineer covered upcoming evolutions in sufficient detail to keep the on-coming personnel abreast of overall plant status. Attendance at these briefings was consistent and included representatives from Chemistry, Health Physics, Maintenance, and Outage Management groups.

Shift staffing levels remain adequate. The licensee began this period with a four-shift rotation consisting of three senior reactor operators (SROs) and two reactor operators (ROs) per shift. The temporary addition of an extra SRO to each shift appears to have enhanced the shift organization with added experience. Eight ROs have unrestricted licenses while the 14 newly licensed ROs have limited licenses, pending completion of on-watch training and reactivity manipulations during the power ascension program.

The control room staff continued to exhibit a safety-conscious and conservative attitude. The operators stop work to resolve problems and correct procedures during testing and other evolutions when appropriate. The Technical Specifications (TS) were conservatively applied. The control room operators were attentive to their panels, alarms and indications. Their response to alarms and system parameter trends was appropriate. During three events affecting overall plant status (i.e. Group I isolation, loss of startup transformer, and Group I isolation and scram), the operators initial actions were prompt and effective in placing the plant in a stable, safe condition.

The inspectors routinely reviewed various control room logs including the Limiting Condition for Operations (LCO) Log, the disabled Annunciator Alarm Log, the Operations Supervisor Log, the Reactor Operators Log, the Lifted Lead and Jumper Log, and the Component Leak Log. The inspectors noted that items were properly logged and tracked.

The inspectors noted on occasions that coordination between operations and other organizations needed improvement. An example is the licensee's effort to schedule and perform post work testing (PWT) on a group of maintenance requests (MRs). The PWTs to be conducted at rated reactor pressure, following completion of Power Ascension Testing at 5% power, were hampered by lack of coordination. Many of the PWTs involved inspection of plant components for steam leaks. It was noted that certain PWTs were performed redundantly by both operations and maintenance while some PWTs were not performed due to unclear ownership of the MRs. The licensee's outage and planning group subsequently coordinated the performance of these PWTs with satisfactory results.

The inspectors also noted that the control room staff, especially at the end of midnight shift exhibited weak knowledge of the status of station maintenance activities, apparently due to lack of communication between operations and maintenance during the shift. The inspectors brought this observation to licensee management's attention and will continue to monitor this area in future inspections.

Control room operators received good support from the shift technical advisors (STA) and administrative assistants. The STAs were used in developing failure and malfunction reports and maintaining various control room logs. The administrative assistants do much of the administrative paperwork which helps to reduce traffic in the control room.

Operations management, particularly the Chief Operating Engineer, provided effective oversight of operations. Operations management was observed touring the control room frequently and discussing plant status and evolutions with the Watch Engineer. Complete briefings were conducted with all shifts to identify and discuss all procedure changes prior to implementation.

2.2 Plant Tour Observations

The inspectors routinely conducted plant tours and noted that the overall material condition of rooms and equipment remained excellent during the report period. The licensee personnel interviewed during the tours (HP, security, operations, contractor) had experience in their positions and were knowledgeable about their work and duties. HPs were cognizant of work activities in progress. Housekeeping controls were being maintained during work in progress.

2.3 Review of Plant Events

2.3.1 Partial Reactor Water Cleanup System (RWCU) Isolation

At 1:20 p.m. on February 10, 1989, a partial isolation of the RWCU system occurred when the inboard suction valve (MO-1201-02) closed. The licensee halted the plant heatup that was in progress, manually completed the isolations, walked down the system (and verified no leaks) and notified the NRC via the Emergency Notification System (ENS). The isolation was caused by a sensed system high flow that cleared about 10 minutes after it occurred. Licensee investigation found air in the instrument lines. The licensee refilled the lines and restored RWCU to service. Air in these instrument sensing lines has been a recurring situation. An Engineering Service Request (ESR) has been initiated to evaluate the instrumentation tubing configuration and other RWCU system anomalies which cause inadvertent RWCU isolations. The inspectors will follow licensee actions in this area.

2.3.2 Group I Isolation Due to Level Swell During Special Main Steam Isolation Valve (MSIV) Testing

At about 9:23 a.m., on February 11, 1989, during the conduct of a test per Temporary Procedure (TP) 87-219, MSIV Opening Test, the licensee received an inadvertent Group I Isolation (MSIVs, Main Steam Line Drains, and Recirculation Loop Sampling Lines) as a result of reactor vessel level indication swell caused by opening the "C" MSIV. The test involved individually opening MSIVs against approximately 100 psid to prove operability. This test was conducted in response to Confirmatory Action Letter 86-10.

The operators were well briefed prior to implementation of the procedure. The briefing included precautions concerning possible power excursions which might be caused by conduct of the test. Upon testing the first two MSIVs, the power transient was negligible, but reactor level increased by about 4 inches. Continuing the test, the "B" outboard MSIV failed to open. The test was continued, bypassing the "B" valve testing and proceeding on to the "C" outboard isolation valve. When the "C" valve was opened, a Group I Isolation was initiated as reactor vessel level swelled from 28 inches to about 44 inches. The Technical Specification limit on this isolation is 48 inches, but the actual isolation setpoint is set conservatively lower. The licensee considered two factors to have contributed to the larger level swell associated with testing the "C" MSIV compared to the "A" and "B" MSIVs. The "C" MSIV cycled open in a shorter time period. Also, there had been a delay after testing the "B" MSIV during which steam was isolated from the main steam lines, allowing them to cool. These two factors resulted in a greater steam flow in a shorter time frame, exaggerating the level swell.

The shift operators did an excellent job of responding to the inadvertent isolation. The licensee made the proper 10 CFR 50.72 notification for an inadvertent ESF actuation via the ENS at about 10:02 a.m. The isolation was reset and operators continued testing.

The licensee inspected and repaired the "B" and "C" outboard MSIVs (discussed in Section 5.1), and inspected the "A" and "D" outboard valves to insure similar repairs were not required, then satisfactorily completed MSIV testing on all valves.

The problems described above have been determined to have no relationship to the previous (1986) MSIV problems caused by the pilot valve stem becoming disconnected from the pilot valve discs. The inspector had no further questions.

2.3.3 Isolation of Reactor Water Cleanup System (RWCU)

At 2:40 a.m., on February 16, 1989, a RWCU isolation occurred, causing the system suction and return valves to close (valves MO-1201-5 and MO-1201-80). The actuation occurred due to a sensed system high flow The sensed high flow was caused by a brief system pressure fluctuation that resulted from operator manipulation of the system flow adjustment valve (MO-1201-85). The licensee made an ENS notification, reset the isolation, and restored RWCU to service. The licensee is evaluating the system design for permanent resolution. The inspector had no further questions.

2.3.4 Malfunction of the Drywell Airlock Door Interlock

At 2:30 a.m., on February 16, 1989, with the reactor critical at approximately 2.5% power and holding at 600 psig for testing and drywell inspection, a malfunction of an interlock designed to prevent simultaneous opening of the inner and outer drywell personnel access doors occurred. Two groups were to make drywell inspections for different reasons. The first group had the inner drywell door open preparing to exit when the second group was trying to enter through the outer door. When the outer door wouldn't open they realized the inner door was open and attempted to close the inner door from the outside. The inner door had not fully latched when the outer door began to open. This condition existed for about 5 seconds before the inner door was secured. The Nuclear Watch Engineer (NWE) held a critique, attended by the NRC shift inspector, to discuss this event. As a result of the critique, the Nuclear Operations Supervisor (NOS) posted a security guard at the door with instructions that no entry was to be made without NOS briefing and approval, and that only one group could enter the drywell at a time. The licensee made the proper 10 CFR 50.72 notification via the ENS system.

The interlock's failure mechanism was determined to be an operating cam misadjustment. The cams were subsequently adjusted and the interlock successfully tested. The inspector had no further questions.

2.3.5 Partial Loss of Offsite Power

At 1:00 a.m., on February 21, 1989, the plant experienced a partial loss of offsite power for a period of about 15 hours. At the time of the event the plant was in the cold shutdown condition. The partial loss of offsite power was initiated when the startup transformer tripped and locked-out on a ground differential relay actuation causing the 345 KV ring bus breakers to trip. Both emergency diesel generators started and assumed loads on the emergency buses. The partial loss of offsite power was reported to the NRC at 1:52 a.m. via the ENS system. At 4:20 p.m., offsite power was restored by backfeeding via the auxiliary transformer. The emergency diesel generators were unloaded and shut down soon thereafter. The operational staff responded well to the event. The 23 kV offsite power supply was available via the shutdown transformer throughout the event.

The licensee's analysis of this event found the following:

-- Restoration of offsite power was delayed for several hours when the operators failed to initiate a Maintenance Work Request (MR) to control the work associated with the establishment of offsite power by backfeeding. A second delay resulted from a procedural requirement that the MR be processed and issued as a prerequisite to backfeeding offsite power.

-- The fault was located on one of the four phase C cables on the secondary winding side of the startup transformer.

The licensee is evaluating the root cause of the delays. The licensee was unable to determine the root cause of the fault in the cable, however, the licensee believes that insulation damage during original cable installation could be the cause. The damaged cable was replaced and power restored via the startup transformer on February 28, 1989.

The inspector found that the licensee took the appropriate action to restore power to the facility via the auxiliary transformer. However, these efforts were hindered because the contingency planning which had taken place for this event lacked sufficient detail to ensure that backfeeding via the auxiliary transformer could be accomplished in a timely fashion. The delay while processing and getting approval of the MR could have been anticipated by the licensee.

The licensee established a preapproved MR to initiate back-feeding via the auxiliary transformer for use should a similar event occur in the future.

The inspector had no further questions.

2.3.6 Increasing Suppression Pool Level

On March 1, 1989, the licensee noted that suppression pool level was increasing. The licensee began an investigation and found Residual Heat Removal (RHR) controlled leakoff valves (10-HO-502C and 10-HO-503C) open instead of closed. These valves are located on a 2 inch bypass line around the discharge check valve on "C" RHR pump. The source of water to the RHR system was the RHR keepfill system. The licensee closed these valves and verified the suppression pool level increase stopped. Further licensee investigation found that the valves were opened by an operator on February 18, 1989, while placing RHR into shutdown cooling per procedure 2.2.86. The operator stated that the valves were opened to position them consistent with piping and instrument diagram (P&ID) M241 which showed them open. The complete system valve lineup was not available to the operator in procedure 2.2.86, and since he reviewed M-241 with the Nuclear Operations Supervisor (NOS) prior to the evolution, he believed these valves were supposed to be open. The valve lineup for RHR indicating these valves as closed, is located in procedure 2.2.19, Low Pressure Coolant Injection.

The licensee performed a system walkdown of the "B" RHR system, the "A" RHR system and the "A" and "B" core spray subsystems outside containment. No further discrepancies were found.

The licensee's corrective actions include revision to procedure 2.2.19 (procedures 2.2.86 and 2.2.19 will be combined into a single procedure) and a change to P&ID M241 to correctly show these valves closed. PCAQ SO 89-017 was written to ensure that the P&ID is updated.

The changes to procedure 2.2.19 and the P&ID should prevent this event from recurring. The inspector had no further questions.

2.3.7 Overview of March 4, 1989 Reactor Scram Caused by Turbine Bypass Valve Opening and MSIV Closure

At 3:40 p.m., on March 4, 1989, the Turbine Generator (TG) was synchronized to the grid. Vibration was noted on a turbine bearing and, as a result, the TG was disconnected from the grid and tripped. At 5:49 p.m., near the end of the TG coast down, a reactor scram occurred when the Main Steam Isolation Valves (MSIVs) shut on a low reactor pressure signal. Observations of this event in the control room by NRC staff indicated that the control room operators were quick to recognize the event. Operators properly utilized procedures and rapidly placed the reactor in a safe shutdown condition. Boston Edison conducted a post-event critique on the evening of March 4, 1989. It was determined that the scram was due to the bypass valves shutting for about 5 to 10 seconds, then going to full open for about 20 seconds, thereby decreasing reactor pressure to the MSIV closure setpoint. The plant response to low pressure resulting from the bypass valves shutting then opening was in accordance with the plant design. The root cause of the bypass valves close to full open cycling had not been determined during the post trip review, but it did appear to be related to vacuum trip signals. Boston Edison assembled a task group to fully investigate this occurrence prior to reactor restart.

On the morning of March 5, 1989, the task group was organized into three teams to investigate the following:

Team 1. Investigate and determine cause of failure of the Main Steam Line (A) Rosemount flow detector. While it is not believed to be related to the reactor scram event, Main Steam Line (A) flow failed high shortly before the scram.

Team 2. Assemble and analyze all data just prior to and following the scram to insure all the facts are recorded and understood.

Team 3. Prepare and implement a formal program to determine the cause of the bypass valve cycling during the TG coast down.

The work performed by each of the teams and the results at the end of the inspection are summarized below:

Team 1 (Main Steam Line "A" Flow Detector Failed High)

A new transmitter calibration card was inserted. The instrument was calibrated, and returned to service. The entire instrument has since been replaced. The failed instrument will be sent to the manufacturer, for evaluation.

This failure had no effect on the reactor scram caused by the bypass valve cycling.

Team 2 (Post Trip Data Analysis)

All of the Honeywell process computer points and the sequence of events related to the event were thoroughly reviewed by the licensee's team. All of the new EPIC computer system (which is still preoperational at this time) data points and trend plots related to this event were also reviewed.

All operator logs and control panel strip recorder printouts were reviewed.

Turbine oil system checks and tests performed about 10 days prior to the scram were reviewed. All oil samples were satisfactory (no entrained air and sediment), and all filters clean.

All recent surveillances and calibrations of the Electric and Mechanical Pressure Regulators (EPR and MPR) were reviewed. No problems were identified.

Detailed discussions were held by the licensee's team with the onsite General Electric turbine technical representative concerning all work performed during the outage and preparations which had been made for initial turbine startup and testing. Although a detailed review was conducted of the post trip data, no evidence to establish a root cause of the transient was identified.

Team 3 (Root Cause Analysis)

Interviews were conducted by the licensee's team with all operators who were in the control room at the time of the event. Statements from those personnel identified no indication of any intentional or inadvertent operation of any of the controls on the C2 turbine panel during the event.

All vacuum trip unit linkage clearances were measured and found satisfactory.

Oil system pressure perturbations of approximately 150 psig and physical shocking of the linkages were conducted with no resulting trips of the vacuum trip units. Oil system perturbations also caused no resets of the trips.

A loss of control oil pressure was simulated. The loss causes a trip of vacuum trip 1 (VT1), but not of vacuum trip 2 (VT2). (VT2 is the unit which controls shutting of the bypass valves). These responses were as designed.

All turbine and bypass valve control circuits and limit switches were checked for continuity, loose terminals, grounds, and shorts. No problems were identified.

The licensee analyzed the possibility of an individual performing a trip and reset of VT1 and VT2 from the turbine front standard. This scenario is not considered probable, since the trips are about 4 feet apart, and the resets not in close proximity to the trips. The licensee concluded that this scenario would require an overt action by a person very knowledgeable of the turbine front standard controls.

Although detailed, comprehensive methodical testing and inspection of all of the mechanical and electrical equipment involved was conducted, no definitive root cause of the event could be identified.

Future Actions Planned/Contemplated by the Licensee

The licensee is evaluating possible adjustments to the Main Steam Line low pressure trips (Group 1 Isolation) and the EPR control point to provide an increased operating band in which the EPR could control the bypass valves and prevent a Group 1 Isolation should this event be repeated.

The front standard of the turbine was instrumented with temporary strip recorders, pressure instruments, etc. to facilitate additional monitoring of trip unit performance during the next turbine operations.

The licensee is considering installing "barrel covers" on the VT1 and VT2 manual trip buttons on control room panel C2 to help prevent any future inadvertent actuation of these trips.

Based on the above, attendance at the initial team meetings, and discussions with the licensee, the NRC staff concluded that the licensee's approach to determining the root cause and formulating corrective measures following this event were prudent, thorough, and consistent with good engineering practices. At the close of this inspection period, the licensee had not reached a final conclusion as to root cause. On March 9, 1989, a publicly noticed meeting was held at Region I in King of Prussia, Pennsylvania, between the licensee and NRC management to discuss the results of the licensee's efforts as well as additional plans. The details of this meeting are documented in NRC Region I Meeting Report Number M89-043. Based on the evaluation and proposed monitoring instrumentation presented at the meeting, plant restart was considered acceptable.

2.4 Failure and Malfunction Reports (F&MR)

The Failure and Malfunction Report (F&MR) is used to document and evaluate failures, malfunctions and abnormal operating events. A sample of recently closed F&MR's showed those F&MR's to be appropriately dispositioned with appropriate management review. No inadequacies were identified with respect to open or recently closed F&MR's.

3.0 Startup Testing Activities

3.1 HPCI Operability Testing

The licensee conducted testing of the High Pressure Coolant Injection (HPCI) system to ensure HPCI operability as required by Technical Specification (TS) 4.5.C.1. The inspector reviewed the completed results of procedure 8.5.4.1, HPCI Pump Operability and Flow Rate Test at 1000 psig and procedure 8.5.4.3, HPCI Simulated Automatic Actuation and Flow Rate Test at 150 psig. The inspector also witnessed the conduct of procedure 8.5.4.1 and discussed the results of this test with cognizant licensee personnel.

The inspector noted that the above procedures verified the HPCI operability surveillance requirements of TS 4.5.C.1. Review of the completed test procedures indicated that the tests were performed in accordance with those procedures, cognizant personnel reviewed the test results, and adequate documentation was provided. However, the inspector noted that the serial number of the measuring and test equipment (MT&E) used for these tests was not recorded on the test document. This information is instead recorded in the M&TE signout records. The inspector discussed this issue with the licensee who stated that MT&E identification would be incorporated into the procedure to provide for additional traceability. The inspector also noted that conduct of personnel during the performance of procedure 8.5.4.1 was satisfactory and that the licensee's quality assurance surveillance group had observed test activities and verified test adequacy. The surveillance tests were adequate and the inspector had no other questions.

3.2 RCIC Operability Testing

The licensee performed Procedure 8.5.5.3, Reactor Core Isolation Cooling System (RCIC) Flow Rate Test at 150 PSIG, to verify the RCIC operability surveillance requirements of TS 4.5.D.1 at 150 psig. The test was performed in two phases. The first phase tested system operability with the test line restricting orifice removed and the second phase verified operability with the test line restricting orifice installed. The inspector reviewed the completed test results and discussed them with cognizant licensee personnel. The inspector noted that approved test procedures were used, test results were adequately reviewed and documented, the test met the pump and turbine operability requirements of TS 4.5.D.1, and quality assurance had performed surveillance of test activities. Based on the above review, the inspector determined that the licensee's conduct of the RCIC flow rate test was adequate.

3.3 RHR System Interleakage Tests

On April 10, 1986, the licensee experienced leakage from the reactor vessel past closed Residual Heat Removal (RHR) system Low Pressure Coolant Injection (LPCI) system injection containment isolation valves to the RHR system piping. The licensee declared the valves inoperable and shut down the reactor. This leakage was an NRC concern in Confirmatory Action Letter 86-10 issued on April 12, 1986. In response to this concern, the licensee repaired the valves, performed local leak rate testing prior to restart, and developed procedure 8.5.2.10, Residual Heat Removal Temperature and Pressure Monitoring, to measure and evaluate valve leakage during the Power Ascension Test Program and subsequent operation. In Procedure 8.5.2.10, temperature and pressure monitoring of the RHR system is performed by taking local temperature and pressure readings in the system and comparing these to saturation conditions to determine if the potential for void formation exists.

The inspector reviewed the results of the intersystem leak checks conducted at 300 psig, 600 psig, and 930 psig per procedure 8.5.2.10. All leak checks indicated greater than 200 degrees F subcooling which is well in excess of the minimum requirement of 15 degrees F subcooling. The inspector had no further questions.

3.4 ADS Subsystem Testing

The inspector observed pretest activities, test conduct, and test restoration for procedure 8.5.6.2, Automatic Depressurization System (ADS) Subsytem Manual Opening of Relief Valves, conducted at a reactor pressure of approximately 350 psig. The operations shift conducted an adequate briefing which covered steps in the test procedure and additional precautions not contained in the procedure concerning careful control of reactor water level, pressure and power. The shift also performed a walkthrough of the opening of one safety relief valve, with all operators and data recording personnel on station. The conduct of this test included greater test coordinator involvement and direct supervision by the Nuclear Watch Engineer (NWE) than previous testing and operations observed.

The test consisted of the following major steps: (1) One loop of RHR was placed in Suppression Pool Cooling (to remove anticipated heat load), (2) one (of three) turbine bypass valves was opened about 30% using the Manual Pressure Regulator (so that it would shut as each relief valve was opened, thus reducing the magnitude of steam load change placed on the reactor), (3) each of the 4 Safety Relief Valves (SRVs) was opened, data taken, and the valve shut, and (4) the RHR loop was removed from Suppression Pool cooling when torus water temperatures were reduced to normal about one half hour following conclusion of the test.

The inspector noted two items of interest during the test performance. When the first SRV (3B) was tested, the valve was left open for approximately 15 seconds as permitted by the test procedure to allow time for completion of data recording. Prior to closing the valve, reactor vessel level had swelled to approximately 43 inches which approached the Group 1 Isolation setpoint of 44 inches. Prior to proceeding with the test, the NWE instructed data recording personnel to complete their tasks more quickly and cautioned control board operators to shut the SRVs if level swell again approached a Group 1 Isolation. The remaining three SRVs were then tested with opening times of between 5 and 10 seconds, and avoided further approaches to isolation setpoints. In addition, about 2 hours after completion of the test, the 3A valve tailpipe temperature had only

cooled to 220 degrees F, while the other three tailpipes had cooled to about 100 degrees F. The 3A valve was cycled in an attempt to reduce the apparent seat/disc steam "weep". The cycling was successful in stopping the weep and reactor pressure was increased to approximately 950 psig. On February 18, 1989, following the completion of testing at 950 psig, the licensee decided to enter a short outage. During the reactor shutdown and cooldown for this outage, the 3A SRV began weeping as indicated by an increase in tailpipe temperature to approximately 225 degrees F, when again reactor pressure was reduced below 400 psig. During subsequent plant start-up, no weeping was evident on the 3A SRV.

In summary, the operating shift adequately prepared and performed the test even though precautions about power, pressure, and level effects were not contained in the procedure. The shifts actions were prompt and appropriate to control testing when the Group I isolation setpoints were approached. The inspector discussed the lack of procedural precautions with the licensee who stated that the procedure would be revised to include appropriate precautions. The inspector had no further questions.

3.5 APRM Setdown Functional Checks

Technical Specifications require Average Power Range Monitoring system (APRM) downscale protective functions and surveillance tests. Procedure 8.M.1-3.1 APRM Setdown Functional Test, is performed to verify these protective functions by monitoring the change in continuity across the APRM downscale trip unit output contact in the reactor protection system (RPS) circuity, in response to a simulated APRM downscale condition. The inspector reviewed the completed test and results, and discussed them with cognizant licensee personnel. The inspector noted that this procedure checked the APRM rod blocks and reactor scram functions. The setpoints for these functions were found to be conservative. The inspector noted that the test was performed in accordance with approved procedures which met the requirements of TS Tables 3.1.1 and 4.1.1 and the test results were adequately reviewed and documented. The inspector had no further questions.

3.6 MSIV Opening Test

On February 11, 1989, Temporary Procedure (TP) 87-219, MSIV Opening Test was satisfactorily performed as discussed in section 2.3.2 of this report. The test involved individually opening MSIVs against approximately 100 psid to prove operability. This test was conducted pursuant to licensee corrective action commitments made in connection with Confirmatory Action Letter 86-10.

4.0 Surveillances

4.1 Routine Surveillance Tests

The inspectors observed the following surveillance tests:

8.M.1-1A	Intermediate Range Monitor Functional/Calibration
8.M.2-3.3	Source Range Monitor Functional
8.M.1-3.1	APRM Setdown Functional
8.M.1-12	Main Steam Line High Radiation
8.M.1-3	APRM Functional
8.M.1-32.3	Analog Trip System - Trip Unit Calibration - Cabinet C229-B1
8.M.1-29	Anticipated Transient Without Scram Functional and Trip Unit Calibration
8.7.4.4	MSIV Trip
8.7.4.5	Exercising Main Steam Isolation Valves
8.4.1	Standby Liquid Control Pump Operation and Flow Rate Test

Based on observations of test performance and discussions with the licensee, the inspectors determined that implementation of surveillance tests was generally well planned and controlled. Licensee communications were generally good. When the licensee identified unsatisfactory equipment performance, it took appropriate corrective measures. The licensee also corrected procedure deficiencies as identified.

The inspector noted that on one occasion the licensee placed checkmarks in a procedure step where double verification initials were required. The licensee investigated this concern and determined that it was an isolated case. The inspector independently reviewed approximately 20 completed surveillance procedures and found no similar discrepancies. The inspector had no further questions.

5.0 Maintenance and Modifications

5.1 MSIV Repair Work

During an MSIV opening test per TP 87-219, "B" outboard MSIV failed to meet the acceptance criteria of the test. Repeated attempts to open the valve resulted in it opening with a time delay of about 20 seconds. The licensee disassembled the 4-way solenoid valve assembly for the "B" outboard MSIV for inspection and found the internals gummed with an oily substance, with the non-porting piston very hard to remove. The 4-way valves for all MSIVs had been inspected by the licensee in April, 1986 during an investigation of the failure of the outboard MSIVs to open upon demand.

The licensee disassembled and inspected each 4-way solenoid valve assembly for the "A", "C" and "D" outboard MSIV's and found no problems. During disassembly, the licensee inspected all valve ports and O-rings to ensure that no foreign material was present. The 4-way valve for "B" outboard MSIV was rebuilt and installed. During further testing of the "B" MSIV, the licensee also identified that the top tee on the dashpot metering valve piping for the air actuator was oriented in such a way that re-filling the dashpot was impossible. The licensee subsequently reoriented the piping to correct the problem. No similar problems were noted with the other MSIVs.

During the February 18-22, 1989 outage, the 4-way solenoid valve assemblies for all four inboard MSIV's were disassembled and inspected by the licensee. No discrepancies were noted for "A", "B" and "D" valves. For the "C" valve, the licensee found a small amount of a green verdigris type material in the solenoid valve assembly. The 4-way valve for "C" inboard MSIV was subsequently rebuilt and installed. No foreign material was observed in the close ports of the valves, therefore only the open function of the MSIV's was affected.

The licensee's root cause evaluation for observed foreign material intrusion into the 4-way valves is ongoing. This item is unresolved (50-293/89-01-01) pending completion of the licensee's evaluation and development of an appropriate inspection schedule for the 4-way valves.

5.2 Emergency Diesel Generator "A" Troubleshooting and Repair

During shutdown of Emergency Diesel Generator "A" (EDG "A") after offsite power was restored on February 21, 1989, a plant operator reported unusual noise near the EDG "A" generator outboard bearing. The licensee subsequently initiated troubleshooting and repair of the problem. The inspector observed prework activities, disassembly of the generator bearing, and postwork testing. It was noted that prework briefs, equipment isolation and test equipment calibration were adequately performed. During disassembly, components were properly segregated and controlled. Inspection of the bearing and lubricant did not reveal any damage or lubricant contamination. The licensee flushed, relubricated and reinstalled the bearing. EDG "A" was started and loaded per procedure 8.A.1, Manual Start and Load D/G, for postwork testing, whereupon it tripped on reverse power as the output breaker was closed. The inspector determined that this anomaly was previously identified and ascertained that Maintenance Requests (MR 89-61-18 and 89-61-19) and Engineering Service Requests (ESR 89-151) had previously been generated to recalibrate the directional control (reverse power) relays. The inspector noted that this relay would not affect EDG operation during a loss of power since the EDG's would power a deenergized bus. The inspector had no further questions.

5.3 Replacement of the Startup Transformer Cables

On February 21, 1989, a partial loss of offsite power occurred due to a fault in a cable associated with the startup transformer. Repair involved replacement of approximately 100 ft of 1250 MCM (millicircular mil) cable with an equivalent substitute of a 500 MCM and a 750 MCM cable connected in parallel. The substitution was made due to the unavailability of 1250 MCM cable. The inspector reviewed plant design change (PDC) 89-012, observed replacement activities and reviewed the post installation test data. The inspector noted that the work was appropriately classified non-Q (i.e., not requiring special nuclear related quality requirements) and that the replacement was performed in accordance with the licensee's transmission and distribution department procedures. The inspector verified that the licensee had conducted and documented appropriate engineering and safety evaluations as a part of the PDC. The inspector reviewed the post installation test data and determined that the test criteria were adequate and that the testing acceptance criteria were satisfied. The inspector had no further questions.

5.4 HPCI Outboard Steam Isolation Valve Repair Work

During the February 18-27, 1989 outage, the licensee's maintenance department disassembled the HPCI outboard steam isolation valve (MO-2301-5) to repair a steam cut on the pressure seal seating surface of the valve body. MO-2301-5 is an 8-inch gate valve manufactured by the Velan valve company. An ISI valve internal examination revealed a steam cut of 0.006 - 0.014 inches in depth. The licensee's repair plan included machining the inside surfaces of the valve bore to eliminate the steam cut location and replacing the pressure seal ring.

The inspector reviewed the Maintenance Request (MR 89-23-1) package and Nonconformance Report (NCR 89-026) for proper disposition. The licensee's engineering department specified minimum wall thickness of 1.410 inches (total dimension of 10.033 inches) for pressure retention and structural integrity of the valve body. The maintenance work plan and associated procedures reviewed were adequate. Material removal during machining was well controlled. A liquid penetrant test following the initial machining work revealed five rounded indications which exceeded the base material acceptance criteria. The licensee revised the work plan to remove the indications by grinding and weld overlay. The inspector reviewed General Welding Procedure 3.M.4-15 and welder qualifications; no discrepancies were noted. The indications were successfully removed as confirmed by liquid penetrant testing. In accordance with ASME Section XI, the integrity of the repair was verified at system pressures during subsequent operation. Good coordination between the engineering department and the station maintenance section was noted during the repair work. The inspector had no further questions.

5.5 Resolution of HPCI Outboard Steam Isolation Valve (MO-2301-5) Seismic Design Concerns

While performing the HPCI outboard steam isolation valve (MO-2301-5) repair work discussed above, discrepancies between the valve reference drawing (M-131-1-7) and the as-found valve configuration were noted. The discrepancies were: (1) the drawing showed a single pressure seal backing ring, whereas the actual valve contained a double backing ring, (2) the drawing showed a 10 inch diameter valve, whereas the installed valve had an 8 inch gate and 10 inch inlet/outlet, and (3) while the drawing did not specify the valve stem diameter, it was noted that a 2.5 inch diameter stem characteristic of a 10 inch valve was installed. The above listed discrepancies include those either verbally communicated to NRC inspectors, or documented in a licensee Potential Condition Affecting Quality report (PCAQ 89- 018). The PCAQ focused on the discrepancies between the drawing and the as-found valve and expressed concern that additional valves may have similar discrepancies. The NRC inspector raised an additional concern over the potential for the apparently oversized Limitorque operator, bonnet, stem and yoke assemblies to affect the seismic analysis for the HPCI steam inlet piping.

Resolution of the PCAQ concerns over differences between drawings and installed valves will be addressed in a licensee Engineering Service Request (ESR) which was scheduled to be completed by about March 22, 1989. The ESR should encompass identification of similar valve drawing discrepancies and the revision of affected drawings to reflect as-found valve configurations. The seismic analysis concern raised by the NRC inspector was satisfactorily resolved by a thorough licensee review of valve requisition documents, drawings, seismic analysis data, and a final verification of valve nameplate data. The inspector will review the licensee's resolution of the drawing discrepancy PCAQ at the completion of the licensee's effort.

5.6 Abandoned In Place Equipment

During a routine walkdown of the control room panels the inspector observed numerous electrical cables that were not properly terminated. A review of the licensee's lifted lead and jumper log (see inspection report 50-293/88-37) did not list the cables in question as being lifted under any in place control system. The licensee has reviewed the inspectors concerns and has determined that the cables in question are cables that had been abandoned in place during plant life. The licensee is developing a program to either remove or identify all abandoned in place cabling as well as other abandoned equipment. The licensee currently projects completion of this effort during the next refueling outage. Current licensee procedures require

that abandoned or spared cables be labeled with the date of removal from service and the documents that authorized removal from service. Past station practice in this area did not require labeling of abandoned or spared cables. Licensee progress toward completion of this project will be reviewed during routine resident inspection activities.

6.0 Security

Two security specialist inspectors reviewed the licensee's security program to assess its effectivenss and the licensee's compliance with the commitments in the NRC approved security plan and its implementing procedures. The inspectors interviewed members of the security organization and security engineering support section, observed security related activities, reviewed the plan and its implementing procedures and reviewed two plant modifications that had security considerations.

The inspectors reviewed the plan and its implementing procedures and determined that the procedures adequately adhered to the plan commitments. The inspectors interviews of security personnel determined that they were familiar with the requirements of the implementing procedures. The inspector noted that management support for the security program has continued as evidenced by the allotment of resources for staffing, maintenance of equipment and ongoing program upgrades.

The inspectors noted that the licensee's proprietary security organization was adequately staffed to provide the appropriate oversight of the contractor security organization. The inspectors' review also disclosed that the contractor security organization is adequately staffed to minimize the need for overtime.

The inspectors' review of the maintenance support program for security equipment disclosed that maintenance on security equipment continues to be performed in a timely manner, minimizing the necessity for the use of compensatory measures.

Modifications to two safety-related systems recently made by the licensee were reviewed by the inspector. For the first modification, the inspector reviewed the licensee's analysis and rationale for not considering certain of the newly installed equipment as vital. The inspectors' review disclosed that the licensee's analysis was sound and appropriate. For the second modification, the inspectors reviewed the licensee's analysis and rationale for the protection afforded to that modification. The inspectors noted a potential security weakness in a portion of the modification. The licensee agreed to take action to address the potential weakness.

In conclusion, the licensee continues to implement a significantly improved security program over that which existed when the station was shutdown in April, 1986. Management continues to be supportive of the security program as evidenced by the allocation of resources to implement a program that goes beyond minimum compliance with NRC requirements.

7.0 Fire Protection Review

7.1 Fire Barrier Penetration Tagging System

The fire protection group stated that the current fire barrier tagging system is being phased out and is being replaced with a new type of tag which can be securely fastened to components or attached permanently to an adjacent wall.

At this time all fire barrier penetrations in the plant have been identified and entered into a computerized drawing file with detailed information provided on barrier penetration size, location, shape and ID number. Each fire barrier wall represented in this manner has been incorporated into individual Station Instructions (SI) in order to enhance the efficiency and completeness of barrier penetration inspections and surveillances.

Individual fire barrier surveillance instructions have data sheets with information on each penetration identifying the penetration number, type, whether Technical Specifications are involved, and inspection entries for both sides of the penetration.

7.2 Fire Brigade Training

The inspector observed a sample of classroom lectures conducted as required refresher training for security force and plant operations personnel who are designated fire brigade members. Each lecture was followed by a written test on the lecture subject matter. The inspector noted that this training was conducted by an experienced and knowledgeable instructor and that several training aids were used (video presentations, fire fighting equipment, etc.) to increase the effectiveness of training. No unsatisfactory conditions were noted in this area.

7.3 System Walkdowns Inspections

The inspector performed fire protection system and equipment walkdown inspections to observe the general condition and operability of systems, and to assess general fire safety conditions, e.g. combustible material control, throughout the plant. All fire systems inspected (sprinkler, cardox, halon, etc.) were observed to be operable as indicated by annunciator panels, equipment configuration, etc., and generally appeared to be in very good condition.

The fire protection group stated that fire extinguishers on site are currently be'-g inventoried and entered into a computerized data base which will track individual fire extinguisher and other equipment for required periodic inspection requirements. When implemented, this tracking system will greatly enhance the licensee's fire protection equipment inspection program.

The inspector also noted that combustible material throughout the plant is well controlled and that adequate storage space is provided. Housekeeping is generally well maintained and loose debris in the plant was minimal.

7.4 Fire Watches

A review of Technical Specification (TS) related fire watch postings throughout the plant was conducted to verify that specific inspection requirements were in accordance with procedural requirements, and to verify that roving fire watches were being performed on the required schedule.

The inspector noted that licensee performance in posting and performing required TS fire watches was good. However, the inspector did identify a missed hourly fire watch in 4160 KV switchgear room "A". Although the licensee correctly followed up on this instance, there appeared to be some confusion among the fire watch contractor management personnel as to the proper method of reporting and documenting missed fire watches. The inspector discussed this concern with the licensee fire protection manager who committed to revise the fire watch procedure to include reporting and documentation requirements for missed fire watches. These revisions were completed and they clearly deliniated the procedure for reporting and documenting missed TS required fire watch.

The inspector also reviewed the licensee's mechanism for determining the reportability of missed TS fire watches. If a fire watch misses a required location during his tour the licensee reviews security records to determine if any individual has entered the area during the time the fire watch was missed. If any individual has been in the area in question the licensee does not report the missed fire watch. The inspector did not consider the chance overlap of security rounds to constitute completion of fire watches. The inspector questioned the licensee regarding whether the intent of the reporting requirements is being met in the application of this policy. The licensee is currently reviewing this policy and further NRC action in this area will be tracked as Unresolved Item (50-293/89-01-02).

7.5 Quality Assurance (QA) Oversight of the Fire Protection Program

The inspector reviewed the licensee's QA audits and surveillance reports pertaining to the Fire Protection and Prevention activities. Included in the QA audits reviewed were an annual fire protection audit conducted by QA and engineering personnel; a triennial fire protection audit conducted by an independent consulting firm and a special audit conducted by the licensee audit group which verified the adequacy of design, modifications and implementation of alternate shutdown capability from outside the control room during a fire. The audits had identified several deficiencies along with numerous recommendations. The plant fire protection group had provided timely response to these audit findings and implemented corrective actions as required. The fire protection department and the engineering department had reviewed these recommendations and had committed to implement the required actions but the final disposition remained protracted. The inspector discussed the matter with QA and fire protection department representatives. The fire protection department representative stated that these outstanding audit recommendations were currently being reviewed by the cognizant individuals at the site and at the corporate office. These issues will be resolved subsequent to the completion of the Pilgrim Nuclear Power Station restart activities.

The inspector reviewed the QA surveillance and inspection reports of the facility's fire protection activities, including smoke detection system, halon system, combustible loading, emergency lighting, fire retardant coating, fire brigade training, fire protection maintenance and fire protection equipment. These activities were performed satisfactorily. A walkdown was also conducted to verify the condition and adequacy of fire equipment, including self contained breathing apparatus (SCBA), radios, emergency flash lights, hats, boots, and gloves. The equipment was well maintained and properly stored.

Based on the above review and discussion with the licensee representatives, the inspector determined that QA oversight of the licensee's fire protection activities is adequate.

8.0 Radiological Controls

8.1 Transportation and Solid Radwaste

The inspector reviewed the licensee's program for quality assurance of vendor programs for materials and services and the licensee's ability to properly prepare, package and ship licensed radioactive materials for transport and disposal. The inspector also reviewed training requirements for waste management and health physics technicians.

8.1.1 Quality Assurance/Quality Control

The licensee has elected to utilize its 10 CFR 50, Appendix B Quality Assurance program in the area of transportation and radwaste. The NRC has issued to the licensee a Quality Assurance Program Approval for Radioactive Material Packages.

The licensee's Quality Assurance (QA) Department conducts regular audits of those vendors providing materials and services which directly impact its transportation and solid radwaste program. The licensee also participates in a consortium of utility QA programs for vendor audits. The inspector examined the following audit reports:

WPPSS Audit # 87-395, dated March 12, 1987, Vendor: Nuclear Packaging

WPPSS Audit # 88-429, dated April 12, 1988, Vendor: Nuclear Packaging

Audit # 88-28, dated August 17, 1988, Vendor: Chem Nuclear Systems, Inc.

The inspector noted that audits were conducted by personnel possessing the appropriate expertise to evaluate the vendor. The audits were comprehensive in scope. These audits were conducted using a predetermined audit plan, which required the auditors to examine certain key areas, but allowed sufficient time for the auditors to perform in-depth analyses of areas of interest as they developed during the audit. All findings were followed up promptly, and vendor responses were tracked through to completion. The QA Department also conducts annual audits of the licensee's transportation and waste management program. Audit # 88-05 was reviewed in its entirety and found to be comprehensive. Currently, Audit # 89-02 is being completed; the inspector was able to review the audit plan and checklist which were found to be adequate.

Procurement of supplies and services for the transportation and radwaste program is conducted by the licensee's purchasing department. Specifications have been written for the procurement of high integrity containers (HIC), liners, shipping casks and waste processing services. These specifications, which have been reviewed and approved by the QA

department, are used to order supplies and services from approved vendors. Supplies are inspected upon receipt by Quality Control (QC) for conformance to the licensee's specifications, and for the presence of appropriate documentation, including certificates of compliance (COC) where applicable.

All procedures which are a part of the licensee's Process Control Plan are subject to hold points for periodic monitoring by QC. All liners and HICs are tracked by the licensee from acceptance test upon receipt until loading and transportation offsite.

QC conducts a program of surveillances of all shipments of radioactive material, together with the preparation of waste packages in accordance with the licensee's Process Control Plan. Additionally, the QA Group conducts periodic surveillances of transportation and waste management activities independent of the QC program.

8.1.2 Transportation and Solid Radwaste Process Review

The licensee's program for packaging and transportation of radioactive material and radwaste is conducted by the Waste Management Group. As part of the inspection the following procedures related to packaging and transportation were examined:

NOP 87RC1 "Processing, Packaging and Shipping of Radioactive Material"

2 .117 "Transferring Spent Resins to Shipping Containers"

4.1 "Receiving and Handling of Un-Irrad ated Fuel Assemblies"

6.9-060 "Receipt of Radioactive Material"

6.9-160 "Shipment of radioactive Material"

6.9-174 "Packaging Dry Radioactive Waste"

6.9-178 "High Integrity Container (HIC) Lid Closure Device Procedure"

6.9-179 "Radioactive Waste Press"

6.9-185 "Handling and Loading Procedure PAS-1 Shipping Cask"

6.9-186 "High Integrity Containers"

6.9-188 "Dewatering Bead Resin/Activated Carbon in 14-215 or Smaller Liners"

6.9-190 "Dewatering 14-215 or Smaller Liners Containing Powdex Resin, Precoat Material or D.E."

6.9-193 "Classification of Radwaste"

6.9-194 "Loading Transport Vehicle for Radioactive Shipments"

6.9-195 "Completion of Radioactive Waste Shipping Records"

6.9-197 "Operation and Control of Radioactive Material Storage Areas"

6.9-200 "DOT Classification of Radioactive Material"

6.9-201 "Completion of Radioactive Shipping Records"

6.9-211 "10 CFR 61 Sampling"

6.9-212 "Handling and Loading Type 'A' Shipping Casks"

6.9-213 "Handling and Loading Procedure for Type 'B' Shipping Casks"

SI-RP.2705 "Monitoring Green Bags of Waste for Release"

SI-RP.2800 "Radioactive Material Segregation Process"

The inspector noted that the above procedures were thorough, with appropriate supervisory and QC review. The inspector reviewed the records of 27 shipments of radioactive material. The licensee continues to perform hand calculations for transportation and waste classification, although it has done certain limited tests of computer codes for this purpose. Hand calculations are reviewed by the Waste Management supervisory personnel and QC prior to shipping any material.

Review of the records for the seventeen contaminated laundry shipments made during 1988 and the first 6 weeks of 1989 showed that the licensee failed to identify the presence of Iron-55 on the shipping papers. This isotope constitutes approximately 30% of the total activity of these shipments. This is an apparent violation (50-293/89-01-03) of 49 CFR 172.203 and 172.204 which require that each shipment of hazardous material be accompanied by shipping papers which accurately reflect the shipped material contents, and requires that the shipper certify that the material has been properly described. The Iron-55 quantity is not directly measured but must be inferred from other data. The licensee had previously corrected their quantification methods in other radwaste areas, but laundry shipments, which are under a separate program, had not been similarly updated.

Scaling factors are determined by the Chemistry Department through the use of a vendor laboratory. Composite samples of specific waste streams were submitted to a vendor laboratory for isotopic analysis, with the results provided to the Waste Management group. The licensee has not sent samples to the vendor laboratory since late 1986, due to the extended shutdown. In the interim, the Chemistry Department has taken monthly samples of the reactor coolant and performed analysis for Cobalt-60 and Manganese-54 content. These parameters have not significantly changed since the shutdown.

With the exception of the above noted apparent violation, which seems to be an omission limited to one type of shipment the licensee's controls were considered adequate.

8.1.3 Training

The licensee has developed a formal training program for waste management and health physics technicians, and maintenance and chemistry personnel who work in the transportation and solid radwaste program, as required by NRC IE Bulletin 79-19. Training for waste management technicians is divided into two phases, an initial qualification program, and a periodic retraining program, both of which are two weeks in length. Health physics technicians receive two day training, while maintenance and chemistry personnel receive four hour training. The licensee's training program is considered adequate.

9.0 Cracking in Residual Heat Removal (RHR) System Drain Line

As a result of the second failure (June 1987 and February 1989) of a fillet weld in the 3/4 inch diameter drain line adjacent to the MO-1001-29A valve in the "A" valve room the inspector observed a penetrant examination of the failed weld, observed the location of the line in the "A" valve room and held discussions with licensee personnel concerning the cause of the failures and planned corrective actions. As a result of 12 similar failures during the life of the plant, two in the core spray system and ten in the RHR system the licensee initiated an investigation to determine the root cause of the failures. This investigation was completed prior to the February 1989 failure. As a result of this investigation the licensee concluded that the root causes of the failures were water hammer and excessive vibration caused by the throttling of valves in the system to adjust the flow rate, resulting in fatigue failure of the lines.

The licensee has installed vent lines at the high points of the RHR system to allow complete filling of this line prior to operation and replaced the valves with ones designed for throttling the flow to eliminate the root causes of these failures. In addition the licensee designed supports for these lines and has installed these supports on vent and drain lines inside the containment that were determined to be susceptible to this type of failure.

Based on the above the inspector had no further questions.

10.0 Review of NRC Temporary Instructions

10.1 Handling of EDG Fuel Oil (TI 2515/100)

The purpose of this inspection was to assess the licensee's program to maintain adequate quality of emergency diesel generator (EDG) fuel oil on site. The licensee has a sampling program to ensure adequate quality of the EDG fuel oil itself and a preventive maintenance program to ensure that fuel oil can be successfully transferred from the fuel oil storage tanks to the EDG engines.

The licensee's Technical Specification (TS) 4.9.A.1.e requires that once a month a sample of diesel fuel be checked for quality in accordance with American Society for Testing and Materials (ASTM) Standard D4057-81 or D4177. The quality is required to be within the limits specified in ASTM-D975-81. The licensee's chemistry department samples the two fuel storage tanks each month and analyzes them in accordance with Station Procedure No. 7.1.3.6 "Diesel Generators Fuel Oil Sampling and Quality Analysis." The analysis includes testing for accumulated water. The licensee does not regularly sample the EDG day tanks nor are they tested for water accumulation, however, during each calendar quarter the day tanks are drained of any accumulated water in accordance with station procedure 3.M.4-36, EDG Preventative Maintenance.

The licensee samples and analyzes new fuel oil brought on site prior to it being pumped into the storage tanks to prevent contaminating the contents of the fuel storage tanks. Depending on the time of year the licensee uses a fuel additive to minimize oxidation and bacterial growth. The licensee has never drained and cleaned the fuel storage tanks, however, they intend to do so during their next refueling outage. Station procedures require immediate notification of the Watch Engineer if any water is found or if the fuel oil quality is not within specification.

In the EDG fuel oil transfer system there are three components which have the potential to restrict the flow of fuel oil to the EDG engines. There is a strainer at the suction of each fuel oil transfer pump and there are primary and secondary duplex filter/strainers in the fuel line between each day tank and their associated EDG. The latter two are monitored for differential pressure (dp). If the dp becomes excessive a local Hi dp alarm initiates which in turn results in a "EDG Trouble" alarm in the main control room. All three of these components are periodically cleaned and/or replaced in accordance with Station Procedure 3.M.4-36.

Based on the above, the inspector determined that the licensee's program is adequate to ensure proper handling of EDG fuel oil and meets or exceeds the regulatory requirements.

11.0 Review of Licensee Self Assessment Activities

The inspectors routinely monitored the licensee's inplace programs to assess facility and personnel performance. The licensee has implemented a formal peer evaluation program for routine personnel performance monitoring. The individuals selected for the peer evaluator program are selected from the onsite organization, receive training on performance monitoring techniques and are assigned to monitor specific activities. The peer evaluator program provided twenty-four hour operations monitoring during all periods when the facility was critical, as well as routine audits of other areas of facility activities. The peer evaluators held regular debriefings with audited organizations to discuss identified strengths and weaknesses. NRC inspectors who attended these debriefing sessions observed that the findings, both positive and negative were discussed in a frank open atmosphere. The audited organizations have generally been receptive to this process and the resolution and closeout of findings has been timely and thorough.

The inspector also noted increased presence of management in the plant throughout this period. Routine presence of middle and senior level management in the control room and in the plant was noted. Management oversight and control of routine and abnormal activities showed clearly that the licensee has set high performance standards.

The licensee's quality assurance organization has also developed a special audit program for the duration of the power ascension plan. The inspectors noted an increased presence of quality assurance and quality control personnel throughout the inspection period.

Management efforts in assuring high standards of facility and personnel performance were evident throughout this inspection period. The licensee was highly self-critical in this self assessment period and overall management performance was good.

12.0 Management Meetings

An NRC Restart Assessment Panel meeting was held on February 17, 1989, at Pilgrim Station. NRC management from Region I and headquarters were onsite for the meeting and Region I staff participated via teleconference. The assessment panel received a presentation from the licensee on their assessment of the results of the 0-5% Power Ascension Program. The licensee handout for the presentation is included as Attachment II to this report.

At periodic intervals during the inspection period, meetings were held by the restart inspection staff with senior facility management to discuss the inspection scope and preliminary findings of the inspectors. A final exit interview was conducted on March 29, 1989. No written material was given to the licensee that was not previously available to the public.

ATTACHMENT I

Persons Contacted

R. Bird, Senior Vice President - Nuclear
* K. Highfill, Site Director
R. Anderson, Plant Manager
D. Eng, Outage and Planning Manager
E. Kraft, Training Department Manager
D. Swanson, Nuclear Engineering Department Manager
D. Long, Plant Support Department Manager
J. Alexander, Operations Section Manager
J. Jens, Radiological Section Manager
J. Seery, Technical Section Manager
R. Sherry, Maintenance Section Manager
L. Olivier, Chief Operating Engineer
J. Neal, Security Division Manager
W. Clancy, Systems Engineering Division Manager
F. Wozniak, Fire Protection Division Manager

* Senior licensee manager present at the exit interview

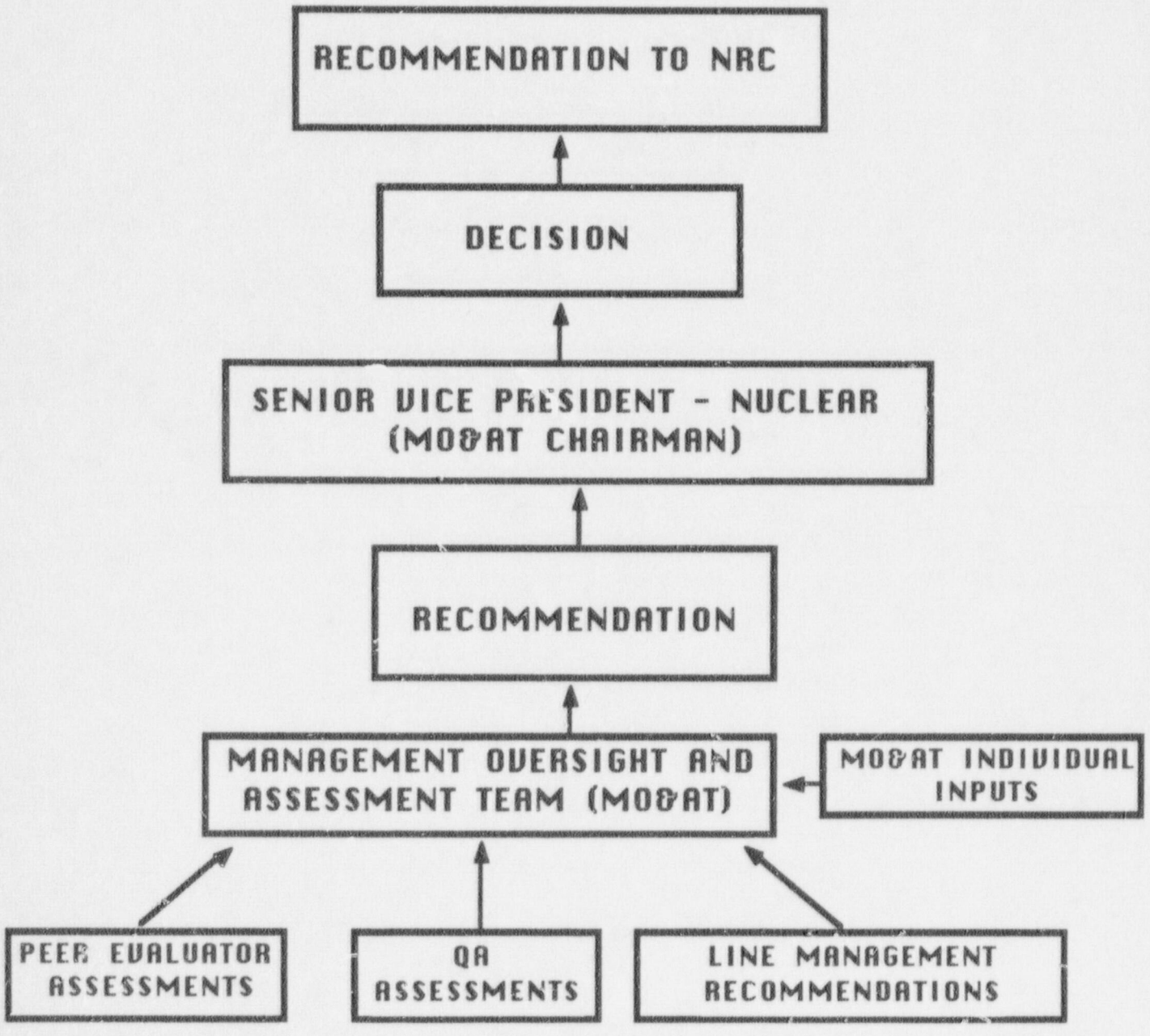
PILGRIM STATION
POWER ASCENSION PROGRAM

PILGRIM STATION HAS SATISFACTORILY COMPLETED THE POWER ASCENSION PROGRAM THROUGH THE 5% POWER LEVEL TO THE NRC HOLD POINT. THE LINE ORGANIZATION HAS PERFORMED EFFECTIVELY. THE PLANT AND PEOPLE ARE READY TO PROCEED TO 25% POWER FOR SCHEDULED TESTING.

FINDINGS ARE FORMALLY DOCUMENTED AND DISPOSITIONED

- REQUEST FOR INVESTIGATION RECOMMENDATION FOR IMPROVEMENT (RFI)
- MAINTENANCE REQUESTS (MRs)
- FAILURE AND MALFUNCTION REPORTS (F&MRs) (INCLUDES ROOT CAUSE ANALYSES)
- PEER EVALUATOR SUMMARIES TO NUCLEAR WATCH ENGINEERS (NWEs)

OVERSIGHT AND ASSESSMENT DECISION PROCESS



SLIDE 3

SCOPE OF OVERSIGHT

THE OVERSIGHT PROGRAM HAS PROVIDED EXTENSIVE FORMAL COVERAGE OF THE POWER ASCENSION PROGRAM

- PEER EVALUATIONS
- MO & AT WATCHES
- LINE MANAGEMENT WATCHES
- QA SURVEILLANCE

POWER ASCENSION PROJECT
(PEER EVALUATOR)

ASSESSMENT

CONCLUSION: OBSERVED PERFORMANCE SUPPORT PROCEEDING WITH TEST PROGRAM TO 25% POWER.

- DISCIPLINES EVALUATED
  - o OPERATIONS
  - o MAINTENANCE
    - MECHANICAL
    - ELECTRICAL
    - I&C
  - o RADIOLOGICAL PROTECTION
  - o CHEMISTRY
  - o SECURITY
  - o FIRE PROTECTION
- PEER EVALUATOR SUMMARIES FOR MO&AT
- STRENGTHS OBSERVED
- AREAS TARGETED FOR ADDITIONAL IMPROVEMENTS
- TRENDS

QUALITY ASSURANCE

DEPARTMENT ASSESSMENT

CONCLUSION: OBSERVED PERFORMANCE SUPPORTS PROCEEDING WITH THE TEST PROGRAM TO 25% POWER.

- SUMMARY OF QA FINDINGS

  - o STRENGTHS
  - o AREAS TARGETED FOR ADDITIONAL IMPROVEMENT
  - o RECOMMENDATIONS

LINE MANAGEMENT RECOMMENDATIONS

CONCLUSION: PERFORMANCE OF PLANT AND PERSONNEL SUPPORTS PROCEEDING TO THE 25% POWER LEVEL PORTION OF THE TEST PROGRAM.

- TEST PROGRAM RESULTS
- OPERATIONS PERFORMANCE
- MATERIAL CONDITION
- INTER-ORGANIZATION SUPPORT

RECOMMENDATION

BOSTON EDISON RECOMMENDS NRC APPROVE PROCEEDING WITH THE POWER ASCENSION PROGRAM TO THE 25% POWER LEVEL

RECOMMENDATION BASED UPON SEPARATE ASSESSMENTS OF STATION PERFORMANCEE INDICATING READINESS TO PROCEED BY:

- SENIOR MANAGEMENT (MO&AT)
- STATION LINE MANAGEMENT
- PEER EVALUATORS
- QUALITY ASSURANCE

THE PLANT AND PERSONNEL ARE PERFORMING WELL. WE ARE FINDING THE THINGS THAT NEED TO BE ADDRESSED AND ARE TAKING APPROPRIATE ACTIONS TO RESOLVE THEM.

WE ARE READY FOR THE NEXT STEP

Status of Pilgrim
Emergency Planning Issues
As Of February 16, 1989

Boston Edison Company

This report is being submitted on behalf of Boston Edison Company in response to a request from the NRC Staff. It does not necessarily represent the views or opinions of the Commonwealth of Massachusetts or any of the local governments around Pilgrim Station.

STATUS OF EMERGENCY

PLANNING ISSUES

Bridgewater

Issue: EOC Renovations/Facility Equipment Placement

Progress:

EOC building renovations have been completed at Bridgewater. EOC equipment (including installation and testing, as appropriate) is complete except for the provision of:

- 1 map
- photocopier
- miscellaneous office supplies

Issue: Training

Progress:

Training of local officials in Bridgewater is ongoing.

STATUS OF EMERGENCY

PLANNING ISSUES

Bridgewater

Issue: EOC Staffing for 24 hours - complete as of 1/25/89

Progress:

19 operational staff positions required for initial response.

19 operational staff positions filled as of 9 January 1989.

38 operational staff positions required for extended response.

38 extended operational staff positions filled as of 25 January 1989.

4 administrative support staff positions identified for initial response.

4 administrative support staff positions filled for initial response.

8 administrative support staff positions identified for extended response.

8 administrative support staff positions filled for extended response.

Issue: Plans & Procedures

Progress:

Revised draft emergency plan and initial draft implementing procedures were forwarded to MCDA and subsequently forwarded to FEMA on September 21, 1988. Results of the FEMA technical review were received on 2/10/89. Comments are being studied for incorporation in the next revision.

STATUS OF EMERGENCY

PLANNING ISSUES

Bridgewater

Issue: Equipment

Progress:

- Traffic Control - Initial shipment of Equipment by Boston Edison was delivered February 3, 1989.

- Communications - Initial* equipment has been identified, ordered and received. Most initial equipment has been placed. Subsequent** equipment has been identified, most has been ordered; and, some has been received.

* Initial equipment is comprised of equipment that was based upon the first draft of implementing procedures.

** Subsequent equipment is comprised of equipment that was identified after review and revision of the implementing procedures by agency heads.

Issue: Public Information Brochure

Progress:

The wording of the initial Draft of the entire Public Information Brochure (PIB) was accepted by the Commonwealth on December 7, 1988. On January 4, 1989, MCDA called for an additional Town and State review. Currently, the Towns and State are in the process of again reviewing the PIB Draft. Comments were due back to the State by January 18, 1989. BECo final copy review sheet signed by Bridgewater on 12/21/88. Brochure will not be printed until written Authorization received from MCDA per meeting of 12/12/88.

STATUS OF EMERGENCY

PLANNING ISSUES

Bridgewater

Issue: Reception Center Renovations/Equipment Placement

Progress:

Reception Center Renovations:

Currently the Bridgewater State College Gymnasium serves as the Reception Center location. Discussions with Bridgewater State College about Reception Center enhancements to the building have been ongoing, but proceeding with the enhancements is not scheduled to commence until the Board of Trustees meets on February 23, 1989 to discuss and concur on the enhancements. Implementation of improvements will be coordinated with Bridgewater State College, Massachusetts Civil Defense Agency, and the Division of Capital Planning Office.

Equipment:

- Monitoring & Decontamination - M/D Equipment delivered to town
- Registration - in town
- Dosimetry - in town

STATUS OF EMERGENCY

PLANNING ISSUES

Carver

Issue: EOC Renovations/Facility Equipment Placement

Progress:

1. EOC building renovations have been completed at Carver. EOC equipment (including installation and testing, as appropriate) is complete with the exception of:

   - Provision of office supplies, paper, pencils, paper clips, etc.
   - Provision of a few additional chairs.
   - Completion of minor telephone system adjustments.
   - Installation of TDD Lines; EOC and 24 hour dispatch point.

2. EWMDS. Renovations will not occur until early spring when building becomes available.

Issue: Training

Progress:

Training is continuing in Carver. Six sessions have been conducted since 12/8/88. Training sessions were conducted on 12/13/88, 1/7/89, 1/14/89, 1/18/89, 2/9/89 and 2/11/89.

STATUS OF EMERGENCY

PLANNING ISSUES

Carver

Issue: EOC Staffing for 24 hours

Progress:

23 operational staff positions required for initial response.

23 operational staff positions filled as of 9 January 1989.

46 operational staff positions required for extended response.

43 extended operational staff positions filled as of 9 January 1989.

4 administrative support staff positions identified for initial response.

4 administrative support staff positions filled for initial response.

8 administrative support staff positions identified for extended response.

6 administrative support staff positions filled for extended response.

Issue: Plans & Procedures

Progress:

Revised draft emergency plan and initial draft implementing procedures were forwarded to MCDA and subsequently forwarded to FEMA on October 12, 1988. Results of the FEMA technical review were received on 2/10/89. Comments are being studied for incorporation in the next revision.

STATUS OF EMERGENCY

PLANNING ISSUES

Carver

Issue: Equipment

Progress:

- EWMDS - Equipment delivered 1/30/89.
- Traffic Control - C-van in place.
  Equipment delivered 2/2/89.
- Communications - Initial* equipment has been identified, ordered, and received. Most initial equipment has been placed. Subsequent** equipment has been identified; most has been ordered; and, some has been received.
- Dosimetry - Equipment has been identified, ordered, and received by Boston Edison. Delivered to town 1/18/89.

* Initial equipment is comprised of equipment that was based upon the first draft of implementing procedures.

** Subsequent equipment is comprised of equipment that was identified after review and revision of the implementing procedures by agency heads. All equipment has been delivered to Carver Fire Dept. as of 1/24/89.

Issue: Public Information Brochure

Progress:

The wording of the initial Draft of the entire Public Information Brochure (PIB) was accepted by the Commonwealth on December 7, 1988. On January 4, 1989, MCDA called for an additional Town and State review. Currently, the Towns and State are in the process of again reviewing the PIB Draft. Comments were due back to the State by January 18, 1989. Carver final review of BECo draft signed on 12/20/88. Brochure cannot be printed and distributed until written authorization is received from MCDA per meeting with MCDA/BECo on 12/12/88.

STATUS OF EMERGENCY

PLANNING ISSUES

Duxbury

Issue: EOC Renovations/Facility Equipment Placement

Progress:

EOC building renovations have been completed. EOC equipment (including installation and testing, as appropriate) is complete except for the provision of:

- Maps - All maps have been delivered and mounted.
- Support equipment VCR, misc, etc.
- TDD's delivered; awaiting installation

Issue: Training

Progress:

Training is continuing in Duxbury. Eight sessions have been conducted since 12/8/88. One session for the Council on Aging, must be rescheduled.

STATUS OF EMERGENCY

PLANNING ISSUES

Duxbury

Issue: EOC Staffing for 24 hours

Progress:

20 operational staff positions required for initial response.

17 operational staff positions filled as of 9 January 1989.

40 operational staff positions required for extended response.

21 extended operational staff positions filled as of 9 January 1989.

5 administrative support staff positions identified for initial response.

0 administrative support staff positions filled for initial response.

10 administrative support staff positions identified for extended response.

0 administrative support staff positions filled for extended response.

Issue: Plans & Procedures

Progress:

- Initial draft emergency plan previously provided to MCDA/FEMA.

  Comments received have been incorporated.

- 39/43 procedures reviewed by agency heads.

  Agency head procedure review committee has completed a review of 39/43 procedures and forwarded them to the RERP Committee Chairman.

  The RERP Committee is scheduled to review all IP's and then forward them to the Selectmen for review.

STATUS OF EMERGENCY

PLANNING ISSUES

Duxbury

Issue: Equipment

Progress:

- EWMDS - Equipment was delivered to town 1/24/89 by Boston Edison.
- Traffic Control - Equipment has been identified, ordered and received by Boston Edison. C-van delivered 1/25/89. Equipment was delivered 1/29/89.
- Communications - Initial* equipment has been identified, ordered and received. Most initial equipment has been placed. Subsequent** equipment has been ordered, and some has been received.
- Dosimetry - Equipment was delivered to town on 1/18/89, by Boston Edison.

* Initial equipment is comprised of equipment that was based upon the first draft of implementing procedures.

** Subsequent equipment is comprised of equipment that was identified after review and revision of the implementing procedures by agency heads.

Issue: Public Information Brochure

Progress:

The wording of the initial Draft of the entire Public Information Brochure (PIB) was accepted by the Commonwealth on December 7, 1988. On January 4, 1989, MCDA called for an additional Town and State review. Comments sent back to State on 1/16/89 - State review copy was missing several sections and pages. School dismissal issue not resolved in Duxbury. Brochure will not be printed until written authorization is received from MCDA per 12/12/88 meeting.

STATUS OF EMERGENCY

PLANNING ISSUES

Kingston

Issue: EOC Renovations/Facility Equipment Placement

Progress:

EOC building renovations have been completed in Kingston. EOC equipment (including installation and testing, as appropriate) is complete with the exception of:

- Provision of T.V. antenna (cable installed)
- Provision of Sign-in board
- Provision of Table for facsimile machine
- TDD in the 24 hour dispatch point.

Issue: Training

Progress:

Training is continuing in Kingston. Six sessions have been conducted since 12/8/88. Training for Sacred Heart Schools has been scheduled for March 10 and 15. A training session for Growth Unlimited Preschool has been scheduled for 2/27/89. A training session for siren activation is scheduled for 3/2/89. The town has approved 41 of 56 lesson plans.

STATUS OF EMERGENCY

PLANNING ISSUES

Kingston

Issue: EOC Staffing for 24 hours

Progress:

22 operational staff positions required for initial response.

20 operational staff positions filled as of 9 January 1989.

44 operational staff positions required for extended response.

32 extended operational staff positions filled as of 9 January 1989.

5 administrative support staff positions identified for initial response.

5 administrative support staff positions filled for initial response.

10 administrative support staff positions identified for extended response.

5 administrative support staff positions filled for extended response.

Issue: Plans & Procedures

Progress:

Revised draft emergency plan and initial draft implementing procedures were forwarded to MCDA, and subsequently forwarded to FEMA, on 10/12/88. Kingston received FEMA comments from the State 2/6/89. Comments are being studied for incorporation in the next revision.

STATUS OF EMERGENCY

PLANNING ISSUES

Kingston

Issue: Equipment

Progress:

- EWMDS - Equipment was delivered 1/25 by Boston Edison.
- Traffic Control - Equipment was delivered 2/1/89 by Boston Edison. C-Van was delivered 2/7/89.
- Communications - Initial* equipment has been identified, ordered and received. Most initial equipment has been placed. Subsequent** equipment has been ordered, and some has been received.

  - A pager (Pilgrim CANS) was provided by Boston Edison to the Civil Defense Director and programmed 2/1/89.
- Dosimetry - Equipment was delivered 1/19 by Boston Edison.

* Initial equipment is comprised of equipment that was based upon the first draft of implementing procedures.

** Subsequent equipment is comprised of equipment that was identified after review and revision of the implementing procedures by agency heads.

Issue: Public Information Brochure

Progress:

The wording of the initial draft of the entire Public Information Brochure (PIB) was accepted by the Commonwealth on December 7, 1988. On January 4, 1989, MCDA called for additional Town and State review. The Town has reviewed and approved the current PIB draft. Brochure will not be printed until written authorization is received from MCDA per 12/12/88 meeting.

STATUS OF EMERGENCY

PLANNING ISSUES

Marshfield

Issue: EOC Renovations/Facility Equipment Placement

Progress:

EOC building renovations are nearing completion in Marshfield. EOC equipment has been identified, ordered and received by Boston Edison. Delivery, installation, and testing of equipment is underway. Open house is scheduled for 2/18/89.

Issue: Training

Progress:

Training is underway in Marshfield. Four sessions have been conducted since 12/8/89.

- Police/Harbormaster training has been rescheduled until after the Marshfield EOC is complete. (Open house is 2/18/89.)

STATUS OF EMERGENCY

PLANNING ISSUES

Marshfield

Issue: EOC Staffing for 24 hours

Progress:

19 operational staff positions required for initial response.

15 operational staff positions filled as of 9 January 1989.

38 operational staff positions required for extended response.

24 extended operational staff positions filled as of 9 January 1989.

8 administrative support staff positions identified for initial response.

0 administrative support staff positions filled for initial response.

16 administrative support staff positions identified for extended response.

0 administrative support staff positions filled for extended response.

Issue: Plans & Procedures

Progress:

Initial draft emergency plan and initial draft implementing procedures were forwarded to MCDA, and subsequently forwarded to FEMA, on 8/8/88. FEMA technical review was received on 2/10/89. Comments are being studied for incorporation in the next revision.

STATUS OF EMERGENCY

PLANNING ISSUES

Marshfield

Issue: Equipment

Progress:

- EWMDS - Equipment was delivered to towns 1/24/89 by Boston Edison.
- Traffic Control - Equipment was delivered to town 2/1/89 by Boston Edison.
- Communications - Initial* equipment has been identified, ordered and received. Most initial equipment has been placed. Subsequent** equipment has been identified; most has been ordered; and, some has been received.
- Dosimetry - Equipment was delivered 1/18/89 by Boston Edison.

* Initial equipment is comprised of equipment that was based upon the first draft of implementing procedures.

** Subsequent equipment is comprised of equipment that was identified after review and revision of the implementing procedures by agency heads.

Issue: Public Information Brochure

Progress:

The wording of the initial draft of the entire Public Information Brochure (PIB) was accepted by the Commonwealth on December 7, 1988. On January 4, 1989, MCDA called for an additional Town and State review. Currently, the Towns and State are in the process of again reviewing the PIB draft. Comments were due back to the State by January 18, 1989. Brochure will not be printed until written authorization is received from MCDA per 12/12/88 meeting.

STATUS OF EMERGENCY

PLANNING ISSUES

Plymouth

Issue: EOC Renovations/Facility Equipment Placement

Progress:

EOC renovations are complete in Plymouth. All EOC equipment is in place.

Issue: Training

Progress:

Training is continuing in Plymouth. Twenty-eight sessions have been conducted since 12/8/88. Additional training is scheduled for 2/21/89, 2/22/89, 2/28/89, 3/7/89, and 3/14/89.

STATUS OF EMERGENCY

PLANNING ISSUES

Plymouth

Issue: EOC Staffing for 24 hours

Progress:

22 operational staff positions required for initial response.

17 operational staff positions filled as of 9 January 1989.

44 operational staff positions required for extended response.

32 extended operational staff positions filled as of 9 January 1989.

4 administrative support staff positions identified for initial response.

2 administrative support staff positions filled for initial response.

8 administrative support staff positions identified for extended response.

2 administrative support staff positions filled for extended response.

Issue: Plans & Procedures

Progress:

- Initial draft emergency plan previously provided to MCDA/FEMA for Informal Technical Review. Comments have been incorporated into the Emergency Plan.
- 18/19 procedures reviewed by agency heads.
- One additional special facility procedure (Jordan Hospital) remains to be reviewed.

STATUS OF EMERGENCY

PLANNING ISSUES

Plymouth

Issue: Equipment

Progress:

- EWMDS - Equipment was delivered 1/25
- Traffic Control - Equipment was delivered 2/1/89 by Boston Edison
- Communications - Initial* equipment has been identified, ordered and received. Most initial equipment has been placed. Subsequent** equipment has been identified; most has been ordered' and, some has been received.
- Dosimetry - Equipment was delivered 1/20

* Initial equipment is comprised of equipment that was based upon the first draft of implementing procedures.

** Subsequent equipment is comprised of equipment that was identified after review and revision of the implementing procedures by agency heads.

Issue: Public Information Brochure

Progress:

The wording of the initial draft of the entire Public Information Brochure (PIB) was accepted by the Commonwealth on December 7, 1988. On January 4, 1989, MCDA called for an additional Town and State review. Currently, the Towns and State are in the process of again reviewing the PIB draft. Comments were due back to the State by January 18, 1989. Plymouth sign-off on BECo final copy of December 1988 was completed on 12/20/88. Procedure will not be printed until written authorization is received from MCDA per 12/12/88.

STATUS OF EMERGENCY

PLANNING ISSUES

Taunton

Issue: EOC Renovations/Facility Equipment Placement

Progress:

EOC building renovations have been completed at the Taunton EOC. Equipment is complete except for the provision of:

- 1 Map

Issue: Training

Progress:

Training is continuing in Taunton. The Fire Department received training on survey meter/portal monitor operations; 2 sessions per day on 2/14/89, 2/16/89, and 2/17/89.

STATUS OF EMERGENCY

PLANNING ISSUES

Taunton

Issue: EOC Staffing for 24 hours

Progress:

20 operational staff positions required for initial response.

20 operational staff positions filled as of 9 January 1989.

40 operational staff positions required for extended response.

38 extended operational staff positions filled as of 9 January 1989.

5 administrative support staff positions identified for initial response.

5 administrative support staff positions filled for initial response.

10 administrative support staff positions identified for extended response.

10 administrative support staff positions filled for extended response.

Issue: Plans & Procedures

Progress:

Revised draft emergency plan and initial draft implementing procedures were forwarded to MCDA and subsequently forwarded to FEMA on 5/9/88. The results of the FEMA technical review were received on 2/10/89. Comments are being studied for incorporation in the next revision.

STATUS OF EMERGENCY

PLANNING ISSUES

Taunton

Issue: Equipment

Progress:

- Traffic Control - Equipment was delivered February 3, 1989 to Taunton DPW by Boston Edison.

- Communications - Initial equipment has been identified, ordered and received. Most initial equipment has been placed. Subsequent** equipment has been identified; most has been ordered; and, some has been received.

Issue: Public Information Brochure

Progress:

The wording of the initial Draft of the entire Public Information Brochure (PIB) was accepted by the Commonwealth on December 7, 1988. On January 4, 1989, MCDA called for an additional Town and State review. Currently, the Towns and State are in the process of again reviewing the PIB Draft. Comments were due back to the State by January 18, 1989. Taunton signed review sheet of BECo final copy dated December, 1988 on 12/21/88. Brochure will not be printed until written auhorization is received from MCDA per meeting of 12/12/88.

STATUS OF EMERGENCY

PLANNING ISSUES

Taunton

Issue: Reception Center R novation/Equipment Placement

Progress:

Reception Center Renovations:

Taunton State Hospital is designated as the reception center. Currently, the Cain Building is serving as the interim facility to be used for registrations, monitoring, and decontamination. Layouts for the building have been provided to Hospital Administrators, MCDA, and Taunton Civil Defense. The building has been cleaned and organized Portable shower facilities and a portable generator are in place. Supplies and equipment necessary to register and monitor evacuees and their vehicles are in place. Proposed final measures to establish a long term facility involve construction of a new building on hospital grounds. Discussions are underway with Hospital administrators to define building parameters.

Equipment: Portal monitors delivered to Taunton State Hospital as of 1/30.

Monitoring & Decontamination - delivered to Cain Building January 26 and 27.

Registration - delivered to Cain Building January 26 and 27.

Dosimetry - in town, delivered during this period.

STATUS OF EMERGENCY

PLANNING ISSUES

State

Issue: Area II Improvements/Equipment Placement

Progress:

Currently, the Area II EOC is operational, however, Boston Edison has entered into discussions with MCDA concerning improvements to the facility and its equipment.

Issue: State Agency Training

Progress:

Training is continuing with the State Agencies and related support groups. Eight sessions have been conducted since 12/8/88. One additional session is scheduled.

STATUS OF EMERGENCY

PLANNING ISSUES

State

Issue: Area II EOC Staffing for 24 hours

Progress:

20*	operational staff positions required for initial response.
20*	operational staff positions filled as of 9 January 1989.
40*	operational staff positions required for extended response.
40*	extended operational staff positions filled as of 9 January 1989.
3	administrative support staff positions identified for initial response.
3	administrative support staff positions filled for initial response.
6	administrative support staff positions identified for extended response.
6	administrative support staff positions filled for extended response.

*MCDA Framingham has committed to providing support to fill all positions.

Issue: Plans & Procedures

Progress:

- The results of Informal Technical Review of the Area II Plan by FEMA were received on 2/8/89. Comments are being studied for incorporation in the next revision.
- Area II Implementing Procedures have been drafted and submitted for submission to FEMA for an informal technical review on February 10, 1989.

STATUS OF EMERGENCY

PLANNING ISSUES

State

Issue: Equipment

Progress:

- Traffic Control - Equipment has been identified and is in the process of being ordered
- Monitoring/Decon - Equipment has been identified and is in the process of being ordered.
- Dosimetry - Equipment has been identified, ordered and received by Boston Edison.

Issue: Public Information Brochure

Progress:

The wording of the initial Draft of the entire Public Information Brochure (PIB) was accepted by the Commonwealth on December 7, 1988. On January 4, 1989, MCDA called for an additional Town and State review. Currently, the Towns and State are in the process of again reviewing the PIB Draft. Comments were due back to the State by January 18, 1989. When all comments are returned and State authorization to print and distribute is given, comments will be incorporated and printing and distribution will be undertaken.

STATUS OF EMERGENCY

PLANNING ISSUES

State

Issue: Reception Center Renovations/Equipment Placement.

Progress:

Reception Center Renovations:

Long term enhancements to the Wellesley DPW garage are currently being finalized with DPW and MCDA representatives.

Equipment:

- Monitoring & Decontamination - M/D Equipment delivered to facility 2/13/89.
- Registration - Delivered 2/13/89.
- Dosimetry - Delivered 2/13/89.

STATUS OF EMERGENCY

PLANNING ISSUES

State

Issue: Transportation Provider LOA

Progress:

All Transportation Provider resource commitment and response time data was reformatted in accordance with directions from the State, and compiled into updated letters of commitment. The letters of commitment have been signed by the Transportation Providers and are currently in the custody of MCDA.

Issue: Transportation Provider Training.

Progress:

Transporation provider training is continuing.

Seven sessions have been conducted since 12/8/88.

Status Of Progress On Emergency Planning Issues In Pilgrim EPZ For The Period Of: 9-Dec.-88 - 17-Feb.-89

AGENCY	EOC	TRAINING	EOC STAFFING	EMERGENCY PLAN & PROCEDURES	FIELD EQUIPMENT	PUBLIC INFORMATION BROCHURE	RECEPTION CENTERS	TRANSPORTATION PROVIDER TRAINING	TRANSPORTATION PROVIDER LOA
Carver	- Renovations Complete - Equipment Essentially Complete - See Attachment EMS/EOC - see attachment	- Underway - 6 Session Conducted Since 12/6	- 45 / 45 Operational - 6 / 8 Administrative - See Attachment	- Draft Revised Plan / Initial Draft Procedures FEMA Review received 2/10/89.	- Received by BSCs - See Attachment - Dosimetry delivered 1/18/89 - EMS/EOC delivered 1/25/89 - Traffic Control delivered 2/2	- Draft Complete - MCDA Requested Additional Town / State Review. - Town Comments were due 1/18.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
Duxbury	- Renovations Complete - Equipment Essentially Complete - See Attachment - 10; 60 mile maps delivered and mounted - TDD's delivered	- Underway - 8 [illegible] Since 12/6 - 1 [illegible] rescheduled.	- 28 / 45 Operational - 8/ 10 Administrative - See Attachment	- 15 / 18 IP's Reviewed by Agency Heads - 20 / 25 IP's Reviewed by Special Facilities Officials)	- Received by BSCs - Dosimetry and EMS/EOC equipment delivered - See Attachment - C van delivered 1/25/89 - Traffic Control delivered 1/25/89.	- Draft Complete. - MCDA Requested Additional Town / State Review. - Town Comments returned 1/16.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
Kingston	- Renovations Complete - Equipment Essentially Complete - See Attachment	- Underway - 6 Sessions Conducted Since 12/6 - 2 Sessions Scheduled for Sacred Heart Schools - Town approved 40-?? LPs - Day Care Session 2/27. - Siren Activation 3/2	- 22 / 44 Operational - 8/ 16 Administrative - See Attachment	- Draft Revised Plan / Initial Draft Procedures FEMA Review received 2/8/89.	- Received by BSCs - Dosimetry and EMS/EOC equipment delivered - See Attachment - Traffic Control equipment delivered 2/1/89. - C. Van delivered 2/7.	- Draft complete and approved by town.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
Marshfield	- Renovations Nearly Complete - Equipment Received by BSCs - Delivery underway - See Attachment - Open House scheduled 2/16/89	- Underway - 11 Sessions Scheduled - 4 Sessions conducted	- 24 / 28 Operational - 8 / 16 Administrative - See Attachment	- Draft Revised Plan / Initial Draft Procedures FEMA Review received 2/10/89.	- Received by BSCs - Dosimetry and EMS/EOC equipment delivered - See Attachment - Traffic Control equipment delivered 2/1/89	- Draft complete - MCDA Requested Additional Town / State Review.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
Plymouth	- Renovations Complete - Equipment Complete - See Attachment	- Underway - 28 Sessions Conducted Since 12/6 - Additional F.S. training 2/1, 2/22, 2/28, 3/7, and 3/14.	- 22 / 44 Operational - 2 / 8 Administrative - See Attachment	- 16 / 16 IP's Reviewed by Agency Heads - 70 / 71 IP's Reviewed by Special Facilities Officials	- Received by BSCs - Dosimetry and EMS/EOC equipment delivered - See Attachment - Traffic Control equipment delivered	- Draft Complete - MCDA Requested Additional Town / State Review. - Town comments were due 1/18.	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
Bridgewater	- Renovations Complete - Equipment Essentially Complete - See Attachment	- Underway - 3 Sessions conducted since 12/6. - Additional sessions are being scheduled.	- 20 / 20 Operational - 8 / 8 Administrative - See Attachment	- Draft Revised Plan / Initial Draft Procedures Awaiting Informal FEMA Review	- Initial shipment of equipment was delivered 2/3/89	- Draft Complete - MCDA Requested Additional Town / State Review During This Reporting Period - Town Comments Due 1/18.	- Building Improvements Pending - Portal Monitors Delivered - Monitoring, decon, and registration equipment delivered	NOT APPLICABLE	NOT APPLICABLE
Taunton	- Renovations Complete - Equipment Essentially Complete - See Attachment	- Underway - 2 Sessions / day conducted 2/14, 2/16, 2/17	- 30 / 45 Operational - 16 / 16 Administrative - See Attachment	- Draft Revised Plan / Initial Draft Procedures Awaiting Informal FEMA Review	- Received by BSCs - See Attachment - Equipment was delivered to Taunton DPW 2/3/89	- Draft Complete - MCDA Requested Additional Town / State Review. - Town comments were due 1/18.	- Building Improvements Pending - Portal Monitors Delivered 1/30 - Monitoring, decon, and registration equipment delivered	NOT APPLICABLE	NOT APPLICABLE
State (Area II)	- Operational - Discussions on Improvements Underway	- Underway - 8 Sessions Conducted Since 12/6 - 1 Session Scheduled	- 45 / 45 Operational - 6 / 6 Administrative - See Attachment	- Draft Area II IP's Complete and are slated for submission in Feb.	- Received by BSCs - See Attachment	- Draft Complete - MCDA Requested Additional Town / State Review. - Town comments were due 1/18.	- Wellesley: - DPW Facility Identified. - Portal monitors, Decon equipment delivered. - See attachment	- Underway - 7 Sessions Conducted Since 12/6	- Updated LOAs Received by MCDA