U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-155
License No:	DPR-06
Report No:	50-155/96012(DRP)
Licensee:	Consumers Power Company
Facility:	Big Rock Point Nuclear Power Plant
Location:	10269 U.S. 31 North Charlevoix, MI 49720
Dates:	November 30, 1996 - January 17, 1997
Inspectors:	R. J. Leemon, Senior Resident Inspector C. E. Brown, Resident Inspector L. N. Tran, Project Manager N. Shah, Chemistry and Health Physics Inspector
Approved by:	Bruce L. Burgess, Chief Reactor Projects Branch 6

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EXECUTIVE SUMMARY

Big Rock Nuclear Power Plant
NRC Inspection Report 50-155/96012

This routine inspection covered aspects of licensee operations, engineering, maintenance, and plant support.

Operations

- The plant automatically shutdown due to a loss of turbine generator field causing a turbine-generator trip without bypass. The inspectors determined that this transient was within the parameters discussed in the FHSR for a plant shutdown (Section O1.2).

Maintenance

- Maintenance and surveillance activities were generally performed well and accurately documented (Section M1.1).

- The licensee correctly diagnosed and repaired the cause of the generator trip, made procedural changes, and provided training for the operators to safely operate the generator-voltage regulator in manual control. The low-pressure turbine repairs were completed safely and accurately, and the inspectors noted good contractor control during the work (Sections M1.2 and M1.3).

- The inspectors identified a work-around associated with source range detector No. 7's failure to reposition. The inspectors also concluded that plant management had accepted this work-around because of ALARA considerations and was not documenting the current failures (Section M1.4).

- The inspectors identified that a failure to repair a known leak in the roof above the standby emergency diesel generator resulted in a thin buildup of ice on its batteries (Section M2.1).

- The inspectors identified a violation of 10 CFR 50, Appendix B, Criterion V involving surveillance procedure TV-02, "Containment Integrated Leak Rate Test," Rev 28. The procedure was inappropriate to its circumstances resulting in an uncontrolled loss of about 400 gallons of reactor coolant and an inline-relief valve lifting when attempting to pressurize the containment (Section M3.1).

Engineering

- The inspectors identified an additional example of a violation of 10 CFR 50, Appendix B, Criterion V regarding the lack of acceptance criteria in the maintenance procedure for MMSS-1. The procedure did not provide tolerances for reassembling the MSIV stem to wedge fit up (Section E1.1).

- The licensee maintained a conservative safety focus by deciding to cool the plant down to cold shutdown and repack and test MO-7062, emergency condenser loop No. 1 inlet valve, in accordance with the motor operated valve program (Section E1.2).

REPORT DETAILS

Summary of Plant Status

The plant was operated at full power from the beginning of the period until the plant tripped off line on December 7, 1996, due to a failed voltage control circuit in the turbine-generator exciter (Section O1.2). The plant was taken to cold shutdown on December 9, 1996, to allow repacking emergency condenser loop No. 1 inlet valve, MO-7062 (Section E1.2). Shutdown activities included retraining the operators on the procedure for operating the turbine-generator in manual voltage control and repacking MO-7062. The licensee started the reactor on December 11, 1996. While warming the turbine, operators detected excessive turbine vibration, indicating that the turbine was out of balance. The plant was returned to cold shutdown on December 13, 1996, after additional testing isolated the source of the vibration to the low-pressure turbine. Internal turbine inspection after shutdown revealed that three sections of turbine-blade shrouding were dislodged. The plant remained in a forced outage to complete a turbine inspection and to effect repairs for the rest of the inspection period. Additional major work performed included a containment integrated-leak-rate test (Section M3.1) and main steam isolation valve repairs (Section E1.1).

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

Inspection Procedure 71707 was used by the inspectors to conduct frequent reviews of plant operations. Specific events and findings are detailed in the sections below.

O1.2 Reactor Scram Caused by Loss of Field Voltage to the Generator

a. Inspection Scope

The inspectors reviewed the licensee's response to a reactor trip caused by the loss of turbine generator field voltage. The inspectors interviewed licensee personnel, reviewed operating records, and independently verified plant indications.

b. Observations and Findings

On December 7, 1996, a loss of field voltage to the main turbine generator caused a reactor scram on high power. The inspectors' independent review of the control room panels and recorder traces verified that reactor had tripped on high power, was fully shut down, and had responded as expected. Steam-drum level and plant cool-down rate (less than 100 °F per hour) were properly controlled by plant operators.

The inspectors discussed the plant trip with the control room operators regarding prior indications of voltage control difficulties and actions taken. The operators had noticed that voltage was decreasing, attempted to restore voltage, and called power control for assistance. The operators were preparing to take manual voltage control when the reactor tripped.

The licensee correctly diagnosed and repaired the cause of the generator trip, made procedural changes, and provided training for the operators to safely operate the generator-voltage regulator in manual control.

c. Conclusion

The inspectors determined that the plant automatically tripped in response to a loss of the main turbine generator voltage control and that plant operators had safely shutdown the plant.

O2 Operational Status of Facilities and Equipment

O2.1 Engineered Safety Feature System Walkdowns (71707)

The inspectors used inspection procedure 71707 to walk down accessible portions of the following ESF systems:

- Emergency Diesel Generator
- Post-Incident System

In all cases, equipment operability, material condition, and housekeeping were acceptable. Several minor discrepancies were brought to the licensee's attention and were corrected. The inspectors did not identify any substantive concerns as a result of these walkdowns.

O8 Miscellaneous Operations Issues (92700)

O8.1 (Closed) Unresolved Item 50-155/94015-02: manual scram due to loss of feed water. On November 29, 1994, with the plant at about 42 percent power, operators were attempting to return one of two condensate pumps to service following repairs. When the equalizing vent to the isolated pump was cracked open, the air trapped in the pump was immediately introduced to the operating pump via the common-vent line to the condenser. The air caused the operating feed-water pump to trip on loss-of-suction pressure. The control-room operators recognized the loss of the feed pump and tried unsuccessfully to restart it (only one feed pump was available). When multiple attempts to restart the feed pump failed, the operators manually scrammed the reactor. The investigation determined that Standard Operating Procedure (SOP) 15, "Condensate System Hotwell to Reactor Feed Pump," was not adequate for the operating conditions. SOP-15 was initially issued in 1976 after returning a condensate pump to service with the reactor at low power (in 1975), but it had never been field tested for the conditions that existed on November 29, 1994. Additionally, the pump shaft packing was replaced with a

mechanical seal after SOP-15 was written. This change caused air to be more readily trapped within the pump casing.

The licensee promptly corrected the procedural inadequacies. Corrective actions included procedure precautions developed by performing the evolution on the plant simulator under differing initial conditions. In addition, the return-to-service instructions in all of the SOPs were reviewed for similar inadequacies. Training plans were revised and all the operating crews were retrained following this incident. By reviewing selected operating procedures and interviewing different operating crews, the inspectors verified that these problems had been corrected.

The inspectors determined that, at the time of the event, SOP-15 was not appropriate for the circumstances, constituting a violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." This licensee-identified and corrected violation is being treated as a Non-Cited Violation , consistent with Section VII.B.1 of the NRC Enforcement Policy(50-155/96012-01(DRP)).

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments

a. Inspection Scope (62703) (61726)

The inspectors followed the troubleshooting efforts following the loss of voltage control to the main generator field and the investigation into the cause of excessive vibration noted during turbine startup on December 1 , 1996. Additionally, the inspectors observed portions of the following work orders (WO) and surveillances:

Maintenance Activities

- WO 12612443: replace moisture separator drain header
- WO 12610697: replace valve VRR-34
- WO 12611276: clean water detector sight glass LS-63-9
- WO 12612277: quarterly battery readings for battery-4
- WO 12612276: quarterly battery readings for battery-3
- WO 12610190: monthly battery reading battery-1
- WO 12612414: clean turbine parts
- WO 12612465: cutout turbine drain collector box
- WO 12612413: steam path repairs
- WO 12611209: provide ILRT test support

Surveillance Activities

- TV-02: integrated leak rate test
- TR-39Q: MSIV local leak rate test
- TSD-04: core spray full flow test
- T7-21: standby diesel generator start and run test

b. Observations and Findings

Maintenance and surveillance activities were reviewed against the FSAR and were found to be satisfactorily performed. All observed work was performed with the work package present and in active use at the job site. Supervisors and system engineers monitored job progress, and appropriate radiation control measures were in place. When questions arose or problems were encountered, the workers stopped the activity and discussed the problem with the engineer or supervisor, and action plans were devised to resolve the problems. Examples included the MSIV local leak rate test (Section E1.1), the standby diesel start test (Section M2.1), and the integrated leak rate test (Section M3.1).

c. Conclusion

Maintenance and surveillance activities were generally performed well and accurately documented. The licensee correctly diagnosed and repaired the cause of the generator trip, made procedural changes, and provided training for the operators to safely operate the generator-voltage regulator in manual control. The low-pressure turbine repairs were completed safely and accurately, and the inspectors noted good contractor control during the work. However, some maintenance procedure deficiencies resulted in a violation of NRC requirements.

M1.2 Main Generator Field Voltage Repairs

a. Inspection Scope

Licensee personnel diagnosed and repaired the problem on the main generator after the plant trip on December 7, 1996. The inspectors observed troubleshooting efforts and maintenance activities related to these repairs.

b. Observations and Findings

The licensee determined that a failed resistor in the main generator field voltage control circuitry was the cause for the loss of voltage. No replacement resistor was immediately available, so the licensee made a temporary change to System Operating Procedure (SOP) 13, "Turbine Generator System," to allow plant startup and provided training for operating the generator in manual voltage control. The resistor could be replaced with the plant on line. Plant staff had previous experience and were knowledgeable of the precautions and actions necessary to

control turbine generator voltage in manual for an extended period of time. However, due to the extended outage caused by problems with turbine blading, the replacement resistor arrived on site and was replaced during the forced outage.

c. Conclusions

The licensee correctly diagnosed and repaired the cause of a generator trip, made procedural changes, and provided training for the operators to safely operate the generator-voltage regulator in manual control.

M1.3 Low Pressure Turbine Repairs

a. Inspection Scope

During the plant startup on December 11, 1996, the operators noted excessive vibration on the low pressure turbine. The plant was shut down to repair the turbine. The inspectors observed licensee and contractor personnel troubleshooting efforts and maintenance practices during the repair effort.

b. Observations and Findings

The licensee determined that an approximately 1 square-inch piece of metal had dislodged in the outlet of the generator end of the low-pressure turbine, and three sections of turbine-blade shrouding had been knocked off of a section of the moving blades. The licensee performed a complete cleaning and non-destructive testing (NDT) of the low-pressure turbine rotor. The inspectors made the following observations:

- All of the contracted worker's activities were closely monitored by the licensee. Additionally, the contractor orientation included a plant walk-through with a contract coordinator who discussed previous contractor-control issues (IR 50-155/96010 Section R4.1) and pointed out pertinent plant features to the contractor supervisors.

- The welding was accomplished with full quality control processes including 100 percent NDT on each weld bead.

- The inspectors noted that regular and contracted maintenance personnel maintained good foreign material exclusion (FME) practices. Only one instance of foreign material intrusion was noted. The licensee evaluated the intrusion as not constituting a hazard to plant operation, and the inspectors concluded that no violations of the plant's FME procedure occurred, since the material could not get into the reactor because of the design of the plant.

- Proper fire protection and radiological control practices were maintained through out the repair efforts.

c. Conclusion

Low-pressure turbine repairs were performed safely and accurately without damage to plant components or personnel injury. The inspectors observed good contractor control during this effort.

M1.4 Source Range No. 7 Detector Failed to Insert

a. Inspection Scope

On December 7, 1996, source range detector (SRD) No. 7 did not fully insert when selected by the operator after the reactor scram. The inspectors interviewed licensee staff, observed plant indications, and reviewed the system description manual, chapter 31, "Nuclear Instrumentation System," and the FHSR section 7.3.2, Source Range Monitoring.

b. Observations and Findings

After the reactor scram on December 7, 1996, SRD No. 7 did not go to the "IN" position as expected when positioned by the operator with the hand switch. The inspectors verified that SRD No. 6 and the three channels of DC wide range monitors were operating properly (indicating reactor power was in the source range) and were providing required shutdown neutron flux monitoring. The operators stated that an instrumentation and control (I&C) technician had gone into the containment to reposition the detector. The I&C technician entered a high radiation area, pulled on a cable, freed the detector, and then had the operator restart the drive motor which repositioned the detector. Technical Specifications required SRD No. 7 to be operable before plant startup, but it was not required while shut down.

Licensee management stated that failure of an SRD to reposition occurred occasionally and that there were no plans to repair the system due to the high cost and exposure required to perform repairs. Additionally, the SRDs are not required for post accident conditions. A licensee analysis performed in 1993 had documented that SRD No. 7 failed to insert six out of eight times. This analysis concluded that the source range monitors had been operational when required (for startups and refueling activities) and that the repair to the mechanism which moves the detectors was not effective from an ALARA (as low as reasonably achievable) standpoint. At the end of the inspection period, no CR had been written for the failure of SRD No. 7 to reposition.

c. Conclusion

The inspectors identified a work-around with SRD No. 7's failure to reposition. The inspectors also concluded that plant management had accepted this work-around because of ALARA considerations and was not documenting the current failures.

M2 Maintenance and Material Condition of Facilities and Equipment

M2.1 Standby Diesel Generator Failure to Start (61726)

a. Inspection Scope

On January 8, 1997, the (non-safety related) standby diesel generator (SBDG) failed to start. The inspectors interviewed licensee staff, and reviewed documentation including: test procedures, battery voltage and specific gravity graphs, a condition report, and the FHSR.

b. Observations and Findings

On January 8, 1997, the standby diesel generator failed surveillance T7-21, "Standby Diesel Generator (SBDG) Start and Run." The SBDG failed two attempted starts before suspending the surveillance test.

A licensee inspection determined that the failure to start was due low battery voltage. Additionally, the licensee found a thin coat of ice on the batteries due to the low ambient temperature and leaking SBDG trailer roof. The following day, the inspectors inspected the trailer during a diesel run and found similar conditions. No action had been taken to correct the deficiencies. The maintenance manager sent a worker out to clear the snow off the trailer roof and make temporary repairs to the leak. On January 15, 1997, the inspectors inspected the trailer and determined that the temporary roof repairs were adequate.

The maintenance records on the SBDG batteries showed that voltage and specific gravity had been lower after each start, but the system engineer was not aware of the trend until the inspectors requested the information after the SBDG failed to start. A condition report, CR 95-BRP-707, written by plant engineering in 1995, recommended that the SBDG runs be extended in cold weather to allow enough time for the battery to recharge, but operations had not extended the diesel run time.

The inspectors concluded that since the SBDG was already on site there were no violations of NRC requirements related to the commitment to have a SBDG available within 24 hours.

c. Conclusion

The inspectors concluded that licensee corrective actions were inadequate; however, because this diesel is not required to operate to mitigate damage to the reactor, no violations of NRC requirements were identified. The condition of the SBDG trailer had deteriorated to the point of allowing ice to form on the batteries. The SBDG weekly runs used more battery power than was restored, but the battery readings were taken monthly and trended at the discretion of the system engineer. Additionally, an earlier recommendation to extend the SBDG run time had not been implemented.

M3 Maintenance Procedures and Documentation

M3.1 Containment Integrated Leak Rate Test (61726)

a. Scope

Due to the expected duration of the forced outage to repair the turbine, the licensee performed the scheduled April 1997 containment integrated leak rate test (ILRT) on January 2, 1997. The inspectors observed preparation and performance of Big Rock Point Surveillance Procedure TV-02, "Containment Integrated Leak Rate Test," Revision 28. The inspection included a review of applicable portions of the final hazards summary report (FHSR), the plant technical specifications (TS), and 10 CFR 50, Appendix J.

b. Observations and Findings

The number and types of sensors in containment met the requirements of 10 CFR 50, Appendix J, and the data was collected and processed properly. The ILRT results met the procedural requirements, indicating that the total leakage met the TS required maximum weight-percent per day value. However, two procedural deficiencies were noted in TV-02:

1) Step 5.1.a, required the operators to depressurize the nitrogen side of all control rod drive accumulators, but did not give instructions on how to accomplish this. The operator accomplished this by using the steps in standard operating procedure (SOP) 30 which isolates and depressurizes the accumulators for personnel protection during maintenance. SOP-30 left the accumulator drain valve and nitrogen vent valve open to prevent possibly re-pressurizing the accumulator. After discussing the valve position with the shift supervisor, the operator left the vent and drain valves open because that would be their required position when recharging the accumulators after the ILRT was complete. The valve position was not recorded on the status board in the control room.

   A temporary change had been approved by the plant review committee to insert a manual scram signal into the reactor protection system before isolating instrument air to the containment (TV-02, step 5.1.ao.1). When the manual scram was inserted, approximately 400 gallons of water was drained from the primary system to the containment sump via the accumulator drain valves before the control room operators noticed decreasing steam drum water level and corresponding increasing dirty sump water level and took actions to stop the coolant leak from the primary system.

2) On January 2, 1997, while attempting to pressurize the containment for the ILRT, a relief valve on the filters in the containment charging line lifted and no air entered the containment. Investigation revealed a blank flange installed in the first flange connection outside VCI-1, sphere test isolation

valve, which is welded to penetration H-80. TV-02, step 5.2, "Maintenance Test Preparation," part "e", stated, "Remove blank flange from sphere pressurizing line inside containment, penetration H-80." However, TV-02 did not include a step to remove the blank flange from outside containment on the sphere pressurizing line, H-80. No record of a blank flange being installed outside VCI-1 on penetration H-80 existed, but the previous ILRT restoration required the installation of blank flanges inside and outside containment on the sphere pressurizing line, H-80. Revision 28 of TV-02 contained the same requirements. Additionally, no attachment to TV-02 was provided to illustrate the normal and the test configuration of the blank flanges on penetration H-80 similar to Attachment 9, "Penetration H-77 Configuration."

The inspectors noted that the blank flange had not been re-installed outside penetration H-80 as required by TV-02, step 5.13.d, after completing the ILRT. An engineer told the mechanics that a blank flange installed on the external end of the containment charging line (outside the external penetration room) was the second blank flange; however, TV-02 had not been revised to clarify the exact intended location for the H-80 external blank flange. Additionally, an opening exists in the piping between the blank flange outside the building and the flange next to VCI-1.

c. Conclusions

The ILRT results met the maximum weight-percent per day value in accordance with technical specifications and 10 CFR 50 Appendix J. However, failing to provide explicit instructions on how to depressurize the CRD accumulators, failing to ensure the removal of the blank flange installed outside penetration H-80 were two examples of a violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings" (50-155/96012-02A,B(DRP)).

M8 Miscellaneous Maintenance Issues (92902)

M8.1 (Closed) Unresolved Item 50-155/94013-01: unanticipated diesel fire pump automatic start. During a refueling outage, the diesel fire pump (DFP) was tagged out for alignment checks and maintenance. When the work was complete on the DFP, the shift supervisor (SS) authorized clearing the personnel protection tags and performing surveillance tests to ensure operability. The maintenance procedure did not specify how to position the electrical supply breaker, so the SS decided to leave the breaker open until the correct position could be verified.

While the DFP was tagged out, a separate event involving a dropped fuel bundle (discussed IR 50-155/94013, Section 2.4.2) occurred. The SS was involved in completing the corrective actions to allow continuing fuel movements and had an operations supervisor assigned to aid in running the shift. The SS had determined that a caution tag should be placed on the DFP stating that the supply breaker was open, but the SS got distracted by other actions and forgot to direct the tag to be hung. The status of the breaker was not turned over to the next shift. After shift turnover, an auxiliary operator (AO), who was continuing to run surveillances on the

DFP, came to a point in the procedure which required the control switch to be in the "AUTO" position. The AO called the SS office, but the operations supervisor answered. The operations supervisor remembered that the switch had to be in AUTO to run an auto-start surveillance and gave permission for the AO to put the switch in AUTO. The DFP immediately started, as designed, due to sensing a loss of power to the reactor depressurization system cabinet. Immediate corrective actions included stopping all outage work, forming a high level investigative team to determine the root cause, and recommending long term corrective actions.

The corrective action team found that the SS had been tasked with too many actions, that the breaker status had not been turned over to the on-coming shift, and that maintenance procedures did not specify how to position the breaker, as operations procedures did. Appropriate changes were made to correct this problem in all maintenance procedures. Additionally, operator aids were developed to clearly show the status of all plant components and management held a stand-down to train the operators on the changes before outage work was resumed.

The inspectors determined that, at the time of the event, the maintenance procedures used, I-FPS-7 and I-FPS-8, were not appropriate for the circumstances, constituting a violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings." This licensee-identified and corrected violation is being treated as a Non-Cited Violation , consistent with Section VII.B.1 of the NRC Enforcement Policy (50-155/96012-03(DRP)).

III. Engineering

E1 Conduct of Engineering

E1.1 Lack of Quantitative Specifications to Repair the Main Steam Isolation Valve

a. Inspection Scope

On October 3, 1994, and December 19, 1996, main steam isolation valve (MSIV), MO-7050, failed local-leak-rate testing (LLRT). A contributing factor for the failures was the lack of adequate tolerances and fit-up between the T-slot in the valve wedge and the valve stem tee. The inspectors reviewed valve drawings, valve work history, completed work requests, and maintenance procedures and held discussions with the maintenance staff and a contracted valve expert.

b. Observations and Findings

Main steam isolation valve (MSIV), MO-7050, a containment isolation valve, failed its local leak rate test on October 3, 1994, and December 19, 1996 after the valve wedge had been replaced in 1994 due to a crack in one of the seating surfaces. After the MSIV leak rate test failure in December 1996, the licensee had a valve

expert present during disassembly and troubleshooting of the failure of the valve to seal. A blue-check of the valve wedge and seat indicated that the valve did not fully close. The MSIV has failed the as-found LLRT after each run since the valve wedge replacement performed in November, 1994.

The licensee and the valve expert found that too little clearance existed between the valve wedge T-slot and the tee on the valve stem and determined that the lack of clearance was a contributing factor to the MSIV failing the LLRT. The valve manufacturer provided the licensee with information specifying the correct clearance on January 10, 1997.

The valve wedge and stem are normally sold as a matched set from the manufacturer, who machines the clearances in the T-slot in the wedge to ensure a proper fitup between the T-slot and tee on the valve stem. In 1994, the licensee replaced the valve wedge and valve stem without ensuring the clearance requirements between the valve wedge T-slot and the valve stem tee were met. The inspectors determined that this information was not contained on any of the MSIV valve drawings in the work package or written in MSIV maintenance procedure MMSS-1, "Inspection and Repair of Main Steam Isolation Valve MO-7050," Revision 4, dated September 23, 1993. Additionally, replacing the valve stem was not discussed in the work history; however, it was indicated as being replaced on material issue ticket 8094922, dated November 11, 1994.

c. Conclusion

The inspectors determined that when the stem and wedge were replaced, neither maintenance procedure MMSS-1, Rev 4, nor work order (WO) MSS 12412294 specified fitup clearances between the wedge T-slot and the stem tee. Failure to include appropriate qualitative and quantitative acceptance criteria was a violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" (50-155/96012-02C(DRP)).

E1.2 Management Discussion to Repack the Emergency Condenser Loop No. 1 Inlet Valve MO-7062

a. Inspection Scope

Inspection Report 155/96010(DRP), Section O2.1 and M2.1 discussed the packing leak on the emergency condenser inlet valve, MO-7062, and the licensee placing the valve on the backseat to stop the steam leak. The inspectors attended the PRC meeting for plant startup on December 9, 1996.

b. Observations and Findings

MO-7062 was open on its backseat to prevent leakage past the stem packing. The valve had not been operated electrically; therefore, there was a question if it would close electrically if needed to isolate a leaking tube bundle.

The licensee concluded that the safety function of this valve was to open and that MO-7062 was in its safety-related position. However, SOP-6, "Emergency Condenser System," required the valve to be closed from the control room to isolate a leaking tube bundle. Additionally, the licensee planned to maintain this valve in the motor operated valve (MOV) program which would require operating the valve electrically off the backseat. The valve would then leak. The plant was still in "Power Operation," (defined as "any operation other than shutdown or cold shutdown with the reactor vessel closure bolted in place"). The plant temperature was 350 °F and -- if the PRC determined that the status of MO-7062 was satisfactory -- the plant could be started up. However, to repair MO-7062, the plant would have to be cooled down.

Management decided to take the plant to cold shutdown, replace MO-7062's valve stem packing, and test MO-7062 in accordance with the MOV program.

c. Conclusion

The inspectors concluded that the plant management displayed a good safety focus by deciding to cool the plant down to cold shutdown and repack and test MO-7062, emergency condenser loop No. 1 inlet valve, in accordance with the motor operated valve program.

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 General Comments

Using Inspection Procedures 71707 and 71750, the inspectors made frequent tours of the radiologically protected area (RPA) and discussed specific radiological controls with the ALARA coordinator and various radiation protection (RP) technicians. The inspectors observed plant conditions and licensee performance including radiation protection practices and extensive work within the turbine repair radiologically controlled boundaries.

The inspectors concluded that the licensee was following good ALARA and radiation protection practices and performed contamination control practices when working on the turbine.

S1 Conduct of Security and Safeguards Activities

S1.1 Security (71750) (71707)

The inspectors monitored the licensee's security program during routine activities and tours to ensure that the approved security plan was being implemented. The inspectors noted that personnel within the protected area displayed proper photo-identification badges and individuals requiring escorts were properly escorted (there were several contract personnel escorted during this outage). The inspectors also

observed that personnel and packages entering the protected area were searched by appropriate equipment or by hand.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on February 3, 1997. The licensee acknowledged the findings presented.

The licensee did not identify any of the documents or processes reviewed by the inspectors as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Donnelly, Plant Manager
R. Addy, Assistant Plant Manager
S. Beachum, Systems and Project Engineering Manager
K. Pallagi, Chemistry/Health Physics Manager
G. Boss, Operations Manager
D. Hice, Maintenance Manager
G. Withrow, Plant Safety and Licensing Director

INSPECTION PROCEDURES USED

IP 37551:	Engineering
IP 40500:	Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems
IP 61726:	Surveillance Observations
IP 62703:	Maintenance Observation
IP 64704:	Fire Protection Program
IP 71707:	Plant Operations
IP 71750:	Plant Support Activities
IP 73753:	Inservice Inspection
IP 83729:	Occupational Exposure During Extended Outages
IP 83750:	Occupational Exposure
IP 92700:	Onsite Followup of Written Reports of Nonroutine Events at Power Reactor Facilities
IP 92902:	Followup - Engineering
IP 92903:	Followup - Maintenance

ITEMS OPENED and CLOSED

Opened

155/96012-01	NCV	OPS Procedure Inappropriate for the Circumstances
155/96012-02	VIO	Three Examples of a 10 CFR 50, Appendix B, Criterion V Violation
155/96012-03	NCV	Maintenance Procedure Inappropriate for the Circumstances

Closed

155/94013-01	URI	Review of DER-BRP-94-102 Re Diesel Fire Pump Start
155/94015-02	URI	Manual Scram Due to Loss of Feedwater
155/96012-01	NCV	OPS Procedure Inappropriate for the Circumstances
155/96012-03	NCV	Maintenance Procedure Inappropriate for the Circumstances

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
AO	Auxiliary Operator
CARB	Corrective Action Review Board
CFR	Code of Federal Regulations
DFP	Diesel Fire Pump
DRP	Division of Reactor Projects
EDG	Emergency Diesel Generator
ESF	Engineered Safety Feature
FHSR	Final Hazards Summary Report
HP	Health Physics
IFI	Inspection Followup Item
IP	Inspection Procedure
IPE	Individual Plant Evaluation
IPTE	Infrequently Performed Test and Evolution
IR	Inspection Report
LCO	Limiting Condition for Operation
LER	Licensee Event Report
NCV	Non-Cited Violation
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
RDS	Reactor Depressurization System
RO	Reactor Operator
RP	Radiation Protection
RPA	Radiologically Protected Area
SFP	Spent Fuel Pool
SS	Shift Supervisor
SV	Solenoid Valve
TS	Technical Specification
UE	Unusual Event
URI	Unresolved Item
VOTES	Valve Operation Test Evaluation System
VIO	Violation
WO	Work Order