U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-346
License No:	NPF-3
Report No:	50-346/99001(DRP)
Licensee:	Toledo Edison Company
Facility:	Davis-Besse Nuclear Power Station
Location:	5501 N. State Route 2 Oak Harbor, OH 43449
Dates:	January 2 - February 12, 1998
Inspectors:	K. Zellers, Resident Inspector
Approved by:	Thomas J. Kozak, Chief Reactor Projects Branch 4 Division of Reactor Projects

EXECUTIVE SUMMARY

Davis-Besse Nuclear Power Station
NRC Inspection Report 50-346/99001(DRP)

This routine inspection included aspects of licensee operations, maintenance, engineering, and plant support. The report covers a six-week period of resident inspection.

Operations

- Operations personnel conducted operations related administrative requirements in accordance with program requirements, shift turnovers were comprehensive, and three-way communications continued to improve (Section O1.1).

- Emergency diesel generator (EDG) 2 was inadvertently rendered inoperable for four hours because of inattention-to-detail by operators during the generation and review of a tagout and a lack of a questioning attitude by operators while hanging the tagout. One Non-Cited Violation resulted when the licensee failed to do a surveillance within the required time after the EDG was rendered inoperable (Section O1.2).

- Conservative actions were taken to isolate letdown cooler 1-1 when it was identified that one of its rupture discs had partially failed (Section O2.2).

- The inspectors concluded that the results of the employee attitude and culture survey that was performed last year, which had positive findings regarding the nuclear safety culture, personnel job satisfaction, and supervisor credibility, were generally consistent with observed behaviors and attitudes of licensee personnel, that the Station Review Board provided effective oversight of important station administrative processes, and that the Management Review Committee effectively prioritized and assigned condition reports for action (Section O7.1).

Maintenance

- The inspectors concluded that station personnel were adhering to the risk matrix and that efforts to update the matrix should improve the licensee's risk-informed decision-making process (Section M1.1).

- The inspectors determined that the dominant root cause of the events of the past year were work-management related. Plant management scheduled more work than could be accomplished with available personnel. Consequently, plant personnel did not always comply with work process guidelines, did not always seek additional assistance when problems were encountered during their activities, spent less time reviewing work packages, and did not always conduct as thorough reviews as necessary before proceeding with tasks (Section M1.2).

- The corrective actions to stop work, reinforce expectations, and reschedule work have been effective to increase the quality of work in the short term as evidenced by the lack of significant human performance related maintenance issues and examples of good performance since November. Station management efforts to increase emphasis on human performance and to initiate staffing increases in critical skill areas should help to balance work load with available resources in the long term (Section M1.2).

- The inspectors concluded that overall, the conduct of maintenance activities was in accordance with station administrative programs. However, the inspectors determined that the work process guidelines were still not being completely adhered to and challenges remained with the implementation of a new work control process (Sections M1.2 and M1.3).

- The inspectors concluded that an annunciator alarm was not properly acknowledged by licensee personnel until test technicians were prompted by the inspectors. Contributing to this situation was that the test technicians were unaware that the test they were performing caused an annunciator to alarm (Section M1.4).

- The inspectors determined that a human performance stand-down was beneficial towards ensuring that maintenance personnel implement lessons-learned from the events of the past year (Section M4.1).

Engineering

- Engineering personnel effectively supported plant operations by using visual and thermal imaging technology to determine that the component cooling water (CCW) system rupture disk downstream of letdown cooler 1-1 was leaking, thereby minimizing dose and avoiding unnecessary thermal cycling of the letdown coolers (Section O2.2)

- The use of rupture disks in the CCW system has proven to be an unreliable design. Pending parts availability, the licensee intends to replace the rupture disks with a more reliable design during the May mid-cycle outage (Section O2.2).

- In general, the conduct of engineering activities was characterized by careful planning and good communications to the rest of the organization. Detracting from this was a failure of performance engineering personnel to communicate to management that a corrective action plan to make valve CV5010E operable, by ensuring that its stroke time was within its acceptance criteria, had been changed to stroke timing the valve with a more accurate timing device rather than adjusting the limit switch setting (Section E1.1).

Plant Support

- The inspectors determined that fire brigade members were prepared for a simulated fire and that fire protection and training personnel provided effective oversight and training (Section F4.1).

Report Details

Summary of Plant Status

The plant was operated at nominally 100 percent power throughout the inspection period except for a short period of time when power was decreased to about 93 percent for conduct routine turbine valve testing.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

During the inspection period, operations management changed the shift duration for operations shift management (the senior reactor operators (SROs)) from 12-hour shifts to 8-hour shifts. The new shift duration coincided with the shift rotation for reactor and equipment operators. Plant management indicated that this was done to obtain greater reactor and equipment operator accountability to operations management.

Shift briefs included the status of important equipment, information necessary for the conduct of operator duties, evolutions in progress and planned for the shift, and a safety message for the day. During the briefs, the operations manager used recent operational occurrences as examples to reinforce management expectations for conducting tagouts and for operating equipment. Operators were observed to be using three-way communications on a more frequent basis. Administrative activities such as maintaining the equipment out-of-service log, the locked valve log, and the unit log were conducted in accordance with program requirements. The inspectors concluded that operations personnel appropriately followed administrative requirements such as routinely maintaining various logs, that shift turnovers were comprehensive, and that three-way communications continued to improve.

O1.2 Tagout Preparation Error Caused an Emergency Diesel Generator (EDG) to be Inoperable

a. Inspection Scope (71707, 92700)

The inspectors reviewed the circumstances surrounding a tagout error which caused EDG 2 to be inoperable for a four-hour period on January 10.

b. Observations and Findings

Background

The EDG room ventilation system maintains EDG room temperatures within the equipment operating limits through the use of fans, dampers, ductwork, temperature sensors, and damper controllers. Damper positions are automatically controlled to regulate how much outside air is drawn in to maintain the room temperatures within the operating limits. The dampers fail closed when the damper controller power is de-energized. When this occurs, the respective EDG is rendered inoperable.

Event

On January 10, containment isolation valve CV5010E on the containment air sample return line was declared inoperable following a stroke time surveillance test. The valve was closed and circuit breaker YF205, "CV 5010E Power Supply," was opened. Operations shift management determined that, in addition to opening the breaker, it needed to be tagged out-of-service. A reactor operator trainee, under RO supervision, erroneously input breaker Y205, "EDG 2 AC Ctrl Power," into computer software while preparing the tagout. Breaker Y205 provides power to, among other things, damper controllers for EDG 2 room ventilation system. The SRO who was in charge of generating the tagout and a SRO who reviewed the tagout did not detect the error and the tagout was approved and provided to operators for use. The operators who subsequently hung and independently verified the tagout did not question that EDG equipment was being tagged out because they assumed that the SROs had properly determined the scope of the tagout. The operators proceeded to open breaker Y205 which de-energized the ventilation dampers and rendered EDG 2 inoperable. About four hours later, the error was detected by the reactor operator who had performed the second check of the tagout when he noted that an indicating bulb to component cooling water valve CC-1474 would not light after being replaced. The error was brought to the attention of shift management, who then, after evaluation of the situation, shut breaker Y205 to restore power to the damper controls for the EDG 2 room ventilation system.

In response to this event, immediate corrective actions were taken to temporarily institute additional SRO reviews for the generation of tagouts and to conduct briefings to oncoming shifts to communicate operations management expectations for the generation, review, and placement of tagouts. In addition, plant management communicated the following information and expectations to operators: (1) lessons-learned pertaining to overconfidence in supervisors and subsequent decisions not to question the hanging of the tags; (2) expectations to do independent review of clearances; (3) expectations to conduct pre-evolution briefs for the hanging of tags; (4) requirements for oversight of trainees; and (5) requirements to review the detail associated with a clearance, specifically the noun names and descriptions.

Technical Specification (TS) 3.8.1.1.b requires that, with one EDG inoperable, surveillance requirement 4.8.1.1.1.a must be performed within one hour. Surveillance requirement 4.8.1.1.1.a requires that the qualified offsite circuits be determined to be operable by verifying correct breaker alignments and indicated power availability. However, the licensee did not verify correct breaker alignments and indicated power availability for the qualified offsite circuits within one hour of the EDG being inoperable. This non-repetitive, licensee-identified and corrected violation is being treated as a Non-Cited Violation, consistent with Section VII.B.1 of the NRC Enforcement Policy (50-346/99001-01).

c. Conclusions

Emergency Diesel Generator 2 was inadvertently rendered inoperable for four hours because of inattention-to-detail by operators during the generation and review of a tagout and a lack of a questioning attitude by operators while hanging the tagout. One Non-cited Violation resulted when the licensee failed to do a surveillance within the required time after the EDG was rendered inoperable.

O2 Operational Status of Facilities and Equipment

O2.1 System Walkdowns (71707)

The inspectors walked down the accessible portions of the following engineered-safety features (ESF) and important-to-safety systems during the inspection period:

- High voltage switchgear
- Emergency diesel generators
- Component cooling water
- Auxiliary feedwater
- Station batteries
- Low pressure injection
- High pressure injection

No substantive concerns were identified as a result of the walkdowns. System lineups and major flowpaths were verified to be consistent with plant procedures/drawings and the Updated Safety Analysis Report (USAR). Pump/motor fluid levels were within their normal bands. Vibration and temperatures of running equipment were normal. Water intrusion integrity was confirmed for electrical powered components. Equipment material condition was excellent in all cases.

O2.2 Component Cooling Water (CCW) System Rupture Disk Failure

a. Inspection Scope (71707)

The inspectors reviewed the circumstances surrounding a small CCW system water leak of about 0.1 gpm which started on or about February 2.

b. Observations and Findings

A plan was developed to identify the source of a CCW system leak of about 0.1 gpm which started on or about February 2. This plan included determining whether one of the four CCW rupture disks was leaking by using a borescope to visually inspect for flowing water in the common rupture disk drain line that was imbedded in a containment floor. This method was used in order to reduce dose, since the rupture disks were located in a difficult access, high dose area. On February 5, the licensee entered containment, saw water flowing in the rupture disk drain line with the borescope, and verified that one of the four rupture disks had partially failed. Again, in an effort to minimize dose and to avoid using a leak isolation procedure, engineering personnel used thermal imaging equipment to determine which of the four rupture disks had failed. This was done by comparing the temperatures of the four lines from the CCW piping leading to the four rupture disks. The line coming from the outlet of letdown cooler 1-1 was hotter than ambient temperature which indicated that its associated rupture disk had failed. Operators then isolated letdown cooler 1-1 to isolate the CCW rupture disk from the rest of the CCW system. Letdown cooler 1-1 was isolated as a conservative measure because of lessons learned from October 1998, when a CCW rupture disk that had been leaking suddenly catastrophically failed, causing a rapid reduction of CCW system water inventory that required a manual trip of the reactor and securing of the reactor coolant pumps (see Inspection Report (IR) 50-346/98019(DRP)). Subsequent to

isolating letdown cooler 1-1, station personnel verified that the CCW leak had stopped by again conducting a borescope inspection of the rupture disk drains.

Because letdown cooler isolation valve MU-1A previously had a substantial body-to-bonnet leak in December 1998 (see IR 50-346/98018(DRP)), and because MU-1A was shut to isolate letdown cooler 1-1, station personnel were concerned that the additional thermal and mechanical stresses on the body-to-bonnet connection might cause the valve to leak again. Therefore, a visual inspection of the valve was performed which determined that the body-to-bonnet leakage was small and essentially the same as before it was closed. Additional evaluations and inspections of MU-1A were being discussed as of the end of this reporting period.

Inspection Report 50-346/98019(DRP) provides some history of previous failures of the CCW system rupture disks. Plans were to improve the reliability of these pressure relieving devices by performing a modification to replace the rupture disks with a more reliable design. This modification has been expedited and plans were to implement it during a mid-cycle outage planned for May pending the availability of parts.

c. Conclusions

Conservative actions were taken to isolate letdown cooler 1-1 when it was identified that one of its rupture discs had partially failed. The use of rupture disks in the CCW system has proven to be an unreliable design. Pending parts availability, the licensee intends to replace the rupture disks with a more reliable design during the May mid-cycle outage. Engineering personnel effectively supported plant operations by using visual and thermal imaging technology to determine that the CCW rupture disk downstream of letdown cooler 1-1 was leaking, thereby minimizing dose and avoiding unnecessary thermal cycling of the letdown coolers.

O7 Quality Assurance in Operations

O7.1 Licensee Self-Assessment Activities

During the inspection period, the inspectors reviewed multiple licensee self-assessment activities, and attended meetings of the Offsite Review Committee, the Station Review Board (SRB), and the Management Review Committee. At the January 7 Offsite Review Committee meeting, the results of an employee attitude and culture survey were presented which indicated that nuclear safety culture, personnel job satisfaction, and supervisor credibility were positives and that unpaid overtime, high workload, downsizing, benefits, and professional growth were negatives. At the January 27 SRB meeting, the board discussed proposed corrective actions for a licensee event report and condition reports which had been generated. Members of the SRB were prepared for the meeting, had good technical knowledge of the issues presented, and occasionally provided feedback to document initiators concerning additional corrective actions. In addition, the inspectors observed that Management Review Committee members effectively prioritized and assigned CRs for action at their January 27 meeting. The inspectors concluded that the results of the employee attitude and culture survey that was performed last year were generally consistent with observed behaviors and attitudes of licensee personnel, that the SRB provided effective oversight of important station administrative processes and that the Management Review Committee effectively prioritized and assigned CRs for action.

O8 Miscellaneous Operations Issues (90712)

O8.1 (Closed) Licensee Event Report (LER) 50-346/1999-001: Failure to comply with TS action statements when EDG 2 was inadvertently rendered inoperable. A description of the event, the licensee's corrective actions, and the disposition of this LER are in paragraph O1.2 of this report.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments (71707, 62707)

The inspectors observed that operations shift management adhered to the restrictions of the risk matrix for the performance of work on risk significant systems. Due to previously identified risk matrix weaknesses, new technology, and increased emphasis on risk-informed decision-making, the licensee had previously commenced updating the level 1 probabilistic safety assessment. The summary of this effort was expected to be finalized in the spring of 1999. Additionally, the licensee was in process of generating a more detailed risk matrix, and was in the process of validating it as of the end of the inspection period. For example, a maintenance activity on breaker AD2DF7, which resulted in the unavailability of the motor-driven feed pump and two of the three air compressors on site, would not have required any additional action using the old risk matrix. Using the new risk matrix, a high risk profile was indicated that caused management to impose additional requirements to the performance of the work to minimize the risk to the plant. The inspectors concluded station personnel were adhering to the current risk matrix and that efforts to update the risk matrix should improve the licensee's risk-informed decision-making process.

M1.2 Assessment of Maintenance Performance During the Past Year

a. Inspection Scope (71707, 62707)

The inspectors evaluated the events of the past year, which included five reactor trips, a plant runback, and maintenance activities pertaining to valve RC-2, and interviewed plant personnel to determine any common underlying root causes to the events, in order to determine if the licensee was taking action to address those underlying root causes.

b. Observations and Findings

Background

The licensee completed a routine refueling outage in May 1998. Subsequent to the outage, several events occurred at the station. These events have been described in detail in several inspection reports which have been previously issued. The following is a brief synopsis of the most noteworthy events.

Events

On June 24, 1998, a tornado hit the site which required extensive efforts among personnel to resolve several equipment deficiencies. The normal online maintenance

planning schedule was disturbed, and many corrective and preventive maintenance activities required rescheduling. In addition, a resin intrusion event into the secondary system required plant shutdowns to perform steam generator and secondary system resin removal activities, which impacted the scheduling process.

On September 24, 1998, engineering and maintenance personnel non-conservatively determined that a malfunctioning solenoid valve associated with a main feedwater regulating valve was functioning correctly. Consequently, during testing, the feed regulating valve inadvertently closed which required operators to manually trip the reactor. The decision to determine that the solenoid valve was operating correctly was made after normal working hours, and the decision process did not solicit the experience base of the rest of the engineering organization. According to licensee personnel, this was done in the interest of getting the surveillance performance done so that the issue could be dispensed with to get to the next days activities (see IR 50-346/98017(DRP) for details of the event).

On October 14, 1998, maintenance workers caused a lockout of busses D1 and D2 when they installed the breaker for AACD1 into its cubicle. This could have been prevented had the maintenance workers, after recognizing difficulty with getting the breaker into its cubicle, taken the time to consult with their supervision and taken the necessary precautions (see IR 50-346/98019(DRP) for details of the event).

On October 21, 1998, due to a poorly written maintenance work order (MWO) instruction and lack of review by the shift manager, the wrong breaker was opened in a circuit causing a reactor runback at 20 percent per minute to about 65 percent power. The MWO did not receive its normal level of review because of electrical maintenance staff workload (see IR 50-346/98017(DRP) for details of the event).

Interviews with Plant Staff

The inspectors interviewed several plant maintenance personnel. They indicated that after the May 1998 refueling outage, there were less staff resources due to not replacing personnel lost through normal attrition. Additionally, some maintenance personnel were not available to the plant during parts of the summer and fall due to being loaned out to the Bayshore station, being used on significant special projects, and summer vacations.

Maintenance staff indicated that additional requirements were placed on them. For example, some of the maintenance activities that were deferred from the period affected by the tornado outage and subsequent shutdowns to perform resin cleanup activities, were scheduled in addition to regularly planned maintenance activities. Consequently, in the effort to get more done with less resources, the amount of time spent generating, reviewing, and walking down work packages decreased. In some cases work packages were not being walked down at all. Additionally, the work process guidelines were not being adhered to for the scheduling of work.

Interviews with Plant Management

Licensee management was in process of conducting a root cause investigation in an effort to identify common causes of the past year's events and developed the following preliminary list of contributing root causes: (1) overconfidence in the quality of the work being performed due to good past performance; (2) a high backlog caused by vacations

during the summer, the tornado event, employee attrition, special projects, and frequent plant shutdowns; (3) loss of skills in the critical functional areas of work planners, maintenance engineers, operations personnel, root cause evaluators, and plant engineers; (4) equipment performance issues after the initiating event such as the failure of inverter YAU during the tornado event and the rupture disk failure during the lockout of busses D1 and D2; (5) lack of emphasis on human performance such as the human performance issues that pertained to valve RC-2; and (6) decision-making processes were less than adequate such as the decision to declare a solenoid valve operable when it was not and the shift manager's decision to assume that a work package was correct in removing a fuse from a component without validating the effect on the plant.

Management efforts to address the above contributing root causes have been to: (1) provide emphasis on not being complacent, to communicate realistic management expectations and not to allow work-arounds or shortcuts to get work done; (2) the work schedule was adjusted to match the labor available to perform the work by moving work into the future; (3) as an interim measure, a maintenance review committee was formed to provide more review of work packages; (4) the protected train philosophy was more rigidly adhered to; (5) management was in process of attempting to hire personnel to fill shortages in maintenance, operations, and plant engineering; (6) a mid-cycle outage was planned starting May 8 to address equipment issues such as leaking pressurizer code safety valves, a high reactor coolant pump upper thrust bearing temperature, a failed containment air cooler, a modification of the code safety rupture disk design to prevent the containment air coolers from accumulating boric acid on the cooling coils, and conducting repairs to a failed turbine bypass valve; (7) a human performance advocate position was created as an interim measure until a more robust human performance program could be formulated. Additionally, two plant-wide work stand-downs were conducted that focused on training to prevent events. The events of the past year were used as examples and the event free tools of the STAR (Stop, Think, Act, Review) principle, procedure adherence, effective communications, and a quality attitude were emphasized; and (8) management emphasized to station personnel during training activities the application of recognizing whether an activity was skill based, rule based, or knowledge based, in order to ensure that the right resources were being applied.

Work Control Process

Plant management has recently expressed a concern that the new maintenance management system software was not providing the tools needed to get work done in an efficient manner. Issues have been documented over the scheduling of work that exceeded the resources to do the work. Supply management has commented that more parts were ready for work, yet more requests for expedited material were being received. Quality assessment audits of maintenance activities conducted in November through December indicated several problems with adherence to the work process guidelines.

c. Conclusions

The inspectors determined that the dominant root cause of the events of the past year were work-management related. Plant management scheduled more work than could be accomplished with available personnel. Consequently, plant personnel did not

always comply with work process guidelines, did not always seek additional assistance when problems were encountered during their activities, spent less time reviewing work packages, and did not always conduct as thorough reviews as necessary before proceeding with tasks.

The corrective actions to stop work, reinforce expectations, and reschedule work have apparently worked to increase the quality of work in the short term as evidenced by the lack of significant human performance related maintenance issues and examples of good performance since November. Station management efforts to increase emphasis on human performance and to initiate staffing increases in critical skill areas should help to balance the work load with available resources in the long term. However, the inspectors determined that the work process guidelines were still not being completely adhered to and challenges remained with the implementation of a new work control process.

M1.3 Maintenance and Surveillance Activities (61726) (62707)

The following maintenance and surveillance activities were observed/reviewed during the inspection period:

- DB-MI-03212 (Rev 05), Channel Functional Test of SFRCS Actuation Channel 2 Logic for Mode 1
- DB-SP-03151, Auxiliary Feed Pump 1 Quarterly test
- DB-SC-03112, SFAS Channel 3 Functional Test
- MWO 99-001041-000, RE 4686 Unit Storm Sewer Outlet Radiation Monitor Element Troubleshooting
- MWO 98-000822-001, Troubleshoot SASS Rack 4 Further
- MWO-99-00176-00, Change out Spent Fuel Pool Filter #1
- DB-SS-03091, Motor Driven Feed Pump Quarterly Test
- Troubleshooting Instrument Air Dryers 3 and 4

Testing and work package documentation were of sufficient detail to perform the assigned activity in a quality manner. Maintenance and testing administrative requirements were adhered to. Personnel conducting surveillance testing used three-way communications and effective reader-worker practices. The inspectors concluded that overall, the conduct of maintenance activities was in accordance with station administrative programs.

M1.4 Control Room Annunciator Alarm Control

During the observation of the performance of procedure DB-SC-03112, "SFAS Channel 3 Functional Test," the inspectors noted that technicians were unaware that they had caused a control room annunciator to alarm. Additionally the procedure did not note that the alarm was expected. The inspectors noted that the control room operators did not respond to the annunciator because it was under the control of the test technicians. After the inspectors brought the annunciator alarm to the attention of the technicians, they determined that the annunciator alarmed due to their performance of the test. They generated a test deficiency to more formally address the situation. Plant management subsequently indicated to the inspectors that control room operations personnel normally have direct responsibility for response to control room annunciators; however, during testing or maintenance activities, the responsibility of some annunciator

alarms is delegated to testing or maintenance personnel. In this case, the operators knew that the annunciator alarm was caused by the test and assumed that responsibility for the alarm had been delegated to the test technicians. The inspectors concluded that the annunciator alarm was not properly acknowledged by licensee personnel until the test technicians were prompted by the inspectors. Contributing to this situation was that the test technicians were unaware that the test they were performing caused an annunciator to alarm.

M4 Maintenance Staff Knowledge and Performance

M4.1 Plant Stand-Down (71707)

On January 22 the inspectors observed portions of a human performance stand-down. During the stand-down, maintenance management was observed providing feedback to maintenance personnel on root causes and corrective actions for maintenance-related events of the past year. This was done in order to impress upon maintenance personnel the importance of performing their jobs in accordance with management expectations. After this presentation, first line supervisors had meetings with their work groups in a less formal manner to discuss ideas to improve performance. Maintenance personnel were observed to be constructively critical about the state and direction of their particular groups' performance. The inspectors determined that the human performance stand-down was beneficial towards ensuring that maintenance personnel were aware of the events of the past year and were involved in improving overall performance.

III. Engineering

E1 Conduct of Engineering

E1.1 General Comments (37551)

In general, the conduct of engineering activities was characterized by careful planning and good communications to the rest of the organization. Detracting from this was a failure of performance engineering personnel to communicate to management that a corrective action plan to make valve CV5010E operable, by ensuring that its stroke time was within its acceptance criteria, had been changed to stroke timing the valve with a more accurate timing device rather than adjusting the limit switch setting.

IV. Plant Support

F4 Fire Protection Staff Knowledge and Performance

F4.1 Fire Brigade Drill (71750)

The inspectors observed the fire brigade respond to a simulated fire outside of the turbine building at the hydrogen skid. The drill scenario was developed from an actual industry event. Fire brigade members manned up and dressed out in fire protection gear, including oxygen tanks, within five minutes and exhibited good three-way communications with the control room. Some fire brigade members did not fully put on their thermal head protectors. The fire brigade captain communicated with the control room personnel the status of the simulated fire, advised the control room of his

recommended course of action, and requested offsite assistance. Oversight and evaluation of the drill was provided by the shift supervisor, the operations fire engineer and a qualified training instructor. Lessons learned from the drill were to be incorporated into training lesson plans. The inspectors determined that fire brigade members were prepared for the simulated fire and that fire protection and training personnel provided effective oversight and feedback.

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 12, 1999. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

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NRC

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INSPECTION PROCEDURES USED

IP 37551:	Onsite Engineering
IP 61726:	Surveillance Observations
IP 62707:	Maintenance Observation
IP 71707:	Plant Operations
IP 71750:	Plant Support Activities
IP 90712:	Onsite Follow-up of Written Reports of Nonroutine Events at Power Reactor Facilities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-346/99001-01	NCV	Tagout Preparation Error Caused an Emergency Diesel Generator to be Inoperable

Closed

50-346/99001-01	NCV	Tagout Preparation Error Caused an Emergency Diesel Generator to be Inoperable
50-346/1999-001	LER	Failure to comply with technical specification action statements

LIST OF ACRONYMS USED

CCW	Component Cooling Water
CFR	Code of Federal Regulations
CR	Condition Report
EDG	Emergency Diesel Generator
ESF	Engineered Safety Feature
IR	Inspection Report
MSSV	Main Steam Safety Valve
MWO	Maintenance Work Order
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PCAQR	Potential Condition Adverse to Quality Report
PDR	Public Document Room
RP	Radiation Protection
RRA	Radiologically Restricted Area
RCS	Reactor Coolant System
RWP	Radiation Work Permit
SFRCS	Steam and Feedwater Rupture Control System
SFAS	Safety Features Actuation System
SRB	Station Review Board
SRO	Senior Reactor Operator
TS	Technical Specification
USAR	Updated Safety Analysis Report
VIO	Violation