January 31, 2003

Mr. Lew W. Myers
Chief Operating Officer
FirstEnergy Nuclear Operating Company
Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION
NRC INTEGRATED INSPECTION REPORT 50-346/02-19

Dear Mr. Myers:

On December 31, 2002, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Davis-Besse Nuclear Power Station. The enclosed report documents the inspection findings which were discussed on January 15, 2003, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. For the entire inspection period, the Davis-Besse Nuclear Power Station was under the Inspection Manual Chapter 0350 Process. The Davis-Besse Oversight Panel assessed inspection findings and other performance data to determine the required level and focus of followup inspection activities and any other appropriate regulatory actions. Even though the Reactor Oversight Process had been suspended at the Davis-Besse Nuclear Power Station, it was used as guidance for inspection activities and to assess findings.

One finding of very low safety significance (Green) was identified in the report. This finding was determined to involve a violation of NRC requirements. However, because of the very low safety significance of the finding, and because it was entered into your corrective action program, the NRC is treating the issue as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC' s Enforcement Policy.

If you contest the subject or severity of the Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 801 Warrenville Road, Lisle, IL 60532-4351; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector office at the Davis-Besse facility.

Since the terrorist attacks on September 11, 2001, the NRC has issued two Orders (dated February 25, 2002, and January 7, 2003) and several threat advisories to licensees of commercial power reactors to strengthen licensee capabilities, improve security force readiness, and enhance access authorization. The NRC also issued Temporary Instruction 2515/148 on August 28, 2002, that provided guidance to inspectors to audit and inspect licensee implementation of the interim compensatory measures (ICMs) required by the February 25th Order. Phase 1 of TI 2515/148 was completed at all commercial nuclear power plants during calendar year (CY) 2002, and the remaining inspections are scheduled for completion in CY 2003. Additionally, table-top security drills were conducted at several licensees to evaluate the impact of expanded adversary characteristics and the ICMs on licensee protection and mitigative strategies. Information gained and discrepancies identified during the audits and drills were reviewed and dispositioned by the Office of Nuclear Security and Incident Response. For CY 2003, the NRC will continue to monitor overall safeguards and security controls, conduct inspections, and resume force-on-force exercises at selected power plants. Should threat conditions change, the NRC may issue additional Orders, advisories, and temporary instructions to ensure adequate safety is being maintained at all commercial power reactors.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at **http://www.nrc.gov/reading-rm/adams.html** (the Public Electronic Reading Room).

Sincerely,

/RA/

John A. Grobe, Chairman
Davis-Besse Oversight Panel

Docket No. 50-346
License No. NPF-3

Enclosure: Inspection Report 50-346/02-19

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-346
License No:	NPF-3
Report No:	50-346/02-19
Licensee:	FirstEnergy Nuclear Operating Company
Facility:	Davis-Besse Nuclear Power Station
Location:	5501 North State Route 2 Oak Harbor, OH 43449-9760
Dates:	November 15 through December 31, 2002
Inspectors:	S. Thomas, Senior Resident Inspector D. Simpkins, Resident Inspector R. Powell, Senior Resident Inspector (Perry Station) M. Bielby, Senior Licensing Inspector J. Belanger, Senior Physical Security Inspector R. Kopriva, Senior Project Engineer (Region IV) P. T. Young, Examiner J. House, Senior Radiation Protection Specialist
Approved by:	Christine A. Lipa, Chief Branch 4 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000346-02-19, FirstEnergy Nuclear Operating Company, on 11/15-12/31/2002, Davis-Besse Nuclear Power Station. Access Control to Radiologically Significant Areas.

This report covers a 6 week period of resident and baseline inspection. The inspection was conducted by resident, Region III, and Region IV inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector-Identified and Self-Revealing Findings

Cornerstone: Radiation Safety

Green. A finding of very low safety significance was identified through self revealing events. On two separate occasions, workers in containment received dose rate alarms on their electronic dosimeters and did not take the actions required by procedure DB-HP-01901, "Radiation Work Permits" Revision 7, and Radiation Work Permit (RWP) 2002-5571. These documents state that radiation worker response requirements for a dose rate alarm are to place the work in a safe condition, exit the work area, and notify Radiation Protection personnel of the alarm.

The finding was more than minor because if left uncorrected workers could receive a greater radiological exposure than was planned for, unnecessary exposure, and could lead to a performance indicator occurrence for unintended dose. The finding was of very low safety significance because the procedure violation was not an As Low As Is Reasonably Achievable issue, did not involve an overexposure, did not involve a substantial potential for an overexposure and did not compromise the licensee's ability to assess dose. The finding was therefore Green. The finding resulted from a violation of Technical Specification 6.8.1 which requires the implementation of radiation protection procedures. (Section 20S1.1)

B. Licensee Identified Findings

No findings of significance were identified.

REPORT DETAILS

Summary of Plant Status

The plant was shutdown on February 16, 2002 for a refueling outage and to perform inspections of vessel head nozzles. During repair of one of the cracked control rod drive mechanism nozzles, significant degradation of the reactor vessel head was discovered. As a direct result of the need to resolve many issues surrounding the Davis-Besse reactor vessel head degradation, NRC management decided to implement Inspection Manual Chapter 0350, "Oversight of Operating Reactor Facilities in a Shutdown Condition With Performance Problems." The fuel was removed from the reactor on June 26, 2002, and the plant remained shut down. For the entire inspection period, the Davis-Besse Nuclear Power Station was under the Inspection Manual Chapter 0350 Process. As part of this process, several additional team inspections continued. The subjects of these inspections included: Containment Health/Extent of Condition, System Health Assurance, Management and Human Performance, and Program Compliance. The results of these inspections will not be included as part of this inspection report, but upon completion, each will be documented in a separate inspection report which will be made publicly available on the NRC website.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity.

1R04 Equipment Alignment (71111.04Q)

a. Inspection Scope

The inspectors verified equipment alignment and identified any discrepancies that impacted the function of the system and potentially increased risk. The inspectors also verified that the licensee had properly identified and resolved any equipment alignment problems that would cause initiating events or impact the availability and functional capability of mitigating systems. Specific aspects of this inspection included reviewing plant procedures, drawings, and the Updated Safety Analysis Report (USAR), to determine the correct system lineup and evaluating any outstanding maintenance work requests on the system or any deficiencies that would affect the ability of the system to perform its function. A majority of the inspector's time was spent performing a walkdown inspection of the system. Key aspects of the walkdown inspection included verification that:

- valves were correctly positioned and did not exhibit leakage that would impact their function;
- electrical power was available as required;
- major system components were correctly labeled, lubricated, cooled, ventilated, etc;
- hangers and supports were correctly installed and functional;
- essential support systems were operational;
- ancillary equipment or debris did not interfere with system performance;
- tagging clearances were appropriate; and
- valves were locked as required by the licensee's locked valve program.

During the walkdown, the inspectors also observed the material condition of the equipment to verify that there were no significant conditions not already in the licensee's work control system. The inspectors performed a walkdown of the following systems:

- service water;
- component cooling water; and
- decay heat removal.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of fire fighting equipment, the control of transient combustibles, and on the condition and operating status of installed fire barriers. The inspectors selected fire areas for inspection based on their overall contribution to internal fire risk, as documented in the Individual Plant Examination of External Events (IPEEE), their potential to impact equipment which could initiate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed at the end of this report, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use, that fire detectors and sprinklers were unobstructed, that transient material loading was within the analyzed limits, and that fire doors, dampers, and penetration seals appeared to be in satisfactory condition.

The following areas or components were inspected:

- service water structure;
- emergency diesel generators; and
- containment fire loading evaluation.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

The inspectors reviewed the data from the latest performance test of decay heat exchanger 1-1. Through discussions with the engineer responsible for this heat exchanger and review of applicable documentation, the inspectors verified:

- the selected testing methodology was consistent with accepted industry practices;
- the test conditions were consistent with the selected methodology;

- the test acceptance criteria were consistent with the design basis values;
- the test results had appropriately considered differences between testing conditions and design conditions; and
- the frequency of the testing, based on trending data, was sufficient to detect degradation prior to the loss of heat removal capabilities below design basis values.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Facility Operating History

a. Inspection Scope

The inspectors reviewed the plant's operating history from September 2001, through October 2002, to assess whether the Licensed Operator Requalification Training (LORT) program had addressed operator performance deficiencies noted at the plant.

b. Findings

No findings of significance were identified.

.2 Licensee Requalification Examinations

a. Inspection Scope

The inspectors performed a biennial inspection of the licensee's LORT program. The inspectors reviewed the current year requalification biennial written examination and annual operating test material to evaluate general quality, construction, and difficulty level. The biennial written examination material consisted of 40 questions in a multiple-choice format. The questions addressed plant and control systems, administrative controls, and procedural limits. The operating test material consisted of dynamic simulator scenarios and job performance measures (JPMs). The inspectors reviewed the methodology for developing the examinations, including the LORT program 2 year sample plan, probabilistic risk assessment insights, previously identified operator performance deficiencies, and plant modifications. The inspectors assessed the level of examination material duplication during the current year annual examination (through four examinations). The inspectors also interviewed members of the licensee's management and training staff, and discussed various aspects of the examination development.

b. Findings

No findings of significance were identified.

.3 Licensee Administration of Requalification Examinations

a. Inspection Scope

The inspectors observed administration of the requalification operating test to assess the licensee's effectiveness in conducting the test and to assess the facility evaluators' ability to determine adequate performance using objective, measurable performance standards. The inspectors evaluated, in parallel with the facility evaluators, the performance of five licensed operators for one operating shift crew during two dynamic simulator scenarios. The operating shift crew was divided into two simulator crews for evaluation purposes. Each simulator crew consisted of three Senior Reactor Operators and two Reactor Operators. The inspectors conducted reviews to verify that all licensed operators participated in at least two evaluated scenarios during the annual test or at some time during the annual training cycle. In addition, the inspectors observed licensee evaluators administer five JPMs to a select number of operators. The inspectors observed the training staff personnel administering the operating test, including pre-examination briefings, observations of operator performance, individual and crew evaluations after dynamic scenarios, techniques for JPM cuing, and the final evaluation briefing for licensed operators. The inspectors evaluated the adequacy of the simulator performance to support the examinations. The inspectors also reviewed the licensee's overall examination security program.

b. Findings

No findings of significance were identified.

.4 Licensee Requalification Training Feedback Process

a. Inspection Scope

The inspectors assessed the effectiveness of the licensee's processes for revision and maintenance of the LORT program, including the use of plant events and industry experience feedback information. The inspectors interviewed licensee personnel (operators, instructors, and management) and reviewed applicable procedures. In addition, the inspectors reviewed the licensee's quality assurance and quality control oversight activities, including training and department self-assessment reports, to evaluate the licensee's ability to assess effectiveness of the LORT program and implementation of appropriate corrective actions.

b. Findings

No findings of significance were identified.

.5 Licensee Remedial Training Program

a. Inspection Scope

The inspectors assessed the adequacy and effectiveness of remedial training administered to one individual that demonstrated unsatisfactory performance during an annual operating test scenario administered the previous week. The inspectors reviewed the training package to ensure that performance and knowledge weaknesses

identified during the annual examination were adequately addressed. The inspectors also reviewed remedial training procedures and records to ensure that the subsequent re-evaluation was properly completed prior to returning the individual to licensed duties.

b. Findings

No findings of significance were identified.

.6 Conformance with Operator License Condition

a. Inspection Scope

The inspectors evaluated facility and individual operator license conformance with the requirements of 10 CFR Part 55. The inspectors reviewed the licensee's program for maintaining active operator licenses to assess compliance with 10 CFR 55.53(e) and (f). The inspectors reviewed the licensee's procedural compliance and the process for tracking on-shift hours for licensed operators. The inspectors also conducted reviews to verify that proficiency watch-standing hours were credited to the correct control room positions in accordance with Technical Specifications. The inspectors reviewed six licensed operator medical records to ensure compliance with 10 CFR 55.21 and 55.25, and medical standards delineated in ANSI/ANS-3.4. In addition, the inspectors reviewed the licensee's LORT program to assess compliance with the requalification program requirements prescribed by 10 CFR 55.59(c).

b. Findings

No findings of significance were identified.

.7 Written Examination and Operating Test Results

a. Inspection Scope

The inspectors reviewed the first 4 weeks' pass/fail results of the 2002 annual written examinations and operating tests administered by the licensee and prescribed by 10 CFR 55.59(a)(2).

b. Findings

No findings of significance were identified.

.8 Conformance with Simulator Requirements

a. Inspection Scope

The inspectors evaluated conformance of the licensee's simulation facility for use in administering the operating test, and as a plant-referenced simulator for satisfying experience requirements for applicants for license applications as prescribed in 10 CFR 55.46. The inspectors reviewed the licensee's process for continued assurance of simulator fidelity with regard to identifying, reporting, correcting, and resolving

simulator discrepancies. The inspectors reviewed simulator certification testing to assess compliance with standards delineated in ANSI/ANS-3.5, 10 CFR 55.46(c) and 55.46(d).

b. Findings

No findings of significance were identified.

.9 Simulator Requalification Observation

a. Inspection Scope

The inspectors observed an operating crew on the simulator during annual requalification examination activities. The inspectors observed two simulator scenarios ORQ-EPE-S113 and ORQ-EPE-S116. The inspectors evaluated crew performance in the areas of:

- clarity and formality of communications;
- ability to take timely actions in the safe direction;
- prioritization, interpretation, and verification of alarms;
- procedure use;
- control board manipulations;
- oversight and direction from supervisors; and
- group dynamics.

The inspectors also observed the performance of the examination evaluators, their critique of the crew's performance, and the self-critique done by the operating crew to verify that any observed weaknesses were identified and documented by the licensee. Additionally, the inspectors reviewed the simulator configuration compared to the actual control room to verify that they were as identical as practical.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed post-maintenance testing activities associated with maintenance on important mitigating and support systems or components to ensure that the testing adequately verified system operability and functional capability with consideration of the actual maintenance performed. The inspectors used the appropriate sections of Technical Specifications and the USAR, as well as the documents listed at the end of this report, to evaluate the scope of the maintenance and verify that the work control documents required sufficient post-maintenance testing to adequately demonstrate that the maintenance was successful and that operability was restored. In addition, the inspectors reviewed CRs to verify that any minor deficiencies identified during these inspections were entered into the licensee's corrective action

system. The inspectors observed and evaluated test activities associated with the following:

- packing adjustment and packing loading check for DH-76;
- thrust check and limit switch adjustment, and packing loading check for CF-1A;
- thrust check and limit switch adjustment, and packing loading check for CF-1B;
- restoration of diesel fire pump fuel oil tank after fouling was discovered and corrected;
- electric fire pump seal replacement and retest; and
- station air compressor #2 testing, following vendor motor refurbishment.

b. Findings

No findings of significance were identified

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors witnessed the surveillance tests and test data to verify that the equipment tested met Technical Specifications, USAR, and licensee procedural requirements, and also demonstrated that the equipment was capable of performing its intended safety functions. The activities were selected based on its importance in verifying mitigating system capability. The inspectors used the documents listed at the end of this report to verify that the tests met the TS frequency requirements; that the tests were conducted in accordance with the procedures, including establishing the proper plant conditions and prerequisites; that the test acceptance criteria were met; and that the results of the tests were properly reviewed and recorded.

The following tests were observed and evaluated:

- emergency diesel generator #2 monthly run; and
- diesel fire pump monthly run.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Radiation Work Permit Review

a. Inspection Scope

The inspectors evaluated Condition Report 02-10075 and the associated corrective actions which documented radiation workers failing to follow procedure requirements in response to electronic dosimetry alarms while working in containment.

b. Findings

The inspectors identified one Green finding of very low safety significance, associated with a Non-Cited Violation that resulted from workers failing to follow procedure and radiation work permit requirements for responding to their electronic dosimeter dose rate alarms.

On December 8 and 10, 2002, two workers in containment received dose rate alarms on their electronic dosimeters and did not take the actions required by procedure DB-HP-01901, "Radiation Work Permits" Revision 7, and Radiation Work Permit 2002-5571. Radiation worker response requirements for a dose rate alarm are to place the work in a safe condition, exit the work area, and promptly notify radiation protection personnel of the alarm. These two examples illustrated the following weaknesses in the licensee's radiological controls practices:

- workers failed to follow requirements of the RWP and site procedure DB-HP-01901, "Radiation Work Permits," Revision 7;
- less than adequate communication of expectations by radiation protection personnel to the workers occurred regarding response to dosimeter alarms; and
- less than adequate assessment and implementation of job controls by radiation protection occurred to ensure the dosimeter alarms provided their intended purpose for protecting the workers.

The workers did not follow the requirements of a site procedure and the radiation work permit for the job.

The inspectors determined that failing to follow procedure and radiation work permit requirements related to dosimeter alarm response was a performance deficiency warranting a significance evaluation. The inspectors concluded that the finding was greater than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B. This issue affected the occupational radiation safety cornerstone to ensure adequate protection of radiation workers from exposure to radioactive material and the attribute for programs and processes. Using the Occupational Radiation Safety Significance Determination Process, the procedure violation was not an As Low As Is Reasonably Achievable issue, did not involve an overexposure, did not involve a

substantial potential for an overexposure and did not compromise the licensee's ability to assess dose. Therefore, the finding is Green.

Technical Specification 6.8.1 requires, in part, that procedures be established, implemented and maintained that cover the activities recommended in Regulatory Guide 1.33, Appendix A, dated November 1972 which include procedures for radiation protection. Procedure DB-HP-01901, "Radiation Work Permits" Revision 7 (Section 4.3.3.c.1) requires, in part, that personnel are expected to respond to a dosimeter alarm by: reading the electronic dosimeter; placing plant equipment in a safe condition (if necessary); exiting the area; and contacting radiation protection. Contrary to this, on December 8 and 10, 2002, two individuals received dose rate alarms but failed to leave the area and contact radiation protection. The failure to follow a procedure requirement is a violation of Technical Specification 6.8.1. However, since the licensee documented this issue as Condition Report 02-10075 in its corrective action program, and because the violation is of very low safety significance, the violation is being treated as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy (NCV 50-346/02-19-02).

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP4 Security Plan Changes (71130.04)

a. Inspection Scope

The inspectors reviewed Revision 21/Change 1 to the Davis Besse Nuclear Plant Security Plan to verify that the changes did not decrease the effectiveness of the submitted document. The referenced revision was submitted in accordance with the regulatory requirements of 10 CFR 50.54(p) by a licensee letter dated July 9, 2002.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA2 Routine Review of Identification and Resolution of Problems (71152)

.1 Licensee Resolution of Condition Reports Containing Mode Restraints

a. Inspection Scope

The inspectors began to review the licensee's process of resolving issues that had been placed into their corrective action program and had also been assigned a restraint for resolution prior to entering a specific operational Mode. The inspectors obtained a listing, dated December 16, 2002, of open condition reports with assigned mode restraints. This list contained approximately:

- 11 Mode 1 restraints; 0 completed
- 57 Mode 2 restraints; 3 completed
- 212 Mode 3 restraints; 18 completed
- 1190 Mode 4 restraints; 39 completed
- 138 Mode 5 restraints; 8 completed, and
- 194 Mode 6 restraints; 64 completed.

Included as part of the corrective action to close out the condition reports that contained Mode restraints were attachments that specifically stated the corrective action taken to lift the Mode restraint. The inspectors evaluated a sampling of condition reports which contained completed corrective actions for restraints assigned to Mode 3, 4, 5 and 6.

b. Findings

No findings of significance were identified.

.2 Documentation of Inspection Finding Tracking Number

As documented in Inspection Report 50-346/02-17, Section 4OA2.2, the inspectors identified numerous examples of the improper implementation of the licensee's corrective action program.

This finding was inadvertently not assigned a tracking number in IR 50-346/02-17. This deficiency will be corrected by assigning this Finding the number 50-346/02-17-03.

4OA3 Event Follow-up (71153)

.1 (Closed) LER 50-346/2002-006: Emergency Diesel Generator Exhaust Piping Not Adequately Protected From Potential Tornado-Generated Missiles

On August 11, 2002, the licensee identified that the last 6 feet of the diesel exhaust piping is not protected from tornado-generated missiles. The licensee's review also identified that an exterior door to a main steam line room was similarly inadequate in protecting the Main Steam Safety Valves. As a result of this condition, the licensee concluded that they were in a condition prohibited by Technical Specifications, in that the current licensing basis requires systems vital to safe shutdown be enclosed in Class I structures designed to withstand tornado-generated missiles. On September 6, 2002, the licensee entered TS 3.8.1.2 due to both EDGs being inoperable due to inadequate missile protection and TS 3.7.1.1 due to the Main Steam Safety Valves being inoperable for the same reason. This condition has apparently existed since original plant construction. The licensee's apparent cause investigation was still in progress at the end of the inspection period as was the final safety significance determination. The inspectors considered this to be an Unresolved Item (URI) (URI 50-346/02-19-01), pending completion of further engineering evaluation by the licensee.

.2 (Closed) LER 50-346/2002-005-00: Potential Clogging of the Emergency Sump Due to Debris in Containment

On December 11, 2002, the licensee issued a revision to this LER to provide additional information regarding the potential clogging of the emergency sump due to debris in containment. This revision superseded LER 50-346/2002-005-00 in its entirety. LER 50-346/2002-005-01 will be reviewed and documented in a subsequent inspection report.

4OA5 Other Activities

One of the key building blocks in the licensee's Return to Service Plan was the Management and Human Performance Excellence Plan. The purpose of this plan was to address the fact that "management ineffectively implemented processes, and thus failed to detect and address plant problems as opportunities arose." The primary management contributors to this failure were grouped into the following areas:

- Nuclear Safety Culture;
- Management/Personnel Development;
- Standards and Decision-Making;
- Oversight and Assessments;
- Program/Corrective; and
- Action/Procedure Compliance.

The inspectors had the opportunity to observe the day to day progress that the licensee made toward completing Return to Service Plan activities. Almost every inspection activity performed by the resident inspectors touched upon one of those five areas. Observations made by the resident inspectors were routinely discussed with the Davis-Besse Oversight Panel members and were used, in part, to gauge licensee efforts to improve their performance in these areas on a day-to-day basis.

The following issues were selected because they occurred throughout the reporting period and illustrated examples of ongoing weaknesses in engineering, operations, and maintenance with respect to Standards and Decision-Making, Oversight and Assessments; and Program/Corrective Action/Procedure Compliance or challenged the ability of the inspectors to assess the current overall status of licensee performance.

.1 Resident Inspector Observations Related to Restart Readiness

a. Poor Maintenance Practices During Repack of the Electric Fire Pump

The electric fire pump packing material was being replaced under a maintenance work order. During a walkdown of the system, the inspectors noted the packing was leaking profusely, even though the pump had been isolated, and that an air trap in the electric fire pump test header was spraying water on nearby components. The inspectors also noted that the pump casing drain line was fouled which caused packing leakage from the pump to overflow onto the floor. When questioned by the inspectors, the SRO overseeing the maintenance activities explained that the test header had been pressurized by a system lineup required to secure the diesel fire pump, but that the air trap should not have been spraying. The inspectors further questioned why the test

header drain line was not draining to the floor drain, even though the isolation valve was open, and were informed it was clogged. An Auxiliary Operator (AO) responded to assist the SRO and commented he had noted the spray from the test header earlier, but had not contacted the SRO because he felt the SRO was too busy with the diesel fire pump. Operations supervision later stated this was not an acceptable communications protocol, and the AO should have contacted either the control room or the SRO for resolution.

The inspectors observed that maintenance workers did not have a copy of the maintenance work order or the appropriate maintenance procedure to work on the electric fire pump packing upon arrival at the work site. Upon questioning, the workers responded they had been sent by their supervisor to stop the leakage, and had left in such a hurry that the procedure and work order were left behind. When informed by the inspectors of the lack of documentation, the SRO requested the workers retrieve it immediately and perform no work until they retrieved it. After obtaining the appropriate work documentation, the workers explained the packing had not yet been adjusted and that leakage was expected. They did not however, know why the drain line was fouled, and proceeded to clear it by rapping on the small copper line with a screwdriver. This same screwdriver was later used to clear the test line drain valve. The maintenance practices used to clear both drain lines were later deemed inappropriate by operations management. The inspectors further questioned why the pump packing was leaking if the pump had been isolated, and were informed the pump isolation valves had leaked for some time.

The last observation made by the inspectors was that the individual tasked with making the adjustment of the packing while the pump was operating was wearing a loose-fitting overshirt, the tails of which were dangling near the pump casing. Since the packing would be adjusted while the pump was operating, the inspectors encouraged the SRO to have the maintenance worker remove the loose outer clothing while working around rotating equipment.

Although none of the issues discussed in this example were of more that minor safety significance or rose to the level of violations of regulatory requirements, they clearly illustrated material deficiencies; a clogged drain line on the test header, a clogged casing drain, a leaking air trap on the test header, at least one leaking isolation valve on the electric fire pump, and poor maintenance practices; a lack of rigor in adhering to work orders, poor communications, and potentially unsafe working conditions. This issue was documented in the licensee corrective action program as Condition Report 02-10203 and the inspectors were informed by the Director of Maintenance that coaching sessions had been conducted with the maintenance workers involved.

b. Unauthorized Impairment of a Spent Fuel Pool Negative Pressure Area Door

Several doors leading to the spent fuel pool area are required to be closed as part of the technical specification requirement for the operability of the Emergency Ventilation System (EVS). The purpose of the EVS was to maintain a negative pressure boundary for the spent fuel pool area. With this boundary not maintained, the EVS cannot maintain a negative pressure on the Spent Fuel Pool area and no nuclear fuel movement is allowed in the fuel handling building.

Maintenance activities required one of these doors to be blocked open to facilitate equipment movement into containment. Security personnel had discussions with the Shift Manager, and erroneously assumed permission was granted to block the door open. When the door was blocked open, weather concerns prompted a temporary plywood cover to be installed limiting airflow but yet allowing equipment passage. Later that shift, a fuel inspection team obtained permission from the Shift Manager and began moving fuel in the spent fuel pool. An operator making a tour discovered the door impairment and fuel movement was stopped.

Although this incident demonstrates a lack of communication and failure to follow procedures, the door impairment was less than the maximum allowed opening in the spent fuel pool negative pressure boundary. Investigations showed turnover discussions were general in nature, and personnel assumed other parts of the organization were tending to the details. Verbal communications were less than adequate, and pre-job briefs did not include adequate detail to allow the discrepancies to be found. Station procedures for door and boundary impairment were not followed. This issue was not more than minor because the requirements of Technical Specifications were not violated. This issue was documented in the licensee corrective action program as Condition Report 02-9770.

c. Incorrect Danger Tag Issue

While performing a walkdown of the auxiliary boiler feedpump 2 to ensure that a safe work isolation had been established, an operator noticed the danger tag that had been hung on valve CW271, was labeled CC271. When the clearance was prepared, the clearance tag was labeled incorrectly as CC271, but was actually hung on the desired valve, CW271. Although this error was found before work had commenced, this illustrates a weakness in the attention to detail during the preparation, review, and performance of establishing the isolation.

Although this example illustrates multiple violations of NOPP-OP-1001, “Clearance/Tagging Program,” the issue was considered minor because no work was completed under the incorrect clearance. This issue was documented in the licensee corrective action program as Condition Report 02-09491.

d. Improper Credit of Proficiency Watch Hours for Licensed Operators

The inspectors identified that the Training Department incorrectly credited hours for watch standing proficiency to both licensed operators standing parallel watches. In accordance with 10 CFR 55.53(e), licensed operators required to maintain active licenses must stand a minimum of seven 8-hour or five 12-hour watches per calendar quarter. Operators can stand parallel watches; however, credit can only be given to the individual that assumes the responsibility and performs the duties associated with the position for the entire watch.

The Training Department reviewed both the unit log and the licensed operator proficiency manual on a quarterly basis to verify that licensed operators stand the minimum number of hours to maintain active licenses. The inspectors identified two instances in which the process used by Training to document the watch hours incorrectly credited proficiency hours for both the individual standing the parallel watch and the individual signed into the unit log. However, in both cases the operators had a sufficient number of additional watch standing hours to meet the minimum number required to be in compliance with 10 CFR 55.53(e). The potential impact of incorrectly documenting the parallel watch standing hours was that an operator may not meet the minimum required proficiency hours to maintain an active license. Although the Training Department did not effectively execute this evolution, this was considered a minor administrative issue and was documented in the licensee's corrective action program as CR 02-09370.

.2 Observations of Deep Drain Valve Maintenance

During this extended outage, the licensee performed preventative or corrective maintenance on 71 valves which required the reactor coolant system to be drained to a level approximately 10 inches above the reactor coolant system hot leg centerline and 3 valves that required the reactor coolant system to be drained to a level approximately 18 inches below the reactor coolant system hot centerline. The inspectors monitored the overall progress of this project and evaluated the work of several valves while in progress. These evaluations included:

- review of the work package;
- observing maintenance in progress;
- ensuring ALARA principles were practiced;
- determining if appropriate FME practices were utilized for jobs that were not actively being worked; and
- appropriate post maintenance tests were identified in the work package.

The inspectors did not identify any findings of significance during the conduct of this inspection.

.3 Completion of Appendix A to TI 2515/148, Rev 1

The inspector completed the pre-inspection audit for interim compensatory measures at nuclear power plants, dated September 13, 2002.

.4 Evaluation of the Status of the Licensee High Energy Line Break Reanalysis

The inspectors followed up licensee resolution for NRC Information Notice 2000-20, "Potential Loss of Redundant Safety-Related Equipment Because of the Lack of High-Energy Line Break Barriers," as part of the Problem Identification and Resolution portion of Inspection Procedure 71111.06. This was evaluated as part of this procedure to assess the potential for flooding of risk significant equipment with high temperature steam or water.

The licensee's evaluation of IN2000-20 identified that design basis documentation pertaining to steam line breaks in the turbine building was potentially incomplete. For example, steam impingement effects from a postulated break in the turbine building on risk-significant high and low voltage switchgear room doors and component cooling water system doors have not been evaluated against standard review plan criteria. Additionally, the auxiliary feedwater pump and component cooling water pump room ventilation systems communicate with the turbine building. The licensee has not rigorously reviewed these ventilation system configurations against the standard review plan criteria. The standard review plan criteria was developed to ensure, among other things, that 10 CFR 50 Appendix A, "General Design Criteria for Nuclear Power Plants," was met for the initial plant design. Because of this potential design basis vulnerability, the licensee performed a risk evaluation of the configurations to determine a time line for resolution. The increase in core damage frequency was 5E-7 which did not exceed the Regulatory Guide 1.174 (An Approach for using Probabilistic Risk Assessment in Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis) threshold for being risk-significant. The licensee had determined that a more detailed evaluation and review needed to be performed and set a time line to complete these reviews by December 4, 2001. Pending further review, this item is an Unresolved Item (URI 50-346/2001-011-01).

Interim Review and Findings

On December 15, 2002, the inspectors reviewed condition report CR 01-2019, "Initial Results of Investigation into NRC Information Notice 2000-20", and the licensee's Calculation No. C-NSA-000.02-010 Revision 1, "Turbine Building High Energy Line Break Evaluation". Based on the results of the evaluation, the licensee concluded that:

- All plant areas identified, with the exception of the CCW pump room and the AFW pump room, are not affected by the consequences of the postulated pipe breaks. The pipe breaks are sufficiently away from the target areas such that they are beyond the direct impact of pipe whip or jet impingement.

- The CCW pump room walls will be subjected to pipe whip load and the jet impingement load from a high energy line break. Some structural damage will result from the pipe rupture and the harsh environment created will enter the room. It was determined that the equipment required for the safe shutdown of the plant located in the CCW room would not be in the direct path of the pipe whip or jet impingement.

- The high energy line break in the area of the AFW pump room may cause impingement into the floor openings of the pump room. Due to the physical separation for the floor openings into the two AFW pump rooms, it would be unlikely that a break on one line would result in a jet impingement into both AFW rooms at the same time. Also, there is sufficient distance from the floor level at 585'-0'' to the AFW pumps that a pipe rupture would not result in a direct impingement onto the AFW pumps. The slab may be subjected to a pipe whip load, but the load would not result in structural damage of the slab.

The licensee has concluded that 1) not knowing to what extent the jet impingement needs to be modeled; 2) the uncertainty of previous evaluations that may or may not have been performed; and 3) the low PSA model risk significance, all of the issues encompassed by the turbine building high energy line break evaluation need resolution but do not constitute an immediate reactor safety concern or an operability concern. The resolution of these issues is being tracked as a Plant Issue and Condition Report CR 01-2019 remains open to ensure that the issues continue to get the proper attention and resources applied toward resolution. Based on this conclusion, URI 50-346/2001-011-01 remains open.

.5 Documentation of Inspection Finding Tracking Number

As documented in Inspection Report 50-346/02-17, Section 4OA5.2, the inspectors observed a licensee employee warning two other licensee employees about the presence of NRC inspectors.

This finding was inadvertently not assigned a tracking number in IR 50-346/02-17. This will be corrected by assigning this Finding the number 50-346/02-17-02.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. Fast, Plant Manager, and other members of licensee management on January 15, 2003. The licensee acknowledged the findings presented. No proprietary information was identified.

.2 Interim Exit Meetings

Interim exits were conducted for:

- Licensed Operator Requalification, 71111.11B, with Mr. M. Roder, Operations Manager, on November 15, 2002.

- Safeguards Inspection with Mr. M. Roder on November 26, 2002.

KEY POINTS OF CONTACT

Licensee
A. Bless, Licensing
D. Bondy, Licensed Operator Requalification Training Lead
G. Dunn, Outage Manager
R. Fast, Plant Manager
D. Gerren, Steam Generator Engineer
J. Grabnar, Manager, Design Engineering
D. Imlay, Superintendent, E&C Maintenance
M. Marler, Manager, Nuclear Training
P. McCloskey, Manager, Regulatory Affairs
G. Melssen, Maintenance Rule Coordinator
L. Meyers, Chief Operating Officer, FENOC
W. Mugge, Manager, Nuclear Security
R. Pell, Manager, Chemistry and Radiation Protection
J. Powers, Director, Nuclear Engineering
R. Rishel, PRA Specialist
M. Roder, Manager, Plant Operations
J. Rogers, Manager, Plant Engineering
R. Schrauder, Director, Support Services
A. Schumaker, Supervisor, Access Control (Acting)
A. Stallard, Operations Support Supervisor
M. Stevens, Director, Work Management
J. Vetter, Quality Assurance Supervisor
G. Wolf, Senior Licensing Engineer

LIST OF ITEMS OPENED CLOSED AND DISCUSSED

Opened

50-346/02-19-01	URI	Final Evaluation of Apparent Cause Evaluation for LER 50-346/2002-006-00. (Section 4OA3.1)
50-346/02-19-02	NCV	Failure to Respond to Dosimeter Alarms. (Section 2OS1)
50-346/02-17-02	FIN	Inappropriate Licensee Notification of NRC Inspector Activity. (Section 4OA5.5)
50-346/02-17-03	FIN	Inadequate Implementation of the Corrective Action Process Which Led to Not Identifying a Potentially Reportable Issue. (Section 4OA2.2)

Closed

50-346/2002-006	LER	Emergency Diesel Generator Exhaust Piping Not Adequately Protected From Potential Tornado-Generated Missiles. (Section 4OA3.1)
50-346/2002-005-00	LER	Potential Clogging of the Emergency Sump Due to Debris in Containment. (Section 4OA3.2)
50-346/02-19-02	NCV	Failure to Respond to Dosimeter Alarms. (Section 2OS1)
50-346/02-17-02	FIN	Inappropriate Licensee Notification of NRC Inspector Activity. (Section 4OA5.5)
50-346/02-17-03	FIN	Inadequate Implementation of the Corrective Action Process Which Led to Not Identifying a Potentially Reportable Issue. (Section 4OA2.2)

Discussed

50-346/2001-011-01	URI	Design Basis Documentation Pertaining to Steam Line Breaks in the Turbine Building Was Potentially Incomplete. (Section 4OA5.4)

LIST OF ACRONYMS USED

ADAMS	Agency-wide Document Access and Management System
AFW	Auxiliary Feedwater
AO	Auxiliary Operator
ASME	American Society of Mechanical Engineers
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CR	Condition Report
DHR	Decay Heat Removal
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
EVS	Emergency Ventilation System
FENOC	FirstEnergy Nuclear Operating Company
IMC	Inspection Manual Chapter
IR	Inspection Report
IPEEE	Individual Plant Examination of External Events
ISLOCA	Inter-System Loss of Coolant Accident
JPM	Job Performance Measure
LER	Licensee Event Report
LOCA	Loss of Coolant Accident
LORT	Licensed Operator Requalification Training
NCV	Non-Cited Violation
NRC	United States Nuclear Regulatory Commission
OHS	Office of Homeland Security
PARS	Publically Available Records
RO	Reactor Operator
RWP	Radiation Work Permit
SSC	System, Structure or Component
SDP	Significance Determination Process
SFP	Spent Fuel Pool
SM	Shift Manager
SP	Surveillance Procedure
SRO	Senior Reactor Operator
TS	Technical Specifications
URI	Unresolved Item
USAR	Updated Safety Analysis Report

LIST OF DOCUMENTS REVIEWED

1R04 Equipment Alignment

M041A	Piping and Instrumentation Diagram - Service Water Pumps and Secondary Service Water System	Rev. 24
M041B	Primary Service Water System	Rev. 54
M041C	Service Water System for Containment Air Coolers	Rev. 25
OS-020	Operations Schematic - Service Water Sheet 1	Rev. 56
OS-020	Operations Schematic - Service Water Sheet 2	Rev. 25
M036A	Component Cooling Water System	Rev. 24
M036B	Component Cooling Water System	Rev. 30
M036C	Component Cooling Water System	Rev. 25
OS-021	Operations Schematic - Component Cooling Water Sheet 1	Rev. 28
OS-021	Operations Schematic - Component Cooling Water Sheet 2	Rev. 21
OS-021	Operations Schematic - Component Cooling Water Sheet 3	Rev. 9
M033B	Decay Heat Train 1	Rev. 39
M033C	Decay Heat Train 2	Rev. 16
OS-004	Operations Schematic - Decay Heat System Sheet 1	Rev. 32
OS-004	Operations Schematic - Decay Heat System Sheet 2	Rev. 4

1R05 Fire Protection

	Fire Protection General Floor Plan Intake Structure	Rev. 9
A223F	Fire Protection General Floor Plan 585'-0" Level	Rev. 14
	Fire Hazards Analysis Report	
DB-FP-00007	Control of Transient Combustibles	Rev. 01
DSO-91-00086	Intra-company Memorandum - Negation of TERMS Commitment 014852 Required to Revise Transient Combustible Program	5/30/91
NLD-91-07753	Negation of TERMS Commitment	7/3/91
M016A	Station Fire Protection System	Rev. 43

1R07 Heat Sink Performance

DB-PF-4703	Decay Heat Cooler Performance Test (dated 1/31/02)	Rev. 03
USAR, Volume 7, Section 6.3	Emergency Core Cooling System	Rev. 22

1R11 Licensed Operator Requalification

ANSI/ ANS-3.4-1983	Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants	
ANSI/ ANS-3.5-1998	Nuclear Power Plant Simulator for Use In Operator Training and Examination	
AR-02-TRAIN-01	Davis-Besse Nuclear Quality Assessment Report, 1/28-4/16/02	
CR 02-00306	Protective Action Recommendation Procedure Issue, Protective Action Recommendation Training Need Identified for SROs	
CR 02-00468	No Training Review for Plant Modifications	
CR 02-00478	Nuclear Operations Training Staff Levels	
CR 02-00495	Modifications Not Being Provided To Training As Required By Procedure	
CR 02-00496	Improvements for Documentation of Modification Training Tracking	
CR 02-3260	Preliminary Notification of Event on Licensed Operator Requalification Exams	
	Licensed Operator Proficiency Manual	Rev. 7
	Licensed Operator Requalification Exam Sample Plan 2001-2002	
	Licensed Operator Requalification Training Program Training Plan;11/15/01	Rev. 6
	Licensed Operator Requalification Training Program Training Plan; 10/15/02	Rev. 7
	Licensed Operator Requalification Training Schedule, Cycles 01-01 through 01-05, and 02-01 through 02-04	
NT-OT-07001	Licensed Operator Requalification Program	Rev. 6
NT-OT-07002	Instant Senior Reactor Operator Training Program	Rev. 5
NT-OT-07003	Senior Reactor Operator Training Program	Rev. 4
NT-OT-07004	Reactor Operator Training Program	Rev. 5

NT-OT-07012	Operations Supervisory Team Training Program	Rev. 3
NT-OT-07013	Simulator Design Control	Rev. 2
NT-OT-07014	Simulator Physical Fidelity	Rev. 2
NT-OT-07015	Simulator Functional Fidelity	Rev. 1
NT-OT-07016	Simulator Instructor Control Functions	Rev. 1
NT-OT-07017	Shift Manager Training Program	Rev. 3
	One Individual Simulator Evaluation Remediation Plan; 11/8/02	
	Open Simulator Work Order Report; 10/25/02	
ORQ-EPE-S113	EOP Simulator Evaluation-Loss of TPCW Hi Level Tank Level, RCS Leak, Loss of CRD CCW Flow, Loss of All AC	Rev. 7
ORQ-EPE-S120	EOP Simulator Evaluation-FW Conductivity, Non-Isolatable Steam Leak	Rev. 7
ORQ-EPE-S116	EOP Simulator Evaluation-Partial Loss of Instrument Air/Reactor Trip/Post Trip Overcooling	Rev. 6
ORQ-EPE-S124	EOP Simulator Evaluation-Reactor Startup, Loss of Seal Return, Steam Leak	Rev. 4
P-OPS-1	Written Examinations and Quizzes for Operations Training Programs	Rev. 5
P-OPS-3	Requalification Walkthrough Examination	Rev. 5
P-OPS-4	Development and Conduct of Continuing Training Simulator Evaluations	Rev. 9
P-OPS-8	Operations Training Instructor Technical Qualification Program	Rev. 4
Q3/2002	Performance Indicator Data Summary Report	
Regulatory Guide 1.134	Medical Evaluation of Nuclear Power Plant Personnel Requiring Operator Licenses	Rev. 1
Regulatory Guide 1.149	Nuclear Power Plant Simulator Facilities for Use In Operator Training and License Examinations, 10/01	Rev. 3
	Selection of Six Licensed Operator Medical Records (three SRO; three RO)	
	2002 Licensed Operator Curriculum Review Committee Meeting Minutes	
	2002 LORT Annual Operating Test JPMs	

	2002 LORT Annual Operating Test Scenarios for first 4 weeks (October 21 and 28; November 4 and 11, 2002)	
	2002 LORT Biennial RO and SRO Written Examinations (first 2 weeks)	
	2002 LORT Training Attendance Sheets	
G-OPS-2	Development and Maintenance of Operations Training Unit Instructional Packages	Rev. 2
	Simulator Test TAB01; Manual Reactor Trip	
	Simulator Test TAB04; Simultaneous Trip of All Reactor Coolant Pumps	
	Simulator Test N06; 60 Minutes Drift Test	
OPS-JPM-102	Upgrade an Event and Perform Notifications	Rev. 1
OPS-JPM-004	Control Room Evacuation, Reactor Operator Actions in the Control Room	Rev. 0
OPS-JPM-017	Recover from Letdown Isolation	Rev. 0
OPS-JPM-088	Perform Attachment 1 of the Turbine Trip AB	Rev. 0
OPS-JPM-048	Energizing the NNI-X Cabinets	Rev. 1
OPS-JPM-043	Manual Operation of the Emergency Diesel Generator 1 or 2 from EDG Room	Rev. 1

1R19 Post-Maintenance Testing

Mechanical Maintenance Procedure DB-MM-9059	Packing Valves	Rev. 07
Work Order 02-3620-000	DH76: Repack During 13 Refueling Outage Deep Drain	Rev. 00
Work Order 02-5687-000	CF1A: Repack, Replace Packing Gland Studs, Pins, and Nuts	Rev.00
Work Order 02-5596-00	Repack CF1B and Replace Packing Gland Studs, Pins, and Nuts	Rev. 00
Work Order 02-5596-01	Disassemble CF1B as Required, Troubleshoot Cause of Stem Score, Replace Valve Stem, and Reassemble Using a New Body to Bonnet Gasket	Rev.00
Work Order 02-6431-004	Remove Motor/Return to Vendor/ Reinstall	

DB-SS-04013	Station Air Compressor No. 2 Performance Check	Rev. 02
DB-FP-04047	Diesel Fire Pump Test	Rev. 01
DB-OP-06610	Station Fire Suppression Water System	Rev. 03
Work Order 02-7663-000	Packing gland on pump outboard runs hotter than desired	Rev. 04
Work Order 02-7717-000	DFP speed slowly decreased	Rev. 05
CR 02-10222	Diesel Fire Pump Day Tank Contaminated	
CR 02-10189	DFP Speed Decrease	
	Test Data Sheet for CF1A Unseating and Closing Thrust Values, dated 12/06/02	
	Test Data Sheet for CF1B Unseating and Closing Thrust Values, dated 12/12/02	

1R22 Surveillance Testing

DB-SC-03071	Emergency Diesel Generator Monthly Test	Rev. 03
DB-FP-04047	Diesel Fire Pump Test	Rev. 01

2OS1 Access Control to Radiologically Significant Areas

DB-HP-01901	Radiation Work Permits	Rev. 7
2002-10075	Radiation Work Permit, Replace Thermo-well RTD Bosses - RCS East and West Hot Legs;	Rev. 0

4OA2 Problem Identification and Resolution

MODE 6

CR 02-04336	CRNVS Equipment Requirements During Fuel Handling in Modes 5 and 6.
CR 02-04752	Latent Issue Review - Emergency Diesel Generator - Fire Damper FD1036 Possible Obstruction; Nuclear Operating Administrative Procedure
CR 02-00794	Containment Purge Valve CV5007 Failed Stroke Time
CR 02-02903	Boric Acid on DH-136
CR 02-03022	Midland II Head Nozzle No. 64 Contract Variation 21352-9 Use-As-Is Disposition

CR 02-03114	Decay Heat Valve 14A
CR 02-03161	Thread Stripped on Manual Actuator of DH-14A
CR 02-03175	Tapped Hole on DH-14A Requires Repair
CR 02-03216	#1 Service Water Pump Motor Connection Box Has Missing Screws
CR 02-03238	SW Pump #1 Strainer Handhole Cover Leak
CR 02-03337	Documentation Could Not Be Located
CR 02-03339	Reactor Cavity Seal Plate Seal Clamp
CR 02-03478	EDG #2 Room Temperature
CR 02-03508	RCM 5052 Low Flow Switch Failed to Actuate
CR 02-03542	Potential “Non-Q” Material Installed on Decay Heat Pump #2 Rotating Element
CR 02-03550	Operability Determination Concluded an SSC is Inoperable
CR 02-03654	Broken Insulator on Connection Post
CR 02-03660	Containment Purge Radiation Monitor 5052 Test Failure
CR 02-03662	CV-5003A Did Not Fully Close During Testing
CR 02-03711	LIR Review- EDG - Nuisance Alarm at Local EDG Panel for Alternate Shutdown
CR 02-03833	Ineffective Implementation of Corrective Action For CR 01-2820 CCW Flow to EDG’s
CR 02-03990	Failure of EDG1 Overspeed Trip Test
CR 02-04336	CRNVS Equipment Requirements During Fuel Handling in Mode 5 and 6
CR 02-04390	SHRR/ EDG 1-2 Ventilation
CR 02-04561	LIR - EDG 2 Cabinet C3618 Raceway Cover Screw Missing
CR 02-04576	LIR - EDG 2 Generator Termination Cabinet Conduit Bushing Loose
CR 02-04629	LIR - Emergency Diesel Generator 1-2 Fuel Oil System
CR 02-04752	LIR - EDG - Fire Dampner FD 1036 Possible Obstruction
CR 02-05049	PR/LMAP: Undocumented Sample Frequency Changes
CR 02-05110	FME in the Refuel Canal - Deep End
CR 02-05123	Issue with CCW Flow to Decay Heat Coolers - Based on CR 02-03278 G.I. Review

CR 02-05340	Could not Recirc BAAT 1 Per Procedure
CR 02-05508	P42-2 Oil V-Rings Not Installed Correctly
CR 02-05584	Replacement Reactor Head
CR 02-06074	LIR: EDG Exhaust Piping Stress Problem Does Not Meet Vendor Limits for Adapter
CR 02-06230	LIR EDG - Missing Minimum Wall Calculation in Calc. 123B/C4
CR 02-06240	LIR: EDG Fuel Oil Procurement Does Not Commitment Per Log 950 LTR
CR 02-06288	#2 Decay Heat Pump Mechanical Seals Leaking
CR 02-06466	LIR: EDG Soakback Pump Equivalency
CR 02-06665	LIR - EDG The Operating Temperature of the Governor Actuator is Not Known
CR 02-06882	LIR: EDG Lube Oil., Jacket Water & Generator Bearing Oil Temperature
CR 02-06993	LIR - EDG Main Bearing Temperature Limits
CR 02-08010	LIR - EDG General Electric SBM Switches Failure (IN 98-19)
CR 02-08708	EVS Fan #1 Flexible Discharge Boot Leakage

MODE 5

CR 02-01062	Loose Fuel Rod in Fuel Assembly NJ100U
CR 02-01483	Foreign Material in Refueling Canal
CR 02-02042	Incomplete Dimension Recordings on Data Sheet
CR 02-02693	Inadequate VT-2 Qualification of Personnel
CR 02-04119	LIR-RCS: TE-RC-13-1 is not Contacting the RC13A Valve Body
CR 02-04120	LIR-RCS Walkdown: ID Tag Deficiencies
CR 02-04260	SHRR Main Steam Valve Packing Followers
CR 02-05491	LIR-SW: Bent/Damaged Instrument Tubing

MODE 4

CR 01-02803	ISI Examination of HPI Pump #2 Casing Studs
CR 02-00690	Leakage Detected During LLRT of Pen 102 Electrical Penetration Assemblies
CR 02-00831	Turbine Control Valve Stem Seal Leakoff Line Damage

CR 02-00965	ICS-11AS, #2 Atmospheric Vent Valve Air Drop Test Exceeds 5%, Per DB-PF-03440
CR 02-01138	Oil Found on Cold Leg Piping
CR 02-01166	OTSG OEM Plugged Tube Stabilization
CR 02-01403	Catastrophic Failure of Limit Switch Compartment Gasket
CR 02-05190	ORR - System Condition Report for Steam Generators

4OA3 Event Follow-up

LER 2002-006	Emergency Diesel Generator Exhaust Piping Not Adequately Protected From Potential Tornado-Generated Missiles
LER 2002-005 Revision 00	Potential Clogging of the Emergency Sump Due to Debris in Containment

4OA5 Other Activities

Work Order 02-2983-00	CF-30 - Open and Inspect to Determine Cause of the Banging and What Damage May Be Occurring.	Rev. 00
Work Order 02-3355-00	Remove Bonnet and Internals for HP50 to Provide Access for the Inspection of the HPI Thermal Sleeve	Rev. 00
Work Order 02-3356-00	Remove Bonnet and Internals for HP51 to provide Borescope Access for the Inspection of the HPI Thermal Sleeve	Rev. 00
CR 02-10203	Fire Pump Issues Noted During Repacking of Electric Fire Pump	
CR 02-10051	Electric Fire Pump Packing Gland Temperature	
Work Order 02-6370-000	Core Flood Tank 1 to Reactor Check - Thread Engagement on Body to Bonnet Nuts Insufficient	Rev. 04
Work Order 02-6361-000	Core Flood Tank 2 to Reactor Check - Repack CF 28, W/O 02-5597-000	Rev. 04
CR 02-09770	SFP Negative Pressure Area Door Impaired, Potential T.S. 3.9.12 Violation	
CR 02-09491	Incorrect Danger Tag Found on Valve	
Drawing M102	Plant Elevation 623'-0''	Rev. 11

Drawing M103	Plant at Elevation 603'-0''	Rev. 17
Drawing M104	Plant at Elevation 585'-0''	Rev. 12
Drawing M105	Plant at Elevation 566'-0'' & 567'-0''	Rev. 5
Drawing M-121	Containment & Auxiliary Building Plan El. 623'-0''	Rev. 15
Drawing M-122	Containment & Auxiliary Building Plan El. 603'-0''	Rev. 17
Drawing M-123	Containment & Auxiliary Building Plan El. 585'-0''	Rev. 27
Drawing M-124	Containment & Auxiliary Building Plan El. 565'-0''	Rev. 18