

July 28, 2005

EA-03-0214
EA-04-0217

Mr. Mark B. Bezilla
Vice President-Nuclear, Davis-Besse
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 05000346/2005007
AND OFFICE OF INVESTIGATIONS REPORT NO. 3-2003-029

Dear Mr. Bezilla:

On June 30, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Davis-Besse Nuclear Power Station. The enclosed inspection report documents the inspection findings which were discussed on July 8, 2005, with you and other members of your staff. This also refers to the investigation completed by the NRC Office of Investigations on October 4, 2004 (EA-04-0217).

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 (IMC) 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. In a letter dated May 19, 2005, the Agency communicated to the licensee its intention to close the IMC 0350 Panel for Davis-Besse and transition to oversight under the Reactor Oversight Program. This transition back to the Reactor Oversight Program would be effective as of July 1, 2005.

Based on the results of this inspection, there was one NRC-identified finding of very low safety significance which involved a violation of NRC requirements. However, because this violation was of very low safety significance and because it was entered into your Corrective Action Program, the NRC is treating the issue as a Non-Cited Violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. The NRC has also determined through information

developed during this inspection and subsequent investigation, that the act of removing information from a Licensee Event Report submitted in 1997 was not deliberate. Notwithstanding this conclusion, the NRC has determined that a Severity Level IV violation of NRC requirements occurred. The violation is also being treated as an NCV, consistent with Section VI.A of the Enforcement Policy. The NCVs are described in the subject inspection report.

If you contest the subject or severity of a 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 copies to the Regional Administrator Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-001; and the NRC Resident Inspector at Davis-Besse.

In accordance with 10 CFR 2.390 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/

Steven A. Reynolds, Chairman
Davis-Besse Oversight Panel

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

Enclosure: Inspection Report 05000346/2005007
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-346

License No: NPF-3

Report No: 05000346/2005007

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Davis-Besse Nuclear Power Station

Location: 5501 North State Route 2
Oak Harbor, OH 43449-9760

Dates: May 14 through June 30, 2005

Inspectors: S. Thomas, Senior Resident Inspector
J. Rutkowski, Resident Inspector
M. Salter-Williams, Resident Inspector
J. House, Senior Radiation Specialist
R. Winter, Reactor Engineer
A. Garmoe, Reactor Engineer

Approved by: C. Lipa, Chief
Branch 4
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000346/2005007; 5/14/2005 - 6/30/2005; Davis-Besse Nuclear Power Station; Fire Protection and Event Followup.

This report covers a seven week period of resident inspection. The inspection was conducted by Region III inspectors and resident inspectors. One Severity Level IV Non-Cited Violation and one Green finding associated with one Non-Cited Violation were identified. 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-Revealed Findings

Cornerstone: Mitigating Systems

- Green. A finding of very low safety significance was identified by the inspectors which was a violation of 10 CFR 50, Appendix R, Section III.J. The licensee failed to identify the loss of power to four emergency battery packs and associated lights for a period of time which exceeded eight hours and which existed for a period of potentially up to eight days. The battery packs and lights were used by the licensee to show compliance with 10 CFR 50 Appendix R, Section III.J. Once identified, the licensee promptly re-energized the charging circuit. The primary cause of this violation was related to the cross-cutting area of Problem Identification and Resolution because licensee personnel had multiple opportunities to question the loss of lighting in an area frequented by plant personnel which was caused by de-energization of the same circuit that provided power to the emergency battery pack charging circuit. Once identified, the licensee promptly restored the lights.

The finding was more than minor because the issue affected the reliability objective and equipment performance attribute of the mitigating systems cornerstone. The finding was of very low safety significance because the discharged emergency battery packs and associated lighting represented a low degradation of the emergency lighting element of the fire protection program. (Section 1R05)

Cornerstone: Initiating Events

- Severity Level IV. A self-revealing issue was identified, during preparations for an NRC inspection, when the licensee discovered that Licensee Event Report (LER) 05000346/1997-004 was not complete and accurate in all material respects. Specifically, information had been removed from the LER prior to issuance. The deleted information was considered to be material by the NRC because if it had been complete and accurate, it would have resulted in additional inspection activities in the area of the completeness of corrective actions associated with this issue. Subsequent to the discovery of the deficiency, the licensee submitted Revision 01 to

LER 05000346/1997-004, on March 26, 2004, which documented the originally omitted information.

Because the issue affected the NRC's ability to perform its regulatory function, this finding was evaluated with the traditional enforcement process. Following a review of the additional information, inspectors determined that licensee corrective actions to address the material conditions documented in the original LER were sufficient. This issue was determined to be a Severity Level IV Non-Cited Violation, consistent with Section VI.A.1 of the NRC Enforcement Policy, of 10 CFR 50.9. (Section 4OA3)

B. Licensee-Identified Findings

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's Corrective Action Program (CAP). This violation and licensee's corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

At the beginning of the inspection period, the plant was operating at approximately 100 percent power. During this inspection period, a brief power reduction of less than 10 percent occurred on June 3, 2005, to support planned testing. Once testing was completed, power was restored to approximately 100 percent. The plant operated at approximately 100 percent power for the remainder of the inspection period.

For the entire inspection period, the Davis-Besse Nuclear Power Station was under the Inspection Manual Chapter (IMC) 0350 Process. Beginning July 1, 2005, oversight for the Davis-Besse Nuclear Power Station will be in accordance with the Reactor Oversight Program.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

The inspectors reviewed the licensee's procedures and implementation of actions to mitigate the potential adverse effects from the annual mayfly swarms. The inspectors verified that there were regular operator tours to inspect equipment that could be impacted by the mayflies. A majority of the inspector's time was spent performing walkdown inspections. Key aspects of the inspection included:

- checking that ventilation filters were free from excessive buildup of mayflies and other material that could impair ventilation flow;
- checking that potentially impacted switchgear and pump ventilation inlets were not clogged or did not have severely restricted passages; and
- checking that operator actions defined in the licensee's procedure maintained readiness of essential systems.

This constitutes one sample.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04Q)

a. Inspection Scope

On June 2, 2005, the inspectors verified equipment alignment for the Decay Heat System Train 2 during planned maintenance activities on Decay Heat Pump 1. The inspectors evaluated the system for any discrepancies that might impact the function of the system's components or contribute to an increase in plant risk. The inspectors also determined if the licensee had properly identified and resolved any equipment alignment problems that would increase the probability of an initiating event or adversely impact the availability and functional capability of the decay heat system. Specific aspects of this inspection included reviewing plant procedures, drawings, and the Updated Safety Analysis Report, to determine the correct system lineup and evaluating any outstanding maintenance work requests on the system or any deficiencies that would adversely affect the ability of the system to perform its function. A majority of the inspectors' time was spent performing a walkdown inspection of the system. 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. Key aspects of the walkdown inspection included determining whether:

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

This constitutes one sample.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection inspections focused on the availability, accessibility, and condition of fire fighting equipment, the control of transient combustibles, and the condition and 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, and their potential to impact equipment which could initiate a plant transient. Inspectors checked whether fire hoses and extinguishers were in their designated locations and available for immediate use, whether fire detectors and sprinklers were unobstructed, whether

transient material loading was within the analyzed limits, and whether fire doors, dampers, and penetration seals appeared to be in satisfactory condition.

The following areas were inspected:

- Low Voltage Switchgear Room F Bus (Fire Area X, Room 248);
- Condenser Pit and Heater Drain Pump Area (Fire Area II, Room 246);
- Auxiliary Building Elevation 465 Main Passageway (Fire Area G, Room 227); and
- Cable Spreading Room (Fire Area DD).

This constitutes four samples.

b. Findings

Introduction: The inspectors identified a Non-Cited Violation (NCV) of 10 CFR 50, Appendix R, Section III.J, having a very low safety significance (Green), for failing to identify the loss of power to four emergency battery packs and associated lights for a period of time which exceeded eight hours and which existed for a period of potentially up to eight days. The battery packs and lights were used by the licensee to meet 10 CFR 50 Appendix R, Section III.J. The licensee failed to identify the inoperable equipment until the inspectors questioned the status of a battery pack that had no status light indications.

Description: On June 21, 2005, the inspectors questioned licensee personnel on the status of an emergency battery pack and associated lamps in the stairwell near the cable spreading room after the inspectors noticed that the battery pack did not have any status lights lit. An operable and functioning battery pack has a green charging status light and no alert or trouble indications. Licensee personnel checked the status of this light and found that the AC power breaker (breaker 22 on lighting panel L5071) to this battery pack had tripped. This de-energized circuit caused three additional battery packs and additional other non-vital circuits to become inoperable. One of the other circuits included a fluorescent light in the area just inside the entrance to the main control room.

The battery packs impacted were designated as BP502N, BPAB1E1, BPAB1E2, and BPAB1S2. All of the lights are listed in licensee documents as being credited for licensee compliance to 10 CFR 50, Appendix R requirements. Section 6.1 of the licensee's Fire Hazard Analysis Report described emergency lighting use in the Fire Protection Program. The Fire Hazard Analysis Report is incorporated by reference in the Davis-Besse Updated Safety Analysis Report (USAR). The licensee's Operating License, NPF-3, Section 2.C(4), required all provisions of the approved Fire Plan, as described in the USAR, to be maintained. Battery pack BP502N is located in the back panel area of the control room. Battery packs BPAB1E1, BPAB1E2, and BPAB1S2 are located in the stairwell that provides an access path to and egress path from the main control room.

The impacted battery packs were designed to deliver eight hours of lighting. The four battery packs were found with discharged batteries indicating that the charging circuit

had been de-energized for a minimum of eight hours. The last monthly check of the battery packs conducted by the licensee was completed on June 13, 2005. Therefore, the charging circuit could have been de-energized for up to eight days.

Analysis: The inspectors determined that failing to identify multiple inoperable emergency battery packs for a period of time in excess of eight hours 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, "Issue Disposition Screening," issued on May 19, 2005, in that the issue affected the reliability objective and equipment performance attribute of the mitigating systems cornerstone. The finding also affected the cross-cutting area of Problem Identification and Resolution because licensee personnel did not identify or question indications of loss of power to the battery packs and the circuit feeding the fluorescent light, although the areas were frequented by licensee personnel.

The inspectors utilized IMC 0609, Appendix F, "Fire Protection Significance Determination Process," dated February 28, 2005, to assess the significance of the finding. Since the discharged emergency battery packs and associated lighting represented a low degradation of the emergency lighting element of the fire protection program, the finding was determined to be of very low safety significance. With the other emergency lights that were available near the inoperable emergency battery packs, licensee personnel would have been able to perform required actions within the area behind the control room panels and would have only been minimally impacted by the degraded lighting in the stairwell which is used as an egress route from the control room.

Enforcement: 10 CFR 50, Appendix R, Section III.J, states that emergency lighting units with at least 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto. Operating License NPF-3 required that the licensee maintain all provisions of the approved fire protection program, which included emergency lighting. Contrary to this requirement, three emergency battery packs and associated lights, which were located in the control room egress route, and one emergency battery pack and associated lights, located behind the main control room panels, were not maintained available for a period of greater than eight hours and potentially up to eight days. Since other emergency lights were available near the inoperable emergency battery packs, this resulted in a low degradation of fire protection program elements. Because this issue is of very low safety significance and has been entered into the licensee's corrective action program (CR 05-03477 and CR 05-03809), this violation is being treated as an NCV, consistent with Section VI.A of the NRC's Enforcement Policy (NCV 05000346/2005007-01).

1R12 Maintenance Effectiveness Periodic Evaluation (71111.12B)

.1 Periodic Evaluation

a. Inspection Scope

The inspectors examined the periodic evaluation report completed for the period of May 2002 through March 2004. To evaluate the effectiveness of Maintenance Rule 10 CFR 50.65(a)(1) and (a)(2) activities, the inspectors examined a sample of (a)(1) Action Plans, Performance Criteria, Functional Failures, and Condition Reports (CRs). These documents were also reviewed to determine whether the threshold for identification of problems was at an appropriate level and the associated corrective actions were appropriate. Also, the inspectors reviewed the maintenance rule procedures and processes. The inspectors focused the inspection on the following four systems:

- Reactor Coolant System (RCS);
- Emergency Diesel Generator (EDG);
- Auxiliary Feedwater System; and
- 480 VAC System.

The inspectors determined whether the periodic evaluation was completed within the time restraints defined in 10 CFR 50.65 (once per refueling cycle, not to exceed 24 months). The inspectors also ensured that the licensee reviewed its goals, monitored performance of Structures, Systems, and Components (SSCs), reviewed industry operating experience, and made appropriate adjustments to the maintenance rule program as a result of the above activities.

The inspectors determined whether:

- the licensee balanced reliability and unavailability during the period, including a review of high safety significant SSCs;
- (a)(1) goals were met, whether corrective action was appropriate to correct the defective condition, including the use of industry operating experience, and whether (a)(1) activities and related goals were adjusted as needed; and
- the licensee has established (a)(2) performance criteria, examined any SSCs that failed to meet their performance criteria, and reviewed any SSCs that have suffered repeated maintenance preventable functional failures, including a verification that failed SSCs were considered for (a)(1).

In addition, the inspectors reviewed maintenance rule self-assessments that addressed the maintenance rule program implementation.

This constitutes four samples.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors reviewed the licensee's response to risk significant activities. These activities were chosen based on their potential impact on increasing overall plant risk. The inspections were conducted to review whether the planning, control, and performance of the work was done in a manner to manage overall plant risk, and that contingency plans were in place where appropriate. The licensee's daily configuration risk assessments, observations of shift turnover meetings, observations of daily plant status meetings, and the documents listed at the end of this report were used by the inspectors to determine whether the equipment configurations had been properly listed, whether protected equipment had been identified and was being controlled where appropriate, whether significant aspects of plant risk were being communicated to the necessary personnel, and whether, as necessary, existing work plans were adjusted to accommodate the change in planned equipment operability. The inspectors evaluated the following licensee activities:

- On June 16 through June 20, 2005, the inspectors reviewed the licensee's initial response and work schedule adjustments associated with the EDG 1 unexpected load increase transient during a schedule surveillance test. This required the EDG to remain inoperable for longer than originally scheduled. Also during this time period, the inspectors evaluated the licensee's scheduling of EDG 1 testing during high grid loading conditions; and
- On June 22, 2005, the inspectors reviewed the licensee's response and corrective actions associated with unexpected computer alarms received in the control room for low main feedwater pump 2 pressure and loss of indication on the control room main panel.

This constitutes two samples.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected condition reports which discussed potential operability issues for risk significant components or systems for review. These condition reports and applicable licensee operability evaluations were reviewed to determine whether the operability of the components or systems was appropriately supported. The inspectors

compared the operability and design criteria in the appropriate sections of the USAR and Technical Specifications (TS) to the licensee's evaluation of the issues to determine whether the components or systems were operable. Where compensatory measures were necessary to maintain operability, the inspectors determined whether compensatory measures were in place, would work as intended, and were properly controlled.

The following samples were evaluated:

- CR 05-03225; Unexpected Containment Atmosphere Sample Result.
The inspectors reviewed the licensee's activities to investigate more frequent than expected containment pressure releases and lower than expected containment oxygen levels. As part of this inspection, the inspectors reviewed the licensee's conclusion regarding the potential impact of the observed conditions on the containment design basis.
- CR 05-03314; Received DS8674S Trouble Alarm on Control Room Simplex Fire Detection System.
The inspectors reviewed the licensee's approach and activities to investigate a series of three fire detector with indication of problems. The detectors are located in fire zone 220 which is in the lower level of the containment building outside the interior biological shield. The inspectors' review included determining if the licensee reasonably concluded that the conditions causing the indications and subsequent detector failures would not adversely impact the containment design basis or a more significant number of fire detection devices within the containment building.
- CR 05-03404; EDG 1 Inadvertent kW Increase During Monthly Loaded Test DB CS-03070.
The inspectors reviewed the licensee's actions to find the cause of the problem and, upon not being able to reproduce the conditions, the rationale for considering the diesel capable of performing its design functions. This included reviewing the appropriateness of short-term increased frequency testing.

This constitutes three samples.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed post-maintenance testing activities to ensure that the testing adequately verified system operability and functional capability with consideration of the actual maintenance performed. The inspectors referenced the appropriate sections of the TS, the USAR, as well as the documents listed at the end of this report, to evaluate the scope of the maintenance and determine whether the work control documents

required sufficient post-maintenance testing to adequately demonstrate that the maintenance was successful and that operability was restored. The inspectors observed and evaluated test activities associated with the following sample:

- static and energized motor testing of service water pump area exhaust fan 3 on June 2 and 3, 2005, after replacement of the exhaust fan's motor;
- functional testing of safety feature actuation system (SFAS) channel 1 after replacement of the RCS pressure low-low SFAS switch (PS2RC2B4) on June 6, 2005;
- functional testing of reactor trip breaker "D" on June 15, 2005, after replacement of the trip target relay indication; and
- functional testing of reactor protection system channel 3, on June 16, 2005, after replacement of the power range test module and followup activities to understand the voltage responses observed during post-maintenance testing.

This constitutes four samples.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

On May 24, 2005, the inspectors observed the Channel Functional Test and Calibration of Steam Feedwater Rupture Control System Actuation Channel 2 to determine whether the equipment tested met TS, Updated Safety Analysis Report, and licensee procedural requirements, and also demonstrated that the equipment was capable of performing its intended safety functions. The inspectors used the documents listed at the end of this report to determine whether the test met the TS frequency requirements; whether the test was conducted in accordance with the procedures, including establishing the proper plant conditions and prerequisites; whether the test acceptance criteria were met; and whether the results of the test were properly recorded and reviewed.

This constitutes one sample.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed temporary modification 05-0015, Revision 00 and Revision 01. The temporary modification addressed installation of a Belzona patch to repair a pinhole leak in the fillet weld between the seal housing and first pipe nipple on the main

feedwater pump (MFP) 2. The temporary modifications were installed to limit steam leakage, and therefore, eliminate potential safety and housekeeping issues. The licensee installed the temporary modification on June 1, 2005 with MFP 2 in service. Initially, the installation was successful in stopping the leak. However, on June 3, 2005, the Belzona patch failed and temporary modification 05-0015 Revision 01 was written to install a second Belzona patch to stop the leakage.

The inspectors reviewed the temporary modification and associated 10 CFR 50.59 screening against system requirements to determine whether there were any adverse effects on system operability or availability and if consistency with plant documentation and procedures was maintained. The inspectors attended the pre-job briefing on June 1, 2005 and observed the installation activities. Additionally, the inspectors reviewed the work orders governing the repairs.

This constitutes one sample.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed the plant USAR to identify applicable radiation monitors associated with transient high and very high radiation areas including those used in remote emergency assessment. These radiation monitors included, but were not limited to:

- RE-8401 Reactor Coolant and Radwaste Sample Room;
- RE-8426 Spent Fuel Pool Area;
- RE-8446 Spent Fuel Pool Air Exhaust;
- RE-2387 Containment Radiation Wide Range Monitor;
- RE-4597 Containment Air Monitor; and
- RE-10252 Radwaste Building Radiation Monitor.

This review represented one sample.

b. Findings

No findings of significance were identified.

.2 Identification of Additional Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors identified portable radiation detection instrumentation used for job coverage of high radiation area work, other temporary area radiation monitors currently used in the plant, and continuous air monitors associated with jobs with the potential for workers to receive 50 millirem committed effective dose equivalent. Whole body counters and radiation detection instruments utilized for personnel survey and for release of material from the radiologically controlled area were also identified.

This review represented one sample.

b. Findings

No findings of significance were identified.

.3 Calibration and Operability of Radiation Instrumentation

a. Inspection Scope

Licensee personnel were observed performing calibration and source checks of selected instruments. This included observing detector geometry and evaluation of calibration sources to determine if station requirements were being met. The inspectors reviewed records of calibration, operability, and alarm set points (where applicable) of selected instruments including containment radiation monitors, portable hand-held survey instruments and personal monitoring devices. This review included, but was not limited to the following:

- RE-2387 Containment Wide Range Radiation Monitor;
- RE-8426 Spent Fuel Pool Monitor;
- 2.7.261 RSO-50 Ion Chamber;
- 2.7.397 AMP-100 Underwater Detector;
- 2.8.182 AMS-4 Air Sampler;
- 2.8.126 Lapel Air Sampler;
- 2.12.42 Fastscan Whole Body Counter; and
- 170122 Electronic Dosimeter.

The inspectors evaluated those actions that would be taken when, during calibration or source checks, an instrument was found to be out of calibration by more than 50 percent. Those actions included entering the issue into the CAP, an investigation of the instrument's previous usages, and the possible consequences of that use since the last calibration. The inspectors also reviewed the licensee's 10 CFR Part 61 source term analyses to determine if the calibration sources used were representative of the plant source term.

This review represented one sample.

b. Findings

No findings of significance were identified.

4. Problem Identification and Resolution for Radiation Monitoring Instrumentation and Protective Equipment

a. Inspection Scope

The inspectors reviewed the licensee's self-assessments, audits, condition reports, and special reports that involved personnel contamination monitor alarms due to personnel internal exposures to determine if identified problems were entered into the CAP for resolution. There were no internal exposure occurrences greater than 50 millirem committed effective dose equivalent. However, the licensee's process for investigating this type of occurrence was reviewed to determine if the affected personnel would be properly monitored utilizing calibrated equipment and if the data would be analyzed and internal exposures properly assessed in accordance with licensee procedures.

This review represented one sample.

The inspectors reviewed CAP reports related to exposure-significant radiological incidents that involved radiation monitoring instrument deficiencies since the last inspection in this area. Staff members were interviewed and corrective action documents were reviewed to determine if follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

- Initial problem identification, characterization, and tracking;
- Disposition of operability/reportability issues;
- Evaluation of safety significance/risk and priority for resolution;
- Identification of repetitive problems;
- Identification of contributing causes;
- Identification and implementation of effective corrective actions;
- Resolution of Non-Cited Violations tracked in the corrective action system; and
- Implementation/consideration of risk significant operational experience feedback.

This review represented one sample.

The inspectors evaluated the licensee's self-assessment activities to determine if they would identify and address repetitive deficiencies or significant individual deficiencies observed in problem identification and resolution.

This review represented one sample.

b. Findings

No findings of significance were identified.

.5 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspectors determined if the calibration expiration and source response check data records on radiation detection instruments staged for use were current. The inspectors also observed radiation protection technicians for appropriate instrument selection and self-verification of instrument operability prior to use.

This review represented one sample.

b. Findings

No findings of significance were identified.

.6 Self-Contained Breathing Apparatus (SCBA) Maintenance and User Training

a. Inspection Scope

The inspectors reviewed the status, maintenance, and surveillance records of selected SCBAs staged and ready for use in the plant and inspected the licensee's capability for refilling and transporting SCBA air bottles to and from the control room and operations support center during emergency conditions. The inspectors determined whether control room operators and other emergency response and radiation protection personnel were trained and qualified in the use of SCBAs including personal bottle change-out. This included determining if licensee personnel were trained and qualified to refill air bottles. The inspectors also reviewed the training and qualification records for selected (more than three) individuals on each control room shift crew, and selected (more than three) individuals from each designated department that were currently assigned emergency duties including onsite search and rescue.

This review represented one sample.

The inspectors identified three SCBA units currently designated as "ready for service" and reviewed maintenance records for work performed by qualified vendors on this equipment, including the vital component maintenance records, over the past five years. Maintenance records, covering the period since the last inspection of this area, were reviewed for selected SCBA units. The licensee performed no maintenance on vendor designated vital components. However, maintenance vendor documentation was reviewed for adequacy. The inspectors also determined if the required, periodic air cylinder hydrostatic testing was documented, up to date, and that the Department of Transportation required air cylinder retest markings were in place for the three identified SCBA units as well as other selected units. A licensee staff member was observed refilling an air bottle to evaluate procedure compliance.

This review represented one sample.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Verification (71151)

Cornerstones: Mitigating Systems, Occupational and Public Radiation Safety

.1 Reactor Safety Strategic Performance Area

a. Inspection Scope

The inspectors performed a periodic review of the data reported by the licensee for the Performance Indicators (PI) listed below. The inspectors reviewed applicable licensee documentation to determine whether the data provided by the licensee for these PI was complete and accurate. The inspectors used PI definitions and guidance contained in Revision 3 of Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," to aid in their review of the PI data. The following two PIs were reviewed:

- Safety System Unavailability, Heat Removal System (AFW) (April 2004 through March 2005); and
- Safety System Unavailability, Residual Heat Removal System (April 2004 through March 2005).

This constitutes two samples.

b. Findings

No findings of significance were identified.

.2 Radiation Safety Strategic Performance Area

a. Inspection Scope

The inspectors sampled the licensee's performance indicator submittals for the previous four quarters. The inspectors used PI definitions and guidance contained in Revision 3 of NEI Document 99-02 to verify the accuracy of the PI data. The following PIs were reviewed:

- Occupational Exposure Control Effectiveness

The inspectors reviewed the licensee's assessment of the PI for occupational radiation safety, to determine if indicator related data was adequately assessed and reported. The inspectors compared the licensee's PI data with the condition report database, reviewed radiological restricted area exit electronic dosimetry

transaction records, and conducted walkdowns of accessible locked high radiation area entrances to verify the adequacy of controls in place for these areas. Data collection and analyses methods for PIs were discussed with licensee representatives to verify that there were no unaccounted occurrences in the Occupational Radiation Safety PI as defined in NEI 99-02.

- Radiological Environmental TS/Offsite Dose Calculation Manual (RETS/ODCM) Radiological Effluent Occurrences

The inspectors reviewed data associated with the RETS/ODCM PI to determine if the data was accurately assessed and reported. This review included the licensee's CR database and selected CRs generated over the previous four quarters, to identify any potential occurrences such as unmonitored, uncontrolled or improperly calculated effluent releases that may have impacted offsite dose. The inspectors also selectively reviewed gaseous and liquid effluent release data and the results of associated offsite dose calculations and quarterly PI verification records generated. Data collection and analyses methods for PIs were discussed with licensee representatives to determine if the process was implemented consistent with industry guidance in NEI 99-02.

This constitutes two samples.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Daily Review

a. Inspection Scope

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment deficiencies or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This screening was accomplished by reviewing documents entered into the licensee CAP and review of document packages prepared for the licensee's daily Management Alignment and Ownership Meetings.

b. Findings

No findings of significance were identified.

.2 Semi-Annual Trend Review

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspector's review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in Section 4OA2.1 above, licensee trending efforts, and licensee human performance results. The inspectors' review included the 6-month period of January 2005 through June 2005. Inspectors also reviewed two Davis-Besse Oversight Assessment Reports (fourth quarter 2004, and first quarter 2005). The review also included issues documented in the licensee's system health reports and maintenance rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's latest quarterly trend reports. Corrective actions associated with a sample of the issues identified in the licensee's reports were reviewed for adequacy.

This constitutes one sample.

b. Assessment and Observations

There were no findings of significance identified. The inspectors determined that the implementation of trending was adequate. The inspectors compared the licensee process results with the results of the inspectors' daily screening and did not identify any discrepancies or potential trends that were not currently captured in the CAP or other licensee generated documents.

4OA3 Event Followup (71153)

.1 (Closed) Licensee Event Report (LER) 05000346/2005-001: Inadvertent Loss of Essential Bus and Start of EDG During Testing.

The inspectors reviewed the LER and supporting evaluations and documentation. The inspectors determined that the plant systems responded as designed to the testing anomaly. The inspectors also determined that the response of the control room staff was conservative and that the corrective actions taken by the licensee to restore power to the D1 Vital 4160 volt bus were appropriate.

TS 3.8.2.3 action b states, "with only one 125-volt D.C. battery or only one charger of one MCC Operable, restore the inoperable battery or charger to operable status within 2 hours or be in at least Hot Standby within the next 6 hours and in Cold Shutdown within the following 30 hours." Since the TS does not recognize the loss of both battery chargers associated with a single station battery (as occurred with the loss of the D1 bus), the licensee took actions in accordance with TS 3.0.3, on January 13, 2005, at 8:49 a.m. At 10:51 a.m., subsequent to power being restored to the D1 vital bus, the licensee exited TS 3.0.3 and power reduction was stopped. After being placed on a

equalizing charge for approximately 1.5 hours, the #2 station battery was declared operable and reactor power escalation recommenced shortly thereafter.

As documented in the LER, a followup investigation of the event by the licensee determined that TS 3.0.3 was exited prematurely (10:51 a.m.) and that it should not have been exited until the #2 station battery was declared operable (1:45 p.m.). The inspectors determined that exiting the TS action statement while the conditions that caused the entry into the action statement still existed was a violation of TS 3.0.3. Since the licensee did not begin a power increase before the #2 station battery was declared operable, restored the operability of all required equipment prior to exceeding any shutdown time limitations imposed by TS 3.0.3, and promptly self-identified and documented this issue in their corrective action program (CR 05-00260) and LER 05000346/2005-001, the inspectors determined this violation to be of minor significance. This LER is closed.

This constitutes one sample.

- .2 (Closed) Unresolved Item (URI) 05000346/2005005-03: Long Term Operability of Low Pressure Recirculation Train 1 with a Piping Arrangement that Allowed an Air Void in the Piping from the Containment Emergency Sump.

During the inspection period associated with integrated inspection 2005005, on March 2, 2005, the licensee was reviewing operating experience documents associated with CR 02-08244. Licensee personnel discovered that the corrective action, specified in that CR to eliminate a potential air pocket in the piping from the containment emergency sump to decay heat train 1 equipment, was cancelled. Licensee personnel, upon discovery, performed ultrasonic testing to determine the extent of any existing voiding and, after confirmation of an air void, initiated action to re-instate the corrective action and to determine current and past operability. The corrective action was a permanent plant modification which added a vent line and valve that would facilitate proper venting of the line. The calculations supporting the operability determination was completed during this inspection period and were reviewed by the inspectors. The calculations determined that the decay heat pump would not be incapacitated by the volume of air in the pipe.

The cancellation of the original corrective action for the identified condition was a violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" in that a deficiency in the piping design of a safety related system was not promptly corrected. The finding is more than minor because it involved the design control and equipment performance attributes of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure reliability and capability of decay heat system to respond to initiating events to prevent undesirable consequences. The finding was considered to have very low safety significance (Green) because the design deficiency did not result in a loss of function. The finding also involved the cross cutting area of Human Performance in that several licensee individuals missed the opportunity to

prevent cancellation of the original corrective action. The enforcement aspects of the violation are discussed in Section 4OA7. This URI is closed.

This constitutes one sample.

- .3 (Closed) LER 05000346/2002-006-01: EDG Exhaust Piping Not Adequately Protected from Potential Tornado-Generated Missiles.

On August 11, 2002, the licensee identified that the last six feet of exhaust piping for the EDGs was not protected from tornado-generated missiles. This issue was discussed in LER 2002-006, Revision 00, which was submitted by the licensee on November 5, 2002. This LER was reviewed by inspectors and closed in inspection report 05000346/2002019. In the same report, an unresolved item (URI 05000346/2002019-031) was opened, pending a review of the apparent cause determination for the deficiency identified in the LER. That URI was closed in inspection report 05000346/2003010 and a Non-Cited Violation (NCV 0500346/2003010-23) was issued for a violation of 10 CFR 50.59(d)(1). Revision 01 to the LER, issued on March 26, 2004, updated the LER with results from a tornado missile risk analysis.

Inspectors' review of this revision did not identify any new items of significance. This LER is closed.

This constitutes one sample.

- .4 (Closed) URI 05000346/2003019-02: Inaccurate/Incomplete Information (by Omission) in LER 05000346/1997-004 (Reactor Coolant Pump Motor Oil Piping Not Protected from Leakage as Required Per 10 CFR 50, Appendix R).

Introduction: The licensee submitted Licensee Event Report 05000346/1997-004 which was determined to be inaccurate/incomplete (by omission). The LER was not complete and accurate in all material respects. This issue was considered to be non-willful and non-repetitive and was dispositioned as a Severity Level IV NCV. (EA-04-0217)

Description: From October 20 through 24, 2003, the NRC conducted an inspection which reviewed the licensee's actions to resolve the Davis-Besse Restart Checklist Item 3.i., which was associated with the completeness and accuracy of required records and submittals to the NRC. The purpose of the inspection was for the NRC to determine whether reasonable confidence existed that important docketed information was complete and accurate in all material respects and that the licensee had taken appropriate corrective actions to ensure that future regulatory submittals were complete and accurate. During the licensee's preparation for this inspection and work to close an associated restart checklist item, the licensee discovered a number of discrepancies in docketed correspondence.

In an August 15, 2003, letter to the NRC, the licensee reported that information in a March 1997 draft LER (LER 05000346/1997-004; Reactor Coolant Pump (RCP) Motor Oil Piping Not Protected from Leakage as Required per 10 CFR 50, Appendix R) was deleted from the final submitted version by a former licensee manager without sound

basis. The information that was removed from the Apparent Cause of Occurrence Section of the draft LER stated:

“During review of Information Notice 94-053, ‘Reactor Coolant Pump Lube Oil Fire,’ that was issued on August 16, 1994, it was identified that the lift oil pump pressure switches and piping are not contained in the RCP oil collection system. No further actions were taken at that time based on previous evaluations that the RCP oil collection system met the requirements of 10 CFR 50, Appendix R.”

The deleted information was considered to be material by the NRC because if it had been complete and accurate, it would have resulted in further inquiry regarding the completeness of the licensee corrective actions associated with this issue when it was identified in 1994.

Analysis: Because violations of 10 CFR 50.9 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process. Had the information provided in the LER been complete and accurate, the NRC would have evaluated the licensee’s corrective actions since initial discovery of the condition in 1994. Following a review of the additional information, inspectors determined that licensee corrective actions to address the material conditions documented in the original LER were sufficient.

Enforcement: 10 CFR 50.9 requires, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects. Contrary to the above, on March 3, 1997, the licensee submitted an LER involving the plant being in an unanalyzed condition that significantly degraded plant safety, which was not complete and accurate in all material respects. Specifically, the LER did not include the wording “During review of Information Notice 94-058, ‘Reactor Coolant Pump Lube Oil Fire,’ that was issued August 16, 1994, it was identified that the lift oil pump pressure switches and piping are not contained in the RCP oil collection system. No further actions were taken at that time based on previous evaluations that the RCP oil collection system met the requirements of 10 CFR 50 Appendix R.” This information was present in the draft version, but was removed prior to submission to the NRC. The information that was not provided is considered material to the NRC because if it had been complete and accurate it would have resulted in further inquiry as to why the licensee’s CAP did not adequately handle the issue when it was identified in 1994. Because this violation was non-willful and non-repetitive, and was captured in the licensee’s CAP (CR 03-05468), it is being treated as a Severity Level IV Non-Cited Violation (NCV 05000346/2005007-02) consistent with Section VI.A.1 of the NRC Enforcement Policy.

40A4 Cross-Cutting Aspects of Findings

A finding described in 1R5 of this report had, as its primary cause, problem identification in that licensee personnel failed to observe and correlate non-energized lights to a loss of power to the charging circuits for emergency battery packs and their associated lighting used to meet emergency lighting requirements of 10 CFR 50, Appendix R.

A finding described in 4OA3.2 of this report had, as its primary cause, a human performance deficiency in that licensee personnel, who had an opportunity to review cancellation information for several proposed design changes, failed to correlate the cancellation of a design change with corrective action that was clearly specified as corrective action for a design deficiency in the decay heat system train 1 piping configuration.

4OA5 Other Activities

.1 Transportation of Reactor Control Rod Drives in Type A Packages (Temporary Instruction (TI) 2515/161)

a. Inspection Scope

The inspectors conducted interviews and record reviews to verify that: (1) the licensee had undergone refueling activities since calendar year 2002; and (2) did not ship irradiated control rod drive mechanisms in Department of Transportation Specification 7A, Type A packages during the time frame 2002 to the present.

b. Findings

No findings of significance were identified.

.2 Operational Readiness of Offsite Power (TI 2515/163)

The inspectors reviewed licensee corrective action documents, procedures, and interviewed the licensee staff to verify information provided by the licensee that was used to complete Temporary Instruction 2515/163. This review was conducted to evaluate, through inspections and interviews, the operational readiness of offsite power systems in accordance with NRC requirements prescribed in General Design Criterion 17, Electric Power Systems; Davis-Besse TS for offsite power systems; 10 CFR 50.63, Loss of All Alternating Current Power; and 10 CFR 50.65(a)(4), Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants.” Specifically, the inspectors reviewed the licensee’s procedures and processes used by the control room operator to assure the operability of the Offsite Power. The inspectors also reviewed procedures to assess the licensee’s compliance with 10 CFR 50.65(a)(4) and 10 CFR 50.63.

In accordance with TI 2515/163 reporting requirements, the inspectors provided the required data to the office of Nuclear Reactor Regulation for further analysis.

4OA5 Other Activities (93812)

.1 Transition from the IMC 0350 Process to the Reactor Oversight Program

In a letter dated May 19, 2005, the Agency communicated to the licensee the intention to close the IMC 0350 Panel for Davis-Besse and transition to oversight under the Reactor Oversight Program. The main points that were communicated included:

- The IMC 0350 panel would be disbanded and the oversight for Davis-Besse would transition to an augmented Reactor Oversight Program;
- One colored finding (a White finding associated with EP Siren Testing; Violation 05000346/2004018-02) would be carried forward into the Reactor Oversight Program Action Matrix; and
- Effective July 1, 2005, oversight and inspection activities would be in accordance with Column II of the Reactor Oversight Program Action Matrix, with supplemental inspections to ensure licensee compliance with the March 8, 2004 Confirmatory Order (EA-03-0214).

In addition to the inspection activities required for a Column II facility, additional inspections will be performed at Davis-Besse. These additional inspections will include:

- The evaluation of the March 8, 2004, Confirmatory Order Required independent assessments for Calendar Year (CY) 2005 conducted in the areas Operations Performance; Organizational Safety Culture, including safety conscious work environment; CAP Implementation, and Engineering Program Effectiveness. Inspection activities associated with the performance of each Independent Assessment would include: a review of each independent assessment plan prior to the start of each assessment; an evaluation of the in-process assessment activities; and a review of each final Independent Assessment report; and
- The performance of an additional Problem Identification and Resolution team inspection for the biennial period of CY 2004/2005. This additional inspection is necessary to monitor the licensee's performance in the areas of self assessment, problem identification, trending, and progress toward effectively reducing the large backlog of maintenance and corrective action items. In addition, this inspection will focus on follow up on the licensee's commitments and action plans that resulted from the Confirmatory Order required Independent Assessments.

.2 Review of Cycle 14 Operational Improvement Plan Commitments

As part of the licensee's Return to Service Plan, the licensee developed a Cycle 14 Operational Improvement Plan. This plan was developed to focus on key improvement initiatives and safety barriers to ensure continued improvements and sustained performance in nuclear safety and plant operations. During this inspection period, the inspectors performed a basic review of the following Cycle 14 completed operational improvement plan initiatives:

- Implement improvements of maintenance supervision through training and development (Initiative C3.3); and
- Implement actions in the maintenance individual commitment area to establish improved ownership and accountability of plant material conditions (Initiative C3.4).

Overall the inspectors concluded that the referenced Operating Cycle 14 commitments had been adequately implemented.

During this inspection period, the inspectors performed a detailed review of the following Cycle 14 completed operational improvement plan initiatives:

- Utilize post-job evaluations, operating experience and lessons learned from rework activities to identify improvements in maintenance training and standards (Initiative C3.1); and
- Perform an assessment of maintenance effectiveness in work planning, scheduling, and implementation of critical equipment outages to identify improvements (Initiative C3.2).

Overall the inspectors noted that the licensee packages associated with the initiatives did identify items that could and would be addressed to improve overall maintenance quality and effectiveness. However, after reviewing the closure package for Initiative C3.1 and discussing the documented information contained in the closure package with the licensee, the inspectors could not determine if industry operating experience was reviewed for potential improvements in the area of maintenance training and standards (Initiative C3.1). The licensee agreed to evaluate whether industry operating experience was reviewed as part of the information used to close this issue or if it was not used, why in-house operating experience was sufficient to close the commitment. Pending the additional information from the licensee, the inspectors did not consider that the activities associated with Initiative C3.1 were fully complete.

For Initiative C3.2, the licensee performed a self-assessment and identified areas for improvement that were documented in condition reports. The inspectors' review of the identified areas and ongoing scheduling and work activities did not identify any areas of significance. The licensee during 2005 successfully completed a mid-cycle outage. The inspectors also noted that issues with work scheduling and planning are identified on condition reports. The condition report process also contained numerous examples where workers initiated suggestions for improvements in work documents. The inspectors concluded, from the information reviewed and observation of past work experiences, that the activities associated with Initiative C3.2 were satisfactorily.

.3 Performance of the Confirmatory Order Required Independent Assessment of Operations

a. Inspection Scope

The March 8, 2004, Confirmatory Order (EA 03-0214) required Independent Assessment of Operations for CY2005 which was conducted on-site during the time period of June 13 to June 23, 2005. In preparation for this assessment, the inspectors had reviewed the qualifications of the Assessment Team and the Assessment Plan, dated March 15, 2005. This review of the Plan was documented in Inspection Report 05000346/2005005.

The inspectors' evaluation of the Team's on-site activities included attending Team debriefs with the licensee, monitoring in-process evaluations, and discussing preliminary findings with assessment team members.

b. Findings and Observations

No findings of significance were identified. The exit meeting for the Independent Assessment of Operations was conducted on July 8, 2005. The March 8, 2004, Confirmatory Order requires that, in part, within 45 days of completion of the assessment, the Licensee shall submit by letter to the Regional Administrator, NRC Region III, all assessment results and any action plans necessary to address issues raised by the assessment results. The inspectors will evaluate this information subsequent to its submittal.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. M. Bezilla, and other members of licensee management on July 8, 2005. The licensee acknowledged the findings presented. No proprietary information was identified.

.2 Interim Exit Meetings

An interim exit meeting was conducted for:

- Radiation Monitoring Instrumentation and Protective Equipment Program with Mr. K. Ostrowski on June 9, 2005.
- Maintenance Effectiveness Periodic Evaluation with S. Loehlein, May 20, 2005.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as NCVs.

- Appendix B, 10 CFR 50, Criterion XVI, states, in part, that measures shall be established to promptly identify and correct deficiencies that are adverse to quality. Contrary to this, the licensee cancelled corrective action for an identified deficiency, in the piping from the containment emergency sump to decay heat train 1 equipment, that impeded venting air from that piping. The initial deficiency was identified in CR 02-08244, dated October 17, 2002. CR 05-01605, dated March 2, 2005, documented the discovery that the deficiency was not corrected. The finding is of very low safety significance because the deficiency did not result in a loss of the decay heat function.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

B. Allen, Director, Plant Operation
J. Amidon, ECP Coordinator
M. Bezilla, Site Vice President
B. Boles, Manager, Plant Engineering
D. Dibert, Dry Cask Project Manager
J. Grabnar, Manager, Design Engineering
L. Harder, Manager, Radiation Protection
D. Haskins, Manager, Leadership & Organizational Development
R. Hovland, Manager, Technical Services
R. Hruby, Manager, Nuclear Oversight
G. Kendrick, Acting Manager, Site Maintenance
D. Kline, Manager, Security
S. Loehlein, Director, Station Engineering
P. McClosky, Manager, Site Chemistry & TOP Team Manager Sponsor
G. Melssen, Site Maintenance Rule Coordinator
L. Myers, Chief Operating Officer, FENOC
D. Noble, Radiation Protection Supervisor
K. Ostrowski, Manager, Plant Operations
C. Price, Manager, Regulatory Compliance
R. Schrauder, Director, Performance Improvement
M. Trump, Manager, Training

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Open and Closed

05000346/2005007-01	NCV	Inoperability of Emergency Battery Packs and Associated Lighting Credited with Licensee Compliance to 10 CFR 50, Appendix R, Section III.J
05000346/2005007-02	NCV	Inaccurate/Incomplete Information (by Omission) in LER 05000346/1997-004

Closed

05000346/2005005-03	URI	Long Term Operability of Low Pressure Recirculation Train 1 With a Piping Arrangement that Allowed an Air Void in the Piping from the Containment Emergency Sump.
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05000346/2003019-02	URI	Inaccurate/Incomplete Information (by Omission) in LER 05000346/1997-004 (Reactor Coolant Pump Motor Oil Piping Not Protected from Leakage as Required Per 10 CFR 50, Appendix R)
05000346/2002-006-01	LER	EDG Exhaust Piping Not Adequately Protected from Potential Tornado-Generated Missiles
05000346/2005-001	LER	Inadvertent Loss of Essential Bus and Start of EDG During Testing

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety, but rather that selected portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless stated in the body of the inspection report.

1R01 Adverse Weather Protection

DB-OP-06913; Seasonal Plant Preparation Checklist; Revision 12

1R04 Equipment Alignment

DB-OP-06012; Decay Heat and Low Pressure Injection System Operating Procedure; Revision 23

OS-004; Decay Heat Removal/Low Pressure Injection System

1R05 Fire Protection

Davis-Besse Nuclear Power Station Fire Hazard Analysis Report

Drawing A-224F; Fire Protection General Floor Plan El. 603'; Revision 21

PFP-AB-428; Low Voltage Switchgear Room F-Bus Room 428 Fire Area X; Revision 03

PFP-AB-227; Passage Room 227 Fire Area G; Revision 03

PFP-TB-246; Condenser Pit Room 246 Fire Area II; Revision 04

Drawing A-222F; Fire Protection General Floor Plan El. 565'; Revision 13

PFP-AB-422A; Cable Spreading Room 422A Fire Area DD; Revision 03

CR 05-03477; Emergency Battery Pack BPAB1S2 Off and Battery Discharged

CR 05-03809; NRC Resident Inspector Observation from Exit Meeting

Drawing A-225F; Fire Protection General Floor Plan El. 623'; Revision 14

1R11 Licensed Operator Requalification Program

DBBP-TRAN-0017; Conduct of Simulator Training; Revision 01

1R12 Maintenance Effectiveness

Maintenance Rule Periodic Assessment; May 2002 - March 2004; dated July 2004

Reactor Coolant System (a)(1) Action Plan; dated February 2003

Auxiliary Feedwater (a)(1) Action Plan; dated November 2003

EDG (a)(1) Action Plan; dated June 2003

480 VAC (a)(1) Action Plan; dated December 2003

List of Systems Within the Scope of the Maintenance Rule; dated March 2005

List of Functional Failures for Assessment Period from May, 2000 to June, 2004; dated July 2004

Expert Panel Meeting Minutes; dated May 30, 2002

Expert Panel Meeting Minutes; dated September 3, 2002

Expert Panel Meeting Minutes; dated December 13, 2002

Expert Panel Meeting Minutes; dated November 18, 2003

480 VAC System Health Report; dated March 2005

EDG System Health Report; dated March 2005

Reactor Coolant System Health Report; dated March 2005

Feedwater System Health Report; dated March 2005

CR 03-02742; AK-25 B25Q10 Found Damage Prop Latch Roller During PM

CR 03-05634; RC 4608A and RC 4608B Leak by

CR 04-00830; AFP1 Response Time Exceeds Acceptance Criteria During DB-SP-03157

CR 04-01214; EDG Transient Analysis During Loss of Offsite Power

DB-PF-00003; Maintenance Rule; Revision 7

NOP-WM-3001; Work Management PM Process; Revision 3

Calculation C-NSA-99.16-20; Maintenance Unavailability and Reliability Sensitivity Analysis; Revision 1

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

NG-DB-00001; On-line Risk Management; Revision 03

DBBP-OPS-0003; On-line Risk Management Process; Revision 01

CR 05-03498; Lessons Learned from EDG #1 Problem Solving Team

DB Work Implementation Schedule Subsystem Sort for Friday, June 17, 2005; Revision as of June 16, 2005 at 1500 hours

Weekly Maintenance Risk Summary for the Week of June 13, 2005; Revision 02

CR 05-03404; EDG 1 Inadvertent KW Increase During Monthly Loaded Test DB-SC-03070

CR 05-03500; Wrong Instrument Isolated During Testing

1R15 Operability Evaluations

Problem Solving Plant for CR 05-03404; EDG 1 Inadvertent KW Increase During Monthly Loaded Test DB-SC-03070; June 16, 2005

CR 05-03498; Lessons Learned from EDG #1 Problem Solving Team

CR 05-03404; EDG 1 Inadvertent KW Increase During Monthly Loaded Test DB-SC-03070

Problem Solving Plan for CR 05-03225; Chemistry Samples Indicate an Unexpected Atmospheric Environment in Containment; June 20, 2005

Problem Solving Plan for CR 05-03314; Investigation of Unusual Atmosphere in Containment; June 30, 2005

CR 05-03314; Received DS8674S Trouble Alarm on Control Room Simplex Fire Detection System Monitor

CR 05-03334; RE4597AA Flow Indicator is Getting Cloudy

CR 05-03225; Unexpected Containment Atmosphere Sample Results

CR 05-02178; Cryogenic Nitrogen Storage Tank T-116 Evaluation

CR 05-02922; Nitrogen Leak in Containment?

1R19 Post-Maintenance Testing

CR 04-0392; 400# Trip Block Permit Light Lit When It Should Not Be

Work Order (WO) 20009640; DB-PS2RC2B4: Troubleshoot 400# Block Permissive Light

DB-SC-03110; SFAS Channel 1 Functional Test; Revision 10

WO 20045149; Replace MC99-3 IAW ECR 03-0652-00

CR 05-03155; SW Pump Fan Motor (MC99-3) Operates Above Nameplate Flow Load Amps

DB-PF-05064; Electrical Machine Testing Using PDMA Motor Tester; Revision 04

WO 200135289; PR Test Module Test Switch Anomaly RPS 3

CR 04-07922; Anomaly Observed During RPS Ch 3 Testing

DB-MI-03059; RPS Channel 3 Calibration of Overpower, Power/Imbalance/Flow, and Power/Pumps Trip Functions; Revision 16

CR 05-03409; Observed RPS Channel 3 Anomaly During DB-MI-03059

WO 200106128; C4806, Relay P9-11823 CR Corrective Action

DB-MI-03013; Channel Functional Test of Reactor Trip Breaker D, RPS Channel 3 Reactor Trip Module Logic, and ARTS Channel 3 Output Logic; Revision 11

1R22 Surveillance Testing

DB-MI-03202; Channel Functional Test and Calibration of SFRCS ACH2 Pressure Inputs PS-3687A, PS-3687C, PS-3687E, PS-3687G, PS-3687K, PS-3687I, PS-3687M and PS-3687N; Revision 06

SD-010; System Description for Steam and Feedwater Line Rupture Control System; Revision 03

1R23 Temporary Modification

Temporary Modification 05-0015; DB-P12-2 Main Feedwater Pump 2, Installation of Belzona Patch on Seal Return Fillet Weld Pinhole Leak

WO 200152196; P12-2 Patch Leak

DB-MM-09067; Temporary Leak Sealing; Revision 08

EP6 Drill Evaluation

CR 05-02348; Application of 10 CFR 50.54(X) or NOED Process During Emergency Situation

2OS3 Radiation Monitoring Instrumentation and Protective Equipment Program

CR 04-01849; Eberline NRD Neutron Shield Ball Band Failure Evaluation

CR 04-04156; Resin Transfer And Changing Radiological Conditions

CR 04-04208; Respiratory Protection Program-Monthly Inspection Observation

CR 04-07906; Noncompliance With DB-HP-00010 For Out Of Service Instruments

CR 04-07909; Lack Of Guidance For Hold For Calibration Tags In DB-HP-00010

CR 05-00256; Damaged Calibration Source

CR 05-01270; RE-1998, Failed Fuel RE Came In Warn Level During Start Up

CR 04-06471; Respirator Fit Tests Not Conducted IAW DB-HP-01351

CR 04-07701; Respirator Fit Test And Issue Procedures Not Adequately Checking Training Quas

CR 04-07700; Discrepancy In Requal Frequencies In Respiratory Program Procedure

Part 61 Analysis; dated January 24, 2005

DB-C-04-04; DB Nuclear Oversight Quarterly Assessment Report; dated January 12, 2005

RA-EP-00100; Emergency Plan Training Program; Revision 8

RE-8426 Rad Monitor Calibration Package; dated February 25, 2005

RE-2387 Rad Monitor Calibration Package; dated November 3, 2003

Updated Safety Analysis Report

FITS Qualification Matrices; dated June 6, 2005

DB HIS-20 Qualification and Fit Report; dated June 8, 2005

Monthly Respirator Locations For June 2005

SCBA Maintenance Record Reports; dated June 8, 2005

RETS/ODCM Effluent Occurrences for 2004 - 2005

Access Control Alarm Report; dated June 8, 2005

Davis-Besse Annual Radiological Operating Report For 2004; dated April 28, 2005

LI 2.12.42; Whole Body Counter Calibration; dated February 28, 2005

170122; Electronic Dosimeter Calibration; dated February 15, 2005

2.8.126; Lapel Air Sampler Calibration; dated May 31, 2005

2.8.182; AMS-4 Continuous Air Monitor Calibration, dated January 19, 2005

2.7.369; Telepole Calibration; dated February 1, 2005

2.7.397; AMP-100 Calibration; dated January 31, 2005

2.7.261; RSO-50 Ion Chamber Calibration; dated May 25, 2005

2.7.427; Ludlum 9-2 Ion Chamber Calibration; dated February 6, 2005

4OA2 Identification and Resolution of Problems

CR 05-03008; Possible Oil Leak on DH 2 Suction Piping Snubber GCB-8-H10 A94

CR 05-03009; Warm Weather Preparations Not Completed in 1-2 Weeks

CR 05-03011; HPI Pump Operability Challenged with Cloudy Oil Following Maintenance

CR 05-03012; Risk Management of Motor Driven Feed Pump Maintenance

CR 05-03013; NRC Concern on Product Warning Label for RP Teledosimetry Antenna in Aux Bldg

CR 05-03048; Boric Acid on HP2A (BACC)

CR 05-03477; Emergency Battery Pack BPAB1S2 Off and Battery Discharged

CR 05-03497; AFW Turbine Exhaust Missile Barrier Degradation

DB-C-05-01; DB Oversight Quarterly Assessment Report; April 29, 2005

DB-C-04-04; DB Nuclear Oversight Quarterly Assessment Report; February 4, 2005

Davis-Besse Plant Health Report; First Quarter, 2005

4OA3 Event Followup

CR 05-00219; Loss of D1 Bus During Testing

CR 05-00260; Apparent Technical Specification Application Issues

Root Cause Analysis Report for the Loss of D1 Bus During Testing; dated April 15, 2005

Problem Solving Plan; Failure of D1 Bus During Undervoltage Relay Testing; dated January 18, 2005

CR 05-01605; RFA CR - Air Intrusion to DH Emergency Sump Suction Piping

MPR Associates, Inc. Letter to FENCO; Past Operability Evaluation of the Effect that an Air Void in the Recirculation Sump Suction Piping Near Valve DH9B Would Have Had on System Performance; May 9, 2005

MPR Associates, Inc. Calculation 0200-0080-HDG-02; Safety Injection System Transient Analysis with Void in Suction Piping; May 9, 2005

Licensee Commitment Package A21041 (Initiative C3.1); June 2, 2004

Licensee Commitment Package A21042 (Initiative C3.2); September 21, 2004

Licensee Commitment Package A21043 (Initiative C3.3); September 18, 2004

Licensee Commitment Package A21044 (Initiative C3.4); December 21, 2004

4OA5 Other Activities

DBBP-OPS-0003; On-line Risk Management; Revision 02

DB-SC-03023; Off-Site AC Sources Lined Up and Available; Revision 16

DB-OP-01300; Switchyard Management; Revision 01

DB-OP-00002; Operations Section Event/Incident Notifications and Actions; Revision 15

DB-OP-02521; Loss of AC Bus Power Sources; Revision 08

4OA5 Other Activities (93812)

Management Plan for Confirmatory Order Independent Assessments; Revision 02

LIST OF ACRONYMS USED

ADAMS	Agency-wide Document Access and Management System
AFW	Auxiliary Feedwater
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CR	Condition Report
CY	Calendar Year
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EDG	Emergency Diesel Generator
FENOC	FirstEnergy Nuclear Operating Company
FIN	Finding
IMC	Inspection Manual Chapter
INPO	Institute of Nuclear Power Operations
IR	Inspection Report
LER	Licensee Event Report
MFP	Main Feedwater Pump
MR	Maintenance Rule
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NQA	Nuclear Quality Assurance
NRC	United States Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PARS	Publicly Available Records
PI	Performance Indicators
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RETS	Radiological Environmental Technical Specification
SCBA	Self Contained Breathing Apparatus
SFAS	Safety Features Actuation System
SSC	Structures, Systems, and Components
SDP	Significance Determination Process
TI	Temporary Instruction
TS	Technical Specifications
URI	Unresolved Item
USAR	Updated Safety Analysis Report
WO	Work Order