

March 7, 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 50-346/03-02

Dear Mr. Myers:

On February 8, 2003, 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 February 7, 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 (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.

Based on the results of this inspection, no findings of significance were identified.

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

L. Myers

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

Enclosure: Inspection Report 50-346/03-02

cc w/encl: B. Saunders, President - FENOC  
Plant Manager  
Manager - Regulatory Affairs  
M. O'Reilly, FirstEnergy  
Ohio State Liaison Officer  
R. Owen, Ohio Department of Health  
Public Utilities Commission of Ohio  
President, Board of County Commissioners  
Of Lucas County  
President, Ottawa County Board of Commissioners  
D. Lochbaum, Union Of Concerned Scientists

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| DATE   | 3/06/03     |  | 3/06/03 |  | 3/06/03 |  |

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-346/03-02

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Davis-Besse Nuclear Power Station

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

Dates: December 29, 2002 to February 8, 2003

Inspectors: S. Thomas, Senior Resident Inspector  
D. Simpkins, Resident Inspector  
M. Bielby, Senior Operations Engineer  
J. House, Senior Radiation Specialist

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

## SUMMARY OF FINDINGS

IR 05000346-03-02, FirstEnergy Nuclear Operating Company, on 12/29/2002 - 2/8/2003, Davis-Besse Nuclear Power Station. Integrated Inspection Report.

This report covers a six week period of resident inspection. The inspection was conducted by resident and Region III inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 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. Inspection Findings**

No findings of significance were identified.

**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. During scheduled inspections of the 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 IMC 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 IMC 0350 Process. As part of this Process, several additional team inspections continued. The subjects of these inspections included; System Health Assurance, Management and Human Performance, and Program Compliance. The status 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 publically 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 looked for any discrepancies that impacted the function of the Service Water system and potential 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 this mitigating system. 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:

- valves were correctly positioned and do 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 does 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.

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, 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 were inspected:

- turbine deck areas;
- feedwater heater areas; and
- auxiliary feedwater pump rooms.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Biennial Written Examination and Annual Operating Test Results

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of individual written tests, Job Performance Measure operating tests, and simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during calendar year 2002. The overall results were compared with the significance determination process in accordance with NRC IMC 0609 Appendix I, "Operator Requalification Human Performance Significance Determination Process."

b. Findings

No findings of significance were identified.

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

.1 Component Cooling Water Expansion Tank Level Transients

a. Inspection Scope

The inspectors reviewed the licensee's response to component cooling water expansion tank level transients in relation to changing plant conditions. These activities were chosen based on the potential impact on increasing the probability of the loss of spent fuel pool cooling. The inspection was conducted to verify evaluation, planning, control, and performance of the work were done in a manner to reduce the risk and minimize the duration where practical, 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 verify that the equipment configurations had been properly listed, that protected equipment had been identified and was being controlled where appropriate, and that significant aspects of plant risk were being communicated to the necessary personnel.

b. Findings

No findings of significance were identified.

.2 Development of Emergency Diesel Generator (EDG) Testing Plan to EDG Operability Prior to Reloading Fuel in the Reactor (Mode 6)

a. Inspection Scope

The inspectors monitored the development of a licensee plan to ensure all surveillance requirements for EDG 1 were met prior to reloading fuel in the core. As part of this inspection, the inspectors interviewed licensee staff, attended Station Review Board (SRB) meetings, and reviewed the material discussed at the SRB meetings. The purpose of this inspection was to verify the testing plan implemented by the licensee met all applicable regulatory requirements for EDG operability. One proposal discussed at these meetings was the development of a procedure that verified the EDGs were capable of handling electric loads required to be operational in Mode 5 and Mode 6. This procedure was a variation of the Safety Features Actuation System Integrated Time Response Test. Subsequent to the SRB meetings, the licensee determined that from a Technical Specification (TS) compliance standpoint, the appropriate course of action to verify EDG operability for Mode 6 was the performance of the complete Safety Features Actuation System Integrated Time Response Test. The modified test was never performed and the complete Safety Features Actuation System Integrated Time Response Test for actuation channel one was completed satisfactorily on February 2, 2003.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected condition reports (CRs) which discussed potential operability issues for risk significant components or systems. These CRs were evaluated to determine whether the operability of the components or systems was justified. The inspectors compared the operability and design criteria in the appropriate sections of the TSs and the USAR to the licensee's evaluations presented on the issues listed below to verify that the components or systems were operable. Where compensatory measures were necessary to maintain operability, the inspectors verified by review of the documents listed at the end of the report that the measures were in place, would work as intended, and were properly controlled.

The issues evaluated were:

- the potential impact of identified fuel assembly spacer grid damage on fuel assemblies scheduled to be used in cycle 14; and
- the continued use of DH14A (Decay Heat Cooler 2 Outlet Valve) during core reload, until the cavitation erosion on the downstream side of the disc was repaired prior to the transition to Mode 2.

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 the TSs 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 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:

- decay heat pump #2 testing after rebuild of system components; and
- EDG #1 testing after governor replacement.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed several surveillance tests and test data to verify that the equipment tested met TSs, USAR, and licensee procedural requirements, and also demonstrated that the equipment was capable of performing its intended safety functions. The activity was 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 test met the TS frequency requirements; that the test was 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 test was properly reviewed and recorded.

The following tests were observed and evaluated:

- Safety features actuation system integrated time response test for actuation channel one (DB-SC-03114);
- Off-site AC sources bus transfer test (DB-SC-03022);
- Decay heat pump 2 rest (DB-SP-3136); and
- 4160V bus "B" transfer test (DB-SC-03020).

b. Findings

No findings of significance were identified.

**2. RADIATION SAFETY**

**Cornerstone: Occupational Radiation Safety**

2OS1 Access Control (71121.01)

.1 Plant Walkdowns, Radiological Boundary Verifications, and Radiation Work Permit Reviews

a. Inspection Scope

The inspectors conducted walkdowns of the radiologically restricted area to verify the adequacy of radiological boundaries and postings. Radiation work permit 2003-5194 (Refueling Canal-Reactor Head Area) for containment work was reviewed for protective clothing requirements and dosimetry requirements including alarm set points.

b. Findings

No findings of significance were identified.

**Cornerstone: Public Radiation Safety**

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (71122.01)

.1 Offsite Dose Calculation Manual (ODCM)

a. Inspection Scope

The inspectors reviewed the Annual Environmental and Effluent Release Report for the year 2001 to verify that the radiological effluent program was implemented as described in the Updated Safety Analysis Report (USAR) and the Offsite Dose Calculation Manual (ODCM), and to ensure that any anomalies in the release data were adequately understood by the licensee. The inspectors reviewed changes made by the licensee to the ODCM as well as to the liquid and gaseous radioactive waste processing system design, procedures, or operation since the last inspection to verify that changes were documented in accordance with the requirements of the ODCM and the Technical Specifications.

b. Findings

No findings of significance were identified.

.2 Gaseous and Liquid Release Systems Walkdowns

a. Inspection Scope

The inspectors performed walkdowns of the major components of the gaseous and liquid release systems to verify that the current system configuration was as described in the USAR and the ODCM, and to observe ongoing activities and equipment material condition. This included radiation and flow monitors, demineralizers and filtration systems, compressors, tanks, and vessels. The inspectors also discussed the waste processing system operations and components with the cognizant system engineer to assess its overall operation.

b. Findings

No findings of significance were identified.

.3 Gaseous and Liquid Effluent Releases

a. Inspection Scope

The inspectors reviewed liquid and gaseous radioactive waste release records including radiochemical measurements and projected radiological doses to members of the public to verify that appropriate treatment equipment was used, that the radwaste effluents were processed and released in accordance with the ODCM, and that releases met the 10 CFR Part 20 requirements. No abnormal releases were noted.

b. Findings

No findings of significance were identified.

.4 Dose Calculations

a. Inspection Scope

The inspectors reviewed selected individual batch release records for the year 2002 and January 2003, along with the Annual Environmental and Effluent Release Report for the year 2001, to ensure that the licensee had properly determined the offsite dose to the public from radiological effluent releases, and to determine if any annual Technical Specification or ODCM (i.e., Appendix I to 10 CFR Part 50 values) limits were exceeded. Additionally, the licensee's current dose assessment software verification test was reviewed.

b. Findings

No findings of significance were identified.

.5 Counting Room Instrument Calibrations and Quality Control

a. Inspection Scope

The inspectors reviewed the quality control records for radiochemistry instrumentation used to identify and quantitate radioisotopes in effluents, in order to verify that the instrumentation was calibrated and maintained as required by site procedures. This review included calibrations of gamma spectroscopy/spectrometry systems and liquid scintillation instruments, lower limit of detection determinations and associated counting instrument control charts.

b. Findings

No findings of significance were identified.

.6 Interlaboratory Comparison Program

a. Inspection Scope

The inspectors reviewed selected data from the Interlaboratory Comparison Program along with the radiochemistry quality control program in order to evaluate the licensee's capability to perform radiochemical measurements, and to assess the quality of radioactive effluent sample analyses performed by the licensee. The inspectors reviewed the licensee's quality assurance evaluation of the Interlaboratory Comparison Program and associated corrective actions for any deficiencies identified.

b. Findings

No findings of significance were identified.

.7 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed audits and self-assessments conducted during the previous year and interviewed cognizant staff to evaluate the effectiveness of the licensee's self-assessment process in the identification, characterization, and prioritization of problems, and to verify that previous radiological effluent and monitoring related issues were adequately addressed. Condition reports written during the previous year that addressed radioactive treatment and monitoring program deficiencies were also reviewed to verify that the licensee had effectively implemented the corrective action program.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

4OA3 Event Follow-UP (71153)

.1 (Closed) Licensee Event Report (LER) 50-346/03-007-00: Potential Leakage of Incore Monitoring Instrumentation Nozzles at Bottom of Reactor Vessel.

On April 24, 2002, with the reactor defueled, visual inspections of the underside of the reactor vessel revealed corrosion deposits. This voluntary LER documented the actions taken by the licensee to identify the source of the corrosion products. This LER also documented the licensee commitment to perform a pressure test of the incore nozzle penetrations to confirm that no leakage exists prior to critical reactor operations. This pressure test will be followed by a bare metal visual inspection of the lower reactor vessel.

The pressure test of the incore nozzle penetrations will be monitored as part of the Davis-Besse Oversight process. (NRC Restart Checklist Item #2a)

.2 (Discussed) LER 50-346/03-008-00: Containment Air Coolers Collective Significance of Degraded Conditions.

Following the reactor shutdown for refueling on February 16, 2002, various degraded conditions were identified associated with the containment air coolers. A collective significance review was performed which included a review of: structural integrity; maintenance, testing, configuration control; thermal performance, and applicable 10 CFR21 issues. A preliminary licensee evaluation of over 80 condition reports addressing containment air cooler deficiencies identified no operability issues. The inspectors will conduct further reviews of this issue when the supplement to this LER is received.

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 Action/Procedure Compliance.

The inspectors had the opportunity to observe the day-to-day implementation 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.

In general, the inspectors noted that progress has been made in several areas. However, 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.

.1 Resident Inspector Observations Related to Restart Readiness

a. Reactor Coolant Pump Breaker/Current Transformer Taps Issue

During this extended outage, significant work was performed on reactor coolant pump 1-2. This work included replacing the existing pump motor. A number of issues arose during the post maintenance testing of the reactor coolant pump motor.

- As part of the post maintenance testing for the motor, a "bump start" of the motor was scheduled to be performed which verified proper electrical phase connections from the power source to the motor. This test was delayed when it was discovered, as part of the prerequisite checks for the test, that the 13.8 KV breaker was not installed in the appropriate cubicle and ready to support the uncoupled run of the motor.
- The "bump start" of the reactor coolant pump motor revealed two power connections were required to be swapped to provide for the correct rotation of the motor. During this process, the leads to the current transformers feeding the differential relay were incorrectly configured because of the power lead configuration being incorrectly recorded. The end result was that when the reactor coolant pump motor was energized, the differential relay sensed a high imbalance because it was comparing signals from different phases.

These issues were not safety significant because they were discovered during the post

installation testing of the reactor coolant pump motor and the reactor coolant pumps were not required to be operable for the plant condition which existed at the time. This example illustrated poor attention to detail, lack of self checking, and poor workmanship practices.

b. Decay Heat Pump Wrong Lube Oil/ Missed Sample

On January 11, 2003, the #2 decay heat pump was run as part of a post maintenance test. Subsequent to completion of the pump run, required pump bearing oil samples were drawn. Due to poor planning, the motor bearing oil samples were not drawn within the required time period, after the end of the pump run. This oversight required the decay heat pump run to be performed again so that the proper motor bearing oil samples could be obtained. When adding oil to restore reservoir level, the mechanic added the wrong type of oil to the outboard motor bearing. Because of this action, the decay heat pump was removed from service, the outboard motor bearing oil reservoir and bearing were flushed, and the proper lubrication oil was added to the motor bearing.

These issues were not safety significant because they were discovered during a time period when train 2 of the decay heat system was not required to be operable to support the plant conditions that existed at the time. This example illustrated poor communication, poor attention to detail, lack of self checking, and poor workmanship practices.

The licensee had failed to follow mechanical maintenance procedure DB-MM-01009, "Lubricant Addition and Sample Methods," Section 8.4 (Lubricant Addition).

The failure to follow this procedure constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. The licensee documented this issue in CR03-00202.

.2 Resident Inspector 0350 Inspection Activities

a. Classification, Categorization, and Resolution of Restart Related Issues

The resident inspectors continued to monitor the licensee's activities related to classifying, categorizing and resolving their backlog of work orders, corrective actions, and modifications required to be completed prior to transitioning to Mode 6. To accomplish this, the inspectors:

- attended and assessed licensee restart readiness meetings;
- attended and assessed licensee management meetings;
- monitored the management of open Mode 6 restraints;
- evaluated the licensee classification of emergent deficient conditions; and
- evaluated closed mode restraints.

No significant issues were identified by the inspectors as a result of inspection activities in this area.

b. Safety Conscious Work Environment (SCWE) and Safety Culture Observations

The inspectors observed management efforts to present SCWE and safety culture goals to the plant staff. These included attending and assessing town hall meetings, Mode 6 Restart Readiness Meetings, operations' pre-briefs and Management Communication Team Meetings. A specific example was noted during Mode 6 Restart Review Meetings, where staff and management freely and openly discussed safety concerns. The inspectors determined that these meetings continued to demonstrate management's emphasis in these areas.

#### 4OA6 Meetings

##### .1 Exit Meeting

The inspectors presented the inspection results to Mr. L. Myers, Chief Operating Officer, FirstEnergy Nuclear Operating Company, and other members of licensee management on February 7, 2003. The licensee acknowledged the findings presented. No proprietary information was identified.

##### .2 Interim Exit Meetings

Interim exits were conducted for:

- Licensed Operator Requalification with Mr. D. Bondy, Licensed Operator Requalification Training Group Lead, on January 23, 2003.
- Radiological Effluents and Access Control with Mr. R. Fast, Plant Manager, on January 31, 2003.

#### 4OA7 Licensee-Identified Violations

A violation of very low significance was identified by the licensee and is discussed in Section 4OA5.1.b.

## KEY POINTS OF CONTACT

### Licensee

A. Bless, Licensing  
D. Bondy, Licensed Operator Requalification Training Lead  
G. Dunn, Outage Manager  
R. Edwards, Chemistry Supervisor  
R. Fast, Plant Manager  
B. Geddes, Chemistry Supervisor  
J. Grabnar, Manager, Design Engineering  
D. Imlay, Superintendent, Electrical Maintenance  
M. Marler, Manager, Nuclear Training  
P. McCloskey, Manager, Regulatory Affairs  
G. Melssen, Maintenance Rule Coordinator  
R. Mende, Manager, Plant Engineering  
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  
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

Closed

50-346/03-007-00 LER Potential Leakage of Incore Monitoring Instrumentation Nozzles  
at Bottom of Reactor Vessel.

Discussed

50-346/03-008-00 LER Containment Air Coolers Collective Significance of Degraded  
Conditions

## LIST OF ACRONYMS USED

|       |   |
|-------|---|
| ADAMS | Agency-wide Document Access and Management System |
| CFR   | Code of Federal Regulations                       |
| CR    | Condition Report                                  |
| EDG   | Emergency Diesel Generator                        |
| FENOC | FirstEnergy Nuclear Operating Company             |
| IMC   | Inspection Manual Chapter                         |
| IR    | Inspection Report                                 |
| LER   | Licensee Event Report                             |
| NRC   | United States Nuclear Regulatory Commission       |
| ODCM  | Offsite Dose Calculation Manual                   |
| PARS  | Publically Available Records                      |
| SDP   | Significance Determination Process                |
| SRB   | Station Review Board                              |
| 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; Revision 24
- M041B Piping and Instrumentation Diagram - Primary Service Water System; Revision 54
- M041C Service Water System for Containment Air Coolers; Revision 25
- OS-020 Operations Schematic - Service Water Sheet 1; Revision 56
- OS-020 Operations Schematic - Service Water Sheet 2; Revision 25

### 1R05 Fire Protection

Fire Hazards Analysis Report

DB-FP-00007; Control of Transient Combustibles; Revision 01

### 1R13 Maintenance Risk and Emergent Work

Memorandum RAS-03-00010, "EDG Surveillance Requirements for Entry into Mode 6"; dated January 10, 2003

### 1R15 Operability Evaluations

CR 02-06178; Spacer Grid Damage During Fuel Inspections

Root Cause Analysis Report Executive Summary, "Davis-Besse Grid Damage Including New Fuel Assembly NJ125Y and NJ126J"; dated January 9, 2003

Root Cause Analysis Report, "Fuel Assembly Spacer Grid Damage Including New Fuel Assemblies NJ125Y and NJ126J"; dated February 1, 2003.

CR 02-00918; DH14A Valve Disc Cavitation Damage

Operability Determination 03-002; Short Term Operation of DH14A With Indications of Cavitation Damage Present on the Back Seat of the Valve

### 1R19 Post-Maintenance Testing

Surveillance Test Procedure DB-SP-03137; "Decay Heat Train 2 Pump and Valve Test," Revision 05

Surveillance Test Procedure DB-SC-03076; "Emergency Diesel Generator 1 184 Day Test," Revision 04

### 1R22 Surveillance Testing

Surveillance Test Procedure DB-SC-03114, "SFAS Integrated Time Response Test,"  
Revision 03

CR 03-00864; SFAS Block Signal Not Received at SFAS Channel 3 Output Module  
L233

CR 03-00880; Improper Lube Oil Flow in #1 Makeup Pump Inboard Pump Bearing  
Sightglass

CR 03-00858; During Integrated SFAS Testing, DH2733 Closed Unexpectedly

CR 03-00838; #3 Service Water Pump Failed to Start During Integrated SFAS Test

Makeup Pump 1 Problem Solving Plan, Revision 1; dated February 1, 2003

SFAS Related Issues Problem Solving Plan, Revision 0; dated January 31, 2003

Surveillance Test Procedure DB-SC-03022, "Off-Site AC Sources Bus Transfer Test,"  
Revision 04

CR 02-08312; Potential Inadequate Surveillance Testing - Transfer to Off-Site Power

CR 02-10323; Inadequate Surveillance Testing of 13.8 KV Transfer Capability

#### 2OS1 Access Control to Radiologically Significant Areas

2003-5194; Radiation Work Permit: Refueling Canal-Reactor Head Area; Revision 0

#### 2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

DB-OP-03011; Radioactive Liquid Batch Release 03-02; dated January 6, 2003

DB-OP-03011; Radioactive Liquid Batch Release 03-03; dated January 15, 2003

DB-OP-03011; Radioactive Liquid Batch Release 01-049; dated January 8, 2002

DB-OP-03011; Radioactive Liquid Batch Release 02-057; dated December 26, 2002

DB-OP-03012; Radioactive Gaseous Batch Release 02-004; dated February 23, 2002

DB-OP-03012; Radioactive Gaseous Batch Release 02-007; dated September 16, 2002

AR-01-RPPCP-01; Nuclear Quality Assessment Audit Report; dated January 17, 2002

DB-C-02-04; Fourth Quarter 2002 Report: Chemistry (Draft)

DB-12003710; Oversight and Process Improvement: Quality Field Observations; dated  
January 9, 2003

DB-12002531; Oversight and Process Improvement: Quality Field Observations; dated  
October 31, 2002

01-3264; Radioactive Effluents Program Ownership; dated December 6, 2001

02-10052; Radioactive Effluent Improvement; dated December 9, 2002

02-02650; 2001 Annual Radiological Environmental Operating Report Typographical Error; dated June 17, 2002

02-02650; Basic Cause Analysis Report; dated July 14, 2002

02-00882; Radioactivity in Liquid Discharges: Goal for 2002 Exceeded; dated February 27, 2002

02-01411; Invalid Station Vent Tritium Analysis; dated March 28, 2002

02-01789; Radiochemistry Interlaboratory Cross-check Alpha Disagreement; dated May 1, 2002

02-02025; RE4598AA Particulate Filter Found Dislodged; dated May 14, 2002

02-02160; Late Sample For RE5052C; dated May 20, 2002

02-04210; Containment Radiation Monitors Test Data Sheets Not Maintained; dated August 14, 2002

02-06841; Enhancement To Containment Atmosphere Sampling and Evaluation; September 27, 2002

02-02989; North Settling Basin Sump Pump Level Switch Malfunctioning; dated July 5, 2002

Annual Radiological Environmental Operating Report; dated April 29, 2002

DB-CH-04041; RETSCODE (GAS)/ODCM Validation; dated September 9, 2002

DB-CH-04042; RETSCODE (LIQUID)/ODCM Validation; dated August 30, 2002

DB-0296-0; Program Readiness Baseline Assessment For The Radioactive Effluent Controls Program; dated December 15, 2002

DB-CH-01806; Efficiency Determination Data Sheet, Liquid Scintillation Counter; Revision 1

QC Data; Control Charts for Gamma Spectroscopy Detector 1; dated January 2002-January 2003

QC Data; Control Charts for Gamma Spectroscopy Detector 2; dated October 2002-January 2003

Analytics Calibration Certificates; dated November 26, 2001

Germanium Detectors #1 and 2 Efficiency Confirmation Checks For 2002

Germanium Detectors #1 and 2 Lower Limit of Detection (liquid/gas) for 2002

Analytics Cross Checks; First, Second, Third, and Fourth Quarters; 2001

Analytics Cross Checks; First, Second and Third Quarters; 2002

DB-MI-03442/02; Channel Calibration of 32C-ISF5090 Station Vent Flow; dated August 22, 2002

DB-SS-03145; Control Room Emergency Ventilation System Refueling Interval Or Special Test Train 1; Revision 3

DB-SS-03146; Control Room Emergency Ventilation System Refueling Interval Or Special Test Train 2; Revision 3

NUCON International; Iodine 131 Removal Efficiency Determination of adsorbent Samples; dated April 19, 2001

NUCON International; Iodine 131 Removal Efficiency Determination of adsorbent Samples; dated April 8, 2001

Davis-Besse updated Safety Analysis Report, Sections 11.3 and 11.4

DBP-6027A; Davis-Besse Offsite Dose Calculation Manual; Revision 14

#### 4OA3 Event Follow-up

LER 50-346/03-007-00, Potential Leakage of Incore Monitoring Instrumentation Nozzles at Bottom of Reactor Vessel

LER 50-346/03-008-00, Containment Air Coolers Collective Significance of Degraded Conditions