

March 8, 2002

Mr. Howard Bergendahl  
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 INSPECTION REPORT 50-346/01-16

Dear Mr. Bergendahl:

On February 15, 2002, the NRC completed an inspection at your Davis-Besse Nuclear Power Station. The enclosed report documents the inspection findings, which were discussed on February 12, 2002, with Mr. Randy Fast 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.

Based on the results of this inspection, one issue of very low safety significance (Green) was identified. However, because of the very low safety significance and because this problem was entered into your corrective action program, the NRC is treating this issue as a Non-Cited Violation, in accordance with Section VI.A.1 of the NRC Enforcement Policy. If you deny this Non-Cited Violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and to the NRC Resident Inspector at the Davis-Besse facility.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories and although the specific actions are not releasable to the public, they generally include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of your response to these advisories and your ability to respond to terrorist attacks with the

capabilities of the current design basis threat. From these audits, the NRC has concluded that your security program is adequate at this time.

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/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

Original signed by  
Christine A. Lipa  
Christine A. Lipa, Chief  
Branch 4  
Division of Reactor Projects

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

Enclosure: Inspection Report 50-346/01-016

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

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-346/01-16(DRP)

Licensee: FirstEnergy Nuclear Operating Company

Facility: Davis-Besse Nuclear Power Station

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

Dates: January 1, 2002, through February 15, 2002

Inspectors: S. Thomas, Senior Resident Inspector  
D. Simpkins, Resident Inspector  
M. Bielby, Senior Operations Engineer  
T. Ploski, Sr. Emergency Preparedness Analyst  
J. House, Sr. Radiation Specialist

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

## SUMMARY OF FINDINGS

IR 05000346-01-16, on 01/01-02/15/2002, FirstEnergy Nuclear Operating Company, Davis-Besse Nuclear Power Station. Public Radiation Safety.

This report covers a 6-week routine inspection conducted by resident inspectors and regional specialists. The inspection identified one Green finding and an associated Non-Cited Violation. The significance of most findings is indicated by the color (Green, White, Yellow, Red) using IMC0609 "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

### A. Inspection Findings

#### **Cornerstone: Public Radiation Safety**

Green. A finding and associated Non-Cited Violation of 10 CFR 71.5(a) and the Department of Transportation regulations contained in 49 CFR 172.504 was identified for the failure to placard vehicles used to transport radioactive materials (Section 2PS2.1).

This finding was determined to be of very low safety significance because the shipment was exclusive use, dose rates were minimal, the shipment was marked properly, and the shipping papers were correct.

### B. Licensee Identified Findings

No findings of significance were identified.

## Report Details

### Summary of Plant Status

The plant operated at 100 percent power throughout most of the inspection period. Exceptions were for brief power reductions to about 93 percent for turbine testing, to 90 percent at the request of the system dispatcher, and to 15 percent on January 4, 2002, to remove the generator for repairs of a hydrogen cooler leak. Subsequent repairs were completed and the plant returned to 100 percent on January 7, 2002. On February 15, 2002, the plant began a planned down-power in preparation for starting a planned refueling outage the following day.

## **1. REACTOR SAFETY**

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

#### 1R04 Equipment Alignment (71111.04Q)

##### .1 Decay Heat Removal Pump #2

###### a. Inspection Scope

The inspectors performed a walkdown of the #2 decay heat removal pump to verify that the redundant train was in the correct lineup while the #1 decay heat removal pump was inoperable during decay heat removal pump quarterly testing. The inspectors used the checklist and drawing to determine the correct lineup. The inspectors also reviewed outstanding work orders (WO) and condition reports (CR) associated with the #2 train to verify that these documents did not reveal issues that could affect train function. The inspectors used the information in the applicable sections of the Updated Safety Analysis Report (USAR) and Technical Specifications (TS) to determine the functional requirements 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.

###### b. Findings

No findings of significance were identified.

##### .2 Emergency Diesel Generator (EDG) #1

###### a. Inspection Scope

The inspectors performed a walkdown of the #1 EDG to verify that the redundant train was in the correct lineup while the #2 EDG was inoperable due to periodic surveillance testing. The inspectors used the system checklist and drawing to determine the correct lineup. The inspectors also reviewed outstanding WOs and CRs associated with the #2 EDG to verify that these documents did not reveal issues that could affect train function. 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)

.1 Quarterly Fire Area Walkdowns

a. Inspection Scope

The inspectors conducted fire protection walkdowns that were focused on availability, accessibility, and the condition of fire fighting equipment, the control of transient combustibles, and 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, their potential to impact equipment which could initiate a plant transient, or their impact on the plant's ability to respond to an 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:

- Fire Area for the Emergency Core Cooling System Room #1;
- Fire Area for the Emergency Core Cooling System Room #2;
- Fire Area for the Emergency Core Cooling System Heat Exchanger Room; and
- Fire Area for the Turbine Deck.

b. Findings

No findings of significance were identified.

.2 Temporary Instruction 2515/146, "Hydrogen Storage Locations" Inspection

a. Inspection Scope

The inspectors met the requirements of Temporary Instruction 2515/146, "Hydrogen Storage Locations." The inspectors confirmed distances between hydrogen storage and ventilation intakes were greater than 50 feet or were in accordance with licensee's commitments. Also the inspectors confirmed that distances between hydrogen storage and risk significant tanks and systems, structures, and components (SSCs) were greater than 50 feet or were in accordance with licensee's commitments.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11B)

.1 Operating Test Results

a. Inspection Scope

The inspectors performed an in-office review of the pass/fail results of individual operating tests and simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during calendar year 2001.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule (MR) Implementation (71111.12Q)

a. Inspection Scope

The inspectors reviewed systems to verify that the licensee properly implemented the MR for systems, structures, and components (SSCs) with performance problems. This evaluation included the following aspects:

- whether the SSC was scoped in accordance with 10 CFR 50.65;
- whether the performance problem constituted a MR functional failure;
- the proper safety significance classification;
- the proper 10 CFR 50.65(a)(1) or (a)(2) classification for the SSC; and
- the appropriateness of the performance criteria for SSCs classified as (a)(2) or the appropriateness of goals and corrective actions for SSCs classified as (a)(1).

The above aspects were evaluated by using the MR scoping and report documents listed at the end of this report. For each SSC reviewed, the inspectors also reviewed significant WOs and CRs to verify that failures were properly identified, classified, and corrected and that unavailable time had been properly calculated. In addition, the inspectors reviewed CRs to verify that minor deficiencies identified during these inspections were entered in the licensee's corrective action system.

The inspectors reviewed the licensee's implementation of the MR requirements for the following SSCs:

- service water system;
- snubbers; and
- condensate system.



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 management of plant risk during emergent maintenance activities or activities during a time when more than one significant system or train was unavailable. The activities were chosen based on their potential impact on increasing the probability of an initiating event or impacting the operation of safety significant equipment. The inspection was conducted to verify that 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.

The inspectors reviewed the following maintenance activities:

- auxiliary feedwater greyboot connectors;
- electro-hydraulic control filter replacement;
- loss of control room forebay level indication due to maintenance; and
- turbine bypass valve modifications.

b. Findings

No findings of significance were identified.

1R14 Performance in Non-Routine Evolutions (71111.14)

a. Inspection Scope

The inspectors observed operations personnel to verify personnel performance was conducted in a safe and conservative manner during the following activities:

- power reduction to take the main generator off-line to repair a leak in the hydrogen cooling system;
- loss of vacuum transient due to broken gage glass on feedwater heater; and
- main steam safety valve testing and reactor downpower in preparations for the refueling outage.

The inspectors reviewed TS, operations procedures, and facility administrative procedures to determine the acceptance criteria for the inspection activities.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected CRs related to potential operability issues for risk significant components and systems. These CRs were evaluated to determine whether the operability of the components and systems was justified. The inspectors compared the operability and design criteria in the appropriate sections of the TS and USAR to the licensee's evaluations presented in the CRs 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 conditions evaluated were:

- snubber inoperability and retesting; and
- valve DH14B stroke times exceeding expected durations.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed design descriptions and drawings to determine the scope of the design changes to the station air compressor #2. The inspectors reviewed the associated safety evaluations to verify consideration of USAR, TS, and 10 CFR 50.59 requirements. Other inspection attributes included incorporation of design criteria such as channel redundancy, separation, and single failure analysis. The inspectors also reviewed the associated post-modification testing results to verify acceptable system performance and compliance with test acceptance criteria.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed post-maintenance testing activities associated with maintenance on important mitigating and support systems 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 TS 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 post-maintenance testing performed adequately demonstrated that the maintenance was successful and that operability was restored. In addition, the inspectors reviewed CRs to verify that minor deficiencies identified during these inspections were entered into the licensee's corrective action system.

Testing subsequent to the following activities was observed and evaluated:

- EDG #2 barring and idle start;
- condensate pump #1 re-installation after refurbishment; and
- main steam safety valve retesting after lift setpoint adjustments.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

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

The following tests were observed and evaluated:

- motor driven feedwater pump and valve quarterly test;
- decay heat removal pump #1 quarterly test; and
- auxiliary feedwater train #1 check valve test.

b. Findings

No findings of significance were identified.

## **EMERGENCY PREPAREDNESS (EP)**

### 1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

#### a. Inspection Scope

The inspectors reviewed Revision 22 and Revision 21 of the Davis-Besse Nuclear Power Station Emergency Plan to determine whether changes identified in Revision 22 reduced the effectiveness of the licensee's emergency planning, pending onsite inspection of the implementation of these changes.

#### b. Findings

No findings of significance were identified.

## **2. RADIATION SAFETY**

### **Cornerstone: Public Radiation Safety**

### 2PS2 Radioactive Material Processing and Transportation (71122.02)

#### .1 Shipping Records

#### a. Inspection Scope

The inspectors reviewed documentation for two shipments of contaminated spent fuel racks, shipped as exclusive use, surface contaminated objects (SCO), to verify compliance with NRC and Department of Transportation (DOT) requirements (i.e., 10 CFR Parts 20 and 71 and 49 CFR Parts 172 and 173).

#### b. Findings

On January 22, 2001, the licensee generated Condition Report 02-00214, "Lack of Placarding of Radioactive SCO Shipments," to document a problem with two exclusive use shipments of contaminated fuel racks that had been transported to a vendor for processing. The licensee was notified by the vendor that both shipments arrived without placards. A review of shipping documents indicated that all other regulatory requirements, including vehicle surveys and markings, were complied with. The licensee determined that the shipment arrived at the vendor without further incident.

This issue, if not corrected, would become a more significant concern and could impact the licensee's radioactive waste shipping program and the licensee's ability to make radioactive waste shipments. This issue involves the licensee's Radioactive Material Transportation Program and is contrary to the DOT regulations. The NRC requires licensees to follow DOT regulations contained in 49 CFR when shipping licensed material on public highways. Therefore this issue represents a finding which the inspectors evaluated using the NRC Significance Determination Process (SDP) for the public radiation safety cornerstone. The finding did not involve radiation limits being exceeded, did not involve a package breach during transit, did not involve a certificate of

compliance finding, did not involve access to a low level burial ground, and did not involve failure to make notifications or provide emergency information. Consequently, the finding was determined to be of very low safety significance (Green).

10 CFR 71.5(a) requires that a licensee who transports licensed material outside of the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation in 49 CFR Parts 170 through 189.

49 CFR 172.504 prescribes requirements for placarding vehicles used to transport hazardous materials. Specifically, Table 1 requires that the transport vehicle be placarded on each side and each end with a "RADIOACTIVE" placard when transporting: (1) packages bearing a "RADIOACTIVE YELLOW-III" label; and (2) exclusive-use shipments of low specific activity (LSA) radioactive materials and surface contaminated objects (SCO) transported in accordance with 49 CFR 173.427(b)(3) or (c), (see footnote in Table 1, 49 CFR 173.504(e)).

Contrary to the above, on January 21, 2002, the licensee transported SCO consisting of contaminated fuel racks as exclusive use shipments in accordance with 49 CFR 173.427(b)(3), outside the site of usage as specified on the NRC license, and on a public highway and the transport vehicle was not placarded with "RADIOACTIVE" placards. However, because of the very low safety significance of this issue, and because the licensee entered this problem into the corrective action program (CR 02-00214) and took immediate steps to prevent this from recurring, the NRC is treating this issue as a Non-Cited Violation (NCV 50-346/01-16-01).

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Programs (71122.03)

.1 Review of Environmental Monitoring Reports and Data

a. Inspection Scope

The inspectors reviewed the licensee's Annual Radiological Environmental Monitoring Report for the years 1999 and 2000. Sampling location commitments, monitoring and measurement frequencies, land use census, the vendor laboratory's Interlaboratory Comparison Program, and data analysis were assessed. Anomalous results including data, missed samples, and inoperable or lost equipment were evaluated. The review of the Radiological Environmental Monitoring Program (REMP) was conducted to verify that the REMP was implemented as required by the Offsite Dose Calculation Manual (ODCM) and associated TSs, and that changes, if any, did not affect the licensee's ability to monitor the impacts of radioactive effluent releases on the environment. The most recent quality assessment of the licensee's REMP vendor laboratory for environmental sample analyses was reviewed to verify that the vendor laboratory performance was consistent with licensee and NRC requirements.

b. Findings

No findings of significance were identified.

.2 Walkdowns Of Radiological Environmental Monitoring Stations and Meteorological Tower

a. Inspection Scope

The inspectors conducted a walkdown of the 10 environmental air sampling stations and selected dosimeters to verify that their locations were consistent with their descriptions in the ODCM, and to evaluate the equipment material condition. The meteorological monitoring site was observed to validate that sensors were adequately positioned and operable. The inspectors reviewed semi-annual meteorological instrument calibration documents for the onsite meteorological monitoring program, including data recovery rates, routine calibration and maintenance activities to verify that the meteorological instrumentation was operable, calibrated, and maintained in accordance with licensee procedures. The inspectors also verified that readouts of wind speed, wind direction, and atmospheric stability measurements were available in the Control Room and that the readout instrumentation was operable.

b. Findings

No findings of significance were identified.

.3 Review of REMP Sample Collection and Analysis

a. Inspection Scope

The inspectors accompanied a licensee REMP technician to observe the collection and preparation of environmental samples including surface and ground water, air filters (particulate) and charcoal cartridges (iodine) to verify that representative samples were being collected in accordance with procedures and the ODCM. The inspectors observed the technician perform air sampler field check maintenance to verify that the air samplers were functioning in accordance with procedures. Selected air sampler calibration and maintenance records for 2001 were reviewed to verify that the equipment was being maintained as required. The environmental sample collection program was compared with the ODCM to verify that samples were representative of the licensee's release pathways. Additionally, the inspectors reviewed results of the vendor laboratory's Interlaboratory Comparison Program to verify that the vendor was capable of making adequate radio-chemical measurements.

b. Findings

No findings of significance were identified.

.4 Unrestricted Release of Material From the Radiologically Controlled Area

a. Inspection Scope

The inspectors evaluated the licensee's controls, procedure, and practices for the unrestricted release of material from radiologically controlled areas and verified that: (1) radiation monitoring instrumentation used to perform surveys for unrestricted release of materials was appropriate; (2) instrument sensitivities were consistent with NRC guidance contained in Inspection and Enforcement (IE) Circular 81-07 and Health Physics Positions in NUREG/CR-5569 for both surface contaminated and volumetrically contaminated materials; (3) criteria for survey and release conformed to NRC requirements; (4) licensee procedures were technically sound and provided clear guidance for survey methodologies; and (5) radiation protection staff adequately implemented station procedures.

The inspectors reviewed the quality control records for radiochemistry instrumentation used to identify and quantitate radioisotopes in materials for free release, in order to verify that the instrumentation was calibrated and maintained as required by site procedures. This review included instrument calibrations, control charts, and the environmental lower limit of detection capability.

b. Findings

No findings of significance were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed condition reports, the results of the licensee's REMP self-assessment, a Nuclear Quality Assurance Audit and Surveillance of the REMP to determine if problems were being identified and entered into the corrective action program for timely resolution. The inspectors also reviewed the licensee's overall management of the REMP, including attention to details of the sampling program and the vendor laboratory, in order to evaluate the effectiveness of the REMP in collection and analysis of samples for the detection of offsite radiological contamination.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed the Performance Indicator (PI) data submitted by the licensee for completeness and accuracy for the Reactor Coolant System Leakage PI in the

Barrier Integrity cornerstone. The inspectors compared the data reported by the licensee to the definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 2. The inspectors reviewed the licensee's computerized data sources and logs to gather information regarding reactor coolant system leakage, and compared to the data reported by the licensee.

b. Findings

No findings of significance were identified.

4OA6 Exit Meetings

Exit Meeting

The inspectors presented the inspection results to Mr. Fast and other members of licensee management during the February 12, 2002 exit meeting. The licensee acknowledged the findings presented. No proprietary information was identified.

Interim Exit Meetings

Senior Official at Exit:	Dave Imlay, Operation Training Manager
Date:	January 14, 2002
Proprietary (explain "yes"):	No
Subject:	Results of Licensed Operator Requalification Testing for Calendar Year 2001
Change to Inspection Findings:	No

Senior Official at Exit:	R. Fast, Plant Manager
Date:	January 24, 2002
Proprietary:	No
Subject:	Radiological Environmental Monitoring and Radioactive Material Control Programs, and Radioactive Material Processing and Transportation Program
Change to Inspection Findings:	No



## KEY POINTS OF CONTACT

### Licensee

H. Bergendahl, Vice President - Nuclear  
R. Fast, Plant Manager  
W. Bentley, Superintendent, Operations  
S. Coakley, Outage Manager  
D. Eshelman, Director, Support Services  
R. Greenwood, Supervisor, Health Physics Services  
D. Geisen, Manager, Design Engineering  
D. Lockwood, Manager, Regulatory Affairs  
G. Melssen, Maintenance Rule Coordinator  
J. Messina, Director, Work Management  
D. Miller, Supervisor, Compliance  
S. Moffit, Director, Technical Services  
W. Mugge, Manager, Nuclear Training  
D. Nelson, Manager, Work Control  
R. Pell, Manager, Plant Operations  
R. Rishel, PRA Specialist  
J. Rogers, Manager, Plant Engineering  
P. Schultz, Manager, Radiation Protection  
G. Skeel, Manager, Nuclear Security  
H. Stevens, Manager, Quality Assessment  
M. Stevens, Manager, Maintenance  
G. Wolf, Licensing Engineer

### NRC

G. Grant, Division Director  
C. Lipa, Branch Chief

## LIST OF ITEMS OPENED AND CLOSED

### Opened

50-346/01-16-01      NCV      Failure to placard radioactive SCO shipment (Section 2PS2.1)

### Closed

50-346/01-16-01      NCV      Failure to placard radioactive SCO shipment (Section 2PS2.1)

## LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
CR	Condition Report
DB	Davis-Besse
DBNPS	Davis-Besse Nuclear Power Station
DOT	Department of Transportation
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EDG	Emergency Diesel Generator
MR	Maintenance Rule
NCV	Non-Cited Violation
NPS	Nuclear Power Station
NRC	Nuclear Regulatory Commission
OA	Other Activities
ODCM	Offsite Dose Calculation Manual
PI	Performance Indicator
REMP	Radiological Effluent Monitoring Program
SCO	Surface Contaminated Object
SDP	Significance Determination Process
SSC	Systems, Structures, and Components
TS	Technical Specifications
USAR	Updated Safety Analysis Report
WO	Work Order

## LIST OF DOCUMENTS REVIEWED

### 1R04 Equipment Alignments

SD-042	Decay Heat/Low Pressure Injection System	Rev. 1
USAR Section 3.6.2.7.1.11	Low Pressure Injection System	Rev. 14
USAR Figure 6.3-2A	Functional Drawing, Decay Heat/Low Pressure Injection System	Rev. 7
P&ID M-033A	Decay Heat Removal Train 1	Rev. 29
P&ID M-033B	Decay Heat Removal Train 2	Rev. 39
OS-004	Decay Heat Removal/Low Pressure Injection System	Rev. 32
DB-OP-6316	Diesel Generator Operating Procedure	Rev. 02

### 1R05 Fire Protection

NRC Reg. Guide 1.189	Fire Protection for Operating Nuclear Power Plants	
	Pre-Fire Plan	
	Fire Hazards Analysis Report	Rev. 14
Dwg. A221F	Fire Protection General Floor Plan El. 545'-0" & 555'- 0"	Rev. 6
Dwg. A223F	Fire Protection General Floor Plan El. 623'-0"	Rev. 12
Dwg. A228F	Fire Protection Sections A-A & B-B	Rev. 2
Dwg. A229F	Fire Protection Sections C-C & D-D	Rev. 4
DSO-02- 00002	Telephone Call Documentation from Vern Patton, DB, to D. Simpkins, USNRC, Subject: Questions Regarding H2 Storage Near BWST	January 22, 2002
NFPA 50A	Gaseous Hydrogen Systems, Chapter 3, Location of Gaseous Hydrogen Systems	

### 1R11 Licensed Operator Requalification

DB-OP-00000	Conduct of Operations	Rev. 4
	Drill Scenario	
	Licensed Operator Training Schedule	

### 1R12 Maintenance Rule Implementation

Davis-Besse System Health Report 1<sup>st</sup> - 4<sup>th</sup> Qtr 2000

Davis-Besse System Health Report 1<sup>st</sup> - 4<sup>th</sup> Qtr 2001

MRPM 06	Maintenance Rule Program Manual	October 27, 2001
DB-PF-00003	Maintenance Rule Administrative Procedure	June 8, 2000

Service Water System

OS-20 Sh. 2	Service Water System	Rev. 23
CR 01-0518	Service Water Pump Testing	
CR 01-0642	Collective Significance Review Of Post-Maintenance Testing Issues	
CR 01-1002	Unexpected Service Water Pump Motor Temperature Increase	
CR 01-1508	Equipment Lineups Affected Maintenance Risk Assessment	
CR 01-1724	Service Water Pump 3 Performance Test Data Problems	
CR 01-2165	Plant Equipment Lineup Did Not Match Risk Summary	
CR 01-2913	Unnecessary Accrual Of Unavailability	
CR 01-2928	Intake Structure Flooding Issue With Pumps Removed	

Snubbers

CR 01-2251	Snubber Benchmarking	
CR 02-00273	Snubber A51, Failed As-Found Testing	
CR 02-00353	Snubber Inspection Failure	
CR 02-00346	Potential Generic Snubber Issue	
CR 02-00385	Snubber A-50, Hanger EBD-19-H76, Failed As-Found Bleed Rate	
CR 02-00294	Snubber A-121, Hanger HCB-3-H12, Failed As-Found Testing	
CR 02-00295	Snubber A-120, for Hanger HCB-3-H10 Failed As-Found Testing	
PCAQR 97-1504	Problem with Grinnel 5434-3 Snubber Test Machine	
DB-MM-05001	Bench Testing Snubbers	Rev. 3

Condensate System

PCAQR 98-1334	Samples Confirmed the Presence of Resin in the Feedwater and Condensate Systems	
	Davis-Besse Root Cause Analysis Report - 1998 Feedwater Resin Intrusion Event	
	Davis-Besse Root Cause Analysis Report - 1998 Feedwater Resin Intrusion Event	Rev. 1
CR 01-3433	Condensate Pump 1-3 Motor Lower Bearing High Temperature	
CR 01-1757	Foreign Material In Condensate	
CR 01-0612	Condensate Pump 1-1 Motor Degradation	

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

CR 01-3463	#1 CREVS Compressor Failed to Start After Low Suction Pressure Trip	
CR 02-00217	Forebay Level Indication Taken Out of Service Without Compensatory Action	
DB-SS-4164	EHC Hydraulic Power Unit Test	Rev. 03
CR 02-00007	OE-13070 (Greyboot Connectors) Should be reviewed for impact on DB-ME-09500	
DB-ME-09500	Installation and Termination of Electrical Cables	Rev. 2
CR 02-00452	Evaluation of risk associated with TBV Mod work	
CR 02-00403	SP13A2 Modification suspended based upon risk to the station	

1R14 Performance in Non-Routine Evolutions

CR 01-1996	Hydrogen Leak at G209	
CR 01-2842	Main Generator Hydrogen Leakage	
CR 01-3458	Main Generator Hydrogen Leakage is increasing	
CR 02-00184	Rising Condenser Pressure due to Broken Glass on LG408A	
DB-OP-02518	High Condenser Pressure	Rev. 1
CR 02-00521	Source Range NI 1 failed to energize on shutdown	

CR 02-00522	Turbine Bypass Valve SP13B3 failed to respond to ICS control Station	
CR 02-00523	Turbine Bypass Valve SP13A3 failed to approximately 20% during plant shutdown	
CR 02-00529	Main Steam Safety Valve test procedure acceptance criteria	
CR 02-00502	Main Steam Safety Valve As-found test results	
DB-OP-02504	Rapid Shutdown	Rev. 3
DB-OP-06903	Plant Shutdown and Cooldown	Rev. 5
DB-OP-06904	Shutdown Operations	Rev. 4
DB-OP-02000	RPS, SFAS, SFRCS Trip or SG Tube Rupture	Rev. 6

1R15 Operability Evaluations

CR 02-00273	Snubber A51, Failed As-Found Testing	
CR 02-00353	Snubber Inspection Failure	
CR 02-00346	Potential Generic Snubber Issue	
CR 02-00385	Snubber A-50, Hanger EBD-19-H76, Failed As-Found Bleed Rate	
CR 02-00294	Snubber A-121, Hanger HCB-3-H12, Failed As-Found Testing	
CR 02-00295	Snubber A-120, for Hanger HCB-3-H10 Failed As-Found Testing	
WPG-2	Work Process Guideline - 2, "Operations Equipment Issues"	
CR 01-2138	DH14B Stroke Time Increase	
CR 02-00369	DH14B Stroke Time Greater than expected	
CR 02-00301	DH14B erroneous movement to 50% open	

1R17 Permanent Plant Modifications

CR 02-00233	Collective Significance for SAC #2 Modification	
CR 02-00161	SAC 2 Microprocessor controls SAC 2 operation but is not CAT B software	
CR 02-00172	SAC 2 restoration to service violated station procedures	
CR 02-00183	SAC 2 post modification testing may not be adequate	

CR 02-00173	Operation of SAC 2 as a lag compressor per DB-OP-06251 will not work	
DB-OP-06251	Station and Instrument Air System Operating Procedure	Rev. 2
CR 02-00094	Problems following installation of MOD 00-0044 on SAC 2	
CR 02-00026	Inadequate FPR for SAC 2 modification	
CR 02-00196	SAC #2 Blowdown Valve cycling excessively	
<u>1R19 Post-Maintenance Testing</u>		
DB-OP-06316	Diesel Generator Operating Procedure	Rev. 2
CR 02-00320	Condensate Pump Thermocouples	
CR 02-00146	Condensate pump 1 work did not start as desired	
CR 02-00529	Main Steam Safety Valve test procedure acceptance criteria	
CR 02-00502	Main Steam Safety Valve As-found test results	
<u>1R22 Surveillance Testing</u>		
DB-PF-3162	AF-68 Reverse flow test (IST)	Rev. 2
DB-PF-3153	Auxiliary Feedwater Train 1 Check Valve Tests	Rev. 2
DB-SS-3091	Motor Driven Feed Pump Quarterly Test	Rev. 3
DB-SP-3136	Decay Heat Train 1 Pump and Valve Test	Rev. 4
DB-PF-3153	AFW Train 1 Check Valve Test	Rev. 2
<u>IEP4 Emergency Action Level and Emergency Plan Changes</u>		
	Davis-Besse Nuclear Power Station Emergency Plan	Revision 22
	Davis-Besse Nuclear Power Station Emergency Plan	Revision 21
<u>2PS2 Transportation</u>		
TR02-0001	Uniform Low-Level Radioactive Waste Manifest Shipping Paper	January 21, 2002
TR02-0002	Uniform Low-Level Radioactive Waste Manifest Shipping Paper	January 21, 2002
2002-0169	Radiological Survey Form: Container H-4	January 18, 2002
2002-0170	Radiological Survey Form: Container H-4	January 18, 2002

2002-0160	Radiological Survey Form: Rack 8	January 17, 2002
2002-0178	Radiological Survey Form: Container H-2	January 19, 2002
2002-0176	Radiological Survey Form: Container H-2	January 19, 2002
2002-0165	Radiological Survey Form: Rack 2	January 18, 2002

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Programs

DB-HP-01706	Release Of Material From Radiologically Restricted Areas	Rev. 5
DB-CH-00013	Radiochemistry Quality Control Program	Rev. 3
DB-HP-01113	Count Room Analysis System Operation	Rev. 2
DB-HP-03005	Surveillance Test Procedure	Rev. 4
DB-HP-10101	REMP Enhancement Sampling	Rev. 4
DB-HP-00015	Radiological Environmental Monitoring Program	Rev. 2
DB-HP-00013	Review and Evaluation of REMP Sample Analysis Results	Rev. 2
DB-HP-03004	Surveillance Test Procedure	Rev. 3
EN-DP-00103	Meteorological Monitoring Program	Rev. 1
EN-DP-04000	Meteorological Monitoring System Channel Calibration	Rev. 00
	Data Sheets-Meteorological Primary System	May 8, 2001
	Data Sheets-Meteorological Backup System	May 9, 2001
	Data Sheets-Meteorological Primary System	October 30, 2001
	Data Sheets-Meteorological Backup System	October 24, 2001
DB-HP-01452	Air Sampler Calibrations: Data Sheets ECP.0.11, ECP.0.16, ECP.0.4, ECP.0.5, ECP.0.6, ECP.0.8	Rev. 3
01-2674	Potentially Contaminated Oil Samples Removed From RRA Without Survey	October 10, 2001
01-1588	Area for Improvement in RP Sampling of Bulk Material Prior to Release	June 14, 2001
00-1293	Contaminated Scrubs Left at PPF	May 4, 2000
00-0763	Contaminated Valve Found in PSF Maintenance Shop	April 3, 2000
00-1045	Contaminated Mop Bucked Found in Clean Area	April 17, 2000
01-1540	Portal Monitor Failed Daily Source Check	June 15, 2001



01-2435	Vent Rig in I&C Hot Shop	September 19, 2001
01-2436	Source Found in Lab Tech Detector Housing	September 19, 2001
01-0636	ODCM Site Specific Dose Commitment Factor	March 5, 2001
01-2864	Beach Station Power Outage	October 25, 2001
01-3263	Errors in 2000 ARERR and Obsolete Dose Assessment Software	December, 6, 2001
01-3264	Radioactive Effluent Program Ownership	December 6, 2001
01-2721	Required Met Tower Instrument Failure	October 14, 2001
01-2812	Required Met Tower Instrument Failure	October 22, 2001
02-00214	Lack of Placarding of Radioactive SCO Shipment	January 22, 2002
SA-2000-0149	Self Assessment Report: RP, Effluents, ODCM and REMP	January 25, 2001
AR-01-RPPCP-01	Nuclear Quality Assessment Audit Report	January 17, 2002
SR-01-CHEMC-01	Surveillance Package	March 9, 2001
17795	NUPIC Joint Audit of Environmental Inc.	January 9, 2002
1999	Annual Radiological Environmental Operating Report	April, 2000
2000	Annual Radiological Environmental Operating Report	April 25, 2001
DP-60271	Offsite Dose Calculation Manual	Rev. 14
	Germanium Detector 3 Background Count	January 20, 2002

4OA1 Performance Indicator Verification

Davis-Besse System Health Report 1<sup>st</sup> - 4<sup>th</sup> Qtr 2000

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Unit Logs