January 18, 2001

Mr. Guy G. Campbell
Vice President - Nuclear
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 50-346/00-15(DRP)

Dear Mr. Campbell:

On December 31, 2000, the NRC completed an inspection at your Davis-Besse reactor facility. The results were discussed with you and other members of your staff on January 5, 2001. The enclosed report presents the results of that inspection.

The inspection was an examination of 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.

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

Sincerely,

Original signed by
Thomas J. Kozak

Thomas J. Kozak, Chief
Reactor Projects Branch 4

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

Enclosure: Inspection Report 50-346/00-15(DRP)

See Attached Distribution

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-346
License No:	NPF-3
Report No:	50-346/00-15(DRP)
Licensee:	FirstEnergy Nuclear Operating Company
Facility:	Davis-Besse Nuclear Power Station
Location:	5501 N. State Route 2 Oak Harbor, OH 43449-9760
Dates:	November 17 - December 31, 2000
Inspectors:	K. Zellers, Senior Resident Inspector D. Simpkins, Resident Inspector L. Collins, Project Engineer
Approved by:	Thomas J. Kozak, Chief Reactor Projects Branch 4 Division of Reactor Projects

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 50-346-00-15, on 11/17-12/31/2000; FirstEnergy Nuclear Operating Company; Davis-Besse Nuclear Power Station; resident inspector report.

The inspection was conducted by resident inspectors and a regional inspector. No findings of significance were identified.

Report Details

Summary of Plant Status: The plant was operated at about 100 percent power throughout the inspection period, except for brief down powers to about 93 percent power for testing activities.

1. REACTOR SAFETY

1R01 Adverse Weather Protection (Inspection Procedure 71111.01)

a. Inspection Scope

The inspectors reviewed the design features and implementation of the licensee's procedures designed to protect mitigation systems from adverse weather effects. The review included a procedural evaluation for cold weather preparations and contingencies, system walkdowns to ensure adequate equipment protection to preclude weather-initiated events and an evaluation of pre-emptive compensatory actions for adverse weather mitigation. (Documents reviewed: DB-OP-06913 (Seasonal Plant Preparation Checklist), RA-EP-02810 (Tornado), DB-ME-09521 (Preventative Maintenance & Circuit Testing of Freeze Protection and Heat Tracing), DB-OP-06331 (Freeze Protection & Electrical Heat Trace), and thirty-one (31) open Maintenance Work Orders (MWOs))

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (Inspection Procedure 71111.12)

a. Inspection Scope

The inspectors reviewed the licensee's implementation of the maintenance rule requirements, including a review of scope, goal setting, and performance monitoring, short-term and long-term corrective actions, and current equipment performance status for the following components and systems which have had performance problems:

- Breaker BBF2 failed to open (documents reviewed: Condition Report (CR) 2000-2259, Maintenance Rule Program Manual system scoping sheet for essential and miscellaneous AC, Davis-Besse Material Condition Report for essential and miscellaneous AC, and Information Notice 99-13 (Insights from NRC Inspections of Low- and Medium-voltage Circuit Breaker Maintenance Programs))

- Intake Canal silting (documents reviewed: Potential Condition Adverse to Quality Reports 1998-1506, -1546 and -1971, CR 1999-0012, -0939 and -0941, Maintenance Rule Program Manual system scoping sheet for the service water system, Davis-Besse Material Condition Report for the service water system, Updated Safety Analysis Report (USAR) Sections 2.2, 2.4, 2.5, 2C and 9.2,

System Description (SD)-0018 (Service Water) and DB-OP-06264 (Intake Structure and Traveling Screen System))

- Auxiliary Feedwater Pump Turbine governor valve linkage inadvertently opened while installing insulation (documents reviewed: CR 2000-2133, DB-OP-00000 (Conduct of Operations), Operations Directives GP-01 and GP-03, Maintenance Rule Program Manual system scoping sheet for the auxiliary feedwater pump turbine system, and the Davis-Besse Material Condition Report for the auxiliary feedwater pump turbine system)

- Intake Canal frazil ice (documents reviewed: CR 1999-2282 and 2000-0030, Maintenance Rule Program Manual system scoping sheet for the service water system, Davis-Besse Material Condition Report for the service water system, USAR Sections 2.2, 2.4, 2.5, 2C and 9.2, SD-0018 (Service Water) and DB-OP-06264 (Intake Structure and Traveling Screen System))

- Station and Instrument Air System (documents reviewed: Maintenance Rule Program Manual system scoping sheet for the station and instrument air system, and the Davis-Besse Material Condition Report for the station and instrument air system)

- Air operated valve CC171 (documents reviewed: CR 2000-2249, Operations Schematic OS-21, Maintenance Deficiency Tag (MDT) P-0355, Maintenance Work Order (MWO) 00-4333, DB-PF-03071 (Component Cooling Water Train 1 Quarterly Valve Testing), DB-SP-03136 (Decay Heat Pump #1 Quarterly Pump and Valve Test), Maintenance Rule Program Manual system scoping sheet for the component cooling water system, Davis-Besse Material Condition Report for air operated valves)

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (Inspection Procedure 71111.13)

a. Inspection Scope

The inspectors evaluated the effectiveness of the risk assessments performed before maintenance was conducted on structures, systems, and components (SSCs) and verified how risk was managed and if maintenance risk assessments and emergent work problems were adequately identified and resolved for the following activities:

- Main Transformer oil leak temporary repair (attended plant meeting and observed the maintenance activity, documents reviewed: OS-55 (Main Power System), drawings TP-13 and 13A from the main transformer vendor manual, DB-OP-02105 (Main Transformer 1 Alarm Panel 105 Annunciators), DB-OP-02016 (Generator Alarm Panel 16 Annunciators), DB-OP-06311 (345 KV Switchyard No.1 (Main) Transformer No. 11 (Auxiliary) Transformer and Startup

Transformer (O1 and O2)), DB-OP-06313 (Station Transformer Auxiliaries System Procedure), and SD-008B (345KV System))

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (Inspection Procedure 71111.15)

a. Inspection Scope

The inspectors reviewed the following operability evaluations affecting mitigating systems and barrier integrity. The reviews considered whether the evaluations were technically justified, the adequacy and functionality of any compensatory measures, and any degradations that might cause a loss of function as described in the USAR or Technical Specifications (TSs).

- Auxiliary Feedwater Pump Turbine Steam Admission Valve ability to open under low steam pressures (documents reviewed: Operability Justification 2000-0016, CR 2000-2924, TS 3/4.7.1.1, and USAR Section 15.2.8)

- Framatome Technologies Preliminary Safety Concern 2-00 pertaining to potential non-conservatism in the Loss of Coolant Accident Evaluation Model results for all B&W units (documents reviewed: CR 2000-1921, Operability Justification 2000-0004, and Framatome Technologies document FTI-00-2268 dated September 11, 2000)

- Potentially non-conservative TS surveillance test acceptance criteria of grid voltage (documents reviewed: CR 2000-2065, and Operability Justification 2000-005).

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (Inspection Procedure 71111.19)

a. Inspection Scope

The inspectors verified that the post-maintenance test procedures and test activities were adequate to verify system operability and functional capability for the following risk significant systems:

- Auxiliary Feedwater steam admission valve MS5889B (documents reviewed: MWO 00-005343-000 (Perform diagnostic testing/speed control valve adjustment to reduce MS5889B stroke time), DB-PF-03272 (Post Maintenance Valve Test), CR 2000-0864, Valve Basis Document for MS 5889B, Valve actuator information sheet for MS-5889B, SD-001 (Station and Instrument Air), and USAR Sections 9.2.7 and 15.2.7)

- Breaker D107 (Auxiliary Feedwater Pump #1 discharge to Steam Generator #1 motor valve AF 3870) interlock replacement. (Documents reviewed: DB-SP-03151 (Auxiliary Feedwater Pump #1 Quarterly Test), MWO 99-006-250-00 and T.S. 3.7.1.2)

- Breaker refurbishment testing (documents reviewed: DB-OP-01000 (Operation of Station Breakers), DB-ME-09104 (13.8 KV and 4.16 KV Westinghouse DHP Breakers) and DB-ME-09107 (Westinghouse DHP Breaker Refurbishment))

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (Inspection Procedure 71111.22)

a. Inspection Scope

The inspectors verified by witnessing the following surveillance tests and/or reviewing the test data; that the subject risk-significant structures, systems, and components (SSCs) met TS, USAR, and licensee procedure requirements; and demonstrated that the SSCs were capable of performing their intended safety functions. The inspectors evaluated the following tests for preconditioning, effect of the test on plant risk, clear and adequate acceptance criteria, operator procedural adherence, test data completeness, test frequency, test equipment range and accuracy, and post test equipment restoration:

- Station Battery Charger 1PN Test (documents reviewed: DB-ME-03003 (Station Battery Charger Test), DB-ME-09209 (BCT-2000 Operating Guide), DB-ME-03002 (Station Battery Service and Performance Discharge Test), SD-007 (125/250V and 120V Instrument AC), USAR Section 8.3.2, and Tss 3.8.2.3 and 4.8.2.3.2.c)

- Station Batteries Quarterly Surveillance (documents reviewed: DB-ME-03001 (Station Batteries Quarterly Surveillance), TS 4.8.2.3.2.b, TS 3/4.8 Bases, Reg Guide 1.129 (Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Nuclear Power Plants), IEEE Std 450-1995 (IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications), and CR 2000-2989)

- Auxiliary Feedwater Pump #2 Monthly Jog Test (documents reviewed: DB-OP-03159 (Auxiliary Feedwater Pump #2 Monthly Jog Test), USAR Section 9.2.7.2, SD-015 (Auxiliary Feedwater System), OS-17A (Auxiliary Feedwater System), OS-17B (Auxiliary Feedwater Pumps and Turbines), Unit Log, and CR 2000-2924)

- Emergency Core Cooling System Valves Train 1 Quarterly Test (document reviewed: DB-PF-03205)

b. Findings

No findings of significance were identified.

OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification (Inspection Procedure 71151)

a. Inspection Scope

The inspectors reviewed licensee event reports, material condition reports, monthly operating reports, and unit log entries to determine if the performance indicators for safety system unavailability for High Pressure Injection, Residual Heat Removal and Reactor Coolant System Leakage were accurately and completely reported to the NRC by the licensee. Since this was the first time this inspection activity was conducted for these performance indicators, the previous 5 quarters of data (July 1999 - September 2000) were inspected.

b. Findings

No findings of significance were identified.

4OA6 Management Meeting

The inspectors presented the inspection results to Mr. G. Campbell and other members of licensee management on January 5, 2001. The licensee acknowledged the findings presented. No proprietary information was identified.

SUPPLEMENTAL INFORMATION

Key Points of Contact

D. M. Andrews, Senior Engineer, Plant Engineering
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R. W. Pell, Manager, Plant Operations
R. I. Rishel, Maintenance Rule Coordinator

List of Items Opened, Closed, and Discussed

None.

List of Acronyms

CR	Condition Report
DRP	Division of Reactor Projects
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
MDT	Maintenance Deficiency Tag
MWO	Maintenance Work Order
NRC	Nuclear Regulatory Commission
OS	Operations Schematic
P&ID	Piping and Instrumentation Diagram
SD	System Description
SDP	Significance Determination Process
SSC	Structures, Systems, and Components
TS	Technical Specification
USAR	Updated Safety Analysis Report