

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 - NRC INSPECTION REPORT 50-346/01-02(DRS)

Dear Mr. Campbell:

On January 12, 2001, the Nuclear Regulatory Commission (NRC) completed the baseline annual inspection of evaluations of changes, tests, or experiments (Title 10 Code of Federal Regulations (10 CFR) Part 50.59) at your Davis-Besse Nuclear Power Station. The enclosed report documents the inspection results which were discussed on January 12, 2001, with Mr. Joe Rogers and other members of your staff.

This inspection examined activities conducted in accordance with the requirements of 10 CFR Part 50.59 under your license as they relate to changes to facility structures, systems, and components; normal and emergency procedures; and the updated safety analysis report. The inspector 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,

**/RA/**

Ronald N. Gardner, Chief  
Electrical Engineering Branch  
Division of Reactor Safety

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

Enclosure: Inspection Report 50-346/01-02(DRS)

See Attached Distribution

G. Campbell

-2-

cc w/encl: B. Saunders, President - FENOC  
H. Bergendahl, Plant Manager  
D. Lockwood, Manager, Regulatory Affairs  
M. O'Reilly, FirstEnergy  
Ohio State Liaison Officer  
R. Owen, Ohio Department of Health  
A. Schriber, Chairman, Ohio Public  
Utilities Commission

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cc w/encl: B. Saunders, President - FENOC  
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A. Schriber, Chairman, Ohio Public  
Utilities Commission

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-346/01-02(DRS)

Licensee: FirstEnergy Nuclear Operating Company

Facility: Davis-Besse Nuclear Power Station

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

Dates: January 8 - 12, 2001

Inspector: George M. Hausman, Senior Reactor Inspector

Approved by: Ronald N. Gardner, Chief  
Electrical Engineering Branch  
Division of Reactor Safety

# 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:

<b>Reactor Safety</b>	<b>Radiation Safety</b>	<b>Safeguards</b>
<ul style="list-style-type: none"><li>● Initiating Events</li><li>● Mitigating Systems</li><li>● Barrier Integrity</li><li>● Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>● Occupational</li><li>● Public</li></ul>	<ul style="list-style-type: none"><li>● Physical Protection</li></ul>

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 05000346-01-02(DRS), on 01/08-12/2001, FirstEnergy Nuclear Operating Company, Davis-Besse Nuclear Power Station. Evaluations of Changes, Tests, or Experiments.

This inspection was conducted by a regional senior reactor inspector. No findings of significance were identified during this inspection.

## Report Details

### **1. REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R02 Evaluations of Changes, Tests or Experiments (Inspection Procedure 71111.02)

##### .1 Review of Evaluations and Screenings for Changes, Tests or Experiments

###### a. Inspection Scope

The inspector reviewed 10 safety evaluations performed pursuant to Title 10 Code of Federal Regulations (10 CFR) Part 50.59. The safety evaluations were related to temporary and permanent plant modifications, set-point changes, procedure changes, potential conditions adverse to quality, and changes to the licensee's updated safety analysis report. The inspector confirmed that the safety evaluations were thorough and that prior NRC approval was obtained as appropriate. The inspector also reviewed 15 safety reviews (screenings), where the licensee had determined that a 10 CFR Part 50.59 safety evaluation was not necessary. In regard to the changes reviewed where no 10 CFR Part 50.59 safety evaluation was performed, the inspector verified that the changes did not meet the threshold to require a 10 CFR Part 50.59 safety evaluation. These safety evaluations and screenings were chosen based on risk significance of samples from the different cornerstones.

###### b. Findings

No findings of significance were identified.

### **4. OTHER ACTIVITIES**

#### 4OA2 Identification and Resolution of Problems

###### a. Inspection Scope

The inspector reviewed the licensee's condition reports concerning 10 CFR Part 50.59 safety evaluations and screenings to verify that the licensee had an appropriate threshold for identifying issues. The inspector evaluated the effectiveness of the corrective actions for the identified issues.

###### b. Findings

No findings of significance were identified.

#### 4OA6 Management Meetings

##### Exit Meeting Summary

The inspector presented the inspection results to Mr. Joe Rogers and other members of licensee management at the exit meeting held on January 12, 2001. The licensee acknowledged the results of the inspection. No proprietary information was identified.



## LIST OF PERSONS CONTACTED

### Licensee

C. Ackerman, Supervisor - Quality Assurance  
H. Bergendahl, Plant Manager  
J. Blay, Senior Engineer - Nuclear Engineering  
A. Bless, Assistant Engineer - Compliance  
G. Campbell, Vice President - Nuclear  
T. Chambers, Supervisor - Quality Assurance  
R. Coad, Assistant to Plant Manager - Operations  
D. Eshelman, Manager - Plant Engineering  
D. Geisen, Manager - Design Basis Engineering  
P. Gilles, Supervisor - Reactor Engineering  
T. Lang, Supervisor - Nuclear Engineering  
D. Miller, Supervisor - Compliance  
S. Moffitt, Director - Technical Services  
J. Rogers, Manager - Life Cycle  
D. Schreiner, Staff Advisor - Maintenance  
D. Stephenson, Auditor - Quality Assurance  
H. Stevens, Manager - Quality Assurance  
R. Wharry, Instructor - Nuclear Training  
G. Wolf, Engineer - Licensing

### NRC

K. Zellers, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

## LIST OF BASELINE PROCEDURES PERFORMED

The following procedure(s) were used to perform the inspection during the report period. Documented findings are contained in the body of the report.

Number	Title	Inspection Procedure(s)
71111.02	Evaluations of Changes, Tests or Experiments	
71152	Identification and Resolution of Problems (Reference Only)	

## LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
CCW	Component Cooling Water
CNRB	Corporate Nuclear Review Board
CTMT	Containment
DBNPS	Davis-Besse Nuclear Power Station
DC	Direct Current
DRS	Division of Reactor Safety
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EN	Engineering
FENOC	First Energy Nuclear Operating Company
IA	Instrument Air
MOD	Modification
NG	Nuclear Group
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
PARS	Publicly Available Records
PCAQR	Potential Condition Adverse to Quality Report
PORV	Pilot Operated Relief Valve
RCP	Reactor Coolant Pump
SA	Service Air
SFAS	Safety Features Actuation System
SQUG	Seismic Qualification Utility Group
TM	Temporary Modification
UCN	USAR Change Notice
USAR	Updated Safety Analysis Report

## LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion on this list does not imply that NRC inspectors reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document in this list does not imply NRC acceptance of the document, unless specifically stated in the inspection report.

### **CONDITION REPORTS GENERATED PRIOR TO INSPECTION**

<b><u>Number</u></b>	<b><u>Description</u></b>	<b><u>Revision</u></b>
1999-0524	CNRB Identified That an Approved Safety Review for USAR Change Request 98-120, Which Had Not Been Approved, Required a Safety Evaluation	03/31/99
1999-0782	Identification of a Second Leak on the Main Generator "A" Phase Line Bushing	05/03/99
1999-1088	Convert PCAQR 98-1858 to the CR Process	06/22/99
1999-1390	Improperly Applied Head Correction Factor in Service Water Pump Quarterly Test Procedure	08/17/99
1999-1689	Possible Inadequacies of TM 98-0037 Safety Review	10/07/99
2000-0271	DBNPS Decay Heat Removal Pumps of Similar Design and Manufacture to Arkansas Nuclear One Significant Event Rpt	02/11/00
2000-1400	MRC Review of CR 2000-1396 Identified Programmatic Issue	05/11/00
2000-1824	CR 2000-1534 Resolution Identified a Safety Evaluation Should Have Been Prepared Prior to a Wiring Change	07/24/00
2000-2411	Possible Inadequacies of TM 99-0018 Safety Evaluation	10/06/00
2000-2600	Safety Evaluations for Removing TBVs and 1050# MSSVs Did Not Fully Consider the Licensing Basis	10/27/00
2000-2732	CNRB Noted That SE 99-0019 Did Not Adequately Address All the Required Considerations as Depicted in IN 97-78	12/13/00
2000-4018	Self-Assessment 2000-0162 Identified Areas for Improvement	
2000-4057	Safety Evaluations Identified as Inadequate by CNRB Are Not Being Captured and Resolved by Corrective Action Program	12/19/00

**CONDITION REPORTS GENERATED DURING INSPECTION**

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<u>Number</u>	<u>Description</u>	<u>Revision</u>
2001-0075	Potential Inadequate Safety Review for TM 00-0018	01/10/01
2001-0083	Safety Review Missing Date After Preparer Signature	01/11/01
2001-0086	Safety Review for TM 00-0027 Did Not Adequately Address If There Was a Change in the Facility as Described in the USAR	01/11/01
2001-0087	NG-EN-00304 Refers to Canceled Procedure	01/11/01

**PROCEDURES**

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<u>Number</u>	<u>Description</u>	<u>Revision</u>
DB-DP-00022	Station Review Board	3; C-2
DB-NE-03292	Core Alteration Prerequisites and Periodic Checks	2; C-3
DB-PF-03270	Containment Atmosphere Closure Verification for Core Alterations	0; C-3
DB-SP-10000	Decay Heat Pump Inboard Bearing Test Procedure (Special Test Procedure)	0
NG-DB-00202	Test Control	0; C-3
NG-DB-00302	DBNPS Fire Protection Program	1
NG-EN-00301	Plant Modifications	2; C-3
NG-EN-00304	Safety Review and Evaluation	3; C-2
NG-EN-00313	Control of Temporary Modifications	1; C-6
NG-EN-00372	Dry Fuel Storage	0; C-2
NG-NA-00115	Control of Procedures	3; C-5
NG-NS-00806	Preparation and Control of USAR Changes	1

**REFERENCES**

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<u>Number</u>	<u>Description</u>	<u>Revision</u>
-----	Company Nuclear Review Board Policy & Practices	10/17/00
98-0978	Potential Condition Adverse to Quality Report (PCAQR)	05/08/98
E52B SH12	Elementary Wiring Diagram - Reactor Cooling System RC Przr Pwr Rlf Shutoff Valve	12

## REFERENCES

<u>Number</u>	<u>Description</u>	<u>Revision</u>
E52B SH13	Elementary Wiring Diagram - Reactor Cooling System RC Przr Auto Vent Quench Tk	12
FEADAQC	Davis-Besse Nuclear Power Station Quality Class Report Pages 154 & 155 of 231	04/02/00
Letter S/N 2679	Revision 22 to the USAR	11/15/00
Manual 10 CFR 50.59	Davis-Besse Nuclear Power Station 10 CFR 50.59 Training Manual	3
Self-Assessment 2000-0162	Assessment Topic 10CFR50.59 Safety Reviews and Safety Evaluations	12/15/00

## SAFETY EVALUATIONS

<u>Number</u>	<u>Description</u>	<u>Revision</u>
SE 98-0054	Replace Service Water Valves (MOD 97-0003 and UCN 98-051)	12/17/98
SE 99-0006	Modifications Due to Emergency Diesel Generator Room High Temperature Concerns (MOD 98-0061)	1
SE 99-0018	Restore the Supports for Component Cooling Water Heat Exchangers (MOD 98-0058)	06/18/99
SE 99-0021	Emergency Diesel Generator (EDG) Room Ventilation and Auxiliary Building Non-radioactive Area Ventilation (UCN 99-022)	09/04/99
SE 99-0030	Nuclear Instrumentation Upgrade (MOD 93-0021 and UCN 99-034)	1
SE 99-0031	EDG Ventilation Dampers Locked to Full Outside Air Configuration (TM 99-0007)	09/10/99
SE 99-0044	Eliminating the Time Delay for Opening the CCW Nonessential Header Isolation Valves When Low Flow Is Detected at a CCW Pump (Limited MOD 98-0056)	12/08/99
SE 00-0004	Reverse Direction of SA 237, IA/SA Cross Tie Check Valve (TM 99-0006)	01/19/00
SE 00-0008	Installing Torque Thrust Cell and Quick Test Cable Assembly on CCW Nonessential Header Isolation Valves CC-2645 and CC-2649 (TM 00-0001)	02/28/00
SE 00-0011	Supply Temporary Cooling to Station Air Compressor 1-1 from Domestic Water (TM 00-0007)	03/15/00

**SAFETY EVALUATIONS**

<u>Number</u>	<u>Description</u>	<u>Revision</u>
SE 00-0015	Decay Heat Pump 1-1 and 1-2 Bearing Test with Cold CCW Cooling (Special Test Procedure DB-SP-10000)	03/31/00

**SAFETY REVIEWS**

<u>Number</u>	<u>Description</u>	<u>Revision</u>
DB-OP-06233	Auxiliary Feedwater System	02/17/00
DB-OP-06317 C-2	480 Volt Switching Procedure	02/06/00
DB-PF-03017	Service Water Pump 1 Quarterly Test (PAT TA99-1611)	09/27/99
DB-PF-03072	Component Cooling Water Pump 1 Quarterly Test (PAT TA99-9128)	11/18/99
DB-SC-3114R1C2	SFAS Integrated Time Response Test	04/11/00
MOD 95-0019-00	Modify Bailey Module for PSHLRC2-5 to Replace Output Relays	07/25/97
MOD 95-0019-01	SQUG Outlier Resolution: PORV Open Bistable. Replaces Electro-mechanical Relays with Solid State Relays	08/23/99
MOD 96-0025-00	Replace the Makeup Pump Re-circulation Check Valves - MU204 & MU207	06/02/99
MOD 97-0078-00	Replace ECCS Room Cooler #3 Coil and Reroute Piping	12/16/99
MOD 99-0045-00	Chemical Cleaning 4160V Line Support Plate	08/24/99
MOD 00-0029-00	Replacement of the Feedwater and Steam Sample Chiller (E116)	08/28/00
TM 99-0021	Raise Set-point of TIS2396 to 123°F	07/27/99
TM 00-0014	RCP Seal Cartridge Connections Temporary Isolation (Blank Flange/Pipe Plug Installation)	03/21/00
TM 00-0018	Temporary Modification to Maintain CTMT Purge Isolation Valves Open During Loss of DC Power	04/01/00
TM 00-0023	Installation of Blank Flanges/Pipe Plugs on RCP 1-1 Seal Cartridge	04/21/00
TM 00-0027	Installation of Lifting Beams Over EDG 1	09/07/00
TM 00-0032	Support Flex Line for Main Transformer Conservator, Cooler Bank 2, East Side	12/13/00