February 26, 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 50-346/01-04(DRS)

Dear Mr. Campbell:

On February 2, 2001, the NRC completed an inspection at your Davis-Besse Nuclear Power Station. The enclosed report documents the inspection findings which were discussed on February 2, 2001, with Mr. Bergendahl 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 inspector reviewed selected procedures and records, observed activities, and interviewed personnel. Specifically, this inspection focused on occupational and public radiation safety.

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 by Wayne J. Slawinski Acting for/

Gary L. Shear, Chief
Plant Support Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 50-346/01-04(DRS)

See Attached Distribution

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
A. Schriber, Chairman, Ohio Public
Utilities Commission

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See Attached Distribution
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R. Owen, Ohio Department of Health
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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-346
License No:	NPF-3
Report No:	50-346/01-04(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 29 - February 2, 2001
Inspector:	John E. House, Senior Radiation Specialist
Observer:	Karl Von Ahn State of Ohio, Department of Health
Approved by:	Gary L. Shear, Chief Plant Support 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:

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 05000346-01-04(DRS), on 01/29-02/02/2001, FirstEnergy Nuclear Operating Company, Davis-Besse Nuclear Power Station. Radiation Safety Specialist Report.

The inspection was conducted by a senior radiation specialist.

Cornerstone: Occupational and Public Radiation Safety

A. Inspector Identified 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 at 100 percent power throughout the inspection period.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Controls for Radiologically Significant Areas

.1 Plant Walk-Downs, Radiological Boundary Verifications and Radiation Work Permit Reviews

a. Inspection Scope

The inspector conducted walk-downs of the radiologically restricted area to verify the adequacy of radiological area boundaries and postings including high and locked high radiation areas. Selected parts of the Auxiliary, Turbine, Radwaste and Containment Buildings were observed to verify that these areas were properly posted and controlled in accordance with 10 CFR Part 20, licensee procedures and Technical Specifications. Radiation work permits (RWPs) for higher dose jobs were reviewed for protective clothing requirements and alarm set points.

b. Findings

No findings of significance were identified.

.2 Radiation Protection Technician Proficiency

a. Inspection Scope

The inspector evaluated radiation protection technician performance during the current inspection and during the last refueling outage, 12RFO. The inspector verified through observations that technicians adequately completed job site dose rate measurements, properly controlled contamination boundaries and that radiation workers used protective clothing consistent with RWP requirements. Radiological problem condition reports were reviewed to determine if technician errors had been identified, and if so, was there a common cause.

b. Findings

No findings of significance were identified.

.3 High Risk Significant and High Dose Rate Controls

a. Inspection Scope

The inspector reviewed controls for elevated dose rate areas and confirmed that locked high radiation areas were secured. The licensee's radiological controls for an at-power containment entry were evaluated. The containment entry pre-job briefings were attended in order to verify that workers were aware of the radiological conditions including neutron dose rates, and to determine how the job would be performed while maintaining the dose As Low As Is Reasonably Achievable (ALARA). The inspector accompanied one work crew into containment to verify that the radiological controls were consistent with those specified in the job plan. A post job evaluation was attended in order to observe the licensee's ALARA planning process for future dose minimization.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls

.1 Outage Review

a. Inspection Scope

The inspector reviewed job activities conducted under the following RWPs in order to evaluate the effectiveness of the licensee's ALARA controls for the last refueling outage (12RFO), and the containment entry conducted during the current inspection:

2000-5003: Inspections, walk-downs, measurements and sampling. Valve and snubber work, scaffolding installation and removal.

2000-5110: Reactor head work.

2000-5302: Setup, maintenance, and tear down of eddy current equipment for steam generator inspection.

2000-5312: Steam generator water lance cleaning.

2000-5502: Insulation removal and replacement in East D-Ring.

2000-5504: Scaffolding installation and removal in East D-Ring.

2000-5604: Scaffolding installation and removal in West D-Ring.

2001-2001: Cleaning containment air coolers.

The inspector reviewed the methodology and assumptions used for outage exposure estimates and exposure goals, and compared those estimates to the final job dose. Those outage jobs that were greater than 5 person-rem and exceeded the dose

estimates by more than 50% were evaluated to confirm that the additional dose was the result of an expanded work scope or emergent work, and that these circumstances had been documented in condition reports. Worker instructions/requirements including protective clothing, engineering controls to minimize contamination, and the use of predetermined low dose waiting areas were reviewed to determine if the licensee had maintained the radiological exposure for these jobs ALARA.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation

.1 Walk-down of Radioactive Waste Systems

a. Inspection Scope

The inspector performed walk-downs of the liquid and solid radioactive waste (radwaste) processing systems located in the Radwaste and Auxiliary Buildings, and reviewed the liquid and solid radioactive waste systems to assess their material condition and operability. The inspector also compared the current system configuration to the system descriptions in the Updated Final Safety Analysis Report and the process control program to determine if system changes had been documented.

b. Findings

No findings of significance were identified.

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4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification

Radiological Effluents

a. Inspection Scope

The inspector reviewed licensee effluent release data for calendar year 2000. The accuracy and completeness of the data was assessed against the criteria specified in Nuclear Energy Institute 99-02, Revision 0, "Regulatory Assessment Performance Indicator Guideline." In addition, the inspector interviewed members of the licensee's staff who were responsible for performance indicator data acquisition, verification and reporting, and verified that their review and assessment of the data was adequate.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

Exit Meeting Summary

The inspector presented the inspection results to Mr. Bergendahl and other members of licensee management at the conclusion of the inspection on February 2, 2001. The licensee acknowledged the findings presented. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

H. Bergendahl,	Acting Plant Manager
A. Bless	Assistant Engineer, Regulatory Assurance
L. Bonker	Health Physics Services Supervisor
L. Bowyer	Supervisor, Radiation Protection
R. Coad	Operations Manager
J. Feckley	Supervisor, Radiation Protection
B. Geddes	Supervisor, Chemistry
R. Greenwood	Health Physics Services Supervisor
D. Miller	Senior Engineer-Compliance
J. Reuter	Master Radiation Protection Technician
R. Scott	Manager, Radiation Protection Assessment
J. Simon	Master Radiation Protection Technician
H. Stevens	Quality Assurance Manager
P. Shultz	Radiation Protection Manager
M. Travis	Radiation Protection Supervisor
G. Wolf	Engineering-Licensing, Regulatory Affairs

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

ALARA	As Low As Is Reasonably Achievable
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
NRC	Nuclear Regulatory Commission
OA	Other Activities
OS	Occupational Radiation Safety
Radwaste	Radioactive Waste
RWP	Radiation Work Permit

PARTIAL LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector 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.

Assessments and Audits

Self Assessment Reports

SA 2000-0024, Radiation Work Permit Process and Procedure, November 15, 2000
SA 2000-0023, Radiation Protection Instruments and Surveys, November 15, 2000
SA 2000-0149, Radiation Protection Effluents, ODCM, and REMP, January 25, 2001
SA 2000-0151, Access to Radiologically Restricted Areas, November 30, 2000
Basis for Lowering the Recording Level for Committed Effective Dose Equivalent

Condition Reports

2000-2110, 2000-0325, 2000-2316, 2000-0584, 2000-0508, 2000-2629, 2000-0241, 2001-0306.

Miscellaneous

DB-HP-01800; TEDE Evaluation, Dose Rate Reduction, Refuel Canal Work Associated with Reactor Head Removal/Replacement Preparation, February 28, 2000
DB-HP-04003, Locked High Radiation Areas Outside Containment
Radiological Surveys: Containment and Auxiliary Building
Request for Assistance and Response 00-0050, Demineralizer Water Use in Refueling Canal

Procedures

DB-HP-01201, Revision 4; Administrative Dose Control Levels, November 8, 1999
DB-HP-04024, Revision 00; 10CFR61 Sampling For Waste Classification, April 1, 1999
DB-HP-01206, Revision 4; Multiple Badging: Issue, Use, and Collection, March 25, 1998
Davis-Besse-PCP, Revision 6; Solid Radioactive Waste Process Control Programs, April 8, 1999

Radiation Work Permits

2000-5003: Work functions to include operation of containment cranes, inspections, walk downs, and measurements, RE and transmitter calibrations, chemistry sampling and cleanliness inspections, votes testing, valve and snubber work, CAC inspection/maintenance, scaffolding installation and removal, CTMT Coordinator work functions and walk downs, QA, QC, NRC, INPO, safety walk downs, and work functions.

2000-5110: Install/remove reactor service structure hoists, lower/raise seal plate, replace NI cover gaskets, torque and RTV seal plate and NI covers. Detension reactor head, run out and remove reactor head studs. Replace and run in studs, and tension reactor head. Clean stud holes and install/remove stud hole covers.

2000-5302: Setup/maintenance/tear down of Eddy Current Equipment, including installation and removal of manipulator, run cable, snorkel adjust, change out probes, reels, data cables, and remote tube plugging evolutions. This RWP covers East and West OTSGs, upper and lower channels.

2000-5312: Secondary OTSGs (A & B) water lance. Includes the removal and re-installation of the secondary man-ways and hand-hole covers. Set-up and tear down of hoses and equipment needed for water lance cleaning.

2000-5502: Insulation removal and replacement in the East D-Ring. This RWP does NOT allow removal of insulation from East OTSG.

2000-5504: Install and remove scaffolding in East D-Ring including construction of contamination pens for Steam Generator inspections.

2000-5604: Install and remove scaffolding in West D-Ring including construction of contamination pens for Steam Generator inspections.

2001-2001: Clean Containment Air Coolers.