November 15, 2004

Mr. Mark B. Bezilla
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 TRIENNIAL FIRE PROTECTION BASELINE INSPECTION
REPORT NO. 05000346/2004009(DRS)

Dear Mr. Bezilla:

On October 25, 2004, the U. S. Nuclear Regulatory Commission (NRC) completed a fire protection triennial baseline inspection at your Davis-Besse Nuclear Power Station. The enclosed report documents the inspection finding which was discussed with you and other members of your staff.

The inspection examined the effectiveness of activities conducted under your license as they related to the implementation of your NRC-approved fire protection program for selected risk-significant fire areas. The inspection consisted of a selected examination of design drawings, calculations, analyses, procedures, audits, field walkdowns, and interviews with personnel.

Based on the results of this inspection, one issue was reviewed under the NRC traditional enforcement process and determined to be a Severity Level IV violation of NRC requirements. However, because this violation was of very low safety significance and because the issue was entered into your corrective action program, the NRC is treating this finding as a Non-Cited Violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy.

If you contest the subject or severity of the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, NRC - RIII, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector Office at the Davis-Besse Nuclear Power Station.

In accordance with 10 CFR Part 2.390 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

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

Enclosure: Inspection Report 05000346/2004009(DRS)
w/ Attachment: Supplemental Information

cc w/encl: The Honorable Dennis Kucinich
G. Leidich, President - FENOC
J. Hagan, Senior Vice President
Engineering and Services, FENOC
L. Myers, Chief Operating Officer, FENOC
Plant Manager
Manager - Regulatory Compliance
M. O'Reilly, Attorney, FirstEnergy
Ohio State Liaison Officer
R. Owen, Administrator, Ohio Department of Health
Public Utilities Commission of Ohio
President, Board of County Commissioners
of Lucas County
C. Koebel, President, Ottawa County Board of Commissioners
D. Lochbaum, Union Of Concerned Scientists
J. Riccio, Greenpeace
P. Gunter, N.I.R.S.

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-346
License No:	NPF-3
Report No:	05000346/2004009(DRS)
Licensee:	FirstEnergy Nuclear Operating Company (FENOC)
Facility:	Davis-Besse Nuclear Power Station
Location:	5501 North State Route 2 Oak Harbor, OH 43449-9760
Dates:	August 30 through October 25, 2004
Inspectors:	R. Langstaff, Senior Reactor Engineer L. Kozak, Senior Reactor Analyst D. Schrum, Reactor Engineer
Observer:	A. Dahbur, Reactor Engineer
Approved by:	J. Lara, Branch Chief Electrical Engineering Branch Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000346/2004009(DRS); 08/30/2004 - 10/25/2004; Davis-Besse Nuclear Power Station; Baseline Triennial Fire Protection Baseline and Special Inspection.

This report covers an announced baseline triennial fire protection inspection and an announced special inspection. The inspection was conducted by Region III inspectors. One Severity Level IV Non-Cited Violation was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 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. Inspector-Identified and Self-Revealed Findings

Cornerstone: Mitigating Systems

- Severity Level IV. The team identified that the licensee did not provide complete information to the NRC in a licensing submittal dated December 21, 2000. Specifically, the licensee did not identify that previously submitted licensing correspondence, dated March 15, 1989, regarding the basis for not protecting ventilation system cables, was no longer accurate. The licensee planned to submit correspondence to the NRC to provide complete information.

  Because the issue potentially impacted the NRC's ability to perform its regulatory function, this finding was evaluated with the traditional enforcement process. The finding was determined to be more than minor because the regulatory process could have been impacted and the licensee had a clear opportunity to identify and correct the error. The finding was determined to be of very low safety significance because the licensee had a technically sound analysis which justified not protecting the ventilation system cables. This finding was determined to be a Severity Level IV Non-Cited Violation of 10 CFR 50.9. (Section 1R05.10)

B. Licensee-Identified Violations

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events and Mitigating Systems

1R05 Fire Protection (71111.05)

The purpose of this inspection was to review the Davis-Besse Nuclear Power Station Fire Protection Program for selected risk-significant fire areas. Emphasis was placed on verifying that the post-fire safe shutdown capability and the fire protection features were maintained free of fire damage to ensure that at least one post-fire safe shutdown success path was available. The inspection was performed in accordance with the NRC reactor oversight process using a risk-informed approach for selecting the fire areas and attributes to be inspected. The team used the Davis-Besse Nuclear Power Station Individual Plant Examination for External Events along with insights gained during plant walkdowns to choose risk-significant areas for detailed inspection and review. The fire areas chosen for review during this inspection were:

Fire Area	Description of Fire Area Reviewed
BF	Service Water Pump Area
T	Component Cooling Water (CCW) Pump Room

The above two areas were selected based on risk insights and that two separate shutdown strategies were used for the CCW pump room (fire area T). As such, the team considered these two inspection samples as equivalent in complexity to three samples as specified in the fire protection inspection procedure.

For each of these fire areas, the inspectors focused on the fire protection features, the systems and equipment necessary to achieve and maintain safe shutdown conditions, determination of licensee commitments, and changes to the fire protection program.

.1 Systems Required to Achieve and Maintain Post-Fire Safe Shutdown

Title 10 CFR Part 50, Appendix R, Section III.G.1, required the licensee to provide fire protection features that were capable of limiting fire damage to structures, systems, and components important to safe shutdown. The structures, systems, and components that were necessary to achieve and maintain post-fire safe shutdown were required to be protected by fire protection features. These features were required to be capable of limiting fire damage to the structures, systems, and components so that:

- One train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) was free of fire damage; and

- Systems necessary to achieve and maintain cold shutdown from either the control room or emergency control station(s) could be repaired within 72 hours.

Specific design features for ensuring this capability were specified by 10 CFR Part 50, Appendix R, Section III.G.2.

a. Inspection Scope

The team reviewed the plant systems required to achieve and maintain post-fire safe shutdown to determine if the licensee had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions for each fire zone selected for review. Specifically, the review was performed to determine the adequacy of the systems selected for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and support system functions. This review included the fire protection safe shutdown analysis.

The team also reviewed the operators' ability to perform the necessary manual actions for achieving safe shutdown including a review of procedures, accessibility of safe shutdown equipment, and the available time for performing the actions.

The team reviewed the Updated Safety Analysis Report (USAR) and the licensee's engineering and/or licensing justifications (e.g., NRC guidance documents, license amendments, technical specifications, safety evaluation reports, exemptions, and deviations) to determine the licensing basis.

b. Findings

No findings of significance were identified.

.2 Fire Protection of Safe Shutdown Capability

Title 10 CFR Part 50, Appendix R, Section III.G.2, required separation of cables and equipment and associated circuits of redundant trains by a fire barrier having a three hour rating. If the requirements cannot be met, then alternative or dedicated shutdown capability and its associated circuits, independent of cables, systems or components in the area, room, or zone under consideration should be provided (10 CFR Part 50, Appendix R, Section III.G.3).

a. Inspection Scope

For each of the selected fire areas, the team reviewed the licensee's safe shutdown analysis to ensure that at least one post-fire safe shutdown success path was available in the event of a fire. This included a review of manual actions required to achieve and maintain hot shutdown conditions and make the necessary repairs to reach cold shutdown within 72 hours. The team also reviewed procedures to verify that adequate

direction was provided to operators to perform these manual actions. Factors, such as timing, access to the equipment, and the availability of procedures, were considered in the review.

The team also evaluated the adequacy of fire suppression and detection systems, fire area barriers, penetration seals, and fire doors to ensure that at least one train of safe shutdown equipment was free of fire damage. To accomplish this, the team observed the material condition and configuration of the installed fire detection and suppression systems, fire barriers, and construction details and supporting fire tests for the installed fire barriers. In addition, the team reviewed license documentation, such as fire code deviations, detector placement drawings, fire house station drawings, smoke removal plans, fire hazard analysis reports, safe shutdown analyses, and the National Fire Protection Association codes to verify that the fire barrier installations met license commitments.

b. Findings

No findings of significance were identified.

.3 Post-Fire Safe Shutdown Circuit Analysis

Title 10 CFR Part 50, Appendix R, Section III.G.1, required that structures, systems, and components important to safe shutdown be provided with fire protection features capable of limiting fire damage to ensure that one train of systems necessary to achieve and maintain hot shutdown conditions remained free of fire damage. Options for providing this level of fire protection were delineated in 10 CFR Part 50, Appendix R, Section III.G.2. Where the protection of systems whose function was required for hot shutdown did not satisfy 10 CFR Part 50, Appendix R, Section III.G.2, an alternative or dedicated shutdown capability and its associated circuits, was required to be provided that was independent of the cables, systems, and components in the area. For such areas, 10 CFR Part 50, Appendix R, Section III.L.3, specifically required the alternative or dedicated shutdown capability to be physically and electrically independent of the specific fire areas and capable of accommodating post-fire conditions where offsite power was available and where offsite power was not available for 72 hours.

a. Inspection Scope

On a sample basis, the team evaluated the adequacy of separation provided for the power and control cabling of redundant trains of shutdown equipment. This inspection focused on the cabling of selected components in systems important for safe shutdown. The team's review also included a sampling of components whose inadvertent operation due to fire may adversely affect post-fire safe shutdown capability. The purpose of this review was to determine if a single exposure fire, in one of the fire areas selected for this inspection, could prevent the proper operation of both safe shutdown trains.

b. Findings

No findings of significance were identified.

.4 Alternative Safe Shutdown Capability

Title 10 CFR Part 50, Appendix R, Section III.G.1, required that structures, systems, and components important to safe shutdown be provided with fire protection features capable of limiting fire damage to ensure that one train of systems necessary to achieve and maintain hot shutdown conditions remained free of fire damage. Options for providing this level of fire protection were delineated in 10 CFR Part 50, Appendix R, Section III.G.2. Where the protection of systems whose function was required for hot shutdown did not satisfy 10 CFR Part 50, Appendix R, Section III.G.2, an alternative or dedicated shutdown capability independent of the area under consideration, was required to be provided. Additionally, alternative or dedicated shutdown capability must be able to achieve and maintain hot standby conditions and achieve cold shutdown conditions within 72 hours and maintain cold shutdown conditions thereafter. During the post-fire safe shutdown, the reactor coolant process variables must remain within those predicted for a loss of normal power, and the fission product boundary integrity must not be affected (i.e., no fuel clad damage, rupture of any primary coolant boundary, or rupture of the containment boundary).

a. Inspection Scope

The team reviewed the licensee's systems required to achieve alternative safe shutdown to determine if the licensee had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions. The team also focused on the adequacy of the systems to perform reactor pressure control, reactivity control, reactor coolant makeup, decay heat removal, process monitoring, and support system functions.

b. Findings

No findings of significance were identified.

.5 Operational Implementation of Shutdown Capability

Title 10 CFR Part 50, Appendix R, Section III.L.2.d, required that the process monitoring function should be capable of providing direct readings of the process variables necessary to perform and control the functions necessary to achieve reactivity control, reactor coolant makeup, and decay heat removal.

a. Inspection Scope

The team reviewed a sample of the actions outlined in procedure DB-OP-02501, "Serious Station Fire." The team verified that operators could reasonably be expected to perform the procedure actions within the identified applicable plant shutdown time requirements and that the actions were consistent with the plant safe shutdown analyses.

b. Findings

No findings of significance were identified.

.6 Communications

For a fire in an alternative shutdown fire area, control room evacuation is required and a unit shutdown is performed from outside the control room. Radio communications are relied upon to coordinate plant shutdown and for fire fighting. Title 10 CFR Part 50, Appendix R, Section III.H., required that equipment provided for the fire brigade include emergency communications equipment.

a. Inspection Scope

The team reviewed the adequacy of the communication system to support plant personnel in the performance of alternative safe shutdown functions and fire brigade duties.

b. Findings

No findings of significance were identified.

.7 Emergency Lighting

Title 10 CFR Part 50, Appendix R, Section III.J., required that emergency lighting units with at least an 8-hour battery power supply be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.

a. Inspection Scope

The team performed a walkdown of a sample of the actions defined in procedures DB-OP-02501, “Serious Station Fire,” and DB-OP-02519, “Serious Control Room Fire.” As part of the walkdowns, the team focused on the existence of sufficient emergency lighting for access and egress to areas and for performing necessary equipment operations.

b. Findings

No findings of significance were identified.

.8 Cold Shutdown Repairs

Title 10 CFR Part 50, Appendix R, Section III.L.5, required that equipment and systems comprising the means to achieve and maintain cold shutdown conditions should not be damaged by fire; or the fire damage to such equipment and systems should be limited so that the systems can be made operable and cold shutdown achieved within 72 hours. Materials for such repairs shall be readily available onsite and procedures shall be in effect to implement such repairs.

a. Inspection Scope

The team reviewed the licensee’s procedures to determine if any repairs were required to achieve cold shutdown. The team determined that the licensee did require repair of

some equipment to reach cold shutdown based on the safe shutdown methods used. The team reviewed the procedures for adequacy.

b. Findings

No findings of significance were identified.

.9 Fire Barriers and Fire Zone/Room Penetration Seals

Title 10 CFR Part 50, Appendix R, Section III.M, required that penetration seal designs be qualified by tests that are comparable to tests used to rate fire barriers.

a. Inspection Scope

The team reviewed the test reports for three-hour rated barriers installed in the plant and performed visual inspections of selected barriers to ensure that the barrier installations were consistent with the tested configuration. In addition, the team reviewed the fire loading for selected areas to ensure that existing barriers would not be challenged by a potential fire.

b. Findings

No findings of significance were identified.

.10 Fire Protection Systems, Features, and Equipment

a. Inspection Scope

The team reviewed the material condition, operations lineup, operational effectiveness, and design of fire detection systems, fire suppression systems, manual fire fighting equipment, fire brigade capability, and passive fire protection features. The team reviewed deviations, detector placement drawings, fire hose station drawings, and fire hazard analysis reports to ensure that selected fire detection systems, sprinkler systems, portable fire extinguishers, and hose stations were installed in accordance with their design, and that their design was adequate given the current equipment layout and plant configuration.

b. Findings

(1) Incomplete Information Provided to NRC in Licensing Submittal

Introduction: The team identified that the licensee failed to provide complete information to the NRC in a licensing submittal. Specifically, the licensee did not identify that previously submitted licensing correspondence regarding the basis for not protecting ventilation system cables was no longer accurate. The issue was considered to be of very low safety significance and was dispositioned as a Severity Level IV Non-Cited Violation (NCV).

Description: In a letter dated March 15, 1989, the licensee informed the NRC that manual actions were not required to respond to the potential failure of ventilation circuits in the CCW pump room. The licensee had concluded that the CCW pump in the room, required for safe shutdown, would remain operable in the event of the loss of the ventilation system for the room. The basis for this conclusion was that CCW pumps would be operable with ambient temperatures of up to 185 degrees (E) Fahrenheit (F) and that the automatic wet-pipe sprinkler system located in the room had sprinkler heads which actuated at 165EF which would cool the air in the room. The NRC referenced the March 15, 1989, letter as part of the May 30, 1991, safety evaluation for fire protection measures.

In March 1990, the sprinkler system in the CCW pump room was modified under modification 89-0079, "Appendix "R" Sprinkler System Upgrade," to bring the system into National Fire Protection Associated code compliance. As a result of the modification, the sprinkler heads would actuate at 212EF instead of the previous 165EF. The license performed an analysis ("Effect of a Fire in Room 328 on CCW Pump Availability," dated May 18, 1990) and determined that the ambient temperatures for the operating CCW pump would still be less than 185EF without the ventilation system. The licensee's analysis did not take credit for actuation of the sprinklers. The team did not identify any concerns with respect to the licensee's analysis.

In July 2000, the NRC performed a Safety System Design and Performance Capability inspection of the CCW system (Inspection Report 05000346/2000007(DRS)). During this inspection, the NRC identified that the bases for an existing exemption for lack of separation were no longer applicable and documented a NCV. As a corrective action, the licensee submitted a request, dated December 21, 2000, to amend the 10 CFR Part 50, Appendix R, Section III.G.2 exemption for lack of separation in the CCW pump room. The December 21, 2000, correspondence stated that a March 15, 1989, letter to the NRC noted the manual operator actions to establish temporary ventilation in the CCW pump room in the event of a fire was no longer considered necessary since the CCW pumps would not overheat despite the fire and postulated loss of the CCW pump room ventilation.

By letter dated December 26, 2002, the NRC updated the exemption for the CCW pump room in response to the licensee's December 21, 2000, request. As part of the exemption, the NRC stated:

> On March 15, 1989, the licensee submitted a letter postulating the loss of CCW room ventilation due to a fire and the effect on the CCW pumps. From the manufacturer's data, the licensee determined that the maximum room temperature the pumps could remain operational was 185EF. The licensee concluded that since the sprinkler system operated at 165EF, the sprinkler system would keep the pumps from reaching 185EF, allowing the pumps to remain operational. Therefore, the licensee concluded the CCW room ventilation was not necessary for SSD [safe shutdown] and fire wrap on the associated cabling for the ventilation system was no longer necessary.

During this inspection, the team considered the information provided in the December 21, 2000, correspondence to be accurate. However, the team noted that the

December 21, 2000, correspondence did not identify that the basis for concluding that ventilation system circuits did not need to be protected had changed. Specifically, the correspondence did not identify that the sprinkler system had been modified resulting in a different sprinkler actuation temperature and that the licensee no longer relied upon the sprinkler system to provide cooling.

Since the information provided by the licensee in the March 15, 1989, letter was cited as a basis for the exemption, the team concluded that the basis for concluding that the ventilation cables were not required to be protected was material to the licensing action. In addition, the team determined that the December 26, 2002, letter from the NRC presented a clear opportunity for the licensee to identify that incomplete information had been submitted to the NRC. The licensee did not take actions to correct the mis-communication.

Analysis: The team considered that the failure to provide complete material information in a submittal to the NRC was a performance deficiency. The failure to provide information complete and accurate in all material respects potentially impacted the NRC's ability to perform its regulatory function.

Because violations of 10 CFR 50.9 are considered to be violations that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process instead of the Significance Determination Process (SDP). Typically, the Severity Level would be assigned after consideration of appropriate factors for the particular regulatory process violation in accordance with the NRC Enforcement Policy. However, the SDP is used, if applicable, in order to consider the associated risk significance of the finding prior to assigning a severity level. Using IMC 0612, Appendix B, "Issue Dispositioning Screening," and Section IX of the NRC Enforcement Policy, the team determined that the finding was more than minor because it involved information provided to the NRC for a licensing action and could have impacted the regulatory process. In addition, the licensee had failed to take appropriate corrective action when there was a clear opportunity to identify and correct the error.

The team considered the licensee's conclusion that fire wraps were no longer needed on cables for the CCW pump room ventilation system to be technically sound. As such, the team determined that it is reasonable that the requested licensing action may have been approved if the licensee had provided materially complete information to the NRC. Consequently, the team concluded that the finding was of very low safety significance. The team concluded that the finding did not impact any of the reactor safety cornerstones and that the SDP was not applicable.

Enforcement: Title 10 CFR 50.9 requires, in part, that information provided to the NRC by a licensee be complete in all material respects. Contrary to the above, on December 21, 2000, the licensee provided information to the NRC by docketed correspondence which was not complete in all material respects. Specifically, the December 21, 2000, correspondence referred to a March 15, 1989, letter from the licensee as providing a basis for not protecting cables associated with the ventilation system for the CCW pump room. However, the licensee failed to identify that the rationale for not protecting cables associated with the CCW pump room ventilation had changed since the issuance of the March 15, 1989, letter. Specifically, the March 15,

1989, letter provided the rationale that a 165EF actuation of the sprinkler system would maintain ambient temperatures for the operating CCW pump below 185EF. However, at the time of the December 21, 2000, submittal, the rationale had changed because the sprinkler system had been modified to actuate at 212EF and subsequent analyses performed by the licensee no longer relied upon actuation of the sprinkler system for providing cooling. The result of this violation was determined to be of very low safety significance; therefore, this violation of 10 CFR 50.9 was classified as a Severity Level IV violation. This Severity Level IV violation is being treated as a NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NRC 05000346/2004009-01). The licensee entered the issue into their corrective action program as Condition Report 04-05695 and planned to submit correspondence to the NRC to provide complete information.

.11 Compensatory Measures

a. Inspection Scope

The team conducted a review to verify that adequate compensatory measures were put in place by the licensee for out-of-service, degraded or inoperable fire protection and post-fire safe shutdown equipment, systems, or features. The team also reviewed the adequacy of short term compensatory measures to compensate for a degraded function or feature until appropriate corrective actions were taken.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The team reviewed the corrective action program procedures and samples of corrective action documents to verify that the licensee was identifying issues related to fire protection at an appropriate threshold and entering them in the corrective action program. The team reviewed selected samples of condition reports, work orders, design packages, and fire protection system non-conformance documents.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

.1 Review of Actions to Address Thermo-Lag Issues (93812, 71152)

a. Inspection Scope

The team reviewed a sample of the licensee's implementation of Thermo-Lag fire barrier corrective actions which were required by NRC Confirmatory Order dated June 22, 1998. The team's review included modifications, safe shutdown analysis, evaluations, licensee correspondence with the NRC, and new fire barrier installations. The team's review specifically included:

Licensing Correspondence referenced by the June 22, 1998, Confirmatory Order;

Modification 95-0056, "Resolution to Thermo-Lag Fire Barrier Deficiencies;" and

Modification 96-0005, "Modify the CCW Pump Breaker Logic to Delete the Low Flow/High Temperature Trip Function."

b. Observations

The team confirmed that the licensee did not take credit for Thermo-Lag as a fire barrier to satisfy NRC regulatory requirements for fire protection (i.e., 10 CFR 50.48 and 10 CFR Part 50, Appendix R). Based on discussions with licensee engineering personnel, the team understood that the licensee did use Thermo-Lag for protecting structural steel in the building housing the station black-out diesel generator outside of the plant. The station black-out diesel generator, and associated building, was not credited in the USAR and, as such, was not considered part of the plant. The team determined that this use of Thermo-Lag was not contrary to the confirmatory order because the use was purposes other than satisfying NRC regulatory requirements for fire protection.

The team noted that some of the earlier licensee correspondence indicated that all Thermo-Lag fire barrier material would be removed. The team identified that for cases where cables were still required to be protected, the Thermo-Lag fire barrier materials had been removed and replaced with a qualified alternative fire barrier, consistent with the earlier licensee correspondence. However, subsequent to the earlier licensee correspondence, the licensee had performed either engineering evaluations and/or modifications obviating the need for some cables having Thermo-Lag fire barriers to continue to be protected by a qualified fire barrier for some cases. As such, the licensee abandoned some Thermo-Lag fire barriers in place. The licensee had informed the NRC that some Thermo-Lag fire barriers would be abandoned in place by telephone conversations on November 5, 1997, and June 1, 1998; and in the January 25, 1999, letter informing NRC of the final closeout regarding resolution of Thermo-Lag issues. For cases where installed Thermo-Lag fire barriers were abandoned in place, the licensee evaluated the impact of installed Thermo-Lag fire barriers upon the ampacity for affected cables. In addition, the licensee included the weight of installed Thermo-Lag material in fire loading calculations.

c. Findings

No findings of significance were identified.

4OA6 Meeting(s)

.1 Exit Meeting

The lead inspector presented the preliminary inspection results to Mr. M. Bezilla and other members of licensee management at the conclusion of onsite inspection activities on September 17, 2004. The lead inspector presented the final inspection results telephonically to Mr. Bezilla and other members of licensee management at the conclusion of the inspection activities on October 25, 2004. The licensee identified proprietary material reviewed during the inspection. The licensee acknowledged that this material had been returned.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee
M. Bezilla, Site Vice-President
B. Allen, Director, Plant Operations
A. Baker, Operations
P. Boulder, Design Engineering
J. Grabnar, Manager, Design Engineering
G. LeBlanc, Design Engineering
S. Loehlein, Director, Station Engineering
K. Ostrowski, Manager, Operations
M. Murtha, Design Engineering
V. Patton,Operations
D. Staudt, Operations
D. Wuokko, Supervisor, Regulatory Compliance
G. Wolf, Regulatory Compliance

Nuclear Regulatory Commission
J. Lara, Chief, Electrical Engineering Branch, Region III
C. Pederson, Director, Division of Reactor Safety, Region III

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000346/2004009-01	NCV	Incomplete Information Provided to NRC in Licensing Submittal (1R05.10)

Discussed

None.

LIST OF DOCUMENTS REVIEWED

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

10 CFR 50.59 Safety Evaluations

96-0055; MOD 95-0056, UCN 96-021F, UCN 96-205F, UCN 97-085F, UCN 97-17F, and UCN 98-041F Resolution to Thermo-Lag Fire Barrier Deficiencies; Revision 8

97-0025; Delete CCW Pump Low Flow and High Temperature Trips; dated September 11, 1997

Assessments

DB-C-03-03; Davis-Besse Nuclear Quality Assessment Quarterly Assessment Report; dated November 17, 2003

DB-C-03-04; Davis-Besse Nuclear Quality Assessment Quarterly Assessment Report; dated February 13, 2004

DB-C-04-01; Davis-Besse Nuclear Quality Assessment Quarterly Assessment Report; dated May 10, 2004

DB-C-04-02; Davis-Besse Nuclear Quality Assessment Quarterly Assessment Report; dated July 29, 2004

Condition Reports

99-1758; Calculations Used in 5 Year Flow Test Contain Errors; dated October 18, 1999

02-10222; Fire Pump Diesel Day Tank 1-1; dated December 12, 2002

03-01988; Lost Fire Watch Extinguishers; dated March 13, 2003

03-02621; NQA DB-C-03-01 FHAR Enhancement Issues; dated April 2, 2003

03-06496; Appendix R Fire Barrier EDG Mezzanine; dated August 12, 2003

03-06797; Fire Protection Barrier Deficiency Evaluations; dated August 21, 2003

03-07650; OE 16523 - Test Report for Epoxy Floor Coatings; dated September 12, 2003

03-09649; Tracking CR: ECR 03-0507 Sup 00 App R Coordination; dated November 7, 2003

04-00561; Excessively Dirty Smoke Detector DS8683G; dated January 21, 2004

04-02370; Penetration 304-S-45 Has a Gouge in the Low Density Foam Material; dated March 30, 2004

Condition Reports Initiated as a Result of Inspection

04-05447; Priorty 1 DCN E-1-79 Not Incorporated Correctly; dated September 2, 2004

04-05451; NRC Inspector Observations of Emergency Battery Lighting; dated September 2, 2004

04-05472; FHAR Fire Area T Table Notes Requires Updated (Appendix R Triennial

Inspection); dated September 10, 2004

04-05585; Results from Emergency Battery Lighting Walkdowns; dated September 10, 2004

04-05591; Enhancements to C-EE-013.01-001 Elect Coordination Calculation; dated September 10, 2004

04-05671; NRC FP Triennial Inspection Observation of Sprinkler Inspection Criteria; dated September 16, 2004

04-05695; Incomplete Fire Protection Letter Submitted to NRC; dated September 16, 2004

04-05703; CCW Room Sprinkler Exhibits Signs of Leakage; dated September 17, 2004

Correspondence

Serial Number 815; Letter to NRC from Toledo Edison, Fire Protection Program; dated April 29, 1982

Serial Number 1535; Letter to the NRC from Toledo Edison, Response to Request for Additional Information; dated June 6, 1988

Serial Number 1558; Letter to the NRC from Toledo Edison, Post-Fire Shutdown Repairs; dated August 9, 1988

DB-GAI/TED-29; Letter to Toledo Edison from Gilbert/Commonwealth, Davis-Besse Nuclear Power Station Appendix R Manual Operations Review, Procedure DB-OP-02519, Revision 0; dated February 13, 1989

Serial Number 1642; Letter to NRC from Toledo Edison, Fire Protection - Manual Operator Actions; dated March 15, 1989

Serial Number 1685; Letter to NRC from Toledo Edison, NFPA Code Compliance Review; dated July 31, 1989

Serial Number 1827; Letter to NRC from Toledo Edison, Resolution of Draft Safety Evaluation Report Open Item; dated July 20, 1990

Letter to Toledo Edison from NRC, Safety Evaluation of Fire Protection Measures at the Davis-Besse Nuclear Power Station, Unit No. 1, Per Appendix R to 10 CFR Part 50; dated May 30, 1991

Serial Number 2298; Letter to NRC from Toledo Edison, Status of Progress in Resolving Issues Identified in Generic Letter 92-08, Thermo-Lag 330-1 Fire Barriers; dated June 13, 1995

Serial Number 2358; Letter to NRC from Centerior Energy, Status of Progress in Resolving Issues Identified in Generic Letter 92-08, Thermo-Lag 330-1 Fire Barriers, and Related NRC Requests for Additional Information; dated February 20, 1996

Serial Number 2373; Letter to NRC from Centerior Energy, Withdrawal of 10 CFR Part 50, Appendix R, Exemption Request for the Containment Annulus; dated April 24, 1996

Serial Number 2381; Letter to NRC from Centerior Energy, Evaluation of Ampacity Issues Related to Thermo-Lag 330-1 Fire Barriers; dated June 26, 1996

Serial Number 2410; Letter to NRC from Centerior Energy, Response to the Request for Additional Information on Cable Ampacity; dated November 5, 1996

NRC Memorandum, Summary of April 3, 1997, Meeting on Thermo-Lag Resolution Progress; dated April 16, 1997

Serial Number 2474; Letter to NRC from Centerior Energy, Evaluation of Ampacity Issues Related to Thermo-Lag 330-1 Fire Barriers; dated September 10, 1997

Letter to Centerior Service Company from NRC, Confirmatory Order Modifying License - Davis-Besse Nuclear Power Station, Unit No. 1; dated June 22, 1998

Serial Number 2577; Letter to NRC from First Energy, Final Closeout Regarding Resolution of Thermo-Lag 330-1 Issues; dated January 25, 1999

Serial Number 2680; Letter to NRC from First Energy, Request to Amend the Existing Exemption from 10 CFR Part 50, Appendix R, for the Component Cooling Water Heat Exchanger and Pump Room; dated December 21, 2000

Serial Number 2691; Letter to NRC from First Energy, Supplemental Information Regarding the Request to Amend the Existing Exemption From 10 CFR Part 50, Appendix R, for the Component Cooling Water Heat Exchanger and Pump Room; dated March 12, 2001

Letter to First Energy from NRC, Davis-Besse Nuclear Power Station, Unit 1, Exemption From the Requirements of 10 CFR Part 50, Section III.G of Appendix R; dated December 26, 2002

Serial Number 3003; Letter to NRC from First Energy, Request for Exemption from 10 CFR Part 50, Appendix R, Section III.G.3 for Fire Area HH; dated January 20, 2004

Drawings

A-2145; Auxiliary Building Barrier Penetration Drawing; Revision 1

A-2191; Auxiliary Building Barrier Penetration Drawing; Revision 0

E-1 Sheet 1; A.C. Electrical System One Line Diagram; Revision 22

E-1 Sheet 2; A.C. Electrical System One Line Diagram; Revision 38

E-1 Sheet 2; A.C. Electrical System One Line Diagram; Revision 39

E-6 Sheet 5; 480 vac MCC (Essential) One Line Diagram; Revision 10

E-7; 250/125 DC and Instrumentation AC One Line Diagram; Revision 34

E-50B Sheet 3C; Elementary Wiring Diagram, Cooling Water System Component Cooling Pump 1 (AC113); Revision 10

E-50B Sheet 3D; Elementary Wiring Diagram, Cooling Water System Component Cooling Pump 1 (AD113); Revision 5

E-50B Sheet 28; Elementary Wiring Diagram, Cooling Water System CC Line 1 and 2 VLVs Aux Relay; Revision 4

E-633B Sheet 23; Connection Diagram Misc. Instrument Aux. Building and CTMT. EL. 585'-0"; Revision 7

M-036A; Piping and Instrument Diagram, Component Cooling Water System; Revision 26

M-036B; Piping and Instrument Diagram, Component Cooling Water System; Revision 31

M-036C; Piping and Instrument Diagram, Component Cooling Water System; Revision 25

M-172; Auxiliary Building Drainage Systems; Revision 19

M-336; Sprinkler System Room 328, Auxiliary Building Elev. 585'-0"; Revision 4

M-357; Auxiliary Building Sprinkler Systems; Revision 1

M-363; Sprinkler System SW Pump Rm 52; Revision 2

M-473-A; Low Density Silicone Foam Penetration Seal Typical Details; Revision 1

M-473-B; High Density Silicone Elastomer Penetration Seal Typical Details; Revision 0

M-473F; Urethane Sealant Penetration Seal Typical Detail; Revision 0

Engineering Analyses, Calculations, and Evaluations

550-30-12501; Room 115 and 328 Fire Protection Environments; Revision 0

C-EE-002.01-011; Low Voltage Coordination Calculation; Revision 6

C-EE-013.10-001; 480V Breaker Coordination to Meet Common Power Source Criteria for Appendix R; Revision 3

C-FP-013.04-005; Justification for Lack of Suppression and Detection in Area BF; Revision 0

C-FP-013.06-004; Diesel FP Room Ventilation Opening; Revision 1

EXT-02-00838; Post-Fire Safe Shutdown Manual Operator Action Assessment; dated November 2002

FEM-007; Summary of Hydraulic Calculations for Davis-Besse Nuclear Plant; Revision 4

Effect of a Fire in Room 328 on CCW Pump Availability; dated May 18, 1990

Unprotected Structural Steel Members in Room 110A; Revision 2

Unprotected Structural Steel Members in Room 113A; Revision 2

Unprotected Structural Steel Members in Room 114; Revision 2

Fire Watches

Roving Fire Watch Log; dated August 18, 2004

Industry Codes and Standards

NFPA 13; Standard for the Installation of Sprinkler Systems; dated 1978

NFPA 14; Standpipe and Hose Systems; dated 1978

NFPA 72E; Automatic Fire Detectors; dated 1978

NFPA 92M; Waterproofing, Draining of Floors; dated 1972

Maintenance Work Orders

85-1036-01; Fire Dampers Will Not Close; dated June 18, 1985

Miscellaneous

Davis-Besse Fire Hazards Analysis Report; Revision 20

List of Penetration Seals for CCW Pump Room; dated August 30, 2004

Nonconformance Report (NCR) 85-0011; Fire Dampers Will Not Close; February 2, 1985

Request for Assistance (RFA) 89-0341; Miscellaneous Fire Dampers; February 24, 1989

Modifications

89-0079, Supplement 04; Appendix “R” Sprinkler System Upgrade; dated December 11, 1989

95-0056; Resolution to Thermo-Lag Fire Barrier Deficiencies; dated March 5, 1998

96-0005; Modify the CCW Pump Breaker Logic to Delete the Low Flow/High Temperature Trip Function; dated October 2, 1996

DCN E-930A-29; Emergency Battery Pack Location and Lamp Direction; dated August 31, 1999

DCR 96-0035; Depowering HP31; dated May 23, 1996

Procedures

DB-FP-00007; Control of Transient Combustibles; Revision 5

DB-FP-04006; Fire Brigade Equipment Quarterly Functional Test; Revision 7

DB-FP-04035; 5 Year Flow Test; Revision 2

DB-ME-04100; Emergency Lighting System Test; Revision 10

DB-ME-09323; Emergency Lighting System Preventive Maintenance; Revision 1

DB-OP-02501; Serious Station Fire; Revision 6

DB-OP-02501; Serious Station Fire; Revision 7

DB-OP-02519; Serious Control Room Fire; Revision 9

DB-OP-02519; Serious Control Room Fire; Revision 10 draft

DB-OP-02521; Loss of AC Bus Power Sources; Revision 8

DB-OP-02529; Fire Procedure; Revision 2

PFP-AB-328; CCW Heat Exchanger and Pump Room Pre-Fire Plan; dated March 6, 2003

PFP-IS-52; Pre-Fire Plan Service Water Pump Room; Revision 2

RA-EP-02880; Internal Flooding; Revision 2

Surveillance Tests

DB-FP-04016; Fire Extinguisher Quarterly Inspection; dated July 21, 2004

DB-FP-04016; Fire Extinguisher Quarterly Inspection; dated July 26, 2004

DB-FP-04019; Non-RRA Wet Pipe Sprinkler System Test; dated February 10, 1994

DB-FP-04019; Non-RRA Wet Pipe Sprinkler System Test; dated April 10, 2004

DB-FP-04021; Appendix R Fire Wrap Visual Inspection; dated September 7, 2003

DB-FP-04021; Appendix R Fire Wrap Visual Inspection; dated June 27, 2004

DB-FP-04024; 18 Month Fire Damper Visual Inspection; dated March 6, 2001

DB-FP-04035; 3 Year Flow Test; dated June 10, 1993

DB-FP-04035; 5 Year Flow Test; dated December 19, 1999

DB-FP-04036; Appendix R Fire Door 18 Month Inspection; dated January 22, 2004

DB-FP-04049; Diesel Fire Pump Tests; dated May 17, 2004

DB-ME-04100; Emergency Lighting System Test; dated October 9, 2002

DB-MI-04812; Supervisory and Functional Test for Node 2 C3080; dated October 1, 2003

Telephone Call Documentation

RAS-97-01220; Status Report on Thermo-Lag Project, 3rd Quarter 1997; dated November 5, 1997

RAS-98-00563; Status of Thermo-Lag Resolution; dated June 1, 1998

Training Documents

OPS-GOP-I119; Serious Control Room Fire Lesson Plan; Revision 3

OPS-GOP-I129; Fire Procedures/Serious Station Fire Lesson Plan; Revision 1

OPS-JPM-001; Job Performance Measure Worksheet; No Revision

OPS-SYS-I305; Service Water System Lesson Plan Guidance; Revision 6

ORQ-SIM-S178; Serious Station Fire in B HVSG Room; Revision 0

ORQ-SIM-S179; Serious Control Room Fire Simulator Guide; Revision 0

Updated Safety Analysis Report Change Notices

96-205F; Revise FHAR to Reflect CAC#3 Not Relied Upon for Shutdown; dated April 15, 1997

97-085F; Modify Text to Show that Structural Steel Fireproofing is Not Credited in Rooms 110 and 113; dated September 17, 1997

97-117F; Deletion of an Exemption; dated October 28, 1997

98-041E; Revise the FHAR for Deletion of the Circuits Associated With SW Pump 3 in Fire Area BG; dated August 25, 1998

LIST OF ACRONYMS USED

E	Degrees
ADAMS	Agencywide Documents Access and Management System
CCW	Component Cooling Water
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
F	Fahrenheit
FENOC	FirstEnergy Nuclear Operating Company
IMC	Inspection Manual Chapter
IR	Inspection Report
NCV	Non-Cited Violation
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records
SDP	Significance Determination Process
SSD	Safe Shutdown
USAR	Updated Safety Analysis Report