



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

December 28, 2010

Mr. Barry Allen
Site Vice President
FirstEnergy Nuclear Operating Company
Davis-Besse Nuclear Power Station
5501 North State Route 2, Mail Stop A-DB-3080
Oak Harbor, OH 43449-9760

**SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION
SUPPLEMENTAL (95001) FOLLOW-UP INSPECTION REPORT
05000346/2010504(DRS) AND ASSESSMENT FOLLOW-UP LETTER**

Dear Mr. Allen:

On December 3, 2010, the U. S. Nuclear Regulatory Commission (NRC) completed a follow-up inspection at your Davis-Besse Nuclear Power Station. The enclosed report documents the inspection results which were discussed on December 3, 2010, with you and members of your staff.

Earlier this year, on September 27, 2010, the NRC completed a supplemental inspection pursuant to Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," at your Davis-Besse Nuclear Power Station. As required by the NRC Reactor Oversight Process Action Matrix, this supplemental inspection was conducted because a finding of White safety significance was identified in the fourth quarter 2009. This issue was documented previously in NRC Inspection Report 05000346/2009503, dated December 28, 2009, and involved the failure to implement the emergency classification and action level scheme during an actual event of an explosion in the switchyard.

During the course of the August/September 95001 inspection, the inspector identified two areas of concern regarding your staff's efforts to address the White finding. These inspector-identified weaknesses included concerns about the adequacy of the extent of cause evaluation and concerns about the appropriateness of the corrective actions with regard to the prevention of recurrence. The NRC determined that these weaknesses warranted keeping the White finding open, and expanding the inspection efforts to allow inspectors to review your actions to address the concerns. The conclusions of this portion of the supplemental inspection were documented in NRC Inspection Report 05000346/2010503.

As a result, a 95001 Supplemental Follow-up Inspection was conducted on December 1 through December 3, 2010, with a focus on reviewing these two areas of concern. This inspection utilized applicable sections of NRC Inspection Procedure 95001. The NRC staff was informed by a letter dated November 10, 2010, of your staff's readiness for this follow-up inspection.

Based on the results of this follow-up inspection, no findings of significance were identified. The NRC has concluded that the extent of cause review performed by your staff had sufficient breadth to identify additional areas of weakness stemming from the same root causes that led to the White finding. In addition, the NRC has determined that your staff has adequately implemented corrective actions to prevent recurrence of the issue.

The purpose of the 95001 inspection was to provide assurance that the root causes and contributing causes of the White finding were understood, the extent of condition and extent of cause were identified, and that the corrective actions were sufficient to address the root causes and contributing causes and to prevent recurrence. Based on the inspection results documented in this Inspection Report and Inspection Report 05000346/2010503, the NRC will close the White finding.

With the closure of this finding, and as a result of our continuous review of plant performance, the NRC has updated its assessment of Davis-Besse Nuclear Power Station. This assessment supplements, but does not supersede, the mid-cycle letter issued on September 1, 2010. Consistent with NRC Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program," based on successful completion of the supplemental inspection, and issuance of this inspection report and assessment letter, Davis-Besse Nuclear Power Station has transitioned to the licensee response column in the NRC Action Matrix (Column 1) as of the date of this letter. However, also consistent with IMC 0305, the finding will still be considered for agency actions in accordance with the ROP Action Matrix until December 31, 2010 (the end of the fourth quarter of 2010).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Anne T. Boland, Director
Division of Reactor Safety

Docket No. 50-346

License No. NPF-3

Enclosure: Inspection Report 05000346/2010504(DRS)
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-346

License No: NPF-3

Report No: 05000346/2010504(DRS)

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Davis-Besse Nuclear Power Station

Location: Oak Harbor, Ohio

Dates: December 1 through December 3, 2010

Inspectors: P. Voss, Reactor Engineer

Approved by: H. Peterson Chief
Operations Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000346/2010504; 12/01/2010 – 12/03/2010; Davis-Besse Nuclear Power Station;
IP 95001 Supplemental Follow-up Inspection

This report covers a three-day period of inspection conducted by a Region III Division of Reactor Projects inspector. The inspection served as a follow-up to the previously performed 95001 supplemental inspection, completed on September 27, 2010. Reviews were focused on licensee actions to address previously identified concerns from the previous supplemental inspection. Specifically, this follow-up inspection reviewed the adequacy of the licensee's extent of cause evaluation, and appropriateness of the licensee's corrective actions with regard to prevention of recurrence. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Emergency Preparedness

The NRC performed this inspection as a follow-up to the previously performed supplemental inspection. This inspection completes the inspection activities documented in Inspection Report 05000346/2010503 and closes the White finding which was documented in Inspection Report 05000346/2009503. The staff performed this Supplemental Follow-up Inspection in accordance with appropriate portions of Inspection Procedure (IP) 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," to assess licensee actions to address specific NRC-identified concerns with the licensee's evaluation associated with the failure to implement the emergency classification and action level scheme during an actual event of an explosion in the switchyard. The NRC staff previously characterized this issue as having low to moderate safety significance (White) as documented in NRC Inspection Report 05000346/2009503. During this Supplemental Follow-up Inspection, the inspector determined that the licensee performed an adequate extent of cause evaluation of the specific performance issue and adequately implemented corrective actions to prevent recurrence of the issue. As a result of this inspection, combined with the conclusions of the previous 95001 inspection, the NRC has determined that the licensee has met the objectives of the 95001 inspection procedure. Therefore, the White finding is being closed.

No findings of significance were identified.

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

4. OTHER ACTIVITIES

4OA4 Supplemental Inspection (95001)

.01 Inspection Scope

The NRC staff performed this supplemental inspection in accordance with applicable portions of IP 95001 to assess the licensee's evaluation of a White finding, which affected the emergency preparedness cornerstone in the reactor safety strategic performance area. The general inspection objectives were to:

- provide assurance that the root and contributing causes of risk-significant issues were understood;
- provide assurance that the extent of condition and extent of cause of risk-significant issues were identified; and
- provide assurance that the licensee's corrective actions for risk-significant issues were or will be sufficient to address the root and contributing causes and to preclude repetition.

The focus of the follow-up portion of the supplemental inspection involved a focused review of the licensee's actions taken to address the NRC inspector-identified areas of weakness in the site's evaluation of the White finding, which were identified during the previous portion of the 95001 inspection. The focused inspection objectives for the Supplemental Follow-up Inspection were to:

- provide assurance that the extent of cause evaluation performed by licensee staff was adequate; and
- provide assurance that the corrective actions the licensee developed in response to the event were appropriate, with regard to prevention of recurrence.

The Davis-Besse Nuclear Power Station entered the Regulatory Response Column of the NRC's Action Matrix in the fourth quarter of 2009 as a result of one inspection finding of low to moderate safety significance (White). The finding was associated with a failure to implement the emergency classification and action level scheme during an actual event for an explosion in the switchyard on June 25, 2009. Licensee staff failed to assess and recognize that the hazard to the plant's operations met the emergency action level conditions for declaring an Alert.

The finding was characterized as having White safety significance based on the results of a Significance Determination evaluation performed by a region-based emergency preparedness inspector, as discussed in Inspection Report 05000346/2009503.

As a result of the finding, the NRC performed a supplemental inspection pursuant to Inspection Procedure 95001 at the Davis-Besse facility in August/September 2010. During the course of this initial 95001 inspection, the inspector identified two areas of concern

regarding the licensee's efforts to address the White finding. These inspector-identified weaknesses included concerns about the adequacy of the extent of cause evaluation and concerns about the appropriateness of the corrective actions with regard to the prevention of recurrence. The results of this inspection were documented in Inspection Report 05000346/2010503.

The NRC determined that these weaknesses warranted keeping the White finding open, and expanding the inspection efforts to allow inspectors to review licensee actions to address the concerns. As a result, the licensee was informed that a 95001 Supplemental Follow-up Inspection would be performed at the site. Inspection efforts would focus on these weaknesses, while utilizing applicable sections of NRC Inspection Procedure 95001.

The NRC was informed by a letter dated November 10, 2010, that the licensee was ready for the Supplemental Follow-up Inspection. In preparation for the inspection, the licensee performed a revised extent of cause evaluation to identify whether the root causes of this event had led to the development of any additional weaknesses within the affected onsite departments or between other onsite departments. In addition, the site revised its corrective action plan with a focus on ensuring that the assigned actions would prevent recurrence of the issue.

During this Supplemental Follow-up Inspection, the inspector reviewed the licensee's root cause evaluation (RCE) with a special focus on the licensee's evaluation of the extent of cause of the issue, in addition to other condition reports that were generated as a result of the event. The inspector reviewed corrective actions that were taken or planned to address the identified causes, as well as corrective actions linked specifically to the extent of cause evaluation. The inspector reviewed specific changes to the licensee's corrective action plan to determine whether the changes made were adequate with regard to the prevention of recurrence. The inspector also held discussions with licensee personnel to ensure that the extent of cause was identified and that corrective actions taken or planned were appropriate to address the causes and preclude repetition.

.02 Evaluation of the Inspection Requirements

02.01 Problem Identification

- a. Inspection Procedure 95001 requires that the inspection staff determine that the licensee's evaluation of the issue is adequate, in accordance with various inspection criteria.

This inspection objective was completed during the previous 95001 supplemental inspection, with no areas of concern identified. Therefore, no additional inspection follow-up of items in this area was required. Additional information on the results of this portion of the previous inspection is documented in NRC Inspection Report 05000346/2010503.

- b. Findings

No findings of significance were identified.

02.02 Root Cause, Extent of Condition, and Extent of Cause Evaluation

- a. Inspection Procedure 95001 requires that the inspection staff review the root cause, extent of cause, and extent of condition evaluations performed by the licensee for the performance issue. Specifically, IP 95001 requires that inspectors determine that the licensee's RCE addresses the extent of condition and extent of cause of the issue.

Previous IP 95001 inspection activities resulted in the inspector determining that the extent of cause evaluation was inadequate because it was narrow in scope. The inspector noted that the evaluation only considered missed classification issues that occurred onsite and did not consider the root causes: "communication incomplete" and "change management." The inspector noted that by not conducting a more thorough extent of cause review, there was a missed opportunity to correct potential issues that involve inter-department communication and procedure change management.

During the follow-up inspection, the inspector reviewed the revised extent of cause evaluation performed by licensee staff. The inspector determined that this evaluation adequately considered the root causes of the event in the review. Additionally, portions of the evaluation looked more broadly at other areas in the organization where these causes may exist, and may be causing additional weaknesses. No specific weaknesses aside from the previously identified weakness in communications between Operations and Security were identified by licensee staff during the extent of cause evaluation. However, some lower level issues were flagged for additional follow-up, and after further review, it was determined that the items that represented potential challenges were being addressed by an independent lessons learned initiative Condition Report. The inspector did not identify any findings of significance as a result of this review.

The inspector identified two main items of note with this evaluation. The inspector noted that some of the previously identified extent of cause evaluation challenges still existed in one of the sections of the revised evaluation. Specifically, individuals were interviewed to determine if communication challenges existed between different departments. The focus of the extent of cause should have been looking beyond Operations and Security, beyond their interactions, to other departments' interactions with each other, and other departments' views on communication challenges between them and Operations or Security. Instead, only individuals from Operations and Security, in addition to one individual from chemistry were interviewed. This may serve as a missed opportunity to identify issues that departments other than Operations and Security have recognized, that may not have been captured by the corrective action program, but may exist within the organization as a precursor to a more significant issue.

Another item of note also pertained to the interview portion of the extent of cause evaluation. Specifically, when interviewing the individuals on communication issues, the question posed to the interviewees was extremely broad. This left the interview open to a variety of answers, and in some cases, no answers at all. The interview process may have been more effective at extracting relevant data if there had been multiple, more focused questions, or probing follow-up questions.

Overall, other portions of the revised extent of cause evaluation addressed these potential issues through a review of Corrective Action Program documents; these portions of the evaluation looked at issues from a site-wide perspective, rather than

narrowly being focused on Operations and Security. This, in addition to the fact that the root causes were appropriately taken into consideration in the revised evaluation allowed the inspector to conclude that this area of concern was adequately addressed.

Other portions of this inspection objective were completed during the previous 95001 supplemental inspection, with no areas of concern identified. Therefore, no additional inspection follow-up of items in these specific areas was required. Additional information on the results of this portion of the previous inspection is documented in NRC Inspection Report 05000346/2010503.

The inspector determined that this inspection objective was met.

b. Findings

No findings of significance were identified.

02.03 Corrective Actions

- a. Inspection Procedure 95001 requires that inspection staff review the adequacy of corrective actions taken for the performance issue. Specifically, IP 95001 requires that the inspection staff determine that: (1) the licensee specified appropriate corrective actions for each root and/or contributing cause; or (2) an evaluation that states no actions are necessary is adequate.

Previous IP 95001 inspection activities resulted in the inspector determining that the existing corrective actions were short-term actions which included, email messages, presentations, and one-time training sessions to various site personnel on lessons learned from the event. The inspector noted that these corrective actions were narrow in scope and would not necessarily prevent recurrence of the issue.

During the follow-up inspection, the inspector reviewed the revisions made by the licensee to the corrective action plan for the performance issue. The licensee's revised corrective actions were focused on making some of the one-time corrective actions, which were mostly lessons learned trainings, recurring actions. These actions mainly involved requiring lessons learned training on the event to be performed on an annual basis. As a result of this review, the inspector did not identify any findings of significance.

The inspector also noted that two of the three licensee-identified root causes, "change management" and "self-checking," were addressed with a single corrective action in the action plan to conduct lessons learned training. The licensee subsequently created a second corrective action addressing these two root causes, however, this new action revised the training to be a recurring action. Considering the significance of the event that occurred as a result of the change management and self-checking errors, the inspector questioned the implementation of a single corrective action for recurring lessons learned training; and thus, one barrier to prevent recurrence.

The licensee noted that they had reviewed the procedural change management process, and did not identify any issues with the quality of the process. In addition, all recent Emergency Preparedness procedural changes were reviewed during the extent of condition evaluation performed by the licensee, and the licensee confirmed that those

changes were made correctly, and in accordance with procedures. As a result, the licensee did not assign any additional corrective actions aimed at altering the process itself.

Overall, the inspector determined that the licensee's revised corrective actions were reasonable with regard to prevention of recurrence of the root causes. The inspector concluded that this area of concern was adequately addressed.

Other portions of this inspection objective were completed during the previous 95001 supplemental inspection, with no areas of concern identified. Therefore, no additional inspection follow-up of items in these specific areas was required. Additional information on the results of this portion of the previous inspection is documented in NRC Inspection Report 05000346/2010503.

The inspector determined that this inspection objective was met.

b. Findings

No findings of significance were identified.

4OA6 Exit Meeting

.01 Exit Meeting Summary

On December 3, 2010, the inspector presented the inspection results to the Davis-Besse Site Vice President, Mr. B. Allen, and other members of the staff, who acknowledged the inspector's conclusions for this inspection. The inspector confirmed with licensee staff that proprietary information was not provided or examined during this inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

B. Allen, Davis-Besse Site Vice President
B. Boles, Davis-Besse Director/Plant Manager
J. Vetter, Davis-Besse Emergency Response Manager
J. Sturdavant, Davis-Besse Senior Compliance Specialist

Nuclear Regulatory Commission

J. Rutkowski, Senior Resident Inspector
D. Kimble, Senior Resident Inspector
A. Wilson, Resident Inspector
H. Peterson, Chief, Operations Branch

List of Items Opened, Closed and Discussed

Opened

None

Closed

05000346/1009503-01	VIO	Failure to Use Classification Scheme for an Alert
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Discussed

None

LIST OF DOCUMENTS REVIEWED

The following is a partial list of 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. 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.

40A4 Supplemental Inspection

NOP-LP-2001; Corrective Action Program; Revision 26
NOBP-LP-2011; FENOC Cause Analysis; Revision 10
RA-EP-01500; Emergency Classification; Revision 12
RE-EP-00100; Emergency Plan Training Program; Revision 16
NOP-SS-3001; Procedure Review and Approval; Revision 15
NG-QS-00120; Davis-Besse Supplemental Procedure Requirements/Guidance; Revision 11
DBBP-PA-0003; Procedure Validators Guidelines; Revision 1
NOBP-SS-4001; Change Management Guide; Revision 2
NOBP-SS-6008; External and Internal Nuclear Communications; Revision 0
CR 09-69475; Switchyard White Finding Root Cause Evaluation and Corrective Actions
CR 09-69475; Revised Corrective Action Plan
CR 09-69475; Revised Extent of Cause Evaluation
CR 09-61115; Transitory Alert Emergency Classification Declared Following Switchyard Event
CR 09-62916; Lessons Learned (Operations-DBOP): Switchyard Event NRC Follow-up Inspection
CR 10-80616; NRC 95001 Self-Assessment (EP) SN-SA 10-255
CR 10-83213; Potential Communication Gaps Identified during Extent of Cause 09-60475 Review
CR 10-83488; Improvement Opportunities in Communications between Operations and Security
SN-SA-10-255; Snapshot Self-Assessment—Pre-NRC IP 95001 Inspection Assessment (Davis-Besse EP); August 9, 2010
EPT-WTE; Emergency Operations Facility (EOF) Walkthrough Lesson Plan; November 15, 2010
EPT-WTJ; Joint Information Center (JIC) Walkthrough Lesson Plan; November 15, 2010
EPT-WTO; Operations Support Center (OSC) Walkthrough Lesson Plan; November 15, 2010

EPT-WTR; Radiological Testing Lab (RTL) Walkthrough Lesson Plan;
November 15, 2010

EPT-WTT; Technical Support Center (TSC) Walkthrough Lesson Plan;
November 15, 2010

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
DRP	Division of Reactor Projects
IMC	Inspection Manual Chapter
IR	Inspection Report
NCV	Non-Cited Violation
NRC	U. S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
RCE	Root Cause Evaluation

Based on the results of this follow-up inspection, no findings of significance were identified. The NRC has concluded that the extent of cause review performed by your staff had sufficient breadth to identify additional areas of weakness stemming from the same root causes that led to the White finding. In addition, the NRC has determined that your staff has adequately implemented corrective actions to prevent recurrence of the issue.

The purpose of the 95001 inspection was to provide assurance that the root causes and contributing causes of the White finding were understood, the extent of condition and extent of cause were identified, and that the corrective actions were sufficient to address the root causes and contributing causes and to prevent recurrence. Based on the inspection results documented in this Inspection Report and Inspection Report 05000346/2010503, the NRC will close the White finding.

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Sincerely,

/RA/

Anne T. Boland, Director
Division of Reactor Safety

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

Enclosure: Inspection Report 05000346/2010504(DRS)
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Letter to Barry Allen from Anne T. Boland dated December 28, 2010.

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION
SUPPLEMENTAL (95001) FOLLOW-UP INSPECTION REPORT
05000346/2010504(DRS) AND ASSESSMENT FOLLOW-UP LETTER

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