



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

May 25, 2017

Mr. Brian D. Boles
Site Vice President
FirstEnergy Nuclear Operating Company
Davis-Besse Nuclear Power Station
5501 N. State Rte. 2, Mail Stop A-DB-3080
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1—BASELINE EMERGENCY
PREPAREDNESS BIENNIAL EXERCISE INSPECTION REPORT
05000346/2017502

Dear Mr. Boles:

On May 4, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Davis-Besse Nuclear Power Station, Unit 1, and the NRC Inspectors discussed the results of this inspection with Mr. B. Boles and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any finding or violation of more than minor significance.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Steven K. Orth, Chief
Plant Support Branch
Division of Reactor Safety

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

cc: Distribution via LISTSERV®

Letter to Brian D. Boles from Steven K. Orth dated May 25, 2017

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 05000346/2017502

Licensee: FirstEnergy Nuclear Operating Company

Facility: Davis-Besse Nuclear Power Station, Unit 1

Location: Oak Harbor, OH

Dates: May 1 through May 4, 2017

Inspectors: G. Hansen, Sr. Emergency Preparedness Inspector
M. Garza, Emergency Preparedness Inspector
N. Egan, Sr. Physical Security Inspector
R. Ng, Project Engineer

Approved by: S. Orth, Chief
Plant Support Branch
Division of Reactor Safety

Enclosure

SUMMARY

Inspection Report 05000346/2017502; May 1–4, 2017; Davis-Besse Nuclear Power Station, Unit 1; Baseline Emergency Preparedness Exercise Evaluation; Exercise Evaluation Scenario Review; Performance Indicator Verification.

This report covers a 1-week period of announced baseline inspection by four Region III inspectors. The U.S. Nuclear Regulatory Commission's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG 1649, "Reactor Oversight Process," dated July 2016.

NRC-Identified and Self-Revealed Findings

Cornerstone: Emergency Preparedness

No findings were identified.

Licensee-Identified Violations

None

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation (71114.01)

.1 Exercise Evaluation

a. Inspection Scope

The inspectors reviewed the May 2, 2017, Biennial Emergency Preparedness Exercise's objectives and scenario to ensure that the exercise would acceptably test major elements of the licensee's Emergency Plan and to verify that the exercise's simulated problems provided an acceptable framework to support demonstration of the licensee's capability to implement its plan. The inspectors also reviewed records of other drills and exercises conducted from 2015 through 2017, to verify that those drills' scenarios were sufficiently different from the scenario used in the May 2, 2017, exercise.

The inspectors evaluated the licensee's exercise performance, focusing on the risk-significant activities of emergency classification, notification, protective action decision making, implementation of accident mitigation strategies, and correction of past exercise weaknesses in the following emergency response facilities:

- Control Room Simulator;
- Technical Support Center;
- Operations Support Center; and
- Emergency Operations Facility.

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interfaces with offsite officials, readiness of emergency facilities and related equipment, and overall implementation of the licensee's Emergency Plan.

The inspectors attended post-exercise critiques in the control room simulator, technical support center, operations support center, and emergency operations facility to evaluate the licensee's initial self-assessment of its exercise performance. The inspectors later met with the licensee's lead exercise evaluators and managers to obtain the licensee's findings and assessments of its exercise participants' performances. These self-assessments were then compared with the inspectors' independent observations and assessments to assess the licensee's ability to adequately critique its exercise performance. Documents reviewed are listed in the Attachment to this report.

This exercise evaluation inspection constituted one sample as defined in Inspection Procedure (IP) 71114.01-06.

b. Findings

No findings were identified.

1EP8 Exercise Evaluation—Scenario Review (71114.08)

a. Inspection Scope

Prior to the inspection activity on-site, the inspectors conducted an in-office review of the exercise objectives and scenarios submitted to the U.S. Nuclear Regulatory Commission using IP 71114.08, “Exercise Evaluation - Scenario Review,” to determine if the exercise would test major elements of the Emergency Plan as required by Title 10 of the *Code of Federal Regulations*, (10 CFR) Part 50.47(b)(14). Documents reviewed are listed in the Attachment to this report.

This review of the exercise objectives and scenario constituted one inspection sample as defined in IP 71114.08–06.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstone: Emergency Preparedness

4OA1 Performance Indicator Verification (71151)

.1 Drill/Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise Performance Indicator (PI) for the period from the third quarter 2016 through fourth quarter 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99–02, “Regulatory Assessment Performance Indicator Guideline,” Revision 7, were used. The inspectors reviewed the licensee’s records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; assessments of PI opportunities during pre-designated control room simulator training sessions, and performance during other drills. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one Drill/Exercise Performance sample as defined in IP 71151–05.

b. Findings

No findings were identified.

.2 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors sampled licensee submittals for the Emergency Response Organization Drill Participation PI for the period from the third quarter 2016 through fourth quarter 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; performance during the 2015 and 2016 exercises and drills; and revisions of the roster of personnel assigned to key emergency response organization positions. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one Emergency Response Organization Drill Participation sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Alert and Notification System

a. Inspection Scope

The inspectors sampled licensee submittals for the Alert and Notification System (ANS) PI for the period from the third quarter 2016 through fourth quarter 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI and results of periodic scheduled ANS operability tests. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one ANS sample as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On May 4, 2017, the inspectors presented the biennial exercise inspection results to Mr. Boles, Site Vice President, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

B. Boles, Site Vice President
D. Imlay, General Plant Manager
T. Brown, Director of Performance Improvement
J. Vetter, Emergency Response Manager
P. Smith, Senior Nuclear Specialist
M. Brasile, Superintendent Operations Training
K. Zellers, Technical Service Engineering Manager
J. Carr, SRO Operations
V. Schultz, Senior Engineering Specialist
S. Hower, Senior Nuclear Analyst
J. Hite, Senior Nuclear Specialist
B. Jackway, Security Training
R. Oesterle, Operations Superintendent
D. Noble, Radiation Protection Manager
A. Dawson, Chemistry Manager
G. Laird, Operations Manager
P. McCloskey, Regulatory Compliance/PI Manager

U.S. Nuclear Regulatory Commission

D. Mills, Senior Resident Inspector
P. Smagacz, Acting Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened, Closed and Discussed

None

LIST OF ACRONYMS USED

ANS	Alert and Notification System
IP	Inspection Procedure
NEI	Nuclear Energy Institute
PI	Performance Indicator

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 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.

1EP1 Exercise Evaluation

- Davis Besse Nuclear Power Station Emergency Plan; Revision 31
- Drill Reports for Drills conducted from May 2015 through May 2017
- CR-2015-06431; EP Drill - Dose Assessment Center Performance during 5/5/15 Evaluated Exercise; 05/15/2015
- RA-EP-02220, EOF Activation and Response; Revision 14
- NOBP-LP-4012-56; Alert & Notification System Reliability; July 2016 – December 2016
- Davis Besse Nuclear Power Station Emergency Plan; Revision 31
- NOP-LP-5011; Emergency Response Drill and Exercise Program; Revision 8
- NOP-LP-5005; FENOC Siren Testing and Maintenance Procedure; Revision 0
- NORM-OP-1002; Conduct of Operations; Revision 6
- DBEP-0901-02; Davis Besse Nuclear Power Station Drill/Exercise Evaluation Criteria for Control Room (CTRM); May 2, 2017
- CR-2015-06442; EP DRILL - NRC Evaluated Exercise - Emergency Operations Facility Roll-up; 05/05/2015
- CR-2015-06507; EP DRILL- Davis Besse 2015 NRC Evaluated Exercise Simulator; 05/06/2015
- CR-2015-06535; EP DRILL- Davis Besse 2015 NRC Evaluated Exercise Simulator Critique; 05/07/2015
- CR-2015-12991; EP Drill 9-29-15 Integrated Drill, Missed Classification Resulting in Failed DEP; 09/30/2015
- CR-2015-13005; Dose Assessment Staff Lacks Proficiency with MIDAS Dose Assessment Software; 09/30/2015
- CR-2015-13061; PA-DB-2015-0024-001: TSC Controller and Observer Interaction with Players during September 2015 Integrated Drill; 10/01/2015
- CR-2015-13098; Conduct of a Mentor During EP Drill/Exercise PI Opportunities; 10/01/2015
- CR-2015-13166; Subject: EP Drill - Technical Support Center Drill Critique 9/29/15; 10/02/2015
- CR-2015-13177; EP Drill - Dose Assessment Center Critique - 9/29/15 Integrated Drill; 10/02/2015
- CR-2016-09729; EP Drill 8/9/2016 - Emergency Operating Facility not Activated Timely; 08/10/2016
- CR-2016-09761; EP Drill - Missed Emergency Classification and Drill and Exercise Performance (DEP) Opportunity; 08/11/2016
- CR-2016-09769; EP Drill - 10CFR50.54(x) Declaration by the EAPM; 08/11/2016
- CR-2016-09902; EP Drill – Missed Drill Objective for ERO Activation; 08/16/2016
- CR-2016-12817; EP DRILL - Initial Notification Form Approval Line not Completed; 10/27/2016
- CR-2016-12823; EP Drill: RA-EP-02320 Emergency Technical Assessment, Figure 3-1 does not agree with DBRM-EMER-1500B Hot EAL Wallboard, Graphs F-1 and F-2; 10/27/2016
- CR-2016-12834; EP Drill - Premature Site Area Emergency Classification during October 25, 2016 Integrated Drill; 10/27/2016
- CR-2016-12839; Initial Notification to State and County Delayed for the Site Area Emergency; 10/27/2016

- CR-2016-12856; EP Drill – Missed Drill Objective for Health Physics Drill; 10/27/2016
- CR-2016-12878; EP Drill – 10/25/16: Joint Information Center, Release in Progress; 10/28/2016
- CR-2017-01962; PA-DB-17-01: 2/21/17 Integrated Drill TSC Self-Critique; 02/23/2017
- CR-2017-02045; EP DRILL 2-21-17 Simulator Debrief Comments; 02/24/2017
- CR-2017-02050; EP DRILL 2-21-17 EOF Integrated Drill Summary Report; 02/24/2017
- CR-2017-02139; EP Drill 2/21/17: Reactor Operation Considerations for Site Area and General Emergency Classifications; 02/27/2017
- CR-2017-02304; EP Drill - MIDAS Dose Assessment Software Data Irregularities - 2/21/17 Integrated Drill; 03/03/2017
- CR-2017-02309; EP Drill - Incorrect Characterization of Release in Progress; 03/03/2017
- CR-2017-02311; EP Drill - 2/21/17 Integrated Drill - RTL Roll-up of Areas for Improvement; 03/03/2017
- CR-2017-02345; EP Integrated Drill (2/21/17) - Dose Assessment Center Areas for Improvement; 03/04/2017
- CR-2017-02542; PA-DB-17-01: OSC Controller Performance During the 2/21 Integrated Drill; 03/08/2017
- CR-2017-03279; EP Drill - 3/21/17 EP Dry Run - Dose Assessment Improvement Opportunities; 03/22/2017
- CR-2017-03299; EP DRILL 3-21-17 ED Declaration Time Requirements; 03/23/2017
- CR-2017-03301; EP DRILL 3-21-17 Simulator Debrief Comments; 03/23/2017
- CR-2017-03339; EP DRILL 3-21-17 - EOF Integrated Drill Summary Report; 03/23/2017
- CR-2017-03377; 2017 EP Dry Run Drill Roll up (Site Protection); 03/24/2017
- CR-2017-03409; EP Drill - RTL improvement areas from Dry Run 3/21/17; 03/25/2017
- CR-2017-03422; EP-Drill OSC Summary Condition Report for the 3/21/17 DRY RUN; 03/25/2017
- CR-2017-03498; EP-Drill: 2017 Dry Run TSC Summary; 03/27/2017
- CR-2017-03515; EP Drill - 3/21/17 Dry Run - Dose Assessment Responsibility Clarifications; 03/28/2017
- CR 2016-13929; Trending of Alert and Notification System (sirens); 12/02/2016

1EP8 Exercise Evaluation—Scenario Review

- Davis-Besse Nuclear Power Station 2017 Biennial Exercise 60-Day Submittal; March 2017
- Drill Scenarios for the 2015 and 2013 Biennial Exercises

4OA1 Performance Indicator Verification

- ANS Siren Data; Third Quarter of 2016 through Fourth Quarter of 2016
- DEP Opportunity Data; Third Quarter of 2016 through Fourth Quarter of 2016
- ERO Personnel Participation Data; Third Quarter of 2016 through Fourth Quarter of 2016