



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

January 30, 2012

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  
NRC INITIAL LICENSE EXAMINATION REPORT 05000346/2011301

Dear Mr. Allen:

On December 27, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Davis-Besse Nuclear Power Station. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on December 14, 2011, with Mr. B. Boles, Director – Site Operations, and other members of your staff. An exit meeting was conducted by telephone on January 4, 2012, between Mr. A. Stallard, Operations Superintendent, of your staff and Mr. D. Reeser, Chief Operator Licensing Examiner, to review the proposed final grading of the written examination for the license applicants. During the telephone conversation the NRC confirmed receipt of the station submitted post examination documentation on December 27, 2011, noting that there were no post-examination comments.

The NRC examiners administered an initial license examination operating test during the weeks of December 5, 2011 and December 12, 2011. The written examination was administered by Davis-Besse Nuclear Power Station training department personnel on December 16, 2011. Eight Senior Reactor Operator and four Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on January 18, 2012. Twelve applicants passed all sections of their respective examinations and six were issued senior operator licenses and four were issued operator licenses. In accordance with NRC policy, the licenses for the two remaining Senior Reactor Operator applicants are being withheld pending a review of an emergent medical condition for one applicant and certification by the facility that the other applicant has fully satisfied the six months on-site experience requirement that was deferred until after completion of the examination.

The written examination and other related written examination documentation will be withheld from public disclosure for 24 months per your request.

B. Allen

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In accordance with 10 CFR 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 System (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA by A. M. Stone for/

Hironori Peterson, Chief  
Operations Branch  
Division of Reactor Safety

Docket No. 50-346; 72-014  
License No. NPF-3

Enclosure: Operator Licensing Examination Report 05000346/2011301(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: 05000346/2011301(DRS)

Licensee: FirstEnergy Nuclear Operating Company

Facility: Davis-Besse Nuclear Power Station

Location: Oak Harbor, OH

Dates: December 5 through 27, 2011

Inspectors: D. Reeser, Operations Engineer/Chief Examiner  
R. Walton, Senior Operations Engineer  
R. Morris, Senior Resident Inspector – Fermi

Approved by: Hironori Peterson, Chief  
Operations Branch  
Division of Reactor Safety

Enclosure

## **SUMMARY OF FINDINGS**

ER 05000346/2011301(DRS); 12/05/2011 – 12/27/2011; FirstEnergy Nuclear Operating Company, Davis-Besse Nuclear Power Station. Initial License Examination Report.

The announced initial operator licensing examination was conducted by regional Nuclear Regulatory Commission examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1.

### Examination Summary

Twelve of twelve applicants passed all sections of their respective examinations. Six applicants were issued senior operator licenses and four applicants were issued operator licenses. The licenses for the two remaining Senior Reactor Operator (SRO) applicants are being withheld pending review of an emergent medical condition for one applicant and certification by the facility that the other applicant has fully satisfied the six months on-site experience requirement that was deferred until after completion of the examination. (Section 40A5.1)

## REPORT DETAILS

### 40A5 Other

#### .1 Initial Licensing Examinations

##### a. Examination Scope

The Nuclear Regulatory Commission (NRC) examiners and members of the facility licensee's staff used the guidance prescribed in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1, to develop, validate, administer, and grade the written examination and operating test. Members of the facility licensee's staff prepared the outline and developed the written examination and operating test. The NRC examiners validated the proposed examination during the week of November 14, 2011, with the assistance of members of the facility licensee's staff. During the on-site validation week, the examiners audited two license applications for accuracy. The NRC examiners, with the assistance of members of the facility licensee's staff, administered the operating test, consisting of job performance measures and dynamic simulator scenarios, during the period of December 5 through 14, 2011. The facility licensee administered the written examination on December 16, 2011.

##### b. Findings

###### (1) Written Examination

The NRC examiners determined that the written examination, as proposed by the licensee, was within the range of acceptability expected for a proposed examination. Less than 20 percent of the proposed examination questions were determined to be unsatisfactory and required modification or replacement. All changes made to the proposed examination, were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and documented on Form ES-401-9, "Written Examination Review Worksheet," which will be available in 24 months electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's document system (ADAMS).

On December 27, 2011, the licensee submitted documentation noting that there were no post-examination comments for consideration by the NRC examiners when grading the written examination. The final as-administered examination and answer key (ADAMS Accession Number ML12019A248), will be available in 24 months electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's document system (ADAMS).

The NRC examiners completed grading of the written examination on January 6, 2012, and concurred with the facility's conclusions, regarding the review of each missed question to determine the accuracy and validity of the examination questions, documented in the post-examination documentation received on December 27, 2011.

(2) Operating Test

The NRC examiners determined that the operating test, as originally proposed by the licensee, was within the range of acceptability expected for a proposed examination. During the validation of the operating test, several Job Performance Measures (JPMs) were modified or replaced, and some modifications were made to the dynamic simulator scenarios. One Administrative JPM, originally intended for both Senior Reactor Operator (SRO) and Reactor Operator (RO) applicants, was administered to only the RO applicants and a new (but related) SRO only JPM was developed and administered to the SRO applicants. One SRO only Administrative JPM was modified to eliminate a second possible outcome. This same JPM was modified during administration, to revise identification of critical steps based on new information provided by the facility staff. One SRO only Administrative JPM, designed to be based on one of the simulator scenarios, was replaced to eliminate the excessive administrative burden that would have been necessary to prevent compromise of the examination. One In-Plant JPM was modified to eliminate several unnecessary (non-critical) steps and shorten the administration time. Although the number of operating test items determined to be unsatisfactory did not exceed 20 percent of the total number of operating test items submitted, and was therefore within the range of acceptability, the number and type of changes made indicate that additional attention in this area is warranted. Changes made to the operating test, documented in a document titled, "Operating Test Comments," as well as the final, as-administered dynamic simulator scenarios and JPMs, are available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's document system (ADAMS).

The NRC examiners completed operating test grading on January 18, 2012.

(3) Examination Results

Eight applicants at the Senior Reactor Operator (SRO) level and four applicants at the Reactor Operator (RO) level were administered written examinations and operating tests. Twelve applicants passed all portions of their examinations and ten were issued their respective operating licenses. In accordance with NRC policy, the licenses for the two remaining Senior Reactor Operator applicants are being withheld pending a review of an emergent medical condition for one applicant and certification by the facility that the other applicant has fully satisfied the six months on-site experience requirement, a portion of which was deferred until after completion of the examination.

.2 Examination Security

a. Scope

The NRC examiners reviewed and observed the licensee's implementation of examination security requirements during the examination validation and administration to assure compliance with 10 CFR 55.49, "Integrity of Examinations and Tests." The examiners used the guidelines provided in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," to determine acceptability of the licensee's examination security activities.

b. Findings

A NRC Examiner identified, on two separate occasions during the administration of an Administrative Job Performance Measure (JPM) related to the classification of an emergency event, that the facility licensee's training staff had failed to ensure that the grease pencil markings on the Emergency Plan – Emergency Action Level (EAL) Wallboard were completely erased after the completion of the JPM by one applicant and before the administration of the JPM to the next applicant.

On one occasion the correct emergency action level and classification remained marked from the previous administration of the JPM. The next applicant correctly classified and documented the event using the E-Plan Implementing Procedure RA EP 01500, Emergency Classification, prior to looking at the EAL Wallboard to validate his determination. If the applicant had looked at the EAL Wallboard instead of, or prior to, referencing RA EP 01500, the applicant would have had an unfair advantage in completing the assigned task, therefore a compromise of exam integrity occurred, resulting in a violation of 10 CFR 55.49.

On the second occasion the facility licensee's training staff had attempted to erase the grease pencil markings, but did not ensure that the marks had been completely erased. An incorrect emergency action level remained partially marked from the previous administration of the JPM. The next applicant determined that the markings were incorrect for the postulated event and correctly identified the appropriate emergency action level and classification independent of the stray markings. In this case, since the markings did not point to the correct answer and therefore did not provide an opportunity for the applicant to gain an unfair advantage, it was determined that a compromise of examination integrity did not exist.

The examiner of record had reasonable assurance that both applicants correctly determined the EAL and Emergency Classification of the postulated event independently of the markings on the EAL Wallboard. All applicants were sequestered after completing the JPM, and the grease pencil marks were erased prior to administration of the JPM to all other applicants. Therefore, it was determined that no applicant had received an unfair advantage and it was determined that replacement of the JPM was unnecessary. The facility licensee entered the above issues into their corrective action program as documented in Condition Report CR-2011-07058.

Since there is reasonable assurance that no applicant received an unfair advantage, no examination material had to be modified or replaced as a result, and there was no impact on the decision of whether or not to issue an operator license, this failure to comply with 10 CFR 55.49 constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

#### 4OA6 Management Meetings

##### .1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on December 14, 2011, to Mr. B. Boles, Director – Site Operations and other members of the Davis-Besse Nuclear Power Station staff. The examiners asked the licensee whether any of the material used to develop or administer the examination should be considered proprietary. No proprietary or sensitive information was identified during the examination or meeting.

##### .2 Exit Meeting

The chief examiner conducted an exit meeting on January 4, 2012, with Mr. A. Stallard, Operations Superintendent, by telephone. During the telephone conversation, the NRC confirmed receipt of the station submitted post examination documentation on December 27, 2011, noting that there were no post-examination comments, and discussed the proposed final grading of the written examination.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

B. Allen, Site Vice President  
B. Boles, Director, Site Operations  
K. Byrd, Director, Site Performance Improvement  
D. Hartnett, Licensed Operator Requalification Lead  
R. Hovland, Manager, Training  
A. Stallard, Superintendent, Operations  
C. Steenbergen, Superintendent, Operations Training  
J. Vetter, Manager, Emergency Response  
G. Wolf, Supervisor, Regulatory Compliance

#### Nuclear Regulatory Commission

D. Kimble, Senior Resident Inspector  
A. Wilson, Resident Inspector  
D. Reeser, Chief Examiner  
R. Walton, Examiner  
R. Morris, Examiner

### **ITEMS OPENED, CLOSED, AND DISCUSSED**

#### Opened, Closed, and Discussed

None

### **LIST OF DOCUMENTS REVIEWED**

None

### **LIST OF ACRONYMS USED**

ADAMS	Agency-Wide Document Access and Management System
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CR	Condition Report
DRS	Division of Reactor Safety
EAL	Emergency Action Level
EP	Emergency Plan
JPM	Job Performance Measures
NRC	U.S. Nuclear Regulatory Commission
PAM	Post Accident Monitoring
RO	Reactor Operator
SRO	Senior Reactor Operator
ULD	Unit Load Demand



B. Allen

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Sincerely,

/RA by A. M. Stone for/

Hironori Peterson, Chief  
Operations Branch  
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cc w/encl: Distribution via ListServ™

cc w/encl: R. Hovland, Training Manager, Davis-Besse Nuclear Power Station

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