



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

**REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511**

April 4, 2018

Mr. Richard L. Anderson, Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
N-TSB-58
1448 S.R. 333
Russellville, AR 72802-0967

**SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 - NRC EXAMINATION
REPORT 05000313/2018301**

Dear Mr. Anderson:

On March 21, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an initial operator license examination at Arkansas Nuclear One, Unit 1. The enclosed report documents the examination results and licensing decisions. The preliminary examination results were discussed on March 1, 2018, with Mr. G. Kilpatrick, Training Manager, and other members of your staff. A telephonic exit meeting was conducted on March 21, 2018, with Mr. R. Martin, Operations Training Superintendent, who was provided the NRC licensing decisions.

The examination included the evaluation of six applicants for reactor operator licenses and four applicants for upgrade senior reactor operator licenses. The license examiners determined that all of the applicants satisfied the requirements of 10 CFR Part 55 and the appropriate licenses have been issued. There were no post examination comments submitted by your staff. The enclosure contains details of this report.

No findings were identified during this examination.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice and Procedure," 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

Agencywide Documents Access and Management 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/

Vincent G. Gaddy, Chief
Operations Branch
Division of Reactor Safety

Docket No. 50-313
License No. DPR-51

Enclosure:
Examination Report 05000313/2018301
w/Attachment: Supplemental Information

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000313

License: DPR-51

Report: 05000313/2018301

Licensee: Entergy Operations, Inc.

Facility: Arkansas Nuclear One, Unit 1

Location: 1448 SR 333
Russellville, AR 72802-0967

Dates: February 26 – March 21, 2018

Inspectors: J. Kirkland, Chief Examiner, Senior Operations Engineer
T. Farina, Senior Operations Engineer
B. Larson, Senior Operations Engineer
M. Hayes, Operations Engineer

Approved By: Vincent G. Gaddy, Chief
Operations Branch
Division of Reactor Safety

Enclosure

SUMMARY

ER 05000313/2018301; 02/26/2018 – 03/21/2018; Arkansas Nuclear One, Unit 1; Initial Operator Licensing Examination Report.

NRC examiners evaluated the competency of six applicants for reactor operator licenses and four applicants for upgrade to senior reactor operator licenses at Arkansas Nuclear One, Unit 1.

The licensee developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11. The written examination was administered by the licensee on March 7, 2018. NRC examiners administered the operating tests on February 26 – March 1, 2018.

The examiners determined that all of the applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA5 Other Activities (Initial Operator License Examination)

.1 License Applications

a. Scope

NRC examiners reviewed all license applications submitted to ensure each applicant satisfied relevant license eligibility requirements. Examiners also audited two of the license applications in detail to confirm that they accurately reflected the subject applicant's qualifications. This audit focused on the applicant's experience and on-the-job training, including control manipulations that provided significant reactivity changes.

b. Findings

No findings were identified.

.2 Examination Development

a. Scope

NRC examiners reviewed integrated examination outlines and draft examinations submitted by the licensee against the requirements of NUREG-1021. The NRC examination team conducted an on-site validation of the operating tests.

b. Findings

NRC examiners provided outline, draft examination, and post-validation comments to the licensee. The licensee satisfactorily completed comment resolution prior to examination administration.

NRC examiners determined the written examinations and operating tests initially submitted by the licensee were within the range of acceptability expected for a proposed examination.

.3 Operator Knowledge and Performance

a. Scope

On March 7, 2018, the licensee proctored the administration of the written examinations to all 10 applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on March 19, 2018.

The NRC examination team administered the various portions of the operating tests to all applicants on February 26 – March 1, 2018.

b. Findings

No findings were identified.

All applicants passed the written examination and all parts of the operating tests. The final written examinations and post examination analysis may be accessed in the ADAMS system under the accession numbers noted in the attachment. There were no post examination comments as indicated in the licensee submittal.

The licensee identified two generic weaknesses associated with applicant performance on the written examinations. All of the weaknesses were attributed to knowledge weaknesses on the topic.

1. Applicants were unfamiliar with why service water is isolated to the intermediate cooling water coolers during engineered safeguards actuation
2. Applicants were unfamiliar with checking the functionality of the liquid radwaste process monitor when the display is reading 1000 counts per minute or less

.4 Simulation Facility Performance

a. Scope

The NRC examiners observed simulator performance with regard to plant fidelity during examination validation and administration.

b. Findings

No findings were identified.

.5 Examination Security

a. Scope

The NRC examiners reviewed examination security during both the onsite preparation week and examination administration week for compliance with 10 CFR 55.49 and NUREG-1021. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel.

b. Findings

No findings were identified.

40A6 Meetings, Including Exit

Exit Meeting Summary

The chief examiner presented the preliminary examination results to Messrs. G. Kilpatrick, Training Manager, and R. Martin, Operations Training Superintendent, and other members of

the staff on March 1, 2018. A telephonic exit was conducted on March 21, 2018, between Mr. J. Kirkland, Chief Examiner, and Mr. R. Martin.

The licensee did not identify any information or materials used during the examination as proprietary.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Cork, Examination Writer
G. Kilpatrick, Training Manager
R. Martin, Operations Training Superintendent
R. Passage, Examination Writer
B. Wooten, Instructor

NRC Personnel

C. Henderson, Senior Resident Inspector

ADAMS DOCUMENTS REFERENCED

Accession No. ML18080A016 - FINAL WRITTEN EXAMS (Do not release until September 7, 2020)
Accession No. ML18080A014 - FINAL OPERATING TEST (Do not release until September 7, 2020)
Accession No. ML18080A017 - POST EXAM ANALYSIS (Do not release until September 7, 2020)

ARKANSAS NUCLEAR ONE, UNIT 1 - NRC EXAMINATION REPORT 05000313/2018301 -
 April 4, 2018

DISTRIBUTION:

KKennedy, RA
 SMorris, DRA
 TPruett, DRP
 RLantz, DRP
 AVegel, DRS
 JClark, DRS
 SKirkwood, RC
 NO'Keefe, DRP
 JDixon, DRP
 JChoate, DRP
 CHenderson, DRP
 PSmagacz, DRP
 MTobin, DRP
 TSullivan, DRP
 AElam, DRP
 JBowen, RIV/OEDO
 VDricks, ORA
 JWeil, OCA
 TWengert, NRR
 AMoreno, RIV/OCA
 BMaier, RSLO
 EUribe, IPAT
 MHerrera, DRMA
 R4Enforcement
 ROPreports.Resource@nrc.gov

DOCUMENT NAME: R:_REACTORS_ANO\2018\Word Docs\ANO2018301-Exam RPT-JCK.docx
 ADAMS ACCESSION NUMBER: ML18094A272

SUNSI Review: ADAMS: Non-Publicly Available Non-Sensitive Keyword:
 By: VGaddy Yes No Publicly Available Sensitive NRC-002

OFFICE	SOE:OB	SOE:OB	SOE:OB	OE:OB	C:PBE	C:OB
NAME	JKirkland	TFarina	BLarson	MHayes	NOKeefe	VGaddy
SIGNATURE	/RA/	/RA/	/RA/	/RA/	/RA/	/RA/
DATE	3/26/18	3/26/18	3/31/18	3/29/18	3/29/18	4/4/18

OFFICIAL RECORD COPY