



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

June 15, 2007

Tennessee Valley Authority  
ATTN: Mr. William R. Campbell  
Chief Nuclear Officer and  
Senior Vice President  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT - NRC EXAMINATION REPORT  
NOS. 05000327/2007301 AND 05000328/2007301

Dear Mr. Campbell:

During the period of April 9-11, 2007, the Nuclear Regulatory Commission (NRC) administered operating examinations to employees of your company who had applied for licenses to operate the Sequoyah Nuclear Plant. The examiners discussed examination questions and preliminary findings related to the operating test with those members of your staff identified in the enclosed report on April 12, 2007. The written examination was administered by your staff on May 9, 2007. The Chief Examiner discussed questions and preliminary findings related to the written examination with members of your staff on May 23, 2007.

Three Senior Reactor Operator applicants passed both the written and operating examinations. There were no post examination comments. A Simulation Facility Report is included in this report as Enclosure 2.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures 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\\

Robert C. Haag, Chief  
Operations Branch  
Division of Reactor Safety

Docket Nos.: 50-327, 50-328  
License Nos.: DPR-77, DPR-79

Enclosures: (See page 2)

Enclosures: 1. Report Details  
2. Simulation Facility Report

Ashok S. Bhatnagar  
Senior Vice President  
Nuclear Generation Development  
and Construction  
Tennessee Valley Authority  
Electronic Mail Distribution

Preston D. Swafford  
Senior Vice President  
Nuclear Support  
Tennessee Valley Authority  
Electronic Mail Distribution

Walter M. Justice, II  
Interim Vice President  
Nuclear Engineering &  
Technical Services  
Tennessee Valley Authority  
Electronic Mail Distribution

Randy Douet  
Site Vice President  
Sequoyah Nuclear Plant  
Electronic Mail Distribution

General Counsel  
Tennessee Valley Authority  
Electronic Mail Distribution

John C. Fornicola, General Manager  
Nuclear Assurance  
Tennessee Valley Authority  
Electronic Mail Distribution

Beth A. Wetzell, Manager  
Corporate Nuclear Licensing and  
Industry Affairs  
Tennessee Valley Authority  
4X Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

Glenn W. Morris, Manager  
Licensing and Industry Affairs  
Sequoyah Nuclear Plant  
Tennessee Valley Authority  
Electronic Mail Distribution

Robert H. Bryan, Jr., General Manager  
Licensing and Industry Affairs  
Sequoyah Nuclear Plant  
Tennessee Valley Authority  
4X Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

David A. Kulisek, Plant Manager  
Sequoyah Nuclear Plant  
Tennessee Valley Authority  
Electronic Mail Distribution

Lawrence E. Nanney, Director  
TN Dept. of Environment & Conservation  
Division of Radiological Health  
Electronic Mail Distribution

County Mayor  
Hamilton County Courthouse  
Chattanooga, TN 37402-2801

Ann Harris  
341 Swing Loop  
Rockwood, TN 37854

James H. Bassham, Director  
Tennessee Emergency Management  
Agency  
Electronic Mail Distribution

Mr. Thomas Wallace  
Training Manager  
Sequoyah Training Center  
Igou Ferry Road  
Soddy-Daisy, TN 37379

Distribution w/encl:

Bob Pascarelli, NRR  
 B. Moroney, NRR  
 C. Evans (Part 72 Only)  
 L. Slack, RII EICS  
 OE Mail (email address if applicable)  
 RIDSNRRDIRS  
 PUBLIC

\*For Previous concurrence see attached copy

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE

ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_

OFFICE	RII:DRS	RII:DRS	RII:DRP				
SIGNATURE	MAB7	RCH	SMS\For				
NAME	MBates	RHaag	MWidmann				
DATE	6/13/2007	6/13/2007	6/13/2007	6/ /2007	6/ /2007	6/ /2007	6/ /2007
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-327, 50-328

License Nos.: DPR-77, DPR-79

Report Nos.: 05000327/2007301 and 05000328/2007301

Licensee: Tennessee Valley Authority (TVA)

Facility: Sequoyah Nuclear Plant Units 1 & 2

Location: Sequoyah Access Road  
Soddy-Daisy, TN 37379

Dates: Operating Tests - April 9-11, 2007  
Written Examination - May 9, 2007

Examiners: M. Bates, Chief Examiner  
R. Aiello, Senior Operations Engineer  
B. Caballero, Operations Engineer

Approved by: R. Haag, Chief  
Operations Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

ER 05000327/2007301, 05000328/2007301; 4/9-5/9/2007; Sequoyah Nuclear Power Plant, Units 1 and 2; Licensed Operator Examinations.

The NRC examiners conducted operator licensing initial examinations in accordance with the guidance of NUREG-1021, Operator Licensing Examination Standards for Power Reactors, Rev. 9. This examination implemented the operator licensing requirements of 10 CFR §55.41, §55.43, and §55.45.

The NRC administered the operating tests during the period of April 9-11, 2007. Members of the Sequoyah Nuclear Plant training staff administered the written examination on May 9, 2007. The operator licensing initial written examinations and operating tests were developed by the licensee. Three Senior Reactor Operator (SRO) applicants passed both the written and operating examinations and were issued SRO licenses.

The initial written examination submittal was determined to be outside of the acceptable quality range as outlined in NUREG-1021. Twenty-nine out of 75 questions on the RO examination were significantly modified or replaced and 9 out of 25 questions on the SRO examination were significantly modified or replaced as a result of the NRC's review of the submittal. Question flaws, which caused questions to be rated as unsatisfactory, included non-plausible distractors, questions not testing knowledge required by the selected topic, and SRO questions not written to test knowledge that is unique to the SRO position. Future examination submittals should incorporate lessons learned from this effort.

## Report Details

### 4. OTHER ACTIVITIES (OA)

#### 4OA5 Operator Licensing Initial Examinations

##### a. Inspection Scope

The licensee developed the operating tests and written examinations. The NRC examination team reviewed the proposed to determine whether it was developed in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. Examination changes agreed upon between the NRC and the licensee were made according to NUREG-1021 and incorporated into the final version of the examination materials.

The examiners reviewed the licensee's examination security measures while preparing and administering the examinations to ensure examination security and integrity complied with 10 CFR 55.49, Integrity of examinations and tests.

The examiners evaluated three SRO applicants who were being assessed under the guidelines specified in NUREG-1021. The examiners administered the operating tests during the period of April 9-11, 2007. Members of the Sequoyah Nuclear Plant training staff administered the written examination on May 9, 2007. The evaluations of the applicants and review of documentation were performed to determine if the applicants, who applied for licenses to operate the Sequoyah Nuclear Plant, met requirements specified in 10 CFR Part 55.

##### b. Findings

The initial written examination submittal did not include adequate reference material, as requested in NRC correspondence from Robert C. Haag to Karl W. Singer, dated November 9, 2006, to allow the NRC Chief Examiner to adequately review the examination. Additional reference material was subsequently provided on April 12, 2007. Also, the initial written examination submittal was evaluated to be outside of the acceptable quality range as outlined in NUREG-1021. Twenty-nine out of 75 questions on the RO examination were significantly modified or replaced and 9 out of 25 questions on the SRO examination were significantly modified or replaced as a result of the NRC's review of the submittal. Question flaws, which caused questions to be rated as unsatisfactory, included non-plausible distractors, questions not testing knowledge required by the selected topic, and SRO questions not written to test knowledge that is unique to the SRO position. Future examination submittals should incorporate lessons learned from this effort.

A portion of the written examination was developed by the licensee and submitted for preliminary NRC review prior to the agreed upon submittal date. The licensee then removed the initial examination developer from examination development activities in order for the individual to instruct the applicants who were scheduled to take the examination. All examination material that had been developed up to that point was required to be discarded due to examination security requirements contained in

NUREG-1021. Examination development was re-commenced with a new examination development team and a revised agreed upon written examination date of May 3, 2007. The written examination was further delayed until May 9, 2007, due to the revisions that were required due to the examination submittal being outside the acceptable quality range as outlined in NUREG-1021.

Three SROs passed both the operating test and written examination. The licensee submitted no post examination comments concerning the written or operating examinations. The written examination, and examination references may be accessed in the ADAMS system (ADAMS Accession Number ML071490433, ML071440462, ML071440467).

#### 40A6 Meetings

##### Exit Meeting Summary

On April 12, 2007, the Chief Examiner discussed generic applicant performance and examination development issues with members of licensee management. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On May 23, 2007, the Chief Examiner discussed written examination development issues with members of licensee management.

#### PARTIAL LIST OF PERSONS CONTACTED

##### Licensee

R. Douet, Site Vice President  
G. Morris, Site Licensing Manager  
T. Wallace, Training Manager  
D. Boone, Radiation Protection Manager  
B. Picchiottino, Operations Training Manager  
R. Proffitt, Licensing Supervisor  
M. Reese, Operations Training  
D. Truong, Nuclear Assurance  
T. Whitten, Operations

##### NRC

M. Speck, Resident Inspector

## SIMULATION FACILITY REPORT

Facility Licensee: Sequoyah Nuclear Station

Facility Docket No.: 05000327/05000328

Operating Tests Administered on: April 9-11, 2007

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and, without further verification and review in accordance with IP 71111.11, are not indicative of noncompliance with 10 CFR 55.46. No licensee action is required in response to these observations.

While conducting the simulator portion of the operating tests, examiners did not observe any simulation fidelity issues.