



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

August 13, 2007

Carolina Power and Light Company  
ATTN: Mr. T. D. Walt  
Vice President  
H. B. Robinson Steam Electric Plant Unit 2  
3581 West Entrance Road  
Hartsville, SC 29550

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT - FINAL NRC EXAMINATION  
REPORT 05000261/2007301

Dear Mr. Walt:

On March 23, 2007, the Nuclear Regulatory Commission (NRC) issued an Interim Examination Report to document activities for the H. B. Robinson 2007 Operator Licensing Examination and provide you with the NRC's assessment of the examination process. This Final Examination Report documents the overall results for this examination. During the period of February 5 - 9, 2007, the NRC administered operating examinations to employees of your company who had applied for licenses to operate the H. B. Robinson Steam Electric Plant. At the conclusion of the examination, the examiners discussed the examination questions and preliminary findings with those members of your staff identified in the enclosed report. The initial written examination was administered by your staff on February 2, 2007.

While administering the written examination, your staff discovered that the version of the written examination given to the applicants was not NRC approved. The actual 'as-given' written examination administered on February 2, 2007, was an earlier version of the exam and did not include a number of significant changes that were made to resolve NRC pre-examination review comments. The NRC performed a comprehensive review of the 'as-given' exam to determine whether the exam satisfied the requirements of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." Based on the large number of exam questions that were found to be unacceptable due to not meeting the requirements of NUREG-1021, the NRC determined that the 'as-given' exam was invalid. Consequently, the written examination administered on February 2, 2007, will not be used by the NRC in licensing decisions for those individuals who had applied for licenses.

The H. B. Robinson staff developed a new written examination, and this examination was administered by your staff on June 26, 2007. All of the applicants (two Reactor Operators (RO) and seven Senior Reactor Operators (SRO)) passed the written examination and the operating test.

During review of the circumstances involving the administration of the unapproved written examination, the NRC identified one Severity Level IV violation of NRC requirements. The violation was determined to be of very low safety significance. Because of its very low safety significance and because it has been entered into your Corrective Action Program (CAP), the

NRC is treating this issue as a non-cited violation (NCV), in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you contest this NCV, you should provide a response within 30 days of the date of this examination report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the H.B. Robinson facility.

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).

Should you have any questions concerning this letter, please contact me at (404) 562-4607.

Sincerely,

**\\RA\\**

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

Docket No. 50-261  
License No. DPR-23

Enclosures: 1. Report Details  
2. Simulation Fidelity Report

cc w/encl:  
Director, Site Operations  
Carolina Power & Light Company  
H. B. Robinson Steam Electric Plant  
Electronic Mail Distribution

Ernest J. Kapopoulos, Jr.  
Plant General Manager  
Carolina Power & Light Company  
H. B. Robinson Steam Electric Plant  
Electronic Mail Distribution

Paul Fulford, Manager  
Performance Evaluation and  
Regulatory Affairs PEB 5  
Electronic Mail Distribution

C. T. Baucom, Supervisor  
Licensing/Regulatory Programs  
Carolina Power & Light Company  
H. B. Robinson Steam Electric Plant  
Electronic Mail Distribution

J. F. Lucas, Manager  
Support Services - Nuclear  
Carolina Power & Light Company  
H. B. Robinson Steam Electric Plant  
Electronic Mail Distribution

Henry J. Porter, Director  
Div. of Radioactive Waste Mgmt.  
Dept. of Health and Environmental  
Control  
Electronic Mail Distribution

cc w/encls:

R. Mike Gandy  
Division of Radioactive Waste Mgmt.  
S. C. Department of Health and  
Environmental Control  
Electronic Mail Distribution

Beverly Hall, Chief Radiation  
Protection Section  
N. C. Department of Environment,  
Health and Natural Resources  
Electronic Mail Distribution

David T. Conley  
Associate General Counsel - Legal Dept.  
Progress Energy Service Company, LLC  
Electronic Mail Distribution

John H. O'Neill, Jr.  
Shaw, Pittman, Potts & Trowbridge  
2300 N. Street, NW  
Washington, DC 20037-1128

Chairman of the North Carolina  
Utilities Commission  
c/o Sam Watson, Staff Attorney  
Electronic Mail Distribution

Robert P. Gruber  
Executive Director  
Public Staff - NCUC  
4326 Mail Service Center  
Raleigh, NC 27699-4326

Public Service Commission  
State of South Carolina  
P. O. Box 11649  
Columbia, SC 29211

Mr. Bo Clark, Training Manager  
H. B. Robinson Steam Electric Plant  
Progress Energy Carolinas, Inc.  
3581 West Entrance Road  
Hartsville, SC 29550

Distribution w/encl:

M. Vaaler, NRR

C. Evans (Part 72 Only)

L. Slack, RII EICS

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OFFICE	RII:DRS	RII:DRS	RII:DRS	RII:DRP	RII:DRS		
SIGNATURE	GWL1	RSB2	RCH	RXM1	MAB7		
NAME	GLaska	RBaldwin	BHaag	RMusser	MBates		
DATE	8/13/2007	8/10/2007	8/9/2007	8/10/2007	8/10/2007	6/ /2008	6/ /2008
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NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-261

License No.: DPR-23

Report No.: 05000261/2007301

Licensee: Carolina Power & Light (CP&L)

Facility: H. B. Robinson Steam Electric Plant

Location: 3581 West Entrance Road  
Hartsville, SC 29550

Dates: Operating Test - February 5 - 9, 2007  
Initial Written Examination - February 2, 2007  
Final Written Examination - June 26, 2007

Examiners: R. Baldwin, Chief, Senior Operations Engineer  
G. Laska, Senior Operations Engineer  
F. Ehrhardt, Senior Operations Engineer  
B. Caballero, Operations Engineer (In-Training)  
M. Bates, Senior Operations Engineer, (Final Written)

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

## SUMMARY OF FINDINGS

ER 05000261/2007301, 02/05-09/2007, 06/26/2007, H. B. Robinson Steam Electric Plant; Licensed Operator Examinations.

The NRC examiners conducted operator licensing initial examinations in accordance with the guidance in NUREG-1021, Revision 9, "Operator Licensing Examination Standards for Power Reactors." 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 February 5 - 9, 2007. Members of the Robinson training staff administered the initial written examination on February 2, 2007. The entire written examination and the operating test were developed by the Robinson training staff.

Due to an error by the licensee, the written examination administered to the applicants on February 2, 2007, was not the version that had been approved by the NRC. This unapproved version of the exam was subsequently reviewed by the NRC and was determined to be invalid.

To complete the examination process for the nine applicants who applied for licenses, the H. B. Robinson staff developed a new written examination that was administered on June 26, 2007. All of the applicants (two Reactor Operators (RO) and seven Senior Reactor Operators (SRO)) passed the written examination and the operating test. The applicants were issued an operator license commensurate with the level of examination administered. There were no post examination comments on the written exam.

An NRC-identified non-cited violation of 10 CFR 55.49 was identified for administering an unapproved written examination which compromised the integrity of the examination process. The violation was characterized as a Severity Level IV due to its very low safety significance.

The initial written examination submittal (for the examination that was administered on February 2, 2007) was determined to be outside of the acceptable quality range as outlined in NUREG-1021. Greater than twenty percent of the questions did not meet the guidance specified in NUREG-1021. Future examination submittals should incorporate lessons learned from this effort.

## Report Details

### 4. OTHER ACTIVITIES

#### 4OA5 Operator Licensing Initial Examinations

##### a. Inspection Scope

The licensee developed the operating tests and written examinations. The NRC examination team reviewed the proposed material 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 material.

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

The examiners evaluated two RO and seven SRO applicants who were being assessed under the guidelines specified in NUREG-1021. The evaluations of the applicants and review of documentation were performed to determine if the applicants, who applied for licenses to operate the H. B. Robinson Nuclear Plant, met requirements specified in 10 CFR 55, "Operators' Licenses." The examiners administered the operating tests during the period of February 5 - 9, 2007. Members of the Robinson training staff administered the written examination on June 26, 2007

##### b. Findings

One finding of significance was identified and is discussed below.

The NRC determined that the details provided by the licensee for the walkthrough and simulator tests were within the range of acceptability expected for a proposed examination. Two RO and seven SRO applicants passed both the written examination and operating test. The applicants who passed both the written examination and the operating test were issued an operator license commensurate with the level of examination administered.

The initial written examination submittal (for the examination that was administered on February 2, 2007) was determined to be outside of the acceptable quality range as outlined in NUREG-1021. Greater than twenty percent of the questions did not meet the guidance specified in NUREG-1021. 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.

The written examinations, question references/answers, and examination references may be accessed in the ADAMS system (ADAMS Accession Numbers ML072200490, and ML072200476)

Introduction. The NRC identified a non-cited violation (NCV) of 10 CFR 55.49, Integrity of examinations and tests, based on the licensee administering an unapproved written examination, compromising the integrity of the examination. This issue was previously identified as unresolved item (URI) 05000261/2007301-01.

Description. During the facility's administration of the initial written examination on February 2, 2007, the licensee identified that an earlier version of the examination was inadvertently provided to the applicants. The earlier version of the examination did not include a number of significant changes that were made to resolve NRC comments provided during the preexamination review of the written examination. This earlier version of the examination had not been approved by the NRC for administration to the license applicants.

In accordance with Title 10, Section 55.40, of the Code of Federal Regulations (10 CFR 55.40), the NRC uses the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," to evaluate the written examinations prepared by facility licensees. In addition, 10 CFR 55.40 and NUREG-1021 require that facilities receive NRC approval of the proposed examinations before their administration. The NRC performed a comprehensive review of the 'as-given' examination to determine whether the exam satisfied the requirements of NUREG-1021. A number of the 'as-given' questions were determined to be unacceptable and did not meet the requirements of NUREG-1021. The NRC determined that the 'as-given' examination was not valid because the remaining acceptable questions provided limited coverage of the knowledge, skills, and abilities needed to perform licensed duties and that the examination could not be used as a basis for making licensing decisions. The administration of an unapproved written examination was a compromise of the examination process. The determination that the NCV was NRC identified was based on the licensee's initial review effort conclusion that the 'as-given' written examination was valid, however, the NRC's subsequent review determined the exam was invalid and could not be used for making licensing decisions.

Analysis. The inspectors determined that the licensee's administration of an invalid, unapproved examination is a performance deficiency because the licensee is expected to comply with 10 CFR 55.49 and because it was within the licensee's ability to foresee and prevent. 10 CFR 55.49, Integrity of examinations and tests states, in part, that facility licensees shall not engage in any activity that compromises the integrity of any test or examination required by this part. Because violations of 10 CFR 55.49 are considered to be a violation that potentially impede or impact the regulatory process, they are dispositioned using the traditional enforcement process. This finding was more than minor because the written examination, which is a significant input to NRC licensing decision making, had the potential to provide inaccurate information to the NRC regarding the knowledge level of the applicants. This finding in the Mitigating

Systems Cornerstone is of very low safety significance because no NRC licensing decisions were made based on the results of the invalid examination.

Enforcement. 10 CRF 55.49, Integrity of examinations and tests states, in part, that facility licensees shall not engage in any activity that compromises the integrity of any test or examination required by this part. The integrity of a test or examination is considered compromised if any activity, regardless of intent, affected, or, but for detection, would have affected the equitable and consistent administration of the test or examination. This includes all activities related to the preparation, administration, and grading of the tests and examinations required by this part.

Contrary to the above, on February 2, 2007, the licensee administered an invalid written examination, an activity that compromised the integrity of the written examination. This information had the potential to impact the regulatory process because the NRC uses the results of the written examination to determine whether an applicant meets the requirements to operate the controls of a nuclear power plant pursuant to 10 CFR Part 55. Because this issue is of very low safety significance and has been entered into the licensee's corrective action program as Action Request 221343, this violation is being treated as a Severity Level IV non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This issue is identified as NCV 05000261/2007301-02, Integrity of Written Examination Compromised.

#### 40A6 Meetings

##### Exit Meeting Summary

On August 13, 2007, the final results of the examination were discussed with Mr. Walt and members of his staff. The examiners asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

**PARTIAL LIST OF PERSONS CONTACTED**Licensee personnel

W. Farmer, Manager - Engineering  
 C. Baucom, Supervisor of Licensing and Regulatory Programs  
 D. Foster, Manager - Shift Operations  
 C. Church, Manager - Operations  
 G. Sanders, Licensing Engineer  
 C. Moon, Supervisor - Technical Training  
 S. Wheeler, Supervisor - Emergency Preparedness  
 K. Jones, Supervisor - Plant Support Group  
 J. Huegel, Manager - Maintenance  
 D. Blakeney, Manager - Outages and Scheduling  
 A. Musselwhite, Assessor - Nuclear Assessment Section  
 J. Long, Assessor - Performance Evaluation & Regulatory Affairs

NRC personnel

D. Jones, Resident Inspector

**ITEMS OPENED, CLOSED, AND DISCUSSED**Closed

05000261/2007301-01	URI	Administering an Unapproved Written Examination (Section 4OA5)
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Opened and Closed

0500261/2007301-02	NCV	Integrity of Written Examination Compromised (Section 4AO5)
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## SIMULATOR FIDELITY REPORT

Facility Licensee: H. B. Robinson Nuclear Station

Facility Docket Nos.: 05000261

Operating Tests Administered: February 5 - 9, 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.

No simulator fidelity or configuration items were identified.