



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

October 3, 2016

Mr. Michael Yox  
Regulatory Affairs Director  
Southern Nuclear Operating Company  
7835 River road, Bldg. 140, Vogtle 3&4  
Waynesboro, GA 30830

**SUBJECT: VOGTLE ELECTRIC GENERATING PLANT UNIT 3 – NRC OPERATOR  
LICENSE EXAMINATION REPORT 5200025/2016301**

Dear Mr. Yox:

During the period July 18 – 28, 2016 the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the Vogtle Electric Generating Plant Unit 3. At the conclusion of the tests, the examiners discussed preliminary findings related to the operating tests with those members of your staff identified in the enclosed report. The written examination was administered by your staff on August 3, 2016.

Three Reactor Operator (RO) and fifteen Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One SRO applicant failed the written examination. There were no post-examination comments. A Simulator Fidelity Report is included in this report as Enclosure 2.

The initial examination submittal met the guidelines for quality contained in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 10, following review by the NRC, and changes that were mutually agreed upon between the NRC and your staff.

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 the 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).

M. Yox

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If you have any questions concerning this letter, please contact me at (404) 997- 4662.

Sincerely,

*/RA/*

Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

Docket No: 5200025  
License Nos: NPF-91

Enclosures: 1. Report Details  
2. Simulator Fidelity Report

cc: See page 3

If you have any questions concerning this letter, please contact me at (404) 997- 4662

Sincerely,

**/RA/**

Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

Docket No: 5200025  
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Enclosures: 1. Report Details  
2. Simulator Fidelity Report

cc: See page 3

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE  
ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_       SUNSI REVIEW COMPLETE       FORM 665 ATTACHED

OFFICE	RII:DRS	RII:DRS	NRO	RII:DRS	NRO	RI:DRS-OB	RI:DRS-OB
SIGNATURE	<b>BLC2</b>	<b>MAB7</b>	<b>JXD18</b>	<b>AXG1</b>	<b>JXK3</b>	<b>MPP1</b>	<b>PAP3</b>
NAME	BCBALLERO	MBATES	JDEMARSHALL	AGOLDAU	JKELLUM	MPATEL	PPRESBY
DATE	9/29/2016	9/29/2016	9/29/2016	9/29/2016	9/29/2016	9/29/2016	9/29/2016
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
OFFICE	RII:DCP	RII:DRS					
SIGNATURE	<b>MEE</b>	<b>EFG</b>					
NAME	ERNSTES	GUTHRIE					
DATE	9/30/2016	10/3/2016	10/ /2016	10/ /2016	10/ /2016	10/ /2016	10/ /2016
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY      DOCUMENT NAME: G:\OLEXAMSVAP-1000 EXAMS2-VOGTLE APRIL 2016  
EXAM\CORRESPONDENCE\VOGTLE UNIT 3 AP1000 EXAM REPORT.DOCX

cc:

Resident Manager  
Oglethorpe Power Corporation  
Alvin W. Vogtle Nuclear Plant  
7821 River Road  
Waynesboro, GA 30830

Office of the Attorney General  
40 Capitol Square, SW  
Atlanta, GA 30334

Southern Nuclear Op. Co.  
Document Control Coordinator  
42 Inverness Center parkway  
Attn: B236  
Birmingham, AL 35242

Anne F. Appleby  
Oglethorpe Power Corporation  
2100 East Exchange Place  
Tucker, GA 30084

County Commissioner  
Office of the County Commissioner  
Burke County Commission  
Waynesboro, GA 30830

Mr. Wayne Guilfoyle  
Commissioner  
District 8  
Augusta-Richmond County Commission  
4940 Windsor Spring Rd  
Hephzibah, GA 30815

Gwendolyn Jackson  
Burke County Library  
130 Highway 24 South  
Waynesboro, GA 30830

Mr. Reece McAlister  
Executive Secretary  
Georgia Public Service Commission  
Atlanta, GA 30334

Resident Inspector  
Plant Vogtle 3&4  
7825 River Road  
Waynesboro, GA 30830

Mr. Barty Simonton  
Environmental radiation Program manager  
Environmental Protection Division  
Georgia Dept. of Natural resources  
4224 International Pkwy. Suite 120  
Atlanta, GA 30354-3906

Gene Stilp  
1550 Fishing Creek Valley Road  
Harrisburg, PA 17112

Mr. Robert E. Sweeney  
IBEX ESI  
4641 Montgomery Avenue  
Suite 350  
Bethesda, MD 20814

George B. Taylor, Jr.  
2100 east Exchange PL  
Atlanta, GA 30084-5336

Brian H. Whitley  
42 Inverness Center Parkway  
BIN B237  
Birmingham, AL 35242

Email

[agahghtm@southernco.com](mailto:agahghtm@southernco.com) (Amy Aughtman)  
[annacom@westinghouse.com](mailto:annacom@westinghouse.com) (Michael J. Annacone)  
[awc@nei.org](mailto:awc@nei.org) (Anne W. Cottingham)  
[Bartley.Higgins@hq.doe.gov](mailto:Bartley.Higgins@hq.doe.gov) (Bartley Higgins)  
[becky@georgiawand.org](mailto:becky@georgiawand.org) (Becky Rafter)  
[bhwhittle@southernco.com](mailto:bhwhittle@southernco.com) (Brian Whitley)  
[Bill.Jacobs@gdsassociates.com](mailto:Bill.Jacobs@gdsassociates.com) (Bill Jacobs)  
[bjadams@southernco.com](mailto:bjadams@southernco.com) (Brad Adams)  
[burrouno@westinghouse.com](mailto:burrouno@westinghouse.com) (Nicholle Burroughs)  
[bwwaites@southernco.com](mailto:bwwaites@southernco.com) (Brandon Waites)  
[castelca@westinghouse.com](mailto:castelca@westinghouse.com) (Curtis Castell)  
[comerj@westinghouse.com](mailto:comerj@westinghouse.com) (James Comer)  
[couturgf@westinghouse.com](mailto:couturgf@westinghouse.com) (Gerald Couture)  
[crenshjw@westinghouse.com](mailto:crenshjw@westinghouse.com) (John Crenshaw)  
[crpierce@southernco.com](mailto:crpierce@southernco.com) (C.R. Pierce)  
[dahjones@southernco.com](mailto:dahjones@southernco.com) (David Jones)  
[david.hinds@ge.com](mailto:david.hinds@ge.com) (David Hinds)  
[david.lewis@pillsburylaw.com](mailto:david.lewis@pillsburylaw.com) (David Lewis)  
[dgbost@southernco.com](mailto:dgbost@southernco.com) (Danny Bost)  
[dlfulton@southernco.com](mailto:dlfulton@southernco.com) (Dale Fulton)  
[drculver@southernco.com](mailto:drculver@southernco.com) (Randy Culver)  
[durhamdc@westinghouse.com](mailto:durhamdc@westinghouse.com) (David Durham)  
[ed.burns@earthlink.net](mailto:ed.burns@earthlink.net) (Ed Burns)  
[edavis@pegasusgroup.us](mailto:edavis@pegasusgroup.us) (Ed David)  
[erg-xl@cox.net](mailto:erg-xl@cox.net) (Eddie R. Grant)  
[fdhundle@southernco.com](mailto:fdhundle@southernco.com) (Forrest Hundley)  
[G2NDRMDC@southernco.com](mailto:G2NDRMDC@southernco.com) (SNC Document Control)  
[graysw@westinghouse.com](mailto:graysw@westinghouse.com) (Scott W. Gray)  
[james1.beard@ge.com](mailto:james1.beard@ge.com) (James Beard)  
[jannina.blanco@pillsburylaw.com](mailto:jannina.blanco@pillsburylaw.com) (Jannina Blanco)  
[jantol1dj@westinghouse.com](mailto:jantol1dj@westinghouse.com) (David Jantosik)  
[jbtomase@southernco.com](mailto:jbtomase@southernco.com) (Janice Tomasello)  
[jenmorri@southernco.com](mailto:jenmorri@southernco.com) (Jennifer Buettner)  
[jim@ncwarn.org](mailto:jim@ncwarn.org) (Jim Warren)  
[Joseph.Hegner@dom.com](mailto:Joseph.Hegner@dom.com) (Joseph Hegner)  
[jpredd@southernco.com](mailto:jpredd@southernco.com) (Jason R. Redd)  
[iranalli@meagpower.org](mailto:iranalli@meagpower.org) (Jerry Ranalli)  
[jtgasser@southernco.com](mailto:jtgasser@southernco.com) (Jeff Gasser)  
[karen.patterson@ttnus.com](mailto:karen.patterson@ttnus.com) (Karen Patterson)  
[karlg@att.net](mailto:karlg@att.net) (Karl Gross)  
[kdfili@southernco.com](mailto:kdfili@southernco.com) (Karen Fili)  
[kim.haynes@opc.com](mailto:kim.haynes@opc.com) (Kim Haynes)  
[kmseiber@southernco.com](mailto:kmseiber@southernco.com) (Kristin Seibert)  
[kmstacy@southernco.com](mailto:kmstacy@southernco.com) (Kara Stacy)

**(Vogtle Units 3 & 4 Mailing List cont'd – See page 5)**

**(Vogle Units 3 & 4 Mailing List cont'd)**

[KSutton@morganlewis.com](mailto:KSutton@morganlewis.com) (Kathryn M. Sutton)  
[kwaugh@impact-net.org](mailto:kwaugh@impact-net.org) (Kenneth O. Waugh)  
[lchandler@morganlewis.com](mailto:lchandler@morganlewis.com) (Lawrence J. Chandler)  
[markus.popa@hq.doe.gov](mailto:markus.popa@hq.doe.gov) (Markus Popa)  
[mcintyba@westinghouse.com](mailto:mcintyba@westinghouse.com) (Brian McIntyre)  
[mdmeier@southernco.com](mailto:mdmeier@southernco.com) (Mike Meier)  
[media@nei.org](mailto:media@nei.org) (Scott Peterson)  
[Melissa.Smith@Hq.Doe.Gov](mailto:Melissa.Smith@Hq.Doe.Gov) (Melissa Smith)  
[Michael.Kuca@hq.doe.gov](mailto:Michael.Kuca@hq.doe.gov) (Michael Kuca)  
[mike.price@opc.com](mailto:mike.price@opc.com) (M.W. Price)  
[mlgraves@southernco.com](mailto:mlgraves@southernco.com) (Michelle Graves)  
[MSF@nei.org](mailto:MSF@nei.org) (Marvin Fertel)  
[myox@southernco.com](mailto:myox@southernco.com) (Mike Yox)  
[nirsnet@nirs.org](mailto:nirsnet@nirs.org) (Michael Mariotte)  
[Nuclaw@mindspring.com](mailto:Nuclaw@mindspring.com) (Robert Temple)  
[patriciaL.campbell@ge.com](mailto:patriciaL.campbell@ge.com) (Patricia L. Campbell)  
[Paul@beyondnuclear.org](mailto:Paul@beyondnuclear.org) (Paul Gunter)  
[pbessette@morganlewis.com](mailto:pbessette@morganlewis.com) (Paul Bessette)  
[r.joshi15@comcast.net](mailto:r.joshi15@comcast.net) (Ravi Joshi)  
[randall@nexusamllc.com](mailto:randall@nexusamllc.com) (Randall Li)  
[rjarrett@southernco.com](mailto:rjarrett@southernco.com) (Robyn Jarrett)  
[RJB@NEI.org](mailto:RJB@NEI.org) (Russell Bell)  
[Ronald.Jones@scana.com](mailto:Ronald.Jones@scana.com) (Ronald Jones)  
[russpa@westinghouse.com](mailto:russpa@westinghouse.com) (Paul Russ)  
[rwink@ameren.com](mailto:rwink@ameren.com) (Roger Wink)  
[sabinski@suddenlink.net](mailto:sabinski@suddenlink.net) (Steve A. Bennett)  
[sara@cleanenergy.org](mailto:sara@cleanenergy.org) (Sara Barczak)  
[sblanton@balch.com](mailto:sblanton@balch.com) (Stanford Blanton)  
[sfrantz@morganlewis.com](mailto:sfrantz@morganlewis.com) (Stephen P. Frantz)  
[Shiva.Granmayeh@hq.doe.gov](mailto:Shiva.Granmayeh@hq.doe.gov) (Shiva Granmayeh)  
[sjackson@meagpower.org](mailto:sjackson@meagpower.org) (Steven Jackson)  
[skauffman@mpr.com](mailto:skauffman@mpr.com) (Storm Kauffman)  
[sroetger@psc.state.ga.us](mailto:sroetger@psc.state.ga.us) (Steve Roetger)  
[stephan.moen@ge.com](mailto:stephan.moen@ge.com) (Stephan Moen)  
[taterrel@southernco.com](mailto:taterrel@southernco.com) (Todd Terrell)  
[Tom.Bilik@nrc.gov](mailto:Tom.Bilik@nrc.gov) (Thomas Bilik)  
[tom.miller@hq.doe.gov](mailto:tom.miller@hq.doe.gov) (Tom Miller)  
[TomClements329@cs.com](mailto:TomClements329@cs.com) (Tom Clements)  
[Vanessa.quinn@dhs.gov](mailto:Vanessa.quinn@dhs.gov) (Vanessa Quinn)  
[Wanda.K.Marshall@dom.com](mailto:Wanda.K.Marshall@dom.com) (Wanda K. Marshall)  
[wasparkm@southernco.com](mailto:wasparkm@southernco.com) (Wesley A. Sparkman)  
[wayne.marquino@ge.com](mailto:wayne.marquino@ge.com) (Wayne Marquino)  
[weave1dw@westinghouse.com](mailto:weave1dw@westinghouse.com) (Doug Weaver)  
[x2gabeck@southernco.com](mailto:x2gabeck@southernco.com) (Gary Becker)

**U.S. NUCLEAR REGULATORY COMMISSION**

REGION II

Docket No.: 5200025

License No.: NPF-91

Report No.: 05200025/2016301

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Unit 3

Location: Waynesboro, GA

Dates: Operating Test – July 18 – 28, 2016  
Written Examination – August 3, 2016

Examiners: Bruno Caballero, Chief Examiner, Senior Operations Engineer  
Mark Bates, Senior Operations Engineer  
Joe DeMarshall, Reactor Operations Engineer  
Andreas Goldau, Operations Engineer  
Jim Kellum, Senior Reactor Engineer  
Manan Patel, Operations Engineer  
Peter Presby, Senior Operations Engineer

Approved by: Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

## SUMMARY

ER 05200025/2016301; operating test July 18-28, 2016 & written exam August 3, 2016; Vogtle Unit 3; Operator License Examinations.

Nuclear Regulatory Commission (NRC) examiners conducted an initial examination in accordance with the guidelines in Revision 10 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." This examination implemented the operator licensing requirements identified in 10 CFR §55.41, §55.43, and §55.45, as applicable.

The operating test and written examination were developed by members of the Vogtle Units 3 & 4 plant staff. The NRC developed the written examination outlines.

The initial operating test, written RO examination, and written SRO examination submitted by your staff met the guidelines for quality contained in NUREG-1021, following review by the NRC, and changes that were mutually agreed upon between the NRC and your staff.

The NRC administered the operating tests during the period July 18 – 28, 2016. Members of the Vogtle Units 3 & 4 training staff administered the written examination on August 3, 2016. Three Reactor Operator (RO) and fifteen Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. None of the applicants were issued licenses; licensing action has been delayed pending receipt of additional information.

There were no post-examination comments.

No findings were identified.



## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA5 Operator Licensing Examinations

##### a. Inspection Scope

The NRC did not evaluate the percentage of submitted written examination and operating test items that required replacement or significant modification, or that clearly did not conform with the intent of the approved knowledge and ability (K/A) statement. The decision to not perform this evaluation was made in conjunction with implementing a collaborative examination development effort between the NRC and the licensee for the first AP-1000 license examination. The NRC evaluated each question to ensure that appropriate changes were made in order for the operating test and written examination to meet the NUREG-1021 criteria.

The NRC reviewed the licensee's examination security measures while preparing and administering the examinations in order to ensure compliance with 10 CFR §55.49, "Integrity of examinations and tests."

The NRC administered the operating tests during the period July 18 – 28, 2016. The NRC examiners evaluated three Reactor Operator (RO) and sixteen Senior Reactor Operator (SRO) applicants using the guidelines contained in NUREG-1021. Members of the Vogtle Units 3 & 4 training staff administered the written examination on August 3, 2016. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the Vogtle Electric Generating Plant Unit 3, met the requirements specified in 10 CFR Part 55, "Operators' Licenses."

The NRC evaluated the performance and fidelity of the simulation facility during the preparation and conduct of the operating tests.

##### b. Findings

No findings were identified.

The NRC developed the written examination sample plan outline. The NRC and members of the Vogtle Units 3 & 4 training staff developed both the operating tests and the written examination. All examination material was developed in accordance with the guidelines contained in Revision 10 of NUREG-1021. The NRC examination team reviewed the proposed examination. Examination changes agreed upon between the NRC and the licensee were made per NUREG-1021 and incorporated into the final version of the examination materials.

Two issues related to examination security were identified during the time frame before the examination was administered. Both of these issues were immediately evaluated by the Chief Examiner and discussed with the Branch Chief. In each case, it was determined that no actual compromise of the examination occurred.

- November 19, 2015 (CR#10149033): A Training Instructor, who was not on the security agreement, needed to retrieve material, which was not exam material, from Room B144 (Simulator 3B Exam Isolation Room). Room B144 was posted as part of the exam security boundary. The Training Instructor requested an Operations Exam Validator to retrieve the material, using the Training Instructor's badge to unlock the door. The Training Instructor used his badge to unlock the door and the Operations Exam Validator entered Room B144 and retrieved the material; the Training Instructor did not cross the B144 door boundary. Afterwards, the Training Instructor notified his supervisor about retrieving the non-exam related material from B144. The licensee classified this event as a "near miss", notified the NRC Chief Examiner, and conducted a stand-down meeting with all training instructors and Operations validators. No exam material was located in Room B144 at the time the Operations Exam Validator retrieved the material for the Training Instructor and no compromise of exam material occurred.
- April 12, 2016 (CR#10209182): Two exam validators, who were on the exam security agreement, received training in the same classroom as applicants for the NRC exam. The instructor conducting the training had no knowledge of the NRC exam content, and was not on the exam security agreement. The two exam validators did not have any technical conversations with the applicants during the classroom training. The licensee notified the NRC Chief Examiner because the two exam validators and the applicants receiving training in the same classroom, which had the potential to lead to a near-miss event. The licensee discussed responsibilities of NRC exam security with other validators, and provided a list of people on the exam security agreement to Operations Training and Operations. Neither of the two exam validators provided training or performance feedback to the applicants during the classroom OJT and no compromise of exam material occurred.

Three RO applicants and fifteen SRO applicants passed both the operating test and written examination. One SRO applicant passed the operating test but did not pass the written examination. Issuance of licenses for three RO applicants and fifteen SRO applicants has been delayed pending receipt of additional information. Details concerning the need for additional information has been sent to the individual applicants and the facility licensee.

One RO applicant and one SRO applicant passed the operating test, but passed the written examination with overall scores between 80% and 82%. One SRO applicant passed the operating test, but passed the SRO-only portion of the written examination with a score between 70% and 74%. Each of these applicants was issued a letter stating that they passed the examination and issuance of their license has been delayed pending any written examination appeals that may impact the licensing decision for their application.

Copies of all individual examination reports were sent to the facility Training Manager for evaluation of weaknesses and determination of appropriate remedial training.

The licensee did not submit any post-examination comments. The final written examination was proprietary; a redacted version of the final RO and SRO examination,

with an answer key, may be accessed not earlier than October 1, 2018, in the ADAMS system (ADAMS Accession Numbers ML16274A416 and ML16274A422, respectively).

#### 40A6 Meetings, Including Exit

##### Exit Meeting Summary

On July 28, 2016 the NRC examination team discussed generic issues associated with the operating test with Karen Fili, Site Vice President, and members of the Vogtle Units 3 & 4 staff. The examiners asked the licensee if any of the examination material was proprietary. The information that the licensee identified as proprietary was handled in a manner consistent with NRC and licensee guidelines for this type of information.

#### **KEY POINTS OF CONTACT**

##### Licensee personnel

Karen Fili, Site Vice President  
Jay Miller, Operations Director  
John Austin, Training Director  
Phillip Prater, Operations Support Manager  
Keith Pope, Baseline 8 Project Manager  
Gary Ohmstede, Fleet Exam Manager  
Jonathan Hartman, Operations Shift Supervisor (Facility Rep)  
John H. Umphlett, Initial License Training Lead  
Chuck Howard, Exam Lead  
Ben E. Denlinger, Exam Author  
Andrew T. Nichols, Exam Author  
Scot Brady, Operations Training Instructor  
Colt Rauschuber, Operations Training Instructor  
Ralph Pritchard, Operations Peer for Training  
Stephen Cigal, Operations Training Instructor  
Scott Percy, Operations Training Instructor  
Jason Cearley, Operations Training Instructor  
David Hawkins, Operations Training Instructor  
Richard Davidson, Operations Training Instructor  
Bernard Burgess, Operations Training Instructor  
Jerome Zakutansky, Operations Training Instructor

## SIMULATOR FIDELITY REPORT

Facility Licensee: Vogtle Unit 3

Facility Docket No.: 5200025

Operating Test Administered: July 18 – 28, 2016

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 Inspection Procedure 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 test, examiners observed the following:

<u>Item</u>	<u>Description</u>
SCR-DR-8652	During the administration of Job Performance Measure (JPM) "C", Reduce Pressurizer Pressure Using 3-AOP-103, the simulator stopped (froze), with Initial Condition (IC) 375 and letdown in service. Degasifier pressure was incorrectly modeled at 250,000 psig, which caused the simulator to stop.