



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

November 14, 2007

Duke Power Company LLC
d/b/a Duke Energy Carolinas, LLC
ATTN: Mr. Bruce H. Hamilton
Vice President
Oconee Nuclear Station
7800 Rochester Highway
Seneca, SC 29672

SUBJECT: OCONEE NUCLEAR STATION - NRC EXAMINATION REPORT
05000269/2007301, 05000270/2007301, AND 05000287/2007301

Dear Mr. Hamilton:

During the period of August 27-31 and September 10-17, 2007, the Nuclear Regulatory Commission (NRC) administered operating examinations to employees of your company who had applied for licenses to operate the Oconee Nuclear Station. The examiners discussed preliminary findings related to the operating test and written examination submittal with those members of your staff identified in the enclosed report on September 18, 2007. The written examination was administered by your staff on September 7, 2007.

Five Senior Reactor Operator (SRO) applicants and nine Reactor Operator (RO) applicants took the written and operating examinations. All applicants passed the operating examination, however, only three of the SRO applicants and two of the RO applicants passed the written examination. There were four post examination comments. The NRC resolutions to these comments are summarized in Enclosure 2. A Simulation Facility Report is included in this report as Enclosure 3.

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,

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Malcolm T. Widmann, Chief
Operations Branch
Division of Reactor Safety

Docket Nos.: 50-269, 50-270, 50-287
License Nos.: DPR-38, DPR-47, DPR-55

Enclosures: (See next page)

Enclosures: 1. Report Details
2. NRC Resolution to the Facility Comments
3. Simulation Facility Report

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ADAMS: Yes ACCESSION NUMBER: ML073190022

OFFICE	RII:DRS	RII:DRS	HQ:NRR	RII:DRS	RII:DRP		
SIGNATURE	RSB2	MAB7	per phone LV	MTW	JHM2		
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DATE	11/ 13 /2007	11/ 14 /2007	11/8 /2007	11/ 14 /2007	11/ 07 /2007		
E-MAIL COPY?	YES NO	YES	YES NO	YES NO	YES NO	YES NO	YES NO

NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-269, 50-270, 50-287

License Nos.: DPR-38, DPR-47, DPR-55

Report Nos.: 05000269/2007301, 05000270/2007301, 05000287/2007301

Licensee: Duke Energy Corporation

Facility: Oconee Nuclear Station

Location: 7800 Rochester Highway
Seneca, SC 29672

Dates: Operating Tests - August 27-31 and September 10-17, 2007
Written Examination - September 7, 2007

Examiners: R. Baldwin, Chief Examiner
M. Bates, Senior Operations Engineer
L. Vick, Reactor Engineer

Approved by: M. Widmann, Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

ER 05000269/2007301, 05000270/2007301, 05000287/2007301; 8/27-31/2007, 9/10-17/2007 & 9/7/2007; Oconee Nuclear Station; 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 August 27-31, 2007 and September 10-17, 2007. Members of the Oconee Nuclear Station training staff administered the written examination on September 7, 2007. The licensing initial written examinations and operating tests were developed by Oconee Nuclear Station training staff.

Five Senior Reactor Operator (SRO) applicants and nine Reactor Operator (RO) applicants took the written and operating examinations. All applicants passed the operating examination, however, only three of the SRO applicants and two of the RO applicants passed the written examination. Each applicant who passed the operating test and written examination with an overall score greater than 82% and SRO-only score greater than 74%, as applicable, was issued an operator license commensurate with the level of examination administered. Two SRO applicants passed the operating test, but passed the written examination with overall scores between 80% and 82%. 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.

There were four post examination comments.

No findings of significance were identified.

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 examination 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 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 five SRO and nine RO applicants who were being assessed under the guidelines specified in NUREG-1021. The examiners administered the operating tests during the periods of August 27-31 and September 10-17, 2007. Members of the Oconee Nuclear Station training staff administered the written examination on September 7, 2007. The evaluations of the applicants and review of documentation were performed to determine if the applicants, who applied for licenses to operate the Oconee Nuclear Station, met requirements specified in 10 CFR Part 55.

b. Findings

No findings of significance were identified.

The NRC determined that the licensee's examination submittal for the operating test was within the range of acceptability expected for a proposed examination.

Five Senior Reactor Operator (SRO) applicants and nine Reactor Operator (RO) applicants took both the written and operating examinations. All applicants passed the operating examination, however, only three of the SRO applicants and two of the RO applicants passed the written examination. Each applicant who passed the operating test and written examination with an overall score greater than 82% and SRO-only score greater than 74%, as applicable, was issued an operator license commensurate with the level of examination administered. Two SRO applicants passed the operating test, but passed the written examination with overall scores between 80% and 82%. 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.

The licensee submitted four post examination comments concerning the written examination. The combined RO and SRO written examinations, with knowledge and abilities (K/As), question references/answers and examination references, may be

accessed in the ADAMS system (ADAMS Accession Numbers ML073090183 and ML073090171).

40A6 Meetings

Exit Meeting Summary

On September 18, 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.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Baxter, Station Manager
S. Batson, Operations Superintendent
N. Clarkson, Senior Engineer, Regulatory Compliance
N. Constance, Operations Training Manager
D. Hubbard, Training Manager
R. Johnston, Initial Training Supervisor
B. Meixell, Licensing Engineer, Regulatory Compliance
P. Stovall, Manager,
G. Washburn, Instructor, Operations Training
K. Welchel, Simulator Supervisor, Operations Training

NRC

D. Rich, Senior Resident Inspector

NRC Resolution to the Facility Comment

A complete Text of the licensee's post examination comments can be found in ADAMS under Accession Number ML073090199.

RO QUESTION # 11**LICENSEE COMMENT:**

The question concerns itself with the identification of whether ES Channels 1 and 2, once initiated, can be reset and who the lowest level of plant management is, after completion of both Rule 5 (Main Steam Line Break) and the Excessive Heat Transfer (EHT) tab, that can provide permission for resetting of those ES Channels.

The licensee contends, in their post examination comment, that there are two correct answers "A" and "B." The licensee identifies that guidance for overriding safety systems (resetting ES Channels) is contained in more than one procedure, OMP 1-2, "Rules of Practice," and the EOP network, procedures that the applicant would have to follow while evaluating the conditions presented.

The licensee states "...the time line is not clear. For certain EHT events, ES 1 and 2 may not immediately actuate, if at all. It cannot be certain under conditions specified that Enclosure 5.1 had been completed to the point when the initiation of Enclosure 5.41 will occur." This path, if evaluated, would have led an applicant to selection of choice "B," the original correct answer.

The licensee further asserts that "more general guidance is contained in OMP 1-2." This procedure provides guidance for the operator to override a safety system that automatically started provided conditions of the procedure are met. The guidance provided in Step 5.17.3.B (licensee identified Step 5.17.B) allows safety systems to be repositioned, if the system is not required, provided that two licensed personnel, one of whom is an SRO, and continued operation of the safety system could "...cause unnecessary operator burden." This path if evaluated would have led to selection of choice "A," the proposed additional correct answer.

The NRC disagrees with the above arguments, in that, the applicant was to determine the lowest level of plant management allowed to provide permission for resetting ES Channels 1 and 2. The stem was very clear with respect to the actuation of ES Channels 1 and 2 (they were identified as actuated), and therefore, the argument that in certain cases of EHT ES may not actuate is moot. The applicants were not required to determine if ES had actuated. The applicants had to recall that the OSM would have to give permission to reset ES actuation (Step 1 of Enclosure 5.41). The additional information provided by the licensee concerning procedure OMP 1-2 and its allowances for "overriding" safety equipment identifies a member of plant management lower than the OSM, the Control Room SRO. The licensee, in this comment, does not identify the procedural differences with "resetting" and "overriding" ES Actuation.

Since the stem of the question did not specify the procedural guidance this action was to take place under, the applicant had to determine what procedure the crew would be in and decide who would be the lowest level of plant management who was allowed to determine if the ES Channels could be "reset" not "overridden." Enclosure 5.41, "ES Recovery," Step 1, identifies "resetting" ES channels while OMP 1-2 describes "overriding."

RO QUESTION # 11 (cont.)**NRC RESOLUTION:**

The NRC partially accepts the licensee's recommendation, in that, the original choice "B" would be considered the only correct answer and choice "A" would not be considered as an additional correct answer. An answer key change is not warranted.

RO QUESTION # 18**LICENSEE COMMENT:**

The question concerns itself with the purpose of High Pressure Injection (HPI) Forced Cooling and the number of HPI pumps that will be operating per Rule 4, "Initiation of HPI Forced Cooling."

The applicants were asked to identify the "required number of HPI pumps that will be operating per EOP Rule 4." The licensee contends that "All available HPI pumps will be started in Rule 4, Step 3, if it is assumed that no equipment is out of service." The licensee further states that "no information is given in the question step to assume otherwise. Thus, in a normal sequence, three HPI pumps will be operating." The licensee further identifies that "per Oconee EOP reference Document, if two HPI pumps can be started then that is considered to be a normal and adequate HPI forced cooling alignment. Two HPI pumps are therefore required from a core cooling perspective."

Based on the above discussion, the licensee requests that answer choices "B" and "D" should be accepted as correct.

The NRC disagrees with the licensee's comment and its resolution, in that, the question is clear as to its intent to identify "the number of HPI pumps that will be operating per RULE 4." The licensee correctly identifies that in, RULE 4, Step 3 that it is required to "Start all available HPI pumps." It is also correct that, there is nothing in the stem of the question that would lead an applicant to assume otherwise. Because of this, the only correct answer would be three HPI pumps running. The question identifies the pumps "that will be running," and not the number of pumps that are considered to be available for a minimum designed HPI forced cooling alignment.

NRC RESOLUTION:

The NRC, based on the above discussion, does not accept the licensee's recommendation and choice "D" will be considered as the only correct answer. No change to the examination key is warranted.

RO QUESTION # 45**LICENSEE COMMENT:**

The question concerns itself with Unit 2 during refueling and a loss of ALL Unit 1 and 2 Low Pressure Service Water (LPSW) pumps with the initiation of AP-24, "Loss of LPSW." The question asked the applicant what "actions will be taken first per AP/24?"

The licensee contends that there are two potential answers to this question, the original answer, choice "A" and choice "C" resulting from verbal direction provided by the proctor to the remaining applicants during examination administration. Two of the applicants had already handed in their examinations prior to the direction to modify this question. The modification was presented only to the available applicants. The proctor decided that, in order to elicit the original answer ("A"), the question had to be modified by deleting "per AP/24" from the stem of the question.

The licensee states that one applicant commented that there are two potential answers. The applicant points out that the two answers were possible whether the applicant should consider "actions contained in only AP-24, or also that contained in AP-20, Loss of Component Cooling." The licensee further points out that AP-20, is initiated at Step 4.15 of AP-24 and if the applicants were to consider the actions in AP-20, then choice "A" could be considered correct, in that, the Control Rod Drive Mechanism (CRDMs) temperature would increase faster than the Reactor Coolant Pumps (RCPs). The next step, Step 4.16, in AP-24, identifies actions to trip the RCPs depending upon increase in component parameters.

The licensee recommends that both choices "A" and "C" be considered as correct answers. The recommendation is that choice "A," be allowed for the 12 applicants that received the direction to modify the question and choice "C," be allowed for those applicants who did not receive this direction.

The NRC partially agrees with the recommendation of allowing both choices "A" and "C" as being correct, but feels that either of these answers is allowable for everyone, not just for certain applicants. The stem of the question asks for what "actions will be taken first per AP/24?" The stem of the question does not require the applicant to determine the reason that the reactor trip was warranted. The action of "tripping the reactor" could be required in either, AP/24 or AP/20, is the action that was expected to be determined, not the reason for it. Since tripping the reactor was the action required to be determined it is considered that choices "A" and "C" answer the question correctly.

NRC RESOLUTION:

The NRC, based upon the above discussion, accepts the licensee's recommendation and considers both choices "A" and "C" as correct answers. The answer key will be changed to reflect this comment.

RO QUESTION # 75**LICENSEE COMMENT:**

The question concerns itself with an overcooling event on the 1"A" Steam Generator (SG) and a loss of heat transfer on the 1"B" SG. The applicant was expected to predict the procedural direction the Senior Reactor Operator (SRO), Operator at the Controls (OATC) and the Balance of Plant (BOP) operators would proceed through the plant Emergency Operating Procedures to handle this situation.

The licensee presents additional information that was not identified prior to the examination administration. The licensee provided emails concerning the special case delineated in this question. The emails identified a clarification from the Operations Training Liaison for this situation, where "a steam line break with a Motor Driven Emergency FeedWater Pump (MDEFWP) was out of service to the intact steam generator and the Turbine Driven EFW Pump (TDEFWP) was available, the Loss of Heat Transfer Tab (LOHT) or RULE 3, "Loss of Main or EFW," should not be entered until a manual start of the TDEFWP is attempted." They further note that "a loss of Heat Transfer Symptom is indicated by a loss of Main and Emergency FDW (including unsuccessful manual initiation of EFDW)." The licensee further points out that the TDEFWP would not start due to the automatic Feed Water Isolation System (AFIS) interlock, however, a manual start would be available. Additionally, RULE 5, "Main Steam Line Break," Step 2 directs a manual start of the TDEFWP due to the MDEFWP not being available on the intact SG. Because of this the Excessive Heat Transfer Tab (EHT) would be entered.

The licensee identified that a clarification to the question was necessary in order to elicit the expected answer. The clarification that the proctor provided was "Answer the question using the EOP hierarchy of RULES." This information was provided to only ten of the applicants, those who were still taking the examination. Three of the applicants had already turned in their answer sheets and one applicant was at the restroom at the time, and was not provided the clarification. The proctor did not follow the directions of ES-402, § 3.b, "any question changes or clarifications shall be made on a chalk board or white board."

The licensee recommends that for the four applicants who did not receive the clarification to this question their answers should be graded against answer choice "A," and for the ten remaining applicants, who received the proctor's clarification, their answers should be graded against answer choice "B," the original answer.

LICENSEE COMMENT:

The NRC agrees with the above discussion. However, during the post-examination review, the NRC examiners identified that an incorrect noun name, "Excessive Heat Transfer," was associated with RULE 5. The noun name associated with RULE 5 is actually "Main Steam Line Break." Answer choices "A," "B," and "C" contained the same incorrect noun name for RULE 5. ES-401, "Preparing Initial Site-Specific Written Examinations," requires in § D.2.b, "Ensure that each question is technically accurate..." The incorrect noun name makes this question technically incorrect. In order to answer this question the applicant would have had make assumptions concerning the choices. The assumption would have been that either the noun name for RULE 5 was incorrect or RULE 5 was incorrect and it was meant to have a different RULE or procedure associated with the noun name provided. This required the applicant to

determine what the question was actually asking. Furthermore, the EOP network contains a procedure that is called the Excessive Heat Transfer Tab, this would further complicated the assumptions the applicants would have to make to determine a correct answer. Because of these technical issues it was determined that there was no correct answer.

NRC RESOLUTION:

The NRC determined that based on the above discussion, the licensee's recommendation will not be accepted, the question will be deleted from the examination and the answer key will be changed to reflect this decision.

Simulation Facility Report

Facility Licensee: Oconee Nuclear Station

Facility Docket No.: 05000269/05000270/05000287

Operating Tests Administered on: August 27-31 and September 10-17, 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 administering the Job Performance Measure (JPM) portion of the operating tests, examiners observed the following item:

Item	Description
Safety Rod Movement	During the performance of a JPM associated with recovering a dropped rod, an NRC examiner identified that the safety rod (the one being recovered) moved inward while the regulating rods were being moved for Tave correction. (PIP Serial Number O-07-05054)