



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

December 3, 2004

Duke Energy Corporation
ATTN: Mr. D. M. Jamil
Site Vice President
Catawba Site
4800 Concord Road
York, SC 29745-9635

SUBJECT: CATAWBA NUCLEAR STATION - NRC EXAMINATION REPORT
05000413/2004301 AND 05000414/2004301

Dear Mr. Jamil:

During the period October 4 - 8, 2004, the Nuclear Regulatory Commission (NRC) administered operating examinations to employees of your company who had applied for licenses to operate the Catawba Nuclear Station. 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 written examination was administered by your staff on October 13, 2004.

Three Reactor Operator (RO) applicants and one Senior Reactor Operator (SRO) applicant passed both the written and operating examinations. One SRO applicant passed the written examination but failed the walkthrough portion of the operating examination. One SRO applicant passed the operating examination but failed the written examination, and one SRO failed the SRO portion of the written examination. One RO passed the written exam but failed the simulator portion of the operating examination. A Simulation Facility Report is included in this report as Enclosure 2. There were five post exam comments. Post examination comment resolutions are 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).

Should you have any questions concerning this letter, please contact me at (404) 562-4647.

Sincerely,

/RA/

James H. Moorman, III, Chief
Operator Licensing Branch
Division of Reactor Safety

Docket Nos. 50-413, 50-414
License Nos. NPF-35, NPF-52

Enclosures: (See page 2)

- Enclosures: 1. Report Details
2. Simulation Facility Report
3. Response to post exam Comments

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3

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NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 05000413, 05000414

License Nos.: NPF-35, NPF-52

Report No.: 05000413/2004301, 05000414/2004301

Licensee: Duke Energy Corporation (DEC)

Facility: Catawba Nuclear Station, Units 1 & 2

Location: 4800 Concord Road
York, SC 29745

Dates: Operating Examination - October 4 - 8, 2004
Written Examinations - October 13, 2004

Examiners: G. Laska, Senior Operations Examiner (Chief Examiner)
L. Miller, Senior Operations Examiner
R. Aiello, Senior Operations Engineer

Approved by: James H. Moorman, III, Chief
Operator Licensing Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

ER 05000413/2004301, 05000414/2004301; 10/4 - 10/8/2004 and 10/13/2004; Catawba Nuclear Station, Units 1 and 2; Licensed Operator Examination.

The operator licensing initial examinations were developed by the licensee, reviewed by the NRC and administered by NRC examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Draft Revision 9. The examination implemented the operator licensing requirements of 10 CFR §55.41, §55.43, and §55.45.

The NRC administered the operating examinations October 4 - 8, 2004. The licensee administered the written examination on October 13, 2004. Three Reactor Operator (RO) applicants and one Senior Reactor Operator (SRO) applicant passed both the written and operating examinations. One SRO applicant passed the written examination but failed the walkthrough portion of the operating examination. One SRO applicant passed the operating examination but failed the written examination, and one SRO failed the SRO portion of the written examination. One RO passed the written exam but failed the simulator portion of the operating examination.

Report Details

4. OTHER ACTIVITIES

4OA5 Operator Licensing Initial Examinations

a. Inspection Scope

The licensee developed the written and operating examinations in accordance with the guidelines specified in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Draft Revision 9.

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

The examiners evaluated four RO and four SRO applicants who were being assessed under the guidelines specified in NUREG-1021. The examiners administered the operating tests during the period October 4 - 8, 2004. Members of the Catawba Nuclear Station training staff administered the written examination on October 13, 2004. The evaluations of the applicants and review of documentation were performed to determine if the applicants, who applied for licensees to operate the Catawba Nuclear Plant, met the requirements specified in 10 CFR Part 55, "Operators' Licenses."

b. Findings

Three RO applicants and one SRO applicant passed both the written and operating examinations. One SRO applicant passed the written examination but failed the walkthrough portion of the operating examination. One SRO applicant passed the operating examination but failed the written examination, and one SRO failed the SRO portion of the written examination. One RO passed the written exam but failed the simulator portion of the operating examination. The licensee submitted five post examination comments concerning the written examinations. The RO and SRO written examinations and answer keys, examination references and licensee's post examination comments may be accessed in the ADAMS system (ADAMS Accession Numbers ML043280583, ML043280575, and ML043280554).

The NRC determined that the overall examination submittal was within the acceptable quality range expected by the NRC. The examination changes agreed upon between the NRC and the facility were made in accordance with NUREG-1021.

During the performance of the administrative Job Performance Measures (JPMs) the examiners identified discrepancies in the grading keys for 3 out of 5 SRO JPMs and 2 out of 4 RO JPMs. One of the grading keys was incorrect as a result of using an uncontrolled set of Plant Data Curves. These curves did not have the same values as the curves in the plant used by the applicants to perform the JPM. The facility wrote a PIP (C-04-5326) to ensure that the Plant Data Curves in the plant were correct. One SRO JPM grading key was incorrect and was corrected by operations management

review after the JPM was administered. One Joint RO/SRO JPM had an incorrect initial value inserted.

The exam team noted a generic weakness in the performance of Administrative JPMs in that several applicants did not interpolate values on plant data curves as required by plant procedures. Additionally, all four SRO applicants failed to correctly perform JPM NRC-SRO-3/Admin, "Evaluate a request to perform maintenance during an outage period."

4OA6 Meetings

Exit Meeting Summary

On October 8, 2004, the examination team discussed generic issues with Mr. R. Michael Glover and members of his staff. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On December 2, 2004, in a telephone call with Mr. R. Michael Glover and members of his staff, the Chief Examiner and other NRC personnel discussed issues related to simulator fidelity and a generic weakness that were observed during examination administration.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Glover, Station Manager
 B. Pitesa, Operations Manager
 C. Orr, Operations Manager
 B. Dolan, Engineering Manager
 E. Brewer, Operations Training Manager
 G. Hamilton, Operations Training Manager
 G. Wood, Simulator Supervisor
 P. McIntyre, SA Manager
 J. Suptela, Supervisor Operator Initial Training
 G. Strickland, Regulatory Compliance Specialist

NRC

E. Guthrie, Senior Resident Inspector
 A. Sabisch Resident Inspector
 J. Moorman, Chief, Operator Licensing Branch
 G. Hopper, Senior Operations Engineer

SIMULATION FACILITY REPORT

Facility Licensee: Catawba Nuclear Station

Facility Docket Nos.: 05000413,05000414

Operating Tests Administered: October 4 - 8, 2004

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, are not indicative of noncompliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information that may be used in future evaluations. No licensee action is required in response to these observations.

While conducting the simulator portion of the operating tests, the following items were observed:

<u>ITEM</u>	<u>DESCRIPTION</u>
NONE	

Catawba 2004-301

NRC Response to Licensee Post Exam Comments.

A complete text of the licensee's post-exam comments can be found in ADAMS under Accession Number ML043280554.

SRO Test Question 4:

The facility contends that there is no correct answer as written. The question was changed during discussions with the NRC and that these changes made the answer incorrect.

Voiding in the upper head will cause Pressurizer level to increase. This is a major concern, in the Westinghouse Emergency Response Guidelines, as indicated by the note in ES-1.2 "Post LOCA Cooldown and Depressurization" that states: "The upper head region may void during NC System Depressurization if NC pumps are not running. This will result in a rapidly increasing PZR level." Therefore voiding in the upper head region is a major concern.

The License's contention that thermal shock to the auxiliary spray nozzle can also be considered a major concern, making distractor B partially correct is not accepted. The Catawba ERG background documents state: If normal spray is not available, use of one PZR PORV has priority over auxiliary spray. Auxiliary spray is used as a last resort to **minimize** thermal shock to the spray nozzle. The document continues on to say that "In order to successfully initiate auxiliary spray flow, the flow through the S/I lines must first be isolated, since sufficient delta P will not be available across the auxiliary spray line with the S/I lines open to deliver adequate spray flow." This statement illustrates that the reason that auxiliary sprays are a final option is not based on the thermal shock considerations alone, but also on the complex operation that is required to control spray flow.

The Facility's recommendation is not accepted. "A" remains the correct answer.

SRO Test Question 6

The Facility contends that after researching Section 1.3 of the Technical Specifications (Completion Times) that there is no correct answer.

The Facility recommends deleting the question.

The exam team reviewed the question considering the facility comment and concurred with the facility's assessment.

The Facility's recommendation is accepted and the question will be deleted.

SRO Test Question 7

The facility contends that the reference material did not include the required table in step 18c of EOP-FR-P.1, "Response to Imminent Thermal Shock Condition", as stated in the reference package. Instead the proceeding page (page 19) containing steps 18a and 18b was provided. Page 19 did not provide sufficient information to allow proper determination of the action in step 18d.

The Facility recommends deleting this question from the exam.

The Facility's recommendation is accepted and the question will be deleted.

SRO Test Question 21(question # 19 on the as given copy).

The facility contends that there are two correct answers to this question depending on the source used. The facility recommends that both answer "C" and "D" be accepted as correct. The facility also contends that applicants should not be required to memorize these documents.

NSD-415 "Operational Risk Management (Modes 1-3) Per 10CFR50.65(a.4)" is used in the daily assessment of risk management, therefore SRO applicants must be familiar with procedures that direct the day to day operation/maintenance.

The question asked specifically for the requirements contained in NSD-415 "Operational Risk Management (Modes 1-3) Per 10CFR50.65(a.4)."

The Facility's recommendation is not accepted. "C" remains the correct answer.

RO Question 41

The Facility contends that answer "C" is the correct answer based on the distractor stating that 1RAD-2 A/2 "1EMF-36 (Unit Vent Gas Hi Rad)" had annunciated. When this EMF alarms a signal is sent to close 1-WG-160. The question asked "Which one of the following alarms are valid indications that the release control valve 1-WG-160 has closed to terminate the release. Although the radiation monitor has exceeded a setpoint and sent a signal to close the valve, this alarm itself is not positive indication that the valve has closed, only that the setpoint was exceeded. The question attempted to test the knowledge of the 1RAD-1;F/3, "Waste Gas Discharge Loss of Flow Annunciator". Training documentation and Alarm Response Procedures stated that when waste gas release flow became low this annunciator would alarm.

Closure of 1-WG-160 would cause a low flow condition. After the exam was administered several applicants questioned whether 1RAD-1;F/3 would come in if 1-WG-160 was closed. It was determined that with 1-WG-160 closed the signal to the alarm circuit is blocked by the valves closed limit switch. Further investigation revealed that this alarm signal actually measures pressure, not flow as originally thought when the question was developed. This informs the control room that the Waste Gas Decay Tank is nearing empty and to secure the

release. Therefore, none of the annunciators listed in the question were positive indication that 1-WG-160 was closed.

With none of the responses correct, the question will be deleted.

The Facility's recommendation is not accepted.