



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

January 11, 2006

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
05000413/2005301 AND 05000414/2005301

Dear Mr. Jamil:

During the period of December 5 - 8, 2005, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the Catawba Nuclear Station. At the conclusion of the tests, the examiners discussed preliminary findings with those members of your staff identified in the enclosed report. The written examination was administered by your staff on December 14, 2005.

Five reactor operator (RO) and four senior reactor operator (SRO) applicants passed both the written examinations and operating tests. There were two post examination comments. 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).

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

Sincerely,

/RA By S. Rose Acting For/

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

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

Enclosures: (See page 2)

DEC

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- Enclosures: 1. Report Details
2. NRC Post Examination Comment Resolution
3. Simulation Facility Report

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NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 05000413, 05000414

License Nos.: NPF-35, NPF-52

Report No.: 05000413/2005301, 05000414/2005301

Licensee: Duke Energy Corporation (DEC)

Facility: Catawba Nuclear Station, Units 1 & 2

Location: 4800 Concord Road
York, SC 29745

Dates: Operating Tests - December 5 - 8, 2005
Written Examination - December 14, 2005

Examiners: R. Baldwin, Chief Examiner, Senior Operations Engineer
G. Hopper, Senior Operations Engineer
M. Bates, Chief Examiner Under Instruction, Operations Engineer

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

SUMMARY OF FINDINGS

ER 05000413/2005301, 05000414/2005301; 12/5 - 12/8/2005 and 12/14/2005; Catawba Nuclear Station, Units 1 and 2; Licensed Operator Examination.

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 December 5 - 8, 2005. Members of the Catawba Nuclear Station training staff administered the written examination on December 14, 2005. The written examination outlines were developed by the NRC. The written examination questions, operating test outlines, and the operating test details were developed by the Catawba Nuclear Station training staff.

Five reactor operators (RO) and four senior reactor operators (SRO) passed both the operating test and written examination. All of the applicants were issued operator licenses commensurate with the level of examination administered. There were two post examination comments.

The initial written examination submittal was evaluated to be outside of the acceptable quality range expected by the NRC. Forty-two out of 75 questions on the RO exam were significantly modified or replaced and 17 out of 25 questions on the SRO exam were significantly modified or replaced as a result of the NRC's review of the submittal. Question flaws included non-plausible distractors, questions not testing knowledge required by the knowledge and ability random sample, and SRO exam questions not written to test knowledge that is only required of the SRO. Future exam submittals should incorporate lessons learned from this effort.

Report Details

4. OTHER ACTIVITIES

4OA5 Operator Licensing Initial Examinations

a. Inspection Scope

The NRC developed the written examination outlines and the licensee developed the written examinations and operating tests 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 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 of December 5 - 8, 2005. Members of the Catawba Nuclear Station training staff administered the written examination on December 14, 2005. The evaluations of the applicants and review of documentation were performed to determine if the applicants, who applied for licenses to operate the Catawba Nuclear Station, met requirements specified in 10 CFR 55, "Operators' Licenses."

b. Findings

The initial written examination submittal was evaluated and found to be outside of the acceptable quality range expected by the NRC. Forty-two out of 75 questions on the RO exam were significantly modified or replaced and 17 out of 25 questions on the SRO exam were significantly modified or replaced as a result of the NRC's review of the submittal. Question flaws included non-plausible distractors, questions not testing knowledge required by the knowledge and ability random sample, and SRO exam questions not written to test knowledge that is only required of the SRO. Future exam submittals should incorporate lessons learned from this effort.

Five RO and four SRO applicants passed both the operating test and written examination.

The combined RO and SRO written examinations with knowledge and abilities (K/As) question references/answers, examination references and licensee's post examination comments may be accessed in the ADAMS system (ADAMS Accession Numbers, ML053540159, ML053540089 and ML060040038).

The exam team identified a generic weakness during performance of a job performance measure related to untimely tripping of the turbine following a manual reactor trip. The delay in tripping the turbine resulted in an unnecessary safety injection which would significantly complicate control of the plant. Details of the job performance measure and

performance inadequacies were discussed with the facility Training Manager for evaluation and determination of remedial training.

4OA6 Meetings

Exit Meeting Summary

On December 9, 2005, the examination team discussed generic issues with Mr. W. Pitesa, Site Manager 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.

PARTIAL LIST OF PERSONS CONTACTED

Licensee personnel

W. Pitesa, Site Manager
R. A. Lindsay, Training Manager
C. Trezise, Operations Manager
J. Suptela, Initial License Training Supervisor
J. McConnell, Assistant Operations Manager
E. Brewer, Operations Training Supervisor
S. Coy, Operations Training Manager
R. Ferguson, Safety Assurance
G. Wood, Simulator Support Supervising Engineer
M. Lee, Relief Operations Shift Manager
R. Katalinich, Operations Training Instructor
J. Guyer, Operations Training Instructor
G. Strickland, Regulatory Compliance

NRC personnel

A. Sabisch, Resident Inspector
E. Guthrie, Senior Resident Inspector
M. Ernstes, Chief, DRP Branch 1
J. Moorman, Chief, Operations Branch

Catawba 2005-301

NRC Resolution to the Catawba Post Examination Comments

A complete text of the licensee's post-exam comments can be found in ADAMS under Accession Number ML060040038.

SRO QUESTION # 78

COMMENT:

The 1A Train of ND becomes inoperable due to a motor cooler leak and must be removed from service while a core reload is in progress. The question tests knowledge of the basis for having one ND pump in operation and the required actions with respect to core reload activities when the 1A train becomes inoperable.

The licensee contends that if the 1B Train of ND was assumed to be inoperable, then answer choice 'A' was the correct answer. The licensee also contends that if the 1B Train of ND was assumed to be operable, then answer choice 'C' would also be a correct answer.

NUREG-1021, Rev. 9, Appendix E, Part B, Step 7, states that applicants are not to make assumptions regarding conditions that are not specified in the question unless they occur as a consequence of other conditions that are stated in the question. Considering this guidance, it would be incorrect for applicants to assume that the 1B Train of ND was inoperable. There is no information provided in the stem for the applicant to make the determination that the 1B Train of ND was inoperable.

However, the applicant was forced to make an assumption on whether the 1B ND Train was in operation. If it was assumed that the 1B Train of ND was not in operation, then the Note below LCO 3.9.4 would be applicable, thus making answer choice 'C' the correct answer. If the applicant conservatively decided to not apply the Note, then the actions associated with not meeting the conditions of the LCO would immediately apply. In this case, immediately stopping core alterations would be an additional correct course of action, thus making answer choice 'A' an additional correct answer.

The licensee's recommendation of allowing both answer choices 'A' and 'C' as correct answers was accepted.

NRC RESOLUTION:

Answer choices 'A' and 'C' are correct answers. The answer key has correspondingly been changed.

SRO QUESTION # 87**COMMENT:**

The question concerns itself with the occurrence of a secondary steam leak caused by a steam dump valve opening. Reactor power was 10^{-8} amps while the crew was taking critical data. The question asks for AP/1/A/5500/028, Secondary Steam Leak, actions to close the steam dump valve and the design basis consideration that is assured by performing these actions.

In this situation, an operator would be required to perform AP/1/A/5500/028, Step 9.e Response Not Obtained (RNO), which provides steps to attempt to close the steam dump valve. The licensee contends that any action taken per AP/1/A/5500/028, Step 9.e RNO, would be a correct choice. The licensee contends that dispatching an operator to locally close the steam dump isolation valve is meeting the intent of procedure Step 9.e RNO. The licensee also contends that the second part of answer choices B, C, and D are also correct, which would result in three correct answers. The licensee is recommending that the question be deleted from the exam due to the three correct answer choices.

The licensee's contention is incorrect, in that, the question clearly asks for the actions that would close the steam dump valve. Answer choices B and D do not contain an action that would close the steam dump valve, rather they contain an action that would close the steam dump isolation valve. From a technical perspective answer choices B and D are incorrect based on not containing actions that would close the steam dump valve; however, it is recognized that closing the steam dump isolation valve would have an equivalent impact on the plant as compared to actually closing the steam dump valve. Therefore, answer choices B and D could also be considered as additional correct answers by accomplishing the desired effect of isolating the steam leak and having a correct basis associated with that action.

The licensee's recommendation of deleting the question is accepted due to the question having three correct answers. Answer choices B, C, and D are all correct answers based on both having a correct action and both having a correct basis associated with that action.

NRC RESOLUTION:

The question has been deleted. The answer key has correspondingly been changed.

SIMULATION FACILITY REPORT

Facility Licensee: Catawba Nuclear Station

Facility Docket Nos.: 05000413 and 05000414

Operating Tests Administered on: Dec 5 - 8, 2005

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.