



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

December 3, 2007

Mr. Dale E. Young, Vice President  
Crystal River Nuclear Plant (NA1B)  
ATTN: Supervisor, Licensing &  
Regulatory Programs  
15760 West Power Line Street  
Crystal River, FL 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 - NRC EXAMINATION REPORT 05000302/2007301

Dear Mr. Young:

During the period of October 22-25, 2007, the Nuclear Regulatory Commission (NRC) administered operating examinations to employees of your company who had applied for licenses to operate your Crystal River Unit 3. 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 30, 2007.

Two Senior Reactor Operator (SRO) applicants passed both the written and operating examinations. Two SRO applicants failed the administrative portion of the operating test and one SRO applicant failed the written examination. There was one post examination comment. This comment is 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) 562-4550.

Sincerely,

**\RA\**

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

Docket No.: 50-302  
License No.: DPR-72

cc: (See page 3)

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

cc w/encls:

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Should you have any questions concerning this letter, please contact me at (404) 562-4550.

Sincerely,

**/RA/**

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

Docket No.: 50-302  
License No.: DPR-72

cc: (See page 3)

- Enclosures: 1. Report Details  
4. NRC Post Examination Comment Resolution  
5. Simulation Facility Report

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E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-302

License No.: DPR-72

Report No.: 05000302/2007301

Licensee: Progress Energy Florida (Florida Power Corporation)

Facility: Crystal River Unit 3

Location: 15760 Power Line Street  
Crystal River, FL 34428

Dates: Operating Tests - October 22 - 25, 2007  
Written Examination - October 30, 2007

Examiners: M. Bates, Chief, Senior Operations Engineer  
G. Laska, Senior Operations Examiner  
R. Walton, Operations Engineer

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

## SUMMARY OF FINDINGS

ER 05000302/2007301, 10/22-30/2007; Crystal River Unit 3; 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 October 22-25, 2007. Members of the Crystal River Unit 3 training staff administered the written examination on October 30, 2007. The written examinations and the operating tests were developed by the Crystal River Training Staff.

Two SRO applicants passed both the operating test and written examination. Two SRO applicants failed the administrative portion of the operating test. One SRO applicant failed the written examination. One SRO applicant was issued an operating license; however, one of the SRO applicants who passed the written examination and operating test, passed the written examination with an overall score between 80% and 82%. This applicant was issued a letter stating that he passed the examination and issuance of his license has been delayed pending any written examination appeals that may impact the licensing decision for his application. There was one post examination comment.

No findings of significance were identified.

## Report Details

### 6. OTHER ACTIVITIES

#### 4OA5 Operator Licensing Initial Examinations

##### a. Inspection Scope

The Crystal River Unit 3 Training Staff developed the operating test and written examinations in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. The licensee's examination team reviewed the proposed examinations. 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 applicants who were being assessed under the guidelines specified in NUREG-1021. The examiners administered the operating tests during the period of October 22-25, 2007. Members of the Crystal River Unit 3 training staff administered the written examination on October 30, 2007. The evaluations of the applicants and review of documentation were performed to determine if the applicants, who applied for licenses to operate the Crystal River Unit 3, met requirements specified in 10 CFR 55, "Operators' Licenses."

##### b. Findings

No findings of significance were identified.

The NRC determined that the details provided by the licensee for the walkthrough and simulator tests were within the range of acceptability expected for the proposed tests. Two SRO applicants passed both the operating test and written examination. Two SRO applicants failed the administrative portion of the operating test. One SRO applicant failed the written examination.

The final 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, ML073321278, ML073321274, and ML073321268).

The examination team noted two generic weaknesses associated with applicant performance on the administrative section of the operating test. The applicants displayed a weakness with their ability to correctly determine emergency action level classifications and determining protective action recommendations. The applicants also displayed weaknesses in generating a tagging order in accordance with plant administrative procedures. Copies of all individual examination reports were sent to the facility Training Manager for evaluation and determination of appropriate remedial training.

#### 4OA6 Meetings

##### Exit Meeting Summary

On October 25, 2007, the examination team discussed generic issues with Mr. D. Young and members of the Crystal River Unit 3 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

D. Young, Vice President - CR3  
J. Franke, Director Site Operations  
R. Hons, Manager Training  
P. Dixon, Manager Nuclear Assessment  
M. Van Sicklen, Manager Operations Training  
M. Broussard, Supervisor Operator Initial Training  
B. Wunderly, Manager Shift Operations  
D. Herrin, Licensing  
F. Lawrence, Nuclear Operations Instructor  
F. Dola, Training

##### NRC personnel

G. Laska, Senior Operations Examiner



## NRC Resolution to the Crystal River Post Examination Comment

A complete text of the licensee's post-exam comments can be found in ADAMS under Accession Number ML073321268.

ADMIN JPM - Equipment Control, "Develop an Operations Clearance for FWP-7"

### **LICENSEE COMMENT:**

The licensee contends that double valve isolation on the discharge side of FWP-7 is not a critical aspect for successful completion of the task. The licensee contends that the safety afforded by double isolation is met if an operator only tags a single manual isolation because there is a check valve between the high energy source and the maintenance boundary. The licensee contends that with one valve tagged and the check valve functioning as designed, two failures would have to occur in order to allow a high energy source to the work area.

The licensee contends that the OSHA standard requires verification of energy isolation, which may be accomplished by observation as frequently as necessary if there is a possibility of reaccumulation of stored energy. The licensee further contends that the OSHA standard would be met by having a vent open inside the maintenance boundary, which provides a means of continuously monitoring for stored energy.

After the licensee submitted their formal comment, they also provided evidence that there were two check valves between the high energy source and the maintenance boundary. The licensee also provided documentation that they take periodic temperature readings between these two check valves.

The licensee contends that the double isolation requirement is not criteria for an unsatisfactory grade for this task.

### **NRC RESOLUTION:**

In accordance with procedure OPS-NGGC-1301, Equipment Clearance, Revision 17, double isolation is required OR SSO permission shall be obtained and a notification to the workers shall be included in the special instructions of the clearance order. The following is an excerpt from Page 31 of the procedure:

When plant design allows, systems that operate with temperatures greater than 200°F, pressures greater than 500 psig, caustic or acid systems (excluding boric acid) should be isolated from the work area by two in series closed valves when the system is to be breached. SSO permission shall be obtained to hang any clearance that meets the above requirements and does not use double valve isolation. This permission and a notification to the workers of the clearance boundary limitations shall be noted in the clearance Special Instructions.

Furthermore, OPS-NGGC-1301 also states that check valves should not be used as clearance boundaries, but if they are used, then the check valve is required to be tagged and a vent path between the check valve and the maintenance boundary must be established and tagged. The following is an excerpt from page 87 of the procedure:

<b>Boundary Device</b>	<b>Restrictions</b>	<b>Tagout Method</b>
Check Valve	- Should not be used as a boundary device	<ul style="list-style-type: none"> <li>- If used, place a tag on the check valve to prevent inadvertent removal from the system</li> <li>- If possible, establish a vent path between the check valve and work location</li> <li>- Tag the vent path if possible</li> </ul>

The task was designed to allow the applicants to receive credit for successful completion of the task if single isolation was used on the discharge side of FWP-7 if SSO permission was obtained and the special instructions in the clearance order contained a notification to the work group. When using single valve isolation, the applicants were required to either write these administrative requirements on the clearance order, or state to the examiner that these administrative requirements would apply.

The Job Performance Measure (JPM) Task Standard, the standard that was required to be met in order to successfully complete the task, was to develop the clearance boundary in accordance with OPS-NGGC-1301. Therefore, the NRC disagrees with the licensee's contention because OPS-NGGC-1301 requires either double isolation on the discharge side of FWP-7 OR that SSO permission is obtained for single isolation and that the work group notification is stated in the special instructions. OPS-NGGC-1301 also states that check valves should not be used as a boundary device. The NRC believes the answer key was correct as written in the approved examination. In order to complete the task with a satisfactory score, an applicant was required to either use double isolation on the discharge side of FWP-7 OR obtain SSO permission for using single isolation and make the appropriate work group notification in the special instructions of the clearance order.

## SIMULATION FACILITY REPORT

Facility Licensee: Crystal River Unit 3

Facility Docket Nos.: 05000302

Operating Tests Administered on: October 22-25, 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 conducting the simulator portion of the operating tests, examiners did not observe any simulation fidelity issues.