July 21, 2000

Mr. Michael T. Coyle
Vice President
Clinton Power Station
AmerGen Energy Company, LLC
Mail Code V-275
P. O. Box 678
Clinton, IL 61727

SUBJECT: CLINTON - NRC EXAMINATION REPORT 50-461/2000301(DRS)

Dear Mr. Coyle:

On June 17, 2000, the NRC completed initial operator licensing examinations at your Clinton Power Station. The enclosed report presents the results of the examination.

Three of your previously licensed reactor operators were administered senior reactor operator license examinations and six other applicants were administered reactor operator license examinations. The license applicants' performance evaluations were finalized on July 17, 2000. All applicants passed all sections of their examinations and were issued their respective operator licenses with the exception of one reactor operator. That license was withheld pending receipt of a medical certification.

Based upon the results of the examination activities, one issue of low safety significance (Green) was identified. This issue was determined to involve a violation of requirements. However, the violation was not cited due to its low safety significance and because it was entered into your corrective action program. If you contest this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the Resident Inspector at the Clinton Power Station.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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/NRC/ADAMS/index.html (the Public Electronic Reading Room).

We will gladly discuss any questions you have concerning this examination.

Sincerely

***/RA by Michael Bielby Acting For/***

David E. Hills, Chief
Operations Branch
Division of Reactor Safety

Docket No. 50-461
License No. NPF-62

Enclosures:
1. Operator Licensing Examination Report 50-461/2000301(DRS)
2. Simulation Fidelity Report
3. Written Examination and Answer Keys (RO/SRO)

cc w/encls 1 and 2:
P. Hinnenkamp, Plant Manager
M. Reandeau, Director - Licensing
G. Rainey, Chief Nuclear Officer
E. Wrigley, Manager-Quality Assurance
M. Aguilar, Assistant Attorney General
G. Stramback, Regulatory Licensing Services Project Manager General Electric Company
Chairman, DeWitt County Board
State Liaison Officer
Chairman, Illinois Commerce Commission

cc w/encls 1, 2, 3:
V. Cwietniewicz, Training Manager

We will gladly discuss any questions you have concerning this examination.

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Services Project Manager
General Electric Company
Chairman, DeWitt County Board
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cc w/encls 1, 2, 3: V. Cwietniewicz, Training Manager

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REGION III

| | |
|---|---|
| Docket No: | 50-461 |
| License No: | NPF-62 |
| Report No: | 50-461 |
| Licensee: | AmerGen Energy Company |
| Facility: | Clinton Power Station |
| Location: | Route 54 West<br>Clinton, IL 61727 |
| Dates: | June 12–17, 2000 |
| Examiners: | D. McNeil, Chief Examiner<br>D. Roth, Examiner<br>D. Muller, Examiner<br>J. Hopkins, Certifying Examiner |
| Approved by: | David E. Hills, Chief, Operations Branch<br>Division of Reactor Safety |

# NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

| Reactor Safety | Radiation Safety | Safeguards |
|---|---|---|
| ● Initiating Events | ● Occupational | ● Physical Protection |
| ● Mitigating Systems | ● Public | |
| ● Barrier Integrity | | |
| ● Emergency Preparedness | | |

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

Clinton Power Station
NRC Examination Report 50-461/2000301(DRS)

During the week of June 12, 2000, NRC examiners conducted an operator licensing initial examination in accordance with the guidance of NUREG-1021, “Operator Licensing Examination Standards for Power Reactors,” Revision 8. This examination implemented the operator licensing requirements of 10 CFR §55.41, §55.43 and §55.45. Three senior reactor operator applicants and six reactor operator applicants were administered the written examination and operating tests.

Examination Summary:

- All applicants passed all portions of their respective examinations and were awarded senior reactor operator licenses or reactor operator licenses. One applicant was not issued an operator license pending medical certification by the station's medical examiner (Section 4OA5.1).

Findings

- Green. A non-cited violation involving compromise of licensed operator initial license examination material was identified. The licensee inadvertently video taped the NRC test validation and allowed unauthorized access to the videotape. The safety significance was low because the issue was identified and corrected before administration of the examination material (Section 4OA5.2).

Report Details

## 4. OTHER ACTIVITIES (OA)

### 4OA5 Other

#### .1 Initial Licensing Examinations

a. Scope

The NRC examiners conducted announced operator licensing initial examinations during the week of June 12, 2000. The NRC developed the written examinations and operating tests. Three senior reactor operator applicants and six reactor operator applicants received written examinations and operating tests.

b. Findings

The written examination was administered on June 17, 2000, in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 8. The NRC examiners graded the written examination and concluded that all nine applicants achieved the passing criteria of 80 percent, with an average score of approximately 90 percent. The examiners identified the following generic performance deficiencies after grading the written examinations:

- Reactor Operator Q#27, Senior Reactor Operator Q#2 - five applicants concluded that Residual Heat Removal was available to use to supplement fuel pool cooling at high power levels. This is specifically excluded at high power levels at Clinton Power Station.

- Reactor Operator Q#77, Senior Reactor Operator Q#52 - six applicants were unable to specify the correct starting sequence for lube oil pumps as the main turbine shaft lube oil pump discharge pressure begins decreasing.

- Reactor Operator Q#92, Senior Reactor Operator Q#67 - five applicants were unable to specify the correct method of releasing a clearance section if the clearance section holder is not available on the site to release the clearance section.

- Reactor Operator Q#97, Senior Reactor Operator Q#72 - five applicants were unable to accurately calculate their stay time in a 6700 mrem radiation field to save a life.

The licensee did not submit any post-examination comments. The examiners determined that one question had two correct answers. In Reactor Operator Q#60, Senior Reactor Operator Q#35 - answer b. was assigned as the correct answer assuming the feedwater pumps would pump at design capacity. However, in the actual plant, the capacity of one feed pump has been found to be adequate to restore reactor pressure vessel water level to the normal setpoint at power levels up to nearly

95 percent rated thermal power. Depending on the training or actual experience of each applicant, either answer a. or b. was correct. The answer key was amended to accept either a. or b. as a correct answer.

The NRC examiners administered the operating tests during the week of June 12, 2000. The NRC examiners concluded that all nine applicants' performance on the operating test was acceptable. The examiners identified the following generic performance deficiencies while administering the operating tests:

- During administration of an alternate path job performance measure, some applicants were slow to recognize the failure of a damper to open. This may indicate an incomplete application of the "STAR" (Stop Think Act Review) program where applicants failed to review the results of their actions.

- Diagnostic skills in some cases were weak. One crew completely failed to diagnose a slowly drifting open recirc flow control valve, and ultimately scrammed the reactor in response to the failure. Follow up questioning revealed that the crew members did not know what had actually occurred during the event. Another example involved a simulated failure of a reactor pressure vessel level instrument. All three initial license crews had some difficulty diagnosing the failed instrument. One applicant indicated that he thought the other two reactor pressure vessel level instruments were failing low rather than a failure of the one instrument.

The NRC examiners also identified several individual deficiencies in applicant performance during the operating examination which are described in each individual's examination report, Form ES-303-1, "Operator Licensing Examination Report." The NRC forwarded copies of the evaluations under separate correspondence to the Site Training Manager.

.2 Examination Security

a. Scope

The examiners evaluated the licensee's performance with respect to initial examination security as governed by 10 CFR 55.49. In accordance with 10 CFR 55.49, "applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any applicant, test, or examination required by this part."

b. Findings

During the week of May 29, 2000, NRC examiners validated the operating test on the Clinton Power Station plant specific simulator. On May 30, 2000, the licensee's employees started a video recording device during a training session conducted immediately before the NRC started validation activities. The video recording device was not stopped by the instructor that conducted the training session. Trainers assisting in the NRC test validation effort did not stop the recording device. This resulted in several hours of NRC test validation being recorded on the video tape. The video tape was not discovered until the morning of May 31, 2000, when a trainer that was not

authorized to view NRC examination material played back the tape and discovered the examination validation recording. The compromised examination material necessitated replacement and validation of most of the job performance measure operating test. The compromise of examination material through the video taping of the NRC validation session was considered a violation of 10 CFR 55.49, "Integrity of Examinations and Tests" (50-461/2000301-01(DRS)). This Severity Level IV violation is being treated as a Non-Cited Violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Clinton Condition Report No. 2-00-05-115. The safety significance was low because the issue was identified and corrected before administration of the examination material.

4OA6 Meetings (Including Exit Meeting)

.1 Exit Meeting Summary

The inspectors presented preliminary examination observations to Mr. Coyle and other members of licensee management on June 16, 2000. The licensee acknowledged the issues presented. No proprietary information was identified.

## PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Berry, Assistant Director-Nuclear Training
M. Coyle, Plant Manager
V. Cwietniewicz, Director-Nuclear Training
J. Foreman, Licensing Specialist
W. Maguire, Director-Operations
J. Owens, Supervisor-Operations Training
L. Pickley, Senior Instructor, Operations
M. Reandeau, Director Licensing
P. Young, Senior Instructor, Operations

NRC

P. Louden, Senior Resident Inspector, Clinton Power Station
C. Brown, Resident Inspector, Clinton Power Station

## ITEMS OPENED, CLOSED AND DISCUSSED

Opened

| | | |
|---|---|---|
| 50-461/00301-01 | NCV | Compromise of licensed operator initial examination material |

Closed

| | | |
|---|---|---|
| 50-461/00301-01 | NCV | Compromise of licensed operator initial examination material |

Discussed

None

Enclosure 2

SIMULATION FACILITY REPORT

Facility Licensee: Clinton Power Station

Facility Licensee Docket No: 50-461

Operating Tests Administered: June 12–16, 2000

The following documents observations made by the NRC examination team during the initial operator license examination. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

| ITEM | DESCRIPTION |
|---|---|

1. None

Enclosure 3

# Written Examination and Answer Keys (RO/SRO)

This document will be available from ADAMS within 30 days under the title “Clinton Initial Examination 06/2000.”