June 6, 2001

EA-01-028

Mr. Oliver D. Kingsley, President
and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: CLINTON POWER STATION
NRC INSPECTION REPORT NO. 50-461/01-07(DRP)

Dear Mr. Kingsley:

On May 18, 2001, the NRC completed an inspection at your Clinton Power Station. The enclosed report documents the inspection findings which were discussed on May 18 with Mr. J. M. Heffley and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings of significance were identified.

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).

Sincerely,

/RA by Laura Collins Acting for/

Thomas J. Kozak, Chief
Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report 50-461/01-07(DRP)

See Attached Distribution

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M. Pacilio, Plant Manager
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-461
License No:	NPF-62
Report No:	50-461/01-07(DRP)
Licensee:	AmerGen Energy Company, LLC
Facility:	Clinton Power Station
Location:	Route 54 West Clinton, IL 61727
Dates:	April 1 through May 19, 2001
Inspectors:	P. L. Louden, Senior Resident Inspector C. E. Brown, Resident Inspector S. K. Orth, Senior Radiation Specialist J. L. Belanger, Senior Physical Security Inspector K. S. Green-Bates, Reactor Inspector D. E. Zemel, Illinois Department of Nuclear Safety
Approved by:	Thomas J. Kozak, Chief Branch 4 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000461-01-07(DRP), on 04/01-05/19/2001, AmerGen Energy Company LLC, Clinton Power Station; Integrated Inspection Report.

The inspection covers a 7-week routine inspection, an emergency preparedness exercise evaluation, and a baseline security inspection. The inspection was conducted by resident and specialist inspectors. There were no findings of significance identified during this inspection. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at: http://www.nrc.gov/NRR/OVERSIGHT/index.html. Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violations.

A. Inspector Identified Findings

No findings of significance were identified.

B. Licensee Identified Findings

No findings of significance were identified.

Report Details

Summary of Plant Status

The licensee operated the plant at approximately 100 percent power throughout the inspection period. Brief periods at less than 100 percent occurred to conduct routine surveillances.

1. Reactor Safety

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors reviewed piping and instrument diagrams, system procedures, previously identified equipment deficiencies, and condition reports as part of partial system walkdowns. These activities were conducted to verify that equipment for these high risk-importance safety systems was aligned appropriately during other divisional engineered core cooling system (ECCS) maintenance outages.

- High pressure injection sources, motor-driven feed pump (MDFP) and high-pressure core spray (HPCS), during reactor core injection cooling (RCIC) maintenance outage with an intermittent electrohydraulic control (EHC) pressure controller problem
- Division II (Div-II) residual heat removal (RHR) B & C during Div-I surveillance tests on low pressure core spray (LPCS) and RHR A
- RCIC system during HPCS outage

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors reviewed portions of the licensee's Fire Protection Evaluation Report (FPER) and the Updated Safety Analysis Report (USAR) to verify consistency in the documented analysis with installed fire protection equipment at the station. To assess the control of transient combustibles and ignition sources, the material and operational

condition of fire-protection systems and equipment, and the status of fire barriers, the inspectors conducted walk downs of the following risk significant areas:

- Containment building.
- Auxiliary building 781 foot level, east and west, including alternate shutdown panel.
- Fuel building including spent fuel pool and shutdown service water gallery.

b. Findings

No findings of significance were identified.

1R06 Flood Protection (71111.06)

a. Inspection Scope

The inspectors reviewed the flooding mitigation plans and equipment to verify the licensee's conformance with the design requirements and risk analysis assumptions. The inspectors reviewed the following licensee documents and procedures associated with the protection of equipment during external and internal flooding events:

- Clinton Updated Safety Analysis Report (USAR), Section 2.4.2, "Floods"
- Procedure 4303.02, "Abnormal Lake Level," Revision 6
- Clinton Power Station Individual Plant Examination of External Events, Section 5.2, "Flooding Analysis"
- Condition Report (CR) 1-94-04-020, "NRC Notification due to Loss of Accessibility to the Plant due to Raining and Flooding"
- Design Calculation PMED 01ME077, "Calculations for Flooding - Safe Shutdown Analysis"

In addition, the inspectors conducted a walkdown of the diesel building roof to review readiness to cope with instantaneous rain buildup as described in Section 2.4.2.3, "Effects of Local Intense Precipitation," of the USAR.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

The inspectors reviewed the licensee's operator training program to evaluate operator performance in mitigating the consequences of a simulated event. The inspectors observed operator performance during a simulator training scenario for an anticipated transient without scram (ATWS). The inspectors evaluated the following attributes of the activity:

- communication clarity and formality
- timeliness and appropriateness of crew actions
- prioritization, interpretation, and verification of alarms
- correct use and implementation of procedures
- oversight and direction provided by the shift supervisor and shift manager

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors reviewed the effectiveness of the licensee's maintenance efforts in implementing the maintenance rule (MR) requirements, including a review of scoping, goal-setting, performance monitoring, short-term and long-term corrective actions, and current equipment performance problems. These systems were selected based on their designation as risk significant under the MR, or their being in the increased monitoring (MR category a (1)) group. The systems were:

- Air operated valves (AOV) MR goal and replacement completion status
- Main steam system
- K-line breakers

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors observed the licensee's risk assessment processes and considerations used to plan and schedule maintenance activities on safety-related structures, systems, and components particularly to ensure that maintenance risk and emergent work contingencies had been identified and resolved. The inspectors assessed the effectiveness of risk management activities for the following work activities or work weeks:

- Assessed the increased risk to the plant while performing a RCIC outage commensurate with possible EHC pressure regulator problems
- Monitored heightened level of awareness (HLA) briefing and assessed the risk for installing high-speed monitoring equipment on the EHC system Bypass regulator cards in the Main Control Room

- Risk Review of possible electrical power lineups for reserve auxiliary transformer (RAT) static VAR compensator (SVC) switch maintenance

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed and observed portions of the following post-maintenance testing (PMT) activities involving risk significant equipment to ensure that the activities were adequate to verify system operability and functional capability:

- "Riley" temperature module replacement for the Div-I main steam line tunnel temperature Group-1 isolation signal
- Modification to install synchronization-check relays on the Div-II emergency diesel generator (EDG) breaker
- Circulating water pump "A" restart and adjustment of rotor-field current after maintenance was conducted
- Mechanical switch maintenance on the RAT-SVC

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed portions of the following surveillance tests to verify that risk significant systems and equipment were capable of performing their intended safety functions and assessed their operational readiness:

- RCIC operability surveillance test
- LPCS and RHR A pump and valve operability surveillance tests including water leg pump operability
- Standby liquid control A & B operability surveillance test, per CPS 9015.01, "Standby Liquid Control System Operability," Rev. 38

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors verified that temporary modifications had not affected the safety functions of important safety systems.

- Temporary modification for removing the delta-temperature trip signal from the nuclear steam safety shutoff system (NSSSS) for the main steam line tunnel.

b. Findings

No findings of significance were identified.

2. Emergency Preparedness

2EP1 Exercise Evaluation (71114.06)

a. Inspection Scope

The inspectors reviewed selected EP Simulator, technical support center (TSC) and operations support center (OSC) drills and training evolutions to evaluate drill conduct and assess the effectiveness of licensee performance critiques in identifying weaknesses and deficiencies.

b. Findings

No findings of significance were identified.

3. Safeguards

3PP4 Security Plan Changes (71130.04)

a. Inspection Scope

The inspectors reviewed Revision 31 to the Clinton Power Station Physical Security Plan to verify that the changes did not decrease the effectiveness of the submitted document. The referenced revision was submitted in accordance with regulatory requirements of 10 CFR Part 50.54(p) by a licensee letter dated October 17, 2000.

b. Findings

No findings of significance were identified.

4. Other Activities

4OA1 Performance Indicator Verification (71151)

Reactor Coolant System Leakage

a. Inspection Scope

The inspectors reviewed the methods used to collect data and to calculate identified and unidentified reactor coolant system leakage. The inspectors verified that the total of both leak rates (in gallons/minute) was summed and expressed as a percentage of the Technical Specifications (TS) allowable total leak rate of 30 gallons/minute in accordance with the guidelines contained in NEI 99-02 Revision 0.

b. Findings

No findings of significance were identified.

4OA2 Event Follow-up (71153)

a. Inspection Scope

The Inspectors evaluated licensee events regarding plant status and mitigating actions in order to assist in determining the need for NRC special inspections. In particular the inspectors evaluated the following:

- The April 5, 2001, loss of the RAT during a thunder storm and the subsequent resolution of operability issues within the TS 72-hour Limited Conditions for Operations.

b. Findings

No findings of significance were identified.

4OA5 Other

Violation of 10 CFR Part 50.7 "Employee Protection" (EA-01-028)

The NRC Office of Investigations, RIII, investigated an apparent violation of 10 CFR 50.7, "Employee Protection," which occurred on or about February 15, 2000, at the licensee's facility. The NRC concluded that a Nuclear Training Department employee's unfavorable 1999 performance review and failure to receive a salary bonus resulted, in part, from the employee's engagement in protected activities. As a result, on April 6, 2001, the NRC issued the licensee a Severity Level IV Notice of Violation requiring a response. The licensee's actions to address this violation will be tracked as **VIO 50-461/01-07-01**. During the investigation, the NRC also learned that several training personnel may be reluctant to discuss department issues within the nuclear training department. Consequently, the NRC requested that the licensee also provide within its violation response, assurance that training employees work in an environment that is free of any chilling effect; where each employee can openly communicate nuclear safety-related concerns without fear of reprisal.

4OA6 Meetings

The inspectors presented the inspection results to Mr. J. M. Heffley, Site Vice President, and other members of licensee management at the conclusion of the inspection on May 18, 2001. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

KEY POINTS OF CONTACT

Licensee

T. Arnold, Acting Senior Manager Plant Engineering
K. Baker, Design Engineering Manager
E. Halverson, Supervisor Mechanical Design
J. Heffley, Site Vice President
W. Iliff, Director - Regulatory Assurance Director
M. Pacilio, Plant Manager
J. Randich, Work Management Director
J. Sutherland, Radiation Protection Director
R. Svaleson, Operations Director
F. Tsakeres, Maintenance Director
P. Walsh, Training Director
J. Williams, Site Engineering Director
E. Wrigley, Nuclear Oversight Manager

NRC

T. Kozak, Chief, Projects Branch 4

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-461/01-07-01	VIO	Violation of 10 CFR Part 50.7 “Employee Protection” (Section 4OA3)

Closed

None

Discussed

None

LIST OF ACRONYMS USED

AOV	Air Operated Valves
ATWS	Anticipated Transient Without Scram
CR	Condition Report
EA	Enforcement Action
ECCS	Engineered Core Cooling Systems
EDG	Emergency Diesel Generator
EHC	Electrohydraulic control
EP	Emergency Preparedness
FPER	Fire Protection Evaluation Report
HPCS	High Pressure Core Spray
LPCS	Low pressure core spray
MDFP	Motor-driven feed pump
MR	Maintenance Rule
PARS	Publicly Available Records
PERR	Public Electronic Reading Room
PI	Performance Indicator
PM	Preventative Maintenance
PMT	Post-Maintenance Testing
RAT	Reserve Auxiliary Transformer
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
RT	Reactor Water Cleanup
SX	Shutdown Service Water
TS	Technical Specification
USAR	Updated Safety Analysis Report