July 21, 2000

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

SUBJECT: CLINTON POWER STATION INSPECTION REPORT 50-461/2000011(DRP)

Dear Mr. Coyle:

On June 30, 2000, the NRC completed a safety inspection at your Clinton Power Station. The results of this inspection were discussed on June 28 with the Plant Manager, P. Hinnencamp, and other members of your staff. The enclosed report presents the results of that inspection.

This inspection was an examination of 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. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, there were no findings 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,

Thomas J. Kozak, Chief
Reactor Projects Branch 4

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

Enclosure: Inspection Report No. 50-461/2000011(DRP)

See Attached Distribution

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/RA/

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cc w/encl: P. Hinnenkamp, Plant Manager
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-461
License No:	NPF-62
Report No:	50-461/2000011(DRP)
Licensee:	AmerGen Energy Company, LLC
Facility:	Clinton Power Station
Location:	Route 54 West Clinton, IL 61727
Dates:	May 21 - June 30, 2000
Inspectors:	P. L. Louden, Senior Resident Inspector C. E. Brown, Resident Inspector L. L. Collins, Project Engineer D. E. Zemel, Illinois Department of Nuclear Safety
Approved by:	Thomas J. Kozak, Chief Reactor Projects Branch 4 Division of Reactor Projects

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 a 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 a safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in a 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 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

IR 05000461-00-11, on 05/21-06/30/2000; Clinton Power Station; Unit 1; Resident Operations Report.

The inspection was conducted by resident inspectors and a regional projects inspector. There were no findings identified during this inspection.

Report Details

Summary of Plant Status

The licensee was completing activities associated with a forced outage at the beginning of the inspection period and restarted the unit on May 24, 2000. The licensee subsequently shutdown the unit from June 3 to June 5 to repair a reactor recirculation (RR) system hydraulic fluid leak and to replace an RR system pump seal. The plant was operated at essentially 100 percent power throughout the remainder of the inspection period.

1. Reactor Safety

Cornerstones: Initiating Events, Mitigation Systems, and Barrier Integrity

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

The inspectors reviewed Piping and Instrument Drawings (P&IDs) and conducted partial walkdowns to verify equipment alignment and identify any discrepancies that impact the function of the following high risk importance safety systems:

- Division II Shutdown Service Water (SX) System and P&ID M05-1052
- Low Pressure Core Spray System and P&ID M05-1073
- High-Pressure Core Spray System and P&ID M05-1074

b. Findings

There were no findings identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

The inspectors observed the licensee's operator training program to evaluate operator performance in mitigating the consequences of a simulated event, particularly in the areas of human performance, procedure quality issues, and emergency response organization performance. The inspectors observed operator performance during a simulator training scenario involving a turbine generator trip with 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; and
- oversight and direction provided by the shift supervisor and shift manager.

As part of this inspection, the inspectors reviewed Simulator Seminar Outline of Instruction RS91085-02, "Turbine Generator Trip with ATWS/Evaluation Scenario." The inspectors observed the pre-scenario briefing on operations expectations and lessons learned and portions of the scenario.

b. Findings

There were no findings identified.

1R12 Maintenance Rule Implementation (10 CFR Part 50.65) (71111.12)

a. Inspection Scope

The inspectors reviewed the licensee's implementation of 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 evaluated were:

- RR system "A" flow control valve and hydraulic power unit
- Division III Emergency Diesel Generator (EDG) unavailability
- Available/unavailable classification status for all three divisional EDGs when paralleled to an off-site source for surveillance testing

b. Findings

There were no findings 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. The inspectors assessed the effectiveness of risk management activities for the following work activities or work weeks:

- Work control for Division II EDG outage coincident with switchyard work and containment hydrogen/oxygen (H2-O2) gas monitoring system maintenance during the week of June 12, 2000.

- Feedwater system “Loop Calibration” per Procedure 8801.01, Revision 11a, and ongoing work including a heightened-level-of-awareness (HLA) briefing during the week of June 19, 2000

b. Findings

There were no findings identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions (71111.14)

a. Inspection Scope

The inspectors reviewed personnel performance during planned and unplanned plant evolutions and selected licensee event reports focusing on those involving personnel response to non-routine conditions. The review was performed to ascertain that operator response was in accordance with the required procedures. The inspectors observed reactor restart activities including control rod pull-to-criticality, reactor recirculation system pump speed shift to fast speed, turbine startup and synchronization, and assorted troubleshooting activities.

b. Findings

There were no findings identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed operability determinations and evaluations affecting mitigating systems and barrier integrity to ensure that operability was properly justified and the component or system remained available such that no unrecognized risk increase had occurred associated with the following condition reports (CRs):

- CR 2-00-05-101, “Upscale Alarm and Trip Lit on IRM (intermediate range monitor) E/H with No Reactor Protective System Trip,”

- CR 2-00-05-121, “Fyrquel Leak in Drywell,”

- CR 2-00-06-023, “Operability Determination for Check Valves 1B21-F010A and F010B.”

b. Findings

There were no findings identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors reviewed the following operator workarounds (OWA) and operator challenges (OC) to determine if the additional required operator actions would impact equipment function during abnormal or emergency operations:

OWA 1998-68	"Diesel generator ventilation fan room doors are difficult to open"
OWA 1999-85	"Poor radio reception in the Residual Heat Removal system "B" area"
OC 1999-34	"Recirculation system discharge valve rework planned for refueling outage 7"
OC 1999-106	"1IA795 leaks by seat impacting weekly stand-by liquid control system bubbler blowdown"
OC 2000-127	"Shutdown cooling valve 1E12-F009 failed to open with control switch"

b. Findings

There were no findings 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:

- Division I SX System pump oil change and operability verification per CPS 9069.01, "Shutdown Service Water Operability Test"

- Return to service PMT for Reactor Water Clean-up System pump "A" overhaul and vibration testing per Action Request (AR) FO 7713A&B

- Return to service PMT for Division III EDG after replacing both cooling water pumps per CPS 9080.02, "Diesel Generator 1C Operability - Manual and Quick Start Operability," Revision 44b and AR F11302

b. Findings

There were no findings identified.

1R20 Refueling and Outage (71111.20)

a. Inspection Scope

To ensure that the licensee had considered risk in developing outage activities and to verify the removal of debris from the containment, the inspectors observed the performance of the following outage activities in the containment drywell during a maintenance outage on the weekend of June 3, 2000:

- Cleanup and repair activities for Fyrquel leak on reactor RR system “A” flow control valve actuator.
- RR pump “A” shaft seal replacement

b. Findings

There were no findings identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

To verify that risk significant systems and equipment were capable of performing their intended safety functions and to assess their operational readiness, the inspectors observed the performance of the following surveillance tests:

- Division II EDG semi-annual quick start per CPS 9080.01, “Diesel Generator 1A (1B) Operability - Manual and Quick Start Operability,” Revision 45a and CPS 3506.01, “Diesel Generator and Support Systems,” Revision 26c
- Main control room fire detection and halon system operability per CPS 9337.81, “Fire Detector Channel Functional,” Revision 30a
- Division II SX System per CPS 9069.01, “Shutdown Service Water Operability Test,” Revision 41

b. Findings

There were no findings identified.

1R23 Temporary Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the following temporary modifications to ensure that the safety functions of important safety systems had not been affected:

00-029 "Jumper IRM C Rod Block"
00-032 "Installation of a pipe plug downstream of 1B33F026B RR system suction line vent valve"
00-014 "Installation of toggle switch to freeze the emergency reserve auxiliary transformer static-VAR (Volt-ampere-reactive)-compensator during EDG paralleling"
99-062 "Install a time delay module for the reactor core isolation cooling system turbine exhaust drain trap high level annunciator"

b. Findings

There were no findings identified.

4. Other Activities

4OA3 Event Follow-up

(Closed) Licensee Event Report (LER) 461/2000-001-00: Manual reactor shutdown due to operation of a mislabeled switch causing loss of a 4160 volt electrical bus and reactor water level transient. The event of May 17, 2000, was fully discussed in Inspection Report 50-461/2000008, Section 4OA3. There were no further findings identified.

4OA6 Meetings, including Exit

The inspectors presented the inspection results to Mr. P. Hinnencamp, Plant Manager, and other members of licensee management on June 28, 2000. 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.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. Baker, Manager - Nuclear Support Services
S. Clary, Director - Plant Engineering
M. Coyle, Vice President
P. Hinnenkamp, Plant Manager - Clinton Power Station
W. Maguire, Director - Operations
R. Moore, Manager - Work Management
M. Reandeau, Director - Licensing
R. Schenck, Manager - Maintenance
D. Smith, Director - Security and Emergency Planning
P. Walsh, Manager - Nuclear Station Engineering Department
E. Wrigley, Manager - Quality Assurance

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

461/2000-001-00	LER	Manual reactor shutdown due to operation of a mislabeled switch causing loss of a 4160 volt electrical bus and reactor water level transient.

Discussed

None

LIST OF ACRONYMS

AR	Action Request
ATWS	Anticipated Transient Without SCRAM
EDG	Emergency Diesel Generator
H2-O2	Hydrogen/Oxygen
HLA	heightened-level-of-awareness
IRM	Intermediate Range Monitor
MR	Maintenance Rule
OC	Operator Challenge
OWA	Operator Work Around
P&IDs	Piping and Instrument Drawings
PMT	Post Maintenance Testing
RR	Reactor Recirculation
SX	Shutdown Service Water
VAR	Volt Ampere Reactive