

October 3, 2001

EA-01-147

Mr. Oliver D. Kingsley, President  
and Chief Nuclear Officer  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: CLINTON POWER STATION  
NRC INSPECTION REPORT 50-461/01-12(DRS)

Dear Mr. Kingsley:

On September 13, 2001, the NRC completed an inspection at your Clinton Power Station. The enclosed report documents the inspection findings, which were discussed on September 13, 2001, with Mr. M. Heffley and other members of your staff.

The 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. Specifically, this inspection focused on emergency preparedness, including your staff's determinations of performance indicators for the Emergency Preparedness Cornerstone.

No findings of significance were identified.

In accordance with 10 CFR Part 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/**

John E. House, Acting Chief  
Plant Support Branch  
Division of Reactor Safety

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

Enclosure: Inspection Report 50-461/01-12(DRS)

See Attached Distribution

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DATE	9/28/01	10/01/01	10/03/01	10/03/01

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J. Cotton, Senior Vice President -  
Operations Support  
M. Pacilio, Plant Manager  
R. Krich, Director - Licensing  
J. Skolds, Chief Operating Officer  
C. Crane, Senior Vice President -  
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W. Curtis, FEMA, Region V

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-461/01-12(DRS)

Licensee: Amergen Energy Company, LLC

Facility: Clinton Power Station

Location: Route 54 West  
Clinton, IL 61727

Dates: August 27 through September 13, 2001

Inspectors: T. Ploski, Senior Emergency Preparedness Analyst  
R. Jickling, Emergency Preparedness Analyst  
P. Loudon, Senior Resident Inspector  
C. Brown, Resident Inspector

Approved by: John E. House, Acting Chief  
Plant Support Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000461-01-12(DRS), on 08/27-09/13/2001, Amergen Energy Company, LLC, Clinton Power Station. Emergency Preparedness Specialist Report.

The report covers one week of baseline inspection in August by two regional emergency preparedness inspectors and two resident inspectors plus three days of baseline inspection in September by one regional emergency preparedness inspector. No findings of significance were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violations. 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>.

## Report Details

### Summary of Plant Status

The plant was at about 100 percent power throughout the inspection period.

#### **1. REACTOR SAFETY**

##### **Cornerstone: Emergency Preparedness**

#### 1EP1 Exercise Evaluation (71114.01)

##### a. Inspection Scope

The inspectors reviewed the 2001 exercise's objectives and scenario to ensure that the exercise would acceptably test major elements of the licensee's emergency plan and to verify that the exercise's simulated problems provided an acceptable framework to support demonstration of the licensee's capability to implement its plan. The inspectors also reviewed records of a practice drill, which was conducted in July 2001, to determine whether the associated accident scenario was sufficiently different from the scenario used in the August 28, 2001 exercise.

The inspectors evaluated the licensee's exercise performance, focusing on the risk-significant activities of emergency classification, notification, and protective action decision making, as well as implementation of accident mitigation strategies in the following emergency response facilities:

- Main Control Room Simulator
- Technical Support Center (TSC)
- Operations Support Center (OSC)
- Emergency Operations Facility (EOF)

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interface with offsite officials, readiness of emergency facilities and related equipment, and overall implementation of the licensee's emergency plan.

The inspectors attended post-exercise critiques in the OSC, TSC, and EOF to evaluate the licensee's initial self-assessment of its exercise performance. The inspectors later met with the licensee's lead exercise evaluators to obtain the licensee's refined assessments of its exercise participants' performances. These self-assessments were then compared with the inspectors' independent observations and assessments. On August 31, 2001, an inspector summarized NRC's preliminary exercise inspection findings at the Federal Emergency Management Agency's public and media briefing in Clinton, Illinois.

##### b. Findings

No findings of significance were identified.

1EP2 Alert and Notification System (ANS) Testing (71114.02)

a. Inspection Scope

An inspector discussed with Clinton Station and corporate Emergency Preparedness (EP) staffs the design, maintenance, and periodic testing of the public ANS for the Station's Emergency Planning Zone (EPZ) to verify that the system was tested and maintained in accordance with emergency plan commitments. The inspector reviewed records of annual preventive maintenance and non-scheduled maintenance activities performed during 2000 and 2001. The inspector also reviewed the licensee's criteria for determining whether each model of siren installed in the EPZ would perform as expected if activated.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Augmentation Testing (71114.03)

a. Inspection Scope

An inspector discussed with Clinton Station EP staff the primary and backup provisions for initiating augmentation of the on-shift emergency organization during normal business and off-hours. The inspector reviewed a sample of records of unannounced, off-hours staff augmentation drills, which were conducted between April 2000 and July 2001, to determine whether the licensee met its off-hours augmentation drill commitments and had initiated acceptable corrective actions on drill performance concerns. The inspector also discussed planned changes to the ERO call out methodology. The inspector reviewed a sample of the Station's ERO training records, including those related to persons who would initiate an off-hours ERO augmentation. The inspector discussed with Station EP staff the status of planned changes to the ERO training program. The inspector also reviewed and discussed the licensee's Policy Statement that summarized management's emergency response expectations applicable to all Clinton Station ERO members. The inspector discussed the Station EP staff's provisions for updating the call-out roster and reviewed its current revision to assess the adequacy of the numbers of personnel assigned to each key and support ERO position.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

An inspector reviewed Nuclear Oversight staff's audit and field observation reports to ensure that its year 2000 assessments met the requirements of 10 CFR 50.54(t) and evaluated other assessments of EP program activities. The inspector reviewed a



sample of Condition Reports (CR) and related records resulting from the aforementioned Nuclear Oversight audit and other EP program reviews to determine whether the licensee had taken acceptable corrective actions on identified concerns.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors reviewed the licensee's records related to each of the three emergency preparedness PIs to verify that the licensee's program was implemented consistent with the industry guidelines in the Nuclear Energy Institute (NEI) 99-02 document and licensee procedures. Specifically, licensee's records related to the performance of the ANS, ERO Drill Participation, and Drill and Exercise Performance (DEP) were reviewed to verify the accuracy and completeness of the data submitted for the period April 2000 through June 2001.

b. Findings

No findings of significance were identified.

4OA5 Other

.1 (Closed) Apparent Violation (AV) No. 50-461/01-09-01: The licensee failed to correct self-identified deficiencies disclosed through control room communicator drills (EA-01-147)

On July 26, 2001, the licensee provided a written response to the NRC's preliminary assessment of an apparent violation of 10 CFR 50.47(b)14. The apparent violation concerned the licensee's failure to adequately correct deficiencies that it identified during calendar year 1999 and 2000 Control Room communicator drills. In its response, the licensee did not contest the apparent violation. The licensee concurred with the NRC's preliminary significance determination that this issue had low-to-moderate safety significance (White). The licensee also described its corrective actions to prevent recurrence, which included enhanced monitoring of Control Room communicator job performance training measures and additional training of non-licensed operators, who functioned as Control Room communicators, in Fall 2001.

The NRC provided the licensee with the NRC's final significance determination of this issue in a letter dated August 22, 2001. The NRC concluded that the inspection finding was appropriately characterized as White and issued the licensee a Notice of Violation of 10 CFR 50.47(b)14. Since the licensee had acceptably provided its corrective actions in its July 26, 2001 correspondence, no additional information was requested of the licensee. In addition, the NRC concluded that an additional supplemental inspection of

the finding was not warranted based on the results of the original NRC supplemental inspection that identified the finding. Consequently the subject apparent violation will be updated to a White Violation.

During this inspection, the inspector determined that non-licensed operators were given training as Control Room communicators in March 2001 and that such training was being repeated in September 2001. The inspector also determined that, as indicated in its response to the apparent violation, the few operators, who did not successfully complete Control Room communicator training on their first attempt in March 2001, were given remedial training later that month. This item is closed.

#### 4OA6 Meeting(s)

##### Exit Meeting

The inspectors presented the inspection results to Mr. M. Heffley and other members of licensee management and staff at the conclusion of the inspection on September 13, 2001. The licensee acknowledged the information presented. No proprietary information was identified.

## KEY POINTS OF CONTACT

### Licensee

D. Basham, Nuclear Oversight Manager  
R. Denney, Nuclear Oversight Assessor  
M. Dodds, Regulatory Assurance  
K. Evans, EP Coordinator  
R. Frantz, Regulatory Assurance  
M. Heffley, Site Vice President  
M. Hintz, Nuclear Oversight Assessor  
W. Lipscomb, Business Operations Director  
M. Pacilio, Plant Manager  
J. Sears, Radiation Protection Manager  
D. Smith, Security Manager  
R. Svaleson, Operations Director  
J. Williams, Site Engineering Director

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

None

### Closed

50-461/01-09-01	AV	The licensee failed to correct self-identified deficiencies disclosed through control room communicator drills (Section 40A5.1)
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### Discussed

None

## LIST OF ACRONYMS USED

ANS	Alert and Notification System
AV	Apparent Violation
CFR	Code of Federal Regulations
CR	Condition Report
DEP	Drill and Exercise Performance
DRS	Division of Reactor Safety
EOF	Emergency Operations Facility
EP	Emergency Preparedness
EPZ	Emergency Planning Zone
ERO	Emergency Response Organization
IR	Inspection Report
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
TSC	Technical Support Center

## LIST OF DOCUMENTS REVIEWED

### 1EP1 Exercise Evaluation

	Clinton Power Station Emergency Plan	Revision 13
	2001 Emergency Response Exercise Manual	
	Practice Drill Scenario Summary	
	Exercise Critique Draft Summary	August 30, 2001
EC-01	ERO Staffing	Revision 7
EC-02	Emergency Classifications	Revision 6
EC-03	Notification of Unusual Event	Revision 6
EC-04	Alert	Revision 6
EC-05	Site Area Emergency	Revision 6
EC-06	General Emergency	Revision 6
EC-07	Emergency Plan Notification	Revision 12
EC-08	Non-Essential Personnel Evacuation	Revision 8
EC-10	Personnel Accountability	Revision 7
EC-12	Emergency Teams	Revision 8
FE-01	TSC Operations	Revision 7
FE-02	OSC Operations	Revision 6
FE-03	EOF Operations	Revision 6
RA-02	Protective Action Recommendations	Revision 5
RA-03	Radiological Exposure Guidelines	Revision 5
RA-15	Predictive Release Rates	Revision 6
RA-16	Computerized Radiological Dose Assessment	Revision 5

### 1EP2 Alert and Notification System Testing

AP-07	Alert and Notification System	Revision 8
	Clinton Off-Site Siren Test Plan	Revision 0
	Warning System Maintenance and Operational Report	April 2000
	Warning System maintenance and Operational Report	June 2001
	Monthly ANS Test Reports, April 2000 through March 2001	
	Siren Daily and Monthly Operability Reports, April 2001 through July 2001	
	Year 2000 ANS Maintenance Report Forms	
CR 2-00-06-062	Under 90 Percent Siren Operability in June Test	
CR 2-00-07-124	ANS Affected by Apparent Lightning Strike	

### 1EP3 Emergency Response Organization Augmentation Testing

	Clinton Power Station Emergency Plan	Revision 13
AP-04	Preparation and Conduct of Drills and Exercises	Revision 5
AP-05	EP Training Program	Revision 11
AP-10	ERO Assignments	Revision 10
EC-01	ERO Staffing	Revision 7
EC-07	Emergency Plan Notifications	Revision 12
	Policy Statement 7 - Emergency Response Expectations	Revision 4
	ERO Listing of Personnel by Position	August 2001
	EP Training Program Description	Revision 48
	Lesson Plan - Emergency Plan Overview	Revision 0
	ERO Notifications - Training Attendance Sheets	December 2000
	Records of January 2001 Pager Drill	
	Records of March 2001 "Drive In" Response Drill	
CR 2-01-03-161	Conduct a "Drive In" Response Drill	
CR 2-01-04-018	Individuals Did Not Use ERO Badge	
CR 2-01-04-013	Autodialer Problems	
CR 2-01-07-108	Autodialer Problem in July 2000 Pager Test	
CR 2-01-05-431	Individual Failure to Respond to Pager Test	
CR 2-01-06-006	Individual Failure to Respond to Pager Test	

### 1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

2000-50-012	Observation - EP Drill 2000-02	
2000-50-020	Off-Site Agency Interface	
2000-50-021	EP Program	
	Observation - Public Information and Education	
	Observation - Evacuation/Accountability Drill	December 2000
	ERO Dose Assessment Capability	May 2001
2001-PS-013	ERO Administration, Communication, Training	
	Clinton Station EP Program Assessment	March 2001
CR 2-00-12-129	Unaccounted for Personnel During Drill	
CR 2-00-05-004	Incorrect Protective Action Recommendation During 2000 Exercise	
CR 2-00-05-008	Failure to Dispatch Few Teams Within Time Goal	
CR 2-01-03-061	ERO Interviewees' Concerns	
CR 2-01-03-165	Inadequacy in 50.54(t) Audit	
CR 2-01-03-169	Plan Change Implemented Prematurely	

4OA1 Performance Indicator Verification

AP-07	Alert and Notification System Records of ANS Operability Tests, April 2000 through June 2001 ERO Drill and Exercise Participation Records, April 2000 through June 2001 Records of DEP Opportunities, April 2000 through June 2001	Revision 8
CR 2-01-02-159	DEP Does Not Include Non-licensed Operator Job Performance Measure Statistics	
CR 2-01-02-196	DEP Indicator in White Band	
CR 2-01-05-191	Why DEP Indicator Went White	
CR 2-01-06-018	Inclusion of Two Substitute Shift Managers in ERO Performance Indicator	