June 18, 2001

Mr. Mark E. Warner
Vice President TMI Unit 1
AmerGen Energy Company, LLC
Three Mile Island Nuclear Station
P. O. Box 480
Middletown, Pennsylvania 17057-0480

SUBJECT: NRC-EVALUATED EMERGENCY PREPAREDNESS EXERCISE - THREE MILE ISLAND NUCLEAR STATION UNIT 1 INSPECTION REPORT NO. 05000289/2001-009

Dear Mr. Warner:

The enclosed report documents an inspection at the Three Mile Island Nuclear Unit 1 which evaluated the performance of your emergency response organization during the May 22, 2001, full-participation exercise, the post-exercise critique, and the emergency preparedness performance indicators as specified in the reactor oversight program. The inspectors discussed the findings of this inspection with yourself and other members of your staff on May 25, 2001.

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, the inspectors identified one issue of very low safety significance (Green) which was determined not to be a violation of NRC requirements.

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).

Should you have any questions regarding this report, please contact Mr. Richard J. Conte at (610) 337-5183.

Sincerely,

/RA/

Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

Docket No: 05000289
License No: DPR-50

Enclosures:
1. Inspection Report No. 05000289/2001-009
2. NRC's Revised Reactor Oversight Process

cc w/encls:
Amergen Energy Company - Correspondence Control Desk
E. Fuhrer, Regulatory Engineering
J. McElwain, Manager, Regulatory Assurance
G. Gellrich, Plant Manager
J. Hutton, Director-Licensing
J. A. Benjamin, Licensing - Vice President, Exelon Corporation
TMI-Alert (TMIA)
D. Allard, PADER
M. Schoppman, Framatome
Commonwealth of Pennsylvania
R. A. Calvan, Regional Director, FEMA Region III

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REGION I

Docket No:	05000289
License No:	DPR-50
Report No:	05000289/2001-009
Licensee:	AmerGen Energy Company, LLC
Facility:	Three Mile Island, Unit 1
Dates:	May 22, 23, and 25, 2001
Inspectors:	D. Silk, Senior Emergency Preparedness Inspector, DRS (Lead) N. McNamara, Emergency Preparedness Inspector, DRS D. Orr, Senior Resident Inspector, TMI, DRP P. Bissett, Senior Operations Engineer, DRS J. McFadden, Health Physicist, DRS R. Bores, State Liaison Officer (FEMA RAC Member)
Approved by:	Richard J. Conte, Chief Operational Safety Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000289/2001-009, on 05/22-25/2001; Exelon Nuclear, Three Mile Island Nuclear Station; Unit 1. Emergency Preparedness exercise.

This inspection was conducted by region based inspectors and the resident inspector. The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process (Enclosure 2).

Cornerstone: Emergency Preparedness

- **Green.** The Technical Support Center (TSC) coordinator did not exhibit command and control over all TSC activities and resources. Further, the exercise observers and participants did not identify the command and control problems as an exercise weakness or an area requiring corrective action.

  This finding, although not a violation of NRC requirements, was evaluated by the significance determination process (SDP). TSC weaknesses during an EP exercise, if left uncorrected could affect the entire emergency response organization during an actual plant event. The TSC critique problems screened to Green in phase one of the EP SDP because the issues did not involve any risk significant planning standards.

Report Details

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP1 Drill, Exercise, and Actual Events

a. Inspection Scope

The inspectors reviewed and assessed:

- Exercise objectives and scenario to determine if the exercise would test major elements of the licensee's emergency plan as required by 10 CFR 50.47(b)(14).

- The licensee's biennial full-participation exercise performance on May 22, 2001, by focusing on the implementation of the risk-significant planning standards in 10 CFR 50.47 (b) (4), (5), (9) & (10) which are emergency classification, offsite notification, radiological assessment, and protective action recommendations (PARs), respectively.

- The licensee's overall exercise performance in the following emergency response facilities: simulator control room (emergency control center ECC), the technical support center (TSC), the emergency operations facility and the joint information center.

- The emergency response organization's (ERO) recognition of abnormal plant conditions, classification of emergency conditions, notification of offsite agencies, development of PARs, command and control, development of mitigation strategies, prioritization of tasks, communications, utilization of repair and field monitoring teams, and the overall implementation of the emergency plan.

- The post-exercise facility debriefs on May 22, 2001, and final critique on May 25, 2001, to evaluate the licensee's self-assessment of the exercise.

b. Findings

The TSC coordinator did not exhibit command and control over all TSC activities and resources. Examples where command and control was not evident included: lack of oversight on activities to isolate the reactor building open pathway, failure to assign a TSC engineer to resolve a stuck open steam generator relief valve, and TSC activities were assigned but not prioritized for urgency. Further, the exercise observers and participants did not identify the command and control problems as an exercise weakness or an area requiring corrective action. This finding was determined to be Green by the significance determination process (SDP) because it was not identified by AmerGen during the exercise critiques.

The inspectors had the following observations regarding TSC performance during the biennial exercise:

> The biennial exercise started with the reactor building exhaust purge dampers failed in the open positions. Once initially manned, the TSC pursued alternative measures to close the reactor building purge dampers. The pursuit became more important once a significant offsite radiological release occurred. Alternative measures were pursued for more than four hours throughout the exercise but the TSC coordinator did not keep himself aware of the troubleshooting decisions. The TSC coordinator also redirected a TSC engineer's continued support on the reactor building purge damper by assigning another task. The inspectors observed that the TSC coordinator did not carefully consider the priority of the two separate tasks.
>
> A steam generator safety valve failed open. Closing the failed open steam generator safety valve was important because plant cool down would become complicated during the current reactor shutdown. The TSC coordinator did not assign a TSC engineer to pursue gagging shut the failed open steam generator safety valve.
>
> Throughout the biennial exercise, the TSC was engaged in many activities including: monitoring plant conditions, isolating the open reactor building pathway, determining fuel failure classifications, providing recommendations for reactor building spray initiation, follow-up to a large fuel oil spill and fire, and determining iodine filtration effectiveness. Although TSC engineers were assigned to each activity, priorities were not developed by the TSC coordinator to ensure that the activities most effective in mitigating offsite consequences were worked first or without impedance.

The inspectors discussed the examples of command and control weaknesses with the AmerGen TSC observer after the formal critique on May 25, 2001. The TSC observer agreed with the NRC observations provided. The TSC observer also agreed that the command and control weaknesses should have been considered at the critiques. Exercise Objective C.1, "The command and control of the facility leaders in the Emergency Response Facilities (ERF) necessary to assure an orderly and effective response to the emergency situation," and Objective H.1, "The ability to properly conduct a critique of the drill/exercise with the participants in order to identify major strengths and weaknesses," were not met in the TSC related to the above mentioned observations. Furthermore, EPIP-TMI-.28, Activation of the Technical Support Center, states that the TSC coordinator is to, based upon observations of plant data, make recommendations to the ECC that will aid in plant control.

This finding, although not a violation of NRC requirements, was more than a minor issue because it involved an EP exercise critique problem. The TSC critique problems screened to Green in phase one of the EP SDP because the issues did not involve any risk significant planning standards. This issue has been entered into the TMI corrective action program as CAP T2001-0527 and CAP T2001-0528.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed the licensee's process for identifying the data that is utilized to determine the values for the three EP performance indicators (PI):

- Drill and Exercise Performance (DEP)
- ERO Drill Participation, and
- Alert and Notification System Reliability.

Since the EP PIs were last reviewed during an inspection in October 2000, this review assessed data and records since that time (which included results from the forth quarter of 2000 and the first quarter of 2001) related to these three PIs.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed licensee findings (EP drill reports and Corrective Action Program (CAP) reports for approximately the past 18 months) pertaining to drills or actual conditions, and the last licensee biennial exercise critique to determine if significant performance trends exist and to determine the effectiveness of licensee corrective actions based upon ERO performance during the exercise. The inspectors verified that the licensee entered the following items from this exercise into their CAP:

T2001-0500	T2001-0510	T2001-0520
T2001-0501	T2001-0511	T2001-0521
T2001-0502	T2001-0512	T2001-0522
T2001-0504	T2001-0513	T2001-0523
T2001-0505	T2001-0514	T2001-0524
T2001-0506	T2001-0515	T2001-0525
T2001-0507	T2001-0516	T2001-0526
T2001-0508	T2001-0517	T2001-0527
T2001-0509	T2001-0518	T2001-0528

b. Findings

No findings of significance were identified.

40A6 Exit Meeting

The inspectors presented the inspection results to Mr. Mark Warner and other members of his staff at the conclusion of the inspection on May 25, 2001. The licensee had no objections to the NRC findings or observations.

KEY POINTS OF CONTACT

Licensee

N. Brown, Lead Emergency Planner
G. Gellrich, Plant Manager
J. Grisewood, Emergency Preparedness Manager
J. Schork, Regulatory Assessment
J. Whitehead, Senior Emergency Planner

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

CAP	Corrective Action Program
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
ECC	Emergency Control Center
EP	Emergency Preparedness
ERF	Emergency Response Facility
ERO	Emergency Response Organization
PAR	Protective Action Recommendation
PI	Performance Indicator
SDP	Significance Determination Process
TSC	Technical Support Center

ENCLOSURE 2

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.