To : U.S NRC Office of Nuclear Reactor Regulations Washington, D.C. 20555

From: Douglas D. Solomon P.O. Box 356 Newport, New Jersey 08345 17 August 98

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Re: Freedom of Information Request

Dear Sir,

I am requesting the release of the following information pertianing to the rescent NRC Security OSRE Evaluation . The Nuclear Plants I am interested in are operated By Public Service Electric& Gas in Hanscock Bridge , New Jersey . I am willing to assume the cost up to 25.00 (twenty five dollars), in accordance to the freedom of information request.

Thanking you in advance for your time

Douglas D. Solomon

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*** SAFEGUARDE INFORMATION *** NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C. 20065-0001

July 9, 1998

Mr. Harold W. Keiser Executive Vice President - Nuclear Business Unit Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038

SUBJECT: NRC INSPECTION REPORT 50-272/98202; 50-311/98202; AND 50-354/98202 (OPERATIONAL SAFEGUARDS RESPONSE EVALUATION)

Dear Mr. Keiser:

During April 20 through 23, 1998, NRC's Office of Nuclear Reactor Regulation performed an Operational Safeguards Response Evaluation (OSRE) at the Salem Generating Station, Units 1 and 2, and the Hope Creek Generating Station, Unit 1. The enclosed report presents the scope and results of that inspection.

The primary purpose of the OSRE team inspection was to evaluate your ability to respond to an external threat. The team focused on the interactions between operations and security in establishing priorities for protection of equipment, on the protective strategy used, and on the ability of the security force to effectively execute the strategy. The inspection included a safety/safeguards interface review to ensure that safeguards measures did not adversely impact safe operation of the facilities.

Based on the results of the inspection, the OSRE team concluded that: the interaction between operations and security in the planning and exercising of the contingency response capability was significant and beneficial, the protective strategy for Salem and Hope Creek was effective, and the participating security officers were able to effectively execute the strategy. Overall, the Salem/Hope Creek team demonstrated an excellent capability of protecting public health and safety against the NRC design basis threat. The OSRE team also concluded that effective provisions were in place to ensure that safeguards measures did not adversely impact safe operation of the facilities.

The enclosed report does not convey any new regulatory requirement. Its findings have been considered with respect to your ability to meet the general performance objective and requirements of 10 CFR 73.55(a), and requirements of your physical security plan. The enclosure, which contains safeguards information of a type specified in 10 CFR 73.21, will <u>not</u> be placed in the Public Document Room and must be protected against unauthorized disclosure.

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H. Keiser

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July 9, 1998

No response to this letter is required. Thank you for your cooperation.

Sincerely,

Alfred E. Chaffee, Chief Safeguards Branch Division of Reactor Program Management Office of Nuclear Reactor Regulation

Docket Nos: 50-272; 50-311; and 50-354

License Nos: DPR-70; DPR-75; and NPF-57

Enclosure: NRC Inspection Report Nos. 50-272/98202; 50-311/98202; and 50-354/98202 (Operational Safeguards Response Evaluation)

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H. Keiser

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EXECUTIVE SUMMARY

Salem and Hope Creek Nuclear Generating Stations Operational Safeguards Response Evaluation Inspection Report Nos. 50-272/98202; 50-311/98202 and 50-354/98202

The Office of Nuclear Reactor Regulation (NRR) conducted an Operational Safeguards Response Evaluation (OSRE) from April 20 through April 23, 1998. The results were:

 The weapons mix and quantity of ammunition were appropriate for protecting the facilities (Section S2.1).



Adequate provisions were in place to ensure that safeguards measures would not adversely impact safe operation of the facility (Section S7.2).

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OPERATIONAL SAFEGUARDS RESPONSE EVALUATION

S1 Conduct of Security and Safeguards Activities

S1.1 Operational Safeguards Response Evaluation

The NRC conducted an Operational Safeguards Response Evaluation (OSRE) of the Salem and Hope Creek Generating Stations from April 20 through 23, 1998.

S1.2 Purposes

The primary purpose of the OSRE was to evaluate the licensee's ability to respond to an external threat. The second purpose of the OSRE was to ensure that safeguards measures did not adversely impact the safe operation of the facility.

S1.3 Scope

In conducting its evaluation, the OSRE team focused on the interactions between the operations and security organizations in establishing priorities for protection of equipment and on the protective strategies used. Additionally, the OSRE team considered a spectrum of external adversaries with varying characteristics. The lower range consisted of one dedicated individual with no special training, armed with a shotgun, a prybar to force doors open, and explosives to damage safety equipment. The spectrum was bounded by the characteristics of the design-basis threat for radiological sabotage specified in 10 CFR 73.1(a).

The external design-basis threat is defined as "A determined violent external assault, attack by stealth, or deceptive actions, of several persons with the following attributes, assistance and equipment: (a) well-trained (including military training and skills) and dedicated individuals, (b) inside assistance which may include a knowledgeable individual who attempts to participate in a passive role (e.g., provide information), an active role (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack), or both, suitable weapons, up to and including hand-held automatic weapons, equipped with silencers and having effective long range accuracy, (d) hand carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter, or container integrity or features of the safeguards system . . ."

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consideration of deceptive acts to those performed after overt penetration into the protected area (PA).



S1.4 Evaluation Methodology

The evaluation team consisted of two safeguards specialists and a reactor engineer from the Office of Nuclear Reactor Regulation (NRR), one safeguards inspector from the regional office, and NRC contractors.

The team assumed that significant radiological release would be the objective of radiological sabotage at a power reactor and used prevention of significant core damage as an evaluation criterion. This assumed adversary objective of significant core damage is more difficult to achieve than damage to any piece of vital equipment and more accurately reflects concerns relative to public health and safety.

The evaluation began with a preliminary target analysis performed before the team arrived on site. This analysis made use of information from earlier reports and communications with the Salem and Hope Creek stations, including the updated Final Safety Analysis Reports and the Regulatory Effectiveness Review Reports, which were issued on February 24, 1983, and April 26, 1989, respectively. The results were further analyzed by an NRR team member who identified several potential target sets that, if disabled, would likely lead to significant core damage.

After the team arrived on site, it reviewed the target sets with the licensee's operations staff to confirm the team's analysis and to determine whether additional targets should be added to any of the sets. Available equipment that could help to achieve and maintain hot shutdown was added to target sets regardless of whether the equipment had been designated as vital or safety grade, further complicating the task for an adversary. In most cases, damage control features that could prevent radiological release were also considered. These target sets were used by the team in conducting table-top drills and in selecting exercises to be observed.

The team's initial effort on site was to walk around the facility observing potential PA entry points, routes, barriers, and distances either to equipment or to doors providing access to equipment included in the target sets. The team also noted the normal duty stations of personnel who might participate in a contingency response, the locations where

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special contingency response equipment was stored, and the design and location of fixed and/or movable defensive positions.

The team then conducted four table-top drills. These drills simulated overt external assaults. For each drill, team members interviewed a licensee contingency response team leader. An OSRE team member identified adversary characteristics, entry points into the PA, and movement toward critical equipment. The response team leader indicated how the responding security officers would be deployed and then estimated the time required for response officers to reach interdicting positions, based on the actual locations of the responding officers at the time of the exercise. Both the response team leader and an OSRE team member estimated the time required for adversaries to proceed along the route and judged the outcome of engagements between adversaries and responders. The scenarios for later, actual on-site exercises, were based on an analysis of the simulated events in the table-top drills.



The team used its target set analysis and the results of the exercises to evaluate the licensee's efforts at establishing priorities for protection of equipment; the ability of responding officers to arrive at suitable interdicting positions in a timely fashion, in sufficient numbers, and appropriately armed and equipped; and the licensee's protective strategies for deployment of response officers and equipment. The team evaluated how exercises were being used both as a training tool and as a means of self-audit of the protective strategy. The exercises were also used to evaluate individual and team tactical movement, command, control, and communications.

Team members also interviewed several security officers regarding use of deadly force at the site. A broad spectrum of possible contingencies was used to assure that officers clearly understood that force should not be used unnecessarily in situations that did not threaten the health and safety of individuals or the general public and that appropriate force should be used if necessary, in situations such as those discussed in NRC Information Notice No. 89-05, "Use of Deadly Force by Guards Protecting Nuclear Power

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Reactors Against Radiological Sabotage." The team also observed the application of (simulated) deadly force in the on-site exercises.

The team interviewed members of the training staff and observed weapons training techniques. The purpose was to evaluate the appropriateness of the training and experience of the training staff, the facilities available, and the techniques and frequency of training employed to assure that contingency response personnel were qualified to execute the responsibilities assigned to them, as required by 10 CFR Part 73, Appendix B.

- S2 Status of Security Facilities and Equipment
- S2.1 Weapons
- a. Evaluation Scope

The team evaluated the licensee's response weapons to determine if the weapons werr appropriate, as used in the protective strategy, for defending the facility against the NAC design-basis threat (DBT).

b. Observations and Findings



c. Conclusions

The weapons mix and the quantity of ammunition were appropriate for protecting the facilities.

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- S2.2 Barriers and Protection Measures
- a. Evaluation Scope

The team evaluated protection and delay measures that the licensee had implemented to enhance its protective strategy.

b. Observation and Findings



c. <u>Conclusions</u>



- S4 Security and Safeguards Staff Knowledge and Performance
- S4.1 Jable-Top/Time-Line Drills
- a. Evaluation Scope



b. Observations and Findings



Of special note was the excellent scale model of the Hope Creek/Salem plant. It was extremely useful to: (1) familiarize the OSRE team with the plant and, in particular, with the protection and delay modifications to the plant, and (2) conduct the table-top drills and understand the plant protection strategy.

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c. Conclusions



S4.2 Contingency Response Exercises



S4.2.1 Contingency Response Exercise One

a. Evaluation Scope

b. **Observations and Findings**



c. Conclusions

The protective strategy was effective and prevented the intruder from reaching either the intended target or any other critical equipment. The use of force was appropriately applied.



S4.2.2 Contingency Response Exercise Two

a. Evaluation Scope



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b. Observations and Findings



R-5). While the adversaries were able to simulate explosively sabotaging vital buses, they were unable to sabotage all of the equipment in the target set.

c. Conclusions



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S4.2.3 Contingency Response Exercise Three

a. Evaluation Scope

b. Observations and Findings



c. <u>Conclusions</u>

The protective strategy was effective and prevented the adversaries from reaching either the intended target or any other critical equipment.

S4.2.4 Contingency Response Exercise Four

a. Evaluation Scope



b. Observations and Findings



c. Conclusions

The protective strategy was effective and prevented the adversaries from reaching either the intended target set or any other critical equipment.

S4.3 Deadly Force

a. Evaluation Scope

Security force members (SFMs) comprehension of the use of force relative to NRC Information Notice No. 89-05, "Use of Deadly Force by Guards Protecting Nuclear Power Reactors Against Radiological Sabotage" was evaluated.

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b. Observations and Findings

The team selected and interviewed five SFMs concerning the use of deadly force on site and evaluated their responses. Each security force member (SFM), who could engage an intruder as a member of the response force or as a patrol officer, displayed an excellent understanding of the use of force, including deadly force, to protect the facilities.

c. Conclusions

Based on the interviews, the team determined that the appropriate amount of force would be utilized during a contingency to prevent radiological sabotage and that deadly force would not be used unnecessarily.

- S5 Security and Safeguards Staff Training and Qualification
- S5.1 Weapons Training

a. Evaluation Scope

The team observed a weapons firing demonstration by several SFMs at the licensee's livefire weapons range.

b. Observations and Findings



c. <u>Conclusions</u>



elements. Overall, the course of fire demonstated to the team was excellent in providing challenge, stress, and a variety of likely shooting conditions.

- S5.2 Contingency Training
- a. Evaluation Scope

The team ubserved the performance of the response officers, both individually and as a team, during the on-site exercises.

b. Observations and Findings

The four on-site exercises during April 21 and 22, 1998, were realistic. The planning and control of the exercises were well thought out. All of the exercise participants conducted themselves in a professional manner, appeared thoroughly involved, and proficiently executed the protective strategy.

The critiques were organized and thorough. Further, the participation by operations in the critique and debriefing of the exercises highlighted the importance of a cohesive and effective plant protection effort in a security contingency.

c. Conclusions

As demonstrated by the on-site exercises, training of the armed response force was appropriate and effective. The response force convincingly executed and met the four OSRE sub-criteria against the adversary team.

- 56 Security Organization and Administration
- S6.1 Security Force
- a. Evaluation Scope

The staffing of the security response force was evaluated to determine if adequate numbers of armed responders were available on each shift.

b. Observations and Findings

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c. Conclusions

The licensee had adequate armed responder staffing assigned to each shift.

S7 Quality Assurance in Security and Safeguards Activities

S7.1 Target Analysis

a. Evaluation Scope

During the OSRE, an OSRE team member and the licensee's operations staff reviewed target sets to confirm the sets and to consider the licensee's damage control measures to prevent a radiological release.

b. Observations and Findings

Control room operators were trained to deal with normal, routine balance-of-plant operations and emergency operations procedures (EOP). The licensee's operators understood the importance of the relationship between critical target sets and a security contingency involving radiological sabotage. Operations provided a solid basis for security to develop its protective strategy.

c. <u>Conclusions</u>

Operations efforts were excellent and generally provided a sound basis for the security organization. The licensee security force used its site-specific target sets to develop an effective protective strategy.

S7.2 Safety/Safeguards Evaluation

a. Evaluation Scope

The second purpose of the OSRE was to assure that safeguards measures did not adversely affect the safe operation of the facility. Part 73.55(d)(7)(ii) of Title 10 of the Code of Federal Regulations requires a licensee to design the access control system to accommodate the potential need for rapid ingress or egress of individuals during emergency conditions, or during situations that could lead to emergency conditions.

To evaluate the licensee's implementation of this requirement, the team interviewed operations personnel, including a shift supervisor (SS), equipment operator, and security supervisor, and conducted a walking tour of safety-related equipment and evacuation routes within the facility. The walking tour and discussions were to assure that both access to and egress from the PA and vital areas (VAs) would not hinder proper plant

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operations and personnel safety in an emergency situation and that security radio transmissions would not interfere with facility operations.

Observations and Findings

PA Emergency Access: During unusual plant conditions requiring emergency access to the PA, the operations SS would advise security personnel of the emergency and the expected arrival of off-site personnel and/or equipment. Upon the arrival of non-plant personnel (e.g., fire, medical), security would waive the required search and provide the escort for emergency personnel. No significant time delay would be expected to enter the PA because of security access controls at the entry facility.

<u>VA Access and Egress</u>: Entry to VAs is needed under some Emergency Operations Procedures. The access control system did not use an anti-passback feature for controlling access to VAs; individuals who are authorized to enter VAs would not be delayed. A personal identification number is not required at Salem and Hope Creek to enter the PA or VA.

All VA controlled access doors fail in the close position due to a loss of power to a keycard reader or the security computer. Operations and security personnel carry hard keys to facilitate unimpeded access to VAs following a card-reader or computer failure.

During a security contingency, VA card readers would not be disabled, and all key cards would continue to function whether the access control system was on normal or emergency power. For personnel safety, VA doors have either thumb latches, door knobs or crash bars to provide emergency egress irrespective of the status of the access control system.

<u>Communications</u>: Areas that contain equipment sensitive to radio frequency interference or electromagnetic interference have been posted with warning signs prohibiting transmitting radio signals.

c. Conclusions

Adequate provisions were in place to assure that safeguards measures would not adversely impact safe operation of the facility.

X1 Exit Meeting Summary

The OSRE team verbally presented the OSRE results to members of licensee management at the conclusion of the OSRE on April 23, 1998. The licensee acknowledged the evaluation findings.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

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B. Simpson, Senior Vice President - Nuclear Engineering

E. Salowitz, Director - Nuclear Business Support

J. McMahon, Director - QA/Nuclear Training/Emergency Preparation

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M. Bezilla, General Manager - Hope Creek Operations

M. Trum, General Manager - Maintenance

G. Gibson, Manager - Nuclear Security

NRC

S. Morris, SRI Hope Creek

INSPECTION PROCEDURE USED

IP 81110 Operational Safeguards Response Evaluation

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