PSEG Nuclear LLC
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PSEG
Nuclear LLC

10 CFR 50.54(f)

LR-N12-0172
June 7, 2012

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Rockville, MD 20852

Salem Generating Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-70 and DPR-75
NRC Docket Nos. 50-272 and 50-311

Hope Creek Generating Station
Renewed Facility Operating License No. NPF-57
NRC Docket No. 50-354

Subject: **PSEG Nuclear LLC's 90-Day Response to NRC Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendation 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident**

References: (1) NRC Letter, *Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident*; dated March 12, 2012

(2) PSEG Letter LR-N12-0143, *PSEG Nuclear LLC's 60-day Response to NRC Letter, Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident; dated March 12, 2012*; dated May 10, 2012

On March 12, 2012, the NRC staff issued the Reference 1 letter. Enclosure 5 of the letter contains specific Requested Actions, Requested Information, and Required Responses associated with Recommendation 9.3 for Emergency Preparedness (EP) programs. In accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (f), addressees were requested to submit a written response to the information requests within 90 days.

In accordance with Reference 1, PSEG Nuclear LLC (PSEG) submitted Reference 2, which proposed an alternative course of action for submitting the requested information. As described

in the alternative course of action, this letter submits the responses to the following information requests in Enclosure 5 of Reference 1:

- Communications Request #2
- Staffing Request #3
- Staffing Request #4
- Staffing Request #5

There are no regulatory commitments contained in this letter.

Should you have any questions concerning the content of this letter, please contact Ms. Emily Maguire at 856-339-1023.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 6/7/12
(Date)

Sincerely,

Robert C. Braun
Senior Vice President, Nuclear Operations

Enclosure (1)

cc: Mr. W. Dean, Administrator, Region I, NRC
Mr. J. Hughey, Project Manager, NRC
NRC Senior Resident Inspector, Salem
NRC Senior Resident Inspector, Hope Creek
Mr. P. Mulligan, Manager IV, NJBNE
Mr. L. Marabella, Corporate Commitment Tracking Coordinator
Mr. K. Yearwood, Hope Creek Commitment Tracking Coordinator
Mr. T. Cachaza, Salem Commitment Tracking Coordinator

Communications

Request #2: Describe any interim actions that have been taken or are planned to be taken to enhance existing communications systems power supplies until the communications assessment and the resulting actions are complete.

PSEG currently has satellite phones in the Emergency Operations Facility (EOF) and in both Salem and Hope Creek Technical Support Centers (TSC). Purchase orders have been submitted for portable generators and support equipment for continued satellite phone coverage. The portable generators were sized to support control room lighting, communications equipment, and emergency response ventilation loads.

Staffing

Request #3: Identify how the augmented staff would be notified given degraded communications capabilities.

Events that result in a major loss or degradation of the electrical grid will most likely result in an emergency declaration at both Salem and Hope Creek. Widespread loss of electrical power may also result in the failure of telephone systems, pager systems, and even cell phones as offsite communications facilities could also be severely impacted by the natural event. This could leave the control rooms without a viable means to get help by activating the Emergency Response Organization (ERO) callout system. An expectation is being incorporated into EP-AA-120-1007, Maintenance of Emergency Response Organization, to ensure that we can "Protect the Health and Safety of the Public and our onsite workers" even when communicating with the ERO is hampered by acts of nature. The expectation will be worded in a manner similar to:

> When you become aware of a **major** loss or degradation of the electrical grid having the potential to negatively impact ERO notification methods (i.e., the pager system, cellular telephones or home telephones), you are expected to ensure your home and family are safe, then immediately report to the EOF. ERO personnel traveling to the EOF should drive cautiously as unexpected road hazards may be encountered. Your safety is of primary concern as we fulfill our obligation to protect the health and safety of the public and plant employees.

The expectation is being incorporated into EP-AA-120-1007, Maintenance of Emergency Response Organization and will be communicated to the ERO once incorporated. The estimated completion date is 9/28/2012.

Request #4: Identify the methods of access (e.g. roadways, navigable bodies of water and dockage, airlift, etc.) to the site that are expected to be available after a widespread large scale natural event.

The preferred route to access the site is the single paved site access road. It is assumed that the access road has been rendered impassible due to the large scale natural event (flooding, bridge damage, earthquake damage, etc.).

The primary means of procuring assistance from state, county and local government is through the mutual aid process. Assistance requests would be made to the State of New Jersey through the Office of Emergency Management (OEM) / New Jersey State Police (NJSP). The

OEM / NJSP will coordinate resources from within New Jersey as well as Delaware, Pennsylvania, and Maryland. New Jersey and Delaware also have memorandums of understanding (MOUs) with their respective County and Local emergency management agencies. In addition, Operational Responsibilities are captured in the NJ Radiological Emergency Response Plan for Nuclear Power Plants.

Mutual aid agreements with State, County, or Local emergency management agencies would be utilized to provide clearing of site access roads. Temporary bridge or road repair may be provided by the Army Corp. of Engineers and by State, County, and Local Departments of Transportation (DOT).

In addition, PSEG would request mutual aid support to move essential PSEG personnel from designated gathering locations. Locations may be designated by procedure or communicated through offsite response organizations (ORO) technologies.

The following types of transport and transportation providers may be utilized to access the site:

- Helicopter - DE National Guard (DNG), DE State Police, NJ State Police (NJSP), NJ National Guard (NJNG), and other neighboring state helicopters
- Ferry Boats - Delaware River Bay Authority, DE Department of Natural Resources and Environmental Conservation (DNREC), and other neighboring state ferry boats
- Boats - NJSP, DNG, NJNG, DNREC, and other neighboring state boats
- Bus - NJDOT, DELDOT, and other State, County, and Local bus services
- Fire Boat - City of Wilmington

The following additional resources may also be utilized:

- Resource Providers are listed in the Emergency Preparedness Phone Number Directory (EP Aid-005)
- The Institute of Nuclear Power Operations (INPO) would be contacted for assistance in accordance with the Annual Letter of Agreement and the Emergency Resource Manual 03-001, for industry supported resources
- Nuclear Regulatory Commission (NRC) and the implementation of the National Incident Response Plan would be used to coordinate mutual aid from federal agencies in the event water or air assets are needed to transport emergency responders or equipment from a designated off-site location to the site

PSEG believes that the mutual aid process and existing emergency plan procedures will adequately provide site access.

Request #5: Identify any interim actions that have been taken or are planned prior to the completion of the staffing assessment.

The Salem and Hope Creek Generating Stations have not made any emergency response organization (ERO) staffing changes, and do not plan on making any interim ERO staffing changes based on the Fukushima accident.

The Salem and Hope Creek Generating Stations have not made and do not plan to make any interim ERO equipment changes (e.g., technology enhancements) based on the Fukushima accident. PSEG Nuclear continues to review technology improvements that may enhance our ERO call-out process and will implement enhancements if a clear advantage or improvement opportunity is noted.

The Salem and Hope Creek Generating Stations maintain a robust on-shift ERO and all E-Plan functions can be adequately addressed by that on-shift ERO until augmentation occurs. In addition to on-shift operations department staffing, the robust on-shift ERO includes a full time and fully equipped fire department, on-shift Maintenance, Radiation Protection (RP), Security, and Chemistry expertise at both stations.

The following table outlines the "On-Shift" ERO positions per facility.

PSEG Nuclear – On-Shift ERO Positions

Control Room – Salem (10) • Shift Manager (SM) • Control Room Supervisor (CRS) - 2 • Shift Technical Advisor (STA) • Nuclear Control Operators (NCO) - 4 • Control Room Communicators – 2	**Operations Support Center – Salem (8)** • Shift Maintenance Supervisor • Nuclear Equipment Operator – 4 • Radwaste Operator • Shift I&C Technician • Shift Electrician	**RCA Control Point – Salem (3)** • Shift Radiation Protection Technician (SRPT) • Onsite Radiation Protection Technician (ORPT) • Chemistry Technician
Control Room – Hope Creek (7) • Shift Manager (SM) • Control Room Supervisor (CRS) • Shift Technical Advisor (STA) • Nuclear Control Operators (NCO) - 2 • Control Room Communicators – 2	**Operations Support Center – Hope Creek (6)** • Shift Maintenance Supervisor • Nuclear Equipment Operator – 2+ • Radwaste Operator • Shift I&C Technician • Shift Electrician	**RCA Control Point – Hope Creek (3)** • Shift Radiation Protection Technician (SRPT) • Onsite Radiation Protection Technician (ORPT) • Chemistry Technician
	Affected Station OSC (Note 1) (5) • Fire Department Supervisor • Fire Department Operators – 4 Note 1 – Fire Dept Supervisor and Operators report to affected Station OSC.	**Main Guard House:** • Shift Security Team Leader • Security Supervisors and Security Force Officers per Security Plan

The following discussion outlines the "On-Shift" ERO capabilities per facility.

Control Room:

Facility
- Shift Manager (SM)
- Control Room Supervisor (CRS)
- Shift Technical Advisor (STA)
- Nuclear Control Operators (NCO)
- Control Room Communicators

Functions
- Overall Emergency Command and Control
- Plant Operations

- Emergency Communications

Summary of Responsibilities
Overall emergency command and control is the responsibility of the Shift Manager (SM). The SM has the tools, training and personnel to maintain emergency command and control until augmented responders arrive. The overall focus of the SM is emergency classification, notifications, PARs, and oversight of plant operations. The Shift Technical Advisor (STA) is assigned the responsibility to perform independent verification of all emergency classifications. The Shift Radiation Protection Technician (SRPT) provides radiological support in the form of real time dose assessment as well as in-plant assessment of radiological conditions. The Operations Support Center (OSC) is activated by/with on-shift personnel (Shift Maintenance Supervisor) which relieves the SM from direct OSC Supervision responsibilities.

Plant Operations is controlled by the Control Room Supervisor (CRS) with SM oversight. The CRS, STA, and NCOs are implementing Abnormal or Emergency Operating Procedures (EOPs) and have little required interaction with augmented ERO responders.

Two dedicated Control Room Communicators perform emergency communications. The Communicators have prescribed procedures that are followed until TSC turnover is complete.

Operations Support Center (OSC):

Facility
- Shift Maintenance Supervisor
- Nuclear Equipment Operators
- Radwaste Operator
- Shift I&C Technician
- Shift Electrician
- Fire Department Supervisor
- Fire Department Operators

Functions
- Troubleshoot and Repair defective equipment
- In-Plant operations
- Fire Fighting
- First Aid
- Search & Rescue

Summary of Responsibilities
Troubleshooting and repairs of defective equipment is performed by on-shift Maintenance personnel. In addition to the on-shift I&C Technician and on-shift Electrical Technician at the affected station and the same positions at the unaffected station, additional maintenance personnel are typically available at both stations to support OSC activities. Both stations have an on-shift Maintenance Supervisor who assumes OSC command and control until relieved by the augmented OSC Coordinator.

Fire Fighting, First Aid, and Search and Rescue activities are performed by the PSEG on-shift Fire Department. Fire Department recall procedures are in place and would be implemented by the Fire Department Supervisor if more support were needed.

Control Point:

Facility

- Shift Radiation Protection Technician (SRPT)
- Onsite Radiation Protection Technician (ORPT)
- Chemistry Technician

Functions

- Perform Dose Assessment
- In-plant RP Support and Onsite Monitoring
- Chemistry Sampling

Summary of Responsibilities

The dose assessment function is performed by the Shift Radiation Protection Technician (SRPT) at the affected station. The PSEG dose assessment program, MIDAS, now a Windows-based program, has improved user interface giving the user more time for other tasks. A dose projection takes approximately 5 minutes to obtain.

Key RP in-plant support activities such as repair team coverage, onsite/in-plant monitoring, and sampling/analysis is covered by the six RP/Chemistry Technicians on-shift (three at each station). RP Support functions such as access control, personnel monitoring, and dosimetry are simplified by plant process enhancements (newer technology/tools) using available equipment such as portal monitors, self-alarming dosimeters, and an automated access control point. All onsite ERO members expected to be dispatched into the plant for evaluation, operations or repair activities are Radiation Worker and Respirator qualified and know how to use available tools. If needed, the Onsite Monitoring personnel could be dispatched offsite for field monitoring until EOF Field Monitoring Teams are in place.

The availability of an on-shift Fire Department (one Supervisor and four Fire Protection Operators) allows RP and Chemistry personnel to perform their primary ERO functions without the added tasks of Fire Brigade or First Aid Team duty.