

April 13, 2012

Mr. Ronald B. Clary, Vice President
New Nuclear Deployment
MC P40
South Carolina Electric & Gas Company
P.O. Box 88
Jenkinsville, SC 29065

SUBJECT: 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

Dear Mr. Clary:

This letter is being issued in accordance with the provisions of Sections 161.c, 103.b, and 182.a of the Atomic Energy Act of 1954, as amended (the Act), and the U.S. Nuclear Regulatory Commission (NRC or Commission) regulation in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(f). Pursuant to these provisions of the Act or this regulation, you are required to provide further information to support the evaluation of the NRC staff recommendations for the Near-Term Task Force (NTTF) review of the accident at the Fukushima Dai-ichi nuclear facility in Japan. The review will enable the staff to determine whether the nuclear plant licenses under your responsibility should be modified, suspended, or revoked. For combined license (COL) holders under 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," the issues in NTTF Recommendations 2.1 and 2.3 regarding seismic and flooding reevaluations and walkdowns are resolved. Therefore, you are not required to take actions for Recommendations 2.1 and 2.3.

BACKGROUND

Following the accident at the Fukushima Dai-ichi nuclear power plant resulting from the March 11, 2011, Great Tōhoku Earthquake and subsequent tsunami, the NRC established the NTTF in response to Commission direction. The NTTF charter, dated March 30, 2011, tasked the NTTF with conducting a systematic and methodical review of NRC processes and regulations and determining if the agency should make additional improvements to its regulatory system. Ultimately, a comprehensive set of recommendations contained in a report to the Commission (SECY-11-0093, "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," dated July 12, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML111861807) was developed using a decision rationale built around the defense-in-depth concept in which each level of defense in depth (namely, prevention, mitigation, and emergency preparedness (EP)) is critically evaluated for its completeness and effectiveness in performing its safety function.

The current regulatory approach, and the resultant plant capabilities, gave the NTTF and the NRC the confidence to conclude that an accident with consequences similar to the Fukushima accident is unlikely to occur in the United States. The NRC concluded that continued plant operation and the continuation of licensing activities did not pose an imminent risk to public health and safety. On August 19, 2011, following issuance of the NTTF report, the Commission directed the NRC staff in a staff requirements memorandum (SRM) for SECY-11-0093 (ADAMS Accession No. ML112310021), in part, to determine which of the recommendations could and should be implemented without unnecessary delay.

On September 9, 2011, the NRC staff provided SECY-11-0124, "Recommended Actions to be Taken Without Delay From the Near-Term Task Force Report" (ADAMS Accession No. ML11245A158) to the Commission. The document identified those actions from the NTTF report that should be taken without unnecessary delay. As part of the October 18, 2011, SRM for SECY-11-0124 (ADAMS Accession No. ML112911571), the Commission approved the staff's proposed actions, including the development of three information requests under 10 CFR 50.54(f). The information collected would be used to support the NRC staff's evaluation of whether further regulatory action was needed in the area of EP.

As stated earlier, for COL holders under 10 CFR Part 52, the issues in NTTF Recommendations 2.1 and 2.3 regarding seismic and flooding reevaluations and walkdowns are resolved.

ACTION

The NRC has concluded that it requires the information requested in the enclosure to this letter to verify the compliance with your plant's design basis and to determine if additional regulatory actions are appropriate. Therefore, you are required, pursuant to Section 182(a) of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), to submit a response to this letter. You must confirm receipt of this letter within 30 days; however, the enclosure contains a topic-specific schedule for response. Your response must be written and signed under oath or affirmation.

The NRC has provided information in the enclosure on acceptable approaches for responding to the information requests. Alternate approaches, with appropriate justification, will be considered.

This request contains information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These information collections were approved by the Office of Management and Budget (OMB) under an expedited clearance, approval number 3150-0211, which expires September 30, 2012. Prior to the expiration date, the NRC will submit the collection to OMB for renewal.

The burden for these information collections is estimated to average 100 hours per response, as detailed in Table 1, "Burden Estimate (hours)." This estimate includes the time for reviewing instructions, searching existing data sources, gathering data, performing necessary analyses, and completing and reviewing the collection of information. These estimates represent the

average level of effort per plant; actual levels of effort may vary depending upon the results of the hazard analyses. Send comments regarding this burden estimate or any other aspect of these information collections, including suggestions for reducing the burden, to the Information Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to Infocollects.resource@nrc.gov; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0211), Office of Management and Budget, Washington, DC 20503.

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

Table 1 Burden Estimate (hours)

	Hazard Evaluation	Risk/Integrated Assessment	Walkdowns	EP Communications	EP Staffing
Enclosure 1	N/A	N/A	N/A	50	50

In accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," a copy of this letter and your response will be made available for inspection and copying at the NRC Web site at www.nrc.gov, and at the NRC Public Document Room. If you believe that any of the information to be submitted meets the criteria in 10 CFR 2.390 for withholding from public disclosure, you must include sufficient information, as required by the subsection, to support such a determination.

INFORMATION REQUEST JUSTIFICATION

Emergency Preparedness

If mitigation is not successful in preventing the release of radioactive materials from the plant, EP provides additional defense-in-depth to minimize exposure to radiation to the public. The accident at Fukushima reinforced the need for effective EP, the objective of which is to ensure the capability to implement effective measures to mitigate the consequences of a radiological emergency. The accident at Fukushima highlighted the need to determine and implement the required staff to fill all necessary positions responding to a multiunit event. Additionally, there is a need to ensure that the communication equipment relied upon to coordinate the event response during a prolonged station blackout can be powered.

The reevaluation and related analysis being conducted under this request are justified by the need to enhance those EP measures that support the prevention or mitigation of core damage and uncontrolled release of radioactive material. The justifications in this letter, as well as the background and discussions in the enclosure, provide the reasoning and justification for this

R. Clary

- 4 -

request. Moreover, the reevaluation and related analysis will serve to meet the NRC's obligation under the Consolidated Appropriations Act, 2012 (*Public Law 112-74*), Section 402, and also affords licensees the opportunity to inform the NRC about safety-related decisions.

If you have any questions on this matter, please contact Denise McGovern at 301-415-6191 or Denise.McGovern@NRC.gov.

Sincerely,

/RA/

Michael R. Johnson, Director
Office of New Reactors

Enclosure:
Recommendation 9.3: Emergency Preparedness

cc: See next page

R. Clary

- 4 -

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Sincerely,

/RA/

Michael R. Johnson, Director
Office of New Reactors

Enclosure:
Recommendation 9.3: Emergency Preparedness

cc: See next page

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ADAMS Accession No.: ML12095A342 *via e-mail

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(Revised 03/15/2012)

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RECOMMENDATION 9.3: EMERGENCY PREPAREDNESS

Communications

PURPOSE

The U.S. Nuclear Regulatory Commission (NRC or Commission) is issuing this information request regarding the power supplies for communications systems to determine if additional regulatory action is warranted. This request is based upon Near-Term Task Force (NTTF) Recommendation 9.3, which proposed that facility emergency plans provide for a means to power communications equipment needed to communicate onsite (e.g., radios for response teams and between facilities) and offsite (e.g., cellular telephones and satellite telephones) during a prolonged station blackout (SBO).

APPLICABLE REGULATORY REQUIREMENTS AND GUIDANCE

Emergency plan communications requirements and detailed guidance on how to meet those requirements are contained in the following:

1. Title 10 of the *Code of Federal Regulations* (10 CFR) 50.47 (b)(6) states that provisions should be made for prompt communications among principal response organizations to emergency personnel and to the public.
2. Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," Section IV. E. 9, states that adequate provisions shall be made and described for emergency facilities and equipment, including "at least one onsite and one offsite communications system; each system shall have a backup power source."
3. NUREG-0696, "Functional Criteria for Emergency Response Facilities," issued February 1981, offers guidance on how to meet the requirements of Appendix E to 10 CFR Part 50, and discusses the onsite and offsite communications requirements for the licensee's emergency operating facilities.

DISCUSSION

During the March 11, 2011, Tōhoku earthquake and subsequent tsunami, the widespread destruction and loss of electrical power degraded communications capabilities onsite at Fukushima Dai-ichi and between the site and external stakeholders, such as local emergency response centers, the Japanese Government, and corporate offices. Normal and emergency offsite communications systems lost power or were degraded by the earthquake and tsunami. Normal and emergency onsite communications were severely impacted by the loss of power to signal repeaters and depleted radio batteries. Accounts of the accident response refer to delays in repair activities caused by issues with the ability to effectively communicate between repair teams and the control rooms and the onsite emergency response center.

The NRC requests that the following assumptions be made in preparing responses to this request for information: the potential onsite and offsite damage is a result of a large-scale natural event resulting in a loss of all alternating current (ac) power.

Enclosure

In addition, assume that the large-scale natural event causes extensive damage to normal and emergency communications systems both onsite and in the area surrounding the site. It has been recognized that, following a large-scale natural event, ac power may not be available to cell and other communications infrastructures.

REQUESTED ACTIONS

It is requested that the addressee assess its current communications systems and equipment used during an emergency event given the aforementioned assumptions. It is also requested that consideration be given to any enhancements that may be appropriate for the emergency plan with respect to communications requirements of 10 CFR 50.47, "Emergency Plans," Appendix E to 10 CFR Part 50, and the guidance in NUREG-0696 in light of the assumptions stated above. Also, the addressee is requested to consider the means necessary to power the new and existing communications equipment during a prolonged SBO.

REQUESTED INFORMATION

1. The addressee is requested to provide an assessment of the current communications systems and equipment used during an emergency event to identify any enhancements that may be needed to ensure that communications are maintained during a large-scale natural event that meets the conditions described above. The assessment should:
 - identify any planned or potential improvements to existing onsite communications systems and their required normal and backup power supplies,
 - identify any planned or potential improvements to existing offsite communications systems and their required normal and backup power supplies,
 - provide a description of any new communications system(s) or technologies that will be deployed based upon the assumed conditions described above, and
 - provide a description of how the new or improved systems and power supplies will be able to provide for communications during a loss of all ac power.
2. The addressee is requested to 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.
3. Provide an implementation schedule of the time needed to conduct and implement the results of the communications assessment.

REQUIRED RESPONSE

The addressee should respond to this request for information no later than 90 days from the date of issuance.

If the addressee cannot meet the requested response date, the addressee must provide a response within 60 days of the date of this letter and describe the alternative course of action that it proposes to take, including the basis of the acceptability of the proposed alternative course of action and estimated completion date.

The required written response should be addressed to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, 11555 Rockville Pike, Rockville, Maryland 20852, under oath or affirmation under the provisions of Sections 161.c, 103.b, and 182.a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f). In addition, addressees should submit a copy of the response to the appropriate regional administrator.

Staffing

PURPOSE

The NRC is issuing this information request to determine if additional regulatory action is warranted regarding the staff required to fill all necessary positions to respond to a multiunit event.

APPLICABLE REGULATORY REQUIREMENTS AND GUIDANCE

- The regulations in 10 CFR 50.47(b)(1) state, in part: "... and each principal response organization has staff to respond and to augment its initial response on a continuous basis."
- In 10 CFR 50.47(b)(2), regulations state, in part: "... adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and..."
- NUREG-0654/FEMA-REP-1, Revision 1, issued November 1980, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, Section B, "Onsite Emergency Organization," states in part:

Each licensee shall specify...functional areas of emergency activity... These assignments shall cover the emergency functions in Table B-1 entitled, "Minimum Staffing Requirements for Nuclear Power Plant Emergencies." The minimum on-shift staffing levels shall be as indicated in Table B-1. The licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. This capability shall be as indicated in Table B-1.

DISCUSSION

The events in Japan have highlighted the importance of responders during all phases of emergency event response. The regulations require emergency response capabilities during a broad spectrum of postulated reactor accidents. A natural event on the scale of the 2011 Great East Japan Earthquake and resulting tsunami could present new challenges to personnel and their safety. Specifically, the event stressed the existing regulatory framework and affected the operator's capability to implement adequate protective measures to protect the public and plant staff. In light of the experience from the event, the unavailability of sufficient onsite staff during the initial phase of the emergency condition, the unavailability of staff designated to augment the onsite staff, the inability for offsite support to reach the site, and the unavailability and inability of relief staff to reach the site, the NRC recognizes that these, in total, could pose challenges to licensee response efforts.

A large-scale natural event may alter the planned emergency framework by changing access routes (e.g., bridges washed out, debris blocking roadways). While several utilities have implemented a combined emergency operations facility that is capable of handling multiunit events, the onsite technical support center and operational support center at sites with multiple reactors have been designed to handle any emergency at only one of the units.

In conjunction with the emergency preparedness regulations (Agencywide Documents Access and Management System (ADAMS) Accession No. ML112070125), published on November 10, 2011, the NRC published on December 5, 2011, in the *Federal Register* (76 FR 75771) interim staff guidance (ISG) in NSIR/DPR-ISG-01 (ADAMS Accession No. ML1113010523). Section IV.C of the ISG provides guidance on performing an on-shift staffing analysis, and identified Nuclear Energy Institute (NEI)-10-05, "Assessment of On-shift Emergency Response Organizations (ERO) Staffing and Capabilities" (ADAMS Accession No. ML111751698), as an acceptable methodology for such an analysis. However, this methodology and guidance does not consider multiple unit events involving a large-scale natural event with a loss of all ac power.

This letter requests that addressees assess and provide the NRC with information regarding the ability to implement their emergency plan during a large-scale natural event that results in the following:

- all units affected,
- extended loss of all ac power, and
- impeded access to the sites.

Addressees may find the capability for assessment activities, including repair team planning and preparation, is particularly affected. Therefore, it is requested that this assessment ensure that there is sufficient onsite staff and other resources to perform critical tasks until augmentation staff arrives to provide assistance and until other offsite resources become available.

REQUESTED ACTIONS

It is requested that the addressee assess its current staffing levels and determines the appropriate staff to fill all necessary positions for responding to a multiunit event during a beyond-design-basis natural event and determines if any enhancements are appropriate given the considerations of Near-Term Task Force (NTTF) Recommendation 9.3.

Single unit sites should provide the requested information as it pertains to an extended loss of all ac power and impeded access to the site.

REQUESTED INFORMATION

1. It is requested that the addressee provide an assessment of the onsite and augmented staff needed to respond to a large-scale natural event meeting the conditions described above. This assessment should include a discussion of the onsite and augmented staff available to implement the strategies as discussed in the emergency plan or described in plant operating procedures. The following functions are requested to be assessed:
 - How onsite staff will move backup equipment (e.g., pumps, generators) from alternate onsite storage facilities to repair locations at each reactor as described in the order regarding the NTTF Recommendation 4.2, the substance of which was included as a license condition (2.D.13) of Summer licenses (NPF-93 and NPF-94).
 - New staff or functions identified as a result of the assessment.

- Collateral duties (personnel not being prevented from timely performance of their assigned functions).
2. Provide an implementation schedule of the time needed to conduct the onsite and augmented staffing assessment. If any modifications are determined to be appropriate, please include in the schedule the time to implement the changes.
 3. Identify how the augmented staff would be notified given degraded communications capabilities.
 4. Identify the methods of access (e.g., roadways, navigable bodies of water, and dockage, airlift) to the site that are expected to be available after a widespread large-scale natural event.
 5. Identify any interim actions that have been taken or are planned before the completion of the staffing assessment.
 6. Identify changes that have been made or will be made to your emergency plan regarding the on-shift or augmented staffing changes necessary to respond to a loss of all ac power multiunit event, including any new or revised agreements with offsite resource providers (e.g., staffing, equipment, transportation).

REQUIRED RESPONSE

In accordance with Section 182.a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), the addressee is requested to submit a written response consistent with the requested information. The response to requested information items 1 and 2 should follow the requirements included in license condition (2.D.13) of your licenses (NPF-93 and NPF-94). The response to requested information items 3-6 should be provided within 90 days of the date of this letter.

If the addressee cannot meet the requested response date, the addressee must provide a response within 60 days of the date of this letter and describe the alternative course of action that it proposes to take, including the basis of the acceptability of the proposed alternative course of action and estimated completion date.

The required written response should be addressed to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, 11555 Rockville Pike, Rockville, Maryland 20852, under oath or affirmation under the provisions of Sections 161.c, 103.b, and 182.a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f). In addition, addressees should submit a copy of the response to the appropriate regional administrator.