

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION

Jennifer L. Uhle, Deputy Director

In the Matter of All Operating Reactor Licensees

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REVISED DIRECTOR'S DECISION UNDER 10 CFR 2.206

I. Introduction

On July 27, 2011, Mr. Geoff Fettus, Senior Project Attorney for the Natural Resources Defense Council (NRDC), submitted a petition under Title 10, "Energy," of the *Code of Federal Regulations* (10 CFR) Section 2.206, "Requests for action under this subpart," to Annette Vietti-Cook, Secretary of the U.S. Nuclear Regulatory Commission (NRC) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11216A085).

Mr. Fettus submitted the petition on behalf of the NRDC (the petitioner). The petition was submitted in the form of 12 letters, which the NRC treated as one petition.

The petitioner requested that the NRC order licensees to comply with 12 specific recommendations in the NRC Near-Term Task Force (NTTF) Report, "Recommendations for Enhancing Reactor Safety in the 21<sup>st</sup> Century," issued July 12, 2011 (ADAMS Accession No. ML111861807). The petitioner cited the NTTF Report as the rationale for and basis of the petition.

On December 28, 2011, the NRC issued an acknowledgement letter to the petitioner accepting the petition for review, as recommended by the NRC's Petition Review Board (PRB). The acknowledgement letter is available in ADAMS under Accession No. ML113260015. The letter informed the petitioner that the topic of the petition is undergoing NRC review as part of the lessons-learned review related to the Fukushima event. The letter also stated that the PRB intends to use information gathered from this review to inform its final decision on whether to implement the actions requested in the petition. Based on the timeline related to the Fukushima lessons-learned review, the acknowledgement letter explained that this activity might take longer than the standard of 120 days for reaching a decision on the petition.

The NRC sent a copy of the proposed director's decision to the petitioner and to licensees for comment on March 10, 2014. The proposed director's decision and the letter to the petitioner are available in ADAMS under Accession Nos. ML13282A373 and ML13282A358. The letter to the licensees, which includes a listing of all operating reactor licensees affected by this proposed director's decision, is available in ADAMS under Accession No. ML13282A372. The staff did not receive any comments on the proposed director's decision.

On May 6, 2014, the NRC issued a Final Director's Decision (ADAMS Accession No. ML14098A166). Subsequently, the NRC found two revisions necessary. The NRC's response to the petitioner's Request 7 is corrected to reference the final regulatory basis issued on October 1, 2013 (ML13101A344), instead of the draft regulatory basis as originally stated. The NRC's response to the part of Request 8 stating that licensees should be required to "maintain ERDS [Emergency Response Data System] capability throughout the accident" is corrected to state that the request will be addressed by an advance notice of proposed rulemaking (ANPR).

## II. Discussion

This section includes both the petitioner's requests for orders to be issued and the NRC's decisions. The NRC did not issue orders within 90 days of date of the petition, as the petitioner had requested, because the agency determined that the continued operation of operating reactors did not pose an imminent risk to public health and safety.

**Request 1: Order licensees to provide reasonable protection for equipment currently provided pursuant to 10 CFR 50.54(hh)(2) from the effects of design-basis external events and to add equipment as needed to address multi-unit events while other requirements are being revised and implemented. NRDC requests that the Commission issue its order within ninety days. (Corresponds to NRC Task Force Recommendation 4.2.)**

NRC decision: The NRC has addressed this request through Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," March 12, 2012 (ADAMS Accession No. ML12054A736). This request is also being addressed through rulemaking (Station Blackout Mitigation Strategies rulemaking, RIN 3150-AJ08, NRC-2011-0299). The rulemaking is making generically applicable the

requirements of the mitigation strategies order, giving consideration to lessons learned and feedback from implementation of the order's requirements.

**Request 2: Order licensees to include a reliable hardened vent in BWR [boiling-water reactor] Mark I and Mark II containments. (Corresponds to NRC Task Force Recommendation 5.1.)**

NRC decision: The NRC has addressed this request through Order EA-12-050, "Order to Modify Licenses with Regard to Reliable Hardened Containment Vents," issued on March 12, 2012 (ADAMS Accession No. ML12054A694), and superseded by a modified Order EA-13-109, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable for Operation Under Severe Accident Conditions" (ADAMS Accession No. ML13143A334), issued on June 6, 2013.

**Request 3: Order licensees to have an installed, seismically qualified means to spray water into the spent fuel pools, including an easily accessible connection to supply the water (e.g., using a portable pump or pumper truck) at grade outside the building. (Corresponds to NRC Task Force Recommendation 7.4.)**

NRC decision: The NRC has addressed this request through Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," issued on March 12, 2012 (ADAMS Accession No. ML12054A736). This order imposes requirements to maintain or restore spent fuel pool cooling capability. The capability is maintained or restored through the use of self-powered portable pumps through multiple connection points, including connections diverse from the spent fuel pool deck. This request is also being addressed through rulemaking (Station Blackout Mitigation Strategies rulemaking, RIN 3150-AJ08, NRC-2011-0299). The rulemaking is making generically applicable the requirements of the mitigation strategies order, giving consideration to lessons learned and

feedback from implementation of the order's requirements.

**Request 4: Order licensees to perform seismic and flood protection walkdowns to identify and address plant-specific vulnerabilities and verify the adequacy of monitoring and maintenance for protection features such as watertight barriers and seals in the interim period until longer term actions are completed to update the design basis for external events. (Corresponds to NRC Task Force Recommendation 2.3.)**

NRC decision: The NRC has decided not to issue orders at this time. It is addressing this request through a 10 CFR 50.54(f) letter titled, "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" (ADAMS Accession No. ML12056A046), issued on March 12, 2012.

The reasons for this decision are set forth in the following documents. 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," to the Commission (ADAMS Accession No. ML11245A158). The document identified those actions from the NTTF report that should be taken without unnecessary delay. As part of the October 18, 2011, staff requirements memo 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 will be used to support the NRC staff's evaluation of whether further regulatory action is needed regarding licensees' compliance with their existing seismic and flooding design or licensing basis.

**Request 5: Order licensees to provide safety-related AC electrical power for the spent fuel pool makeup system. (Corresponds to NRC Task Force Recommendation 7.2.)**

NRC decision: The NRC has addressed this request through Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," issued on March 12, 2012 (ADAMS Accession No. ML12054A736). This order imposes requirements to maintain or restore spent fuel pool cooling capability. The spent fuel pool cooling capability (i.e., providing makeup to the spent fuel pool) is maintained or restored through the use of self-powered portable pumps using multiple connection points. This strategy provides makeup independent of AC power and accordingly is a superior strategy to the recommendation provided by the NTF. This request is also being addressed through rulemaking (Station Blackout Mitigation Strategies rulemaking, RIN 3150-AJ08, NRC-2011-0299). The rulemaking is making generically applicable the requirements of the mitigation strategies requested order, giving consideration to lessons learned and feedback from implementation of the order's requirements.

**Request 6: Order licensees to revise their technical specifications to address requirements to have one train of onsite emergency electrical power operable for spent fuel pool makeup and spent fuel pool instrumentation when there is irradiated fuel in the spent fuel pool, regardless of the operational mode of the reactor. (Corresponds to NRC Task Force Recommendation 7.3.)**

NRC decision: This NRC has addressed this request through Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," issued on March 12, 2012 (ADAMS Accession No. ML12054A736). This order imposes requirements to maintain or restore spent fuel pool cooling capability. This capability is maintained or restored through the use of self-powered portable pumps through multiple connection points. As part of the mitigation strategies, licensees are required to have sufficient equipment to maintain or restore core cooling, containment, and spent fuel pool cooling

for all reactors on a given site simultaneously. Additionally, licensees are required to be able to implement the strategies in all modes. As a result, the intent of this NTTF recommendation (to ensure that sufficient spent fuel pool cooling equipment is always available) is met by the requirements of the mitigation strategies order. Additionally, this strategy provides makeup independent of AC power (which might not be available for severe events) and additionally would make use of the spent fuel pool level instrumentation required by EA-12-051. The NRC is also addressing this request through rulemaking (Station Blackout Mitigation Strategies rulemaking, RIN 3150-AJ08, NRC-2011-0299). The rulemaking is making generically applicable the requirements of the mitigation strategies order, giving consideration to lessons learned and feedback from implementation of the order's requirements.

**Request 7: Order licensees to modify the EOP technical guidelines (required by Supplement 1, "Requirements for Emergency Response Capability," to NUREG-0737, issued January 1983 (GL 82-33)), to (1) include EOPs, Severe Accident Mitigation Guidelines (SAMGs), and Extensive Damage Mitigation Guidelines (EDMGs) in an integrated manner, (2) specify clear command and control strategies for their implementation, and (3) stipulate appropriate qualification and training for those who make decisions during emergencies. (Corresponds to NRC Task Force Recommendation 8.1.)**

NRC decision: The NRC is addressing this request through the rulemaking, "Onsite Emergency Response Capabilities" (RIN 3150-AJ11; NRC-2012-0031). The reasons for this decision are given in SECY-11-0137, "Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned" (ADAMS Accession No. ML11272A111), and SRM-SECY-11-0137 (ADAMS Accession No. ML113490055). The Commission directed the NRC staff to initiate rulemaking on NTTF Recommendation 8 in the form of an ANPR.

The staff published the advance notice on April 18, 2012 (ADAMS Accession No. ML12058A062), and the comments received were considered in the development of the regulatory basis. The final regulatory basis was issued on October 1, 2013 (ADAMS Accession No. ML13101A344). The rulemaking would make SAMGs a requirement; integrate onsite emergency response processes, training, and exercises; and clarify command and control issues as appropriate.

**Request 8: Order licensees to do the following until rulemaking is complete:**

- **Determine and implement the required staff to fill all necessary positions for responding to a multi-unit event.**
- **Add guidance to the emergency plan that documents how to perform a multi-unit dose assessment (including releases from spent fuel pools) using the licensee's site-specific dose assessment software and approach.**
- **Conduct periodic training and exercises for multi-unit and prolonged SBO scenarios. Practice (simulate) the identification and acquisition of offsite resources, to the extent possible.**
- **Ensure that EP equipment and facilities are sufficient for dealing with multi-unit and prolonged SBO scenarios.**
- **Provide 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, satellite telephones) during a prolonged SBO.**

- **Maintain ERDS [Emergency Response Data System] capability throughout the accident.**

**(Corresponds to NRC Task Force Recommendation 9.3.)**

NRC decision: The NRC has decided not to issue orders at this time. It is addressing this request through several means, including a 10 CFR 50.54(f) letter titled, "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" (ADAMS Accession No. ML12056A046), issued on March 12, 2012.

The reasons for this decision are set forth in the following documents. 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," to the Commission (ADAMS Accession No. ML11245A158). The document identified those actions from the NTTF report that should be taken without unnecessary delay. As part of the October 18, 2011, staff requirements memo 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 will be used to support the NRC staff's evaluation of whether further regulatory action is needed.

Further, regarding the request to add guidance to the emergency plan that documents how to perform a multi-unit dose assessment, in the NTTF Report, the Task Force recommended that an Order be issued requiring licensees to develop and add guidance to their emergency plan regarding performing multi-unit dose assessments. To determine whether an Order was warranted, the NRC staff in a letter dated February 27, 2013 (ADAMS Accession No. ML13029A632), requested that the Nuclear Energy Institute (NEI) provide additional information

on the number of sites that currently have multi-unit dose-assessment capabilities and the date by which all sites will have these capabilities. By letter dated March 14, 2013 (ADAMS Accession No. ML13073A522), NEI informed the staff that each licensee would notify the NRC of its multi-unit or multi-source dose-assessment capabilities no later than June 30, 2013. Subsequently, the NRC staff developed COMSECY-13-0010, "Schedule and Plans for Tier 2 Order on Emergency Preparedness for Japan Lessons Learned" (ADAMS Accession No. ML12339A262), which requested a change to the implementation of the Tier 2 NTF Recommendation 9.3 Emergency Preparedness Japan lessons-learned items. The Commission, in the staff requirements memorandum to COMSECY-13-0010 (ADAMS Accession No. ML13120A339), agreed with the approach, and directed the staff to keep them informed regarding the implementation of licensees' stated commitments.

The responses from licensees included: 1) a summary of their current capabilities to perform multi-unit or multi-source dose assessments; 2) the anticipated schedule to establish full multi-unit and/or multi-source capabilities on an interim and/or permanent basis if such capabilities are not already in place; 3) due dates associated with each key action or milestone; and 4) a description of how the implementation schedule will be tracked. The final implementation date for permanent multi-unit or multi-source dose-assessment capabilities is no later than December 31, 2014.

The NRC staff confirmed that licensees currently have multi-unit or multi-source dose-assessment capabilities or will have these capabilities by December 31, 2014. NRC staff expects that as part of the implementation of these new dose-assessment capabilities, an appropriate level of site procedures and training will be provided to ensure adequate integration and licensee staff familiarity. NRC staff will verify the implementation of these dose-assessment capabilities through the inspection program. The petitioner also requests that the NRC order

licensees to maintain ERDS capability throughout an accident. This issue is identified as a Tier 3 item (long-term evaluation) in SECY-11-0137, "Prioritization of Recommended Actions To Be Taken in Response to Fukushima Lessons Learned" (ADAMS Accession No. ML11272A111). As stated in SECY-11-0137, the staff determined that ERDS may need a more integrated and comprehensive set of requirements. The staff intends to address ERDS capability through an ANPR. An ANPR is a tool that allows the NRC to solicit early written stakeholder input on a new potential rulemaking effort. The staff will use the ANPR feedback to inform the decision regarding the need for rulemaking.

**Request 9: Order licensees to complete the ERDS modernization initiative by June 2012 to ensure multi-unit site monitoring capability. (Corresponds to NRC Task Force Recommendation 9.4.)**

NRC decision: This request has been addressed fully without the need for an order. As of June 1, 2012, all 104 reactors have completed the transition to the new Emergency Response Data System (ERDS). Over the past several years, the NRC engaged licensees in a program that replaced the existing modems used to transmit ERDS data with Virtual Private Network (VPN) devices. Because all 104 reactors have already transitioned to VPN communication for ERDS, the NRC is not issuing an order (NTTF Recommendation 9.4, "Order licensees to complete the ERDS modernization initiative by June 2012 to ensure multi-unit site monitoring capability") to address this request.

**Request 10: Modify Section 5.0, "Administrative Controls," of the Standard Technical Specifications for each operating reactor design to reference the approved EOP technical guidelines for that plant design. Subsequently order licensees to modify each plant's technical specifications to conform to the changes. (Corresponds to NRC Task Force Recommendations 8.2 and 8.3.)**

NRC decision: The petitioner's requests are being addressed through the actions discussed in the NRC's decision under Request 7 above (rulemaking).

Request 11: **Order licensees to reevaluate the seismic and flooding hazards at their sites against current NRC requirements and guidance, and if necessary, update the design basis and SSCs [structures, systems, and components] important to safety to protect against the updated hazards. (Corresponds to NRC Task Force Recommendation 2.1.)**

NRC decision: The NRC has decided not to issue orders at this time. It is addressing this request through a 10 CFR 50.54(f) letter titled, "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" (ADAMS Accession No. ML12056A046), issued on March 12, 2012.

The reasons for this decision are set forth in the following documents. 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," to the Commission (ADAMS Accession No. ML11245A158). The document identified those actions from the NTTF report that should be taken without unnecessary delay. As part of the October 18, 2011, staff requirements memo 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 will be used to support the NRC staff's evaluation of whether further regulatory action is needed regarding the adequacy of licensees' seismic and flooding design and licensing bases.

Request 12: **Order licensees to provide sufficient safety-related instrumentation, able to withstand design-basis natural phenomena, to monitor key spent fuel pool**

**parameters (i.e., water level, temperature, and area radiation levels) from the control room. (Corresponds to NRC Task Force Recommendation 7.1.)**

NRC decision: The NRC has addressed this request through Order EA- 12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," issued on March 12, 2012 (ADAMS Accession No ML12056A044).

III. Conclusion

The NRC has addressed the petitioner's requests through the issuance of orders, 10 CFR 50.54(f) letters, rulemaking, and the Emergency Response Data System initiative. Therefore, the NRC is closing this petition.

In a manner consistent with 10 CFR 2.206(c), the NRC staff will file a copy of this director's decision with the Secretary of the Commission for the Commission to review. As set forth in 10 CFR 2.206(c)(1), the director's decision will constitute the Commission's final action within 25 days of the date of the decision unless the Commission, on its own motion, chooses to review the decision within that time.

Dated at Rockville, Maryland, this 17<sup>th</sup> day of June, 2014.

For the Nuclear Regulatory Commission.

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for Reactor Safety Programs  
Office of Nuclear Reactor Regulation