UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 12, 2012

EA-12-051

All Power Reactor Licensees and
Holders of Construction Permits in
Active or Deferred Status

SUBJECT: ISSUANCE OF ORDER TO MODIFY LICENSES WITH REGARD TO RELIABLE SPENT FUEL POOL INSTRUMENTATION

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Order that modifies the current license for your facility. The Order requires provisions for reliable spent fuel pool indications and applies to all addressees listed in Attachment 1 to the enclosed Order.

Following the earthquake and tsunami at the Fukushima Dai-ichi nuclear power plant in March 2011, the NRC established a senior-level task force referred to as the Near-Term Task Force (NTTF). The NTTF conducted a systematic and methodical review of the NRC regulations and processes to determine if the agency should make safety improvements in light of the events in Japan. As a result of this review, the NTTF issued SECY-11-0093, "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan" (Agencywide Document Access and Management System (ADAMS) Accession No. ML11186A950). SECY 11-0124, "Recommended Actions to be Taken Without Delay from the Near-Term Task Force Report," (ADAMS Accession No. ML112911571) and SECY-11-0137, "Prioritization of Recommended Actions to be Taken in Response to Fukushima Lessons Learned," (ADAMS Accession No. ML11272A111) were issued to establish the NRC staff's prioritization of the recommendations. Recommendation 7.1, concerning reliable spent fuel pool instrumentation, was determined to be a high-priority action. This Order is based upon the NTTF recommendation.

During the events in Fukushima, responders were without reliable instrumentation to determine water level in the spent fuel pool. This caused concerns that the pool may have boiled dry, resulting in fuel damage. Numerous attempts were made to refill the spent fuel pools, which diverted resources and attention from other efforts. The events at Fukushima demonstrated the confusion and misapplication of resources that can result from beyond-design-basis external events when adequate instrumentation is not available.

The NRC staff has determined that the current fleet of nuclear power plants is safe to continue operation. Additionally, the Commission has determined that the enhanced spent fuel pool instrumentation required by this Order represents a substantial increase in protection to public health and safety. The requirements of this Order are immediately effective and are expected to remain in place until superseded by Order or rule.

Pursuant to Section 223 of the Atomic Energy Act of 1954, as amended, any person who willfully violates, attempts to violate, or conspires to violate, any provision of this Order shall be subject to criminal prosecution as set forth in that section. Violation of this Order may also subject the person to civil monetary penalty.

The enclosed Order requires responses and actions within specified timeframes. Please contact your Licensing Project Manager or Mrs. Lisa Regner, Spent Fuel Pool Instrumentation Order Project Manager (301-415-1906), regarding any issues related to compliance with the requirements in the enclosed Order, or if you have other questions.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. The NRC also includes significant enforcement actions on its Web site at (http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/. The enclosed Order has been forwarded to the Office of the *Federal Register* for publication.

Sincerely,

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Michael R. Johnson, Director
Office of New Reactors

Enclosure:
Order (EA-12-051)

cc: Listserv

ORDER TO MODIFY LICENSES WITH REGARD TO RELIABLE
SPENT FUEL POOL INSTRUMENTATION
EA-12-051

Enclosure

7590-01-P

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
ALL POWER REACTOR LICENSEES AND HOLDERS OF CONSTRUCTION PERMITS IN ACTIVE OR DEFERRED STATUS	)	Docket Nos. (as shown in Attachment 1) License Nos. (as shown in Attachment 1) or Construction Permit Nos. (as shown in Attachment 1)
	)	
	)	EA-12-051

ORDER MODIFYING LICENSES WITH REGARD TO RELIABLE SPENT FUEL POOL INSTRUMENTATION (EFFECTIVE IMMEDIATELY)

I.

The Licensees and construction permit (CP) holders[1] identified in Attachment 1 to this Order hold licenses issued by the U.S. Nuclear Regulatory Commission (NRC or Commission) authorizing operation and/or construction of nuclear power plants in accordance with the Atomic Energy Act of 1954, as amended, and Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," and Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants."

II.

On March 11, 2011, a magnitude 9.0 earthquake struck off the coast of the Japanese island of Honshu. The earthquake resulted in a large tsunami, estimated to have exceeded 14 meters (45 feet) in height, that inundated the Fukushima Dai-ichi nuclear power plant site.

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[1] *CP holders, as used in this Order, includes CPs, in active or deferred status, as identified in Attachment 1 to this Order (i.e., Watts Bar, Unit 2; and Bellefonte, Units 1 and 2)*

The earthquake and tsunami produced widespread devastation across northeastern Japan and significantly affected the infrastructure and industry in the northeastern coastal areas of Japan.

When the earthquake occurred, Fukushima Dai-ichi Units 1, 2, and 3 were in operation and Units 4, 5, and 6 were shut down for routine refueling and maintenance activities. The Unit 4 reactor fuel was offloaded to the Unit 4 spent fuel pool. Following the earthquake, the three operating units automatically shut down and offsite power was lost to the entire facility. The emergency diesel generators (EDGs) started at all six units providing alternating current (ac) electrical power to critical systems at each unit. The facility response to the earthquake appears to have been normal.

Approximately 40 minutes following the earthquake and shutdown of the operating units, the first large tsunami wave inundated the site, followed by additional waves. The tsunami caused extensive damage to site facilities and resulted in a complete loss of all ac electrical power at Units 1 through 5, a condition known as station blackout. In addition, all direct current electrical power was lost early in the event on Units 1 and 2 and after some period of time at the other units. Unit 6 retained the function of one air-cooled EDG. Despite their actions, the operators lost the ability to cool the fuel in the Unit 1 reactor after several hours, in the Unit 2 reactor after about 70 hours, and in the Unit 3 reactor after about 36 hours, resulting in damage to the nuclear fuel shortly after the loss of cooling capabilities.

The Unit 4 spent fuel pool contained the highest heat load of the six units with the full core present in the spent fuel pool and the refueling gates installed. However, because Unit 4 had been shut down for more than 3 months, the heat load was low relative to that present in spent fuel pools immediately following shutdown for reactor refueling. Following the earthquake and tsunami, the operators in the Units 3 and 4 control room focused their efforts on stabilizing the Unit 3 reactor. During the event, concern grew that the spent fuel was overheating, causing a

high-temperature reaction of steam and zirconium fuel cladding generating hydrogen gas. This concern persisted primarily due to a lack of readily available and reliable information on water levels in the spent fuel pools. Helicopter water drops, water cannons, and cement delivery vehicles with articulating booms were used to refill the pools, which diverted resources and attention from other efforts. Subsequent analysis determined that the water level in the Unit 4 spent fuel pool did not drop below the top of the stored fuel and no significant fuel damage occurred. The lack of information on the condition of the spent fuel pools contributed to a poor understanding of possible radiation releases and adversely impacted effective prioritization of emergency response actions by decision makers.

Following the events at the Fukushima Dai-ichi nuclear power plant, the NRC established a senior-level agency task force referred to as the Near-Term Task Force (NTTF). The NTTF was tasked with conducting a systematic and methodical review of the NRC regulations and processes and determining if the agency should make additional improvements to these programs in light of the events at Fukushima Dai-ichi. As a result of this review, the NTTF developed a comprehensive set of recommendations, documented in SECY-11-0093, "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," dated July 12, 2011. These recommendations were modified by the NRC staff following interactions with stakeholders. Documentation of the NRC staff's efforts is contained in SECY-11-0124, "Recommended Actions To Be Taken Without Delay From the Near-Term Task Force Report," dated September 9, 2011, and SECY-11-0137, "Prioritization of Recommended Actions To Be Taken in Response to Fukushima Lessons Learned," dated October 3, 2011.

As directed by the Commission's Staff Requirements Memorandum (SRM) for SECY-11-0093, the NRC staff reviewed the NTTF recommendations within the context of the NRC's existing regulatory framework and considered the various regulatory vehicles available to

the NRC to implement the recommendations. SECY-11-0124 and SECY-11-0137 established the NRC staff's prioritization of the recommendations based upon the potential safety enhancements.

Current regulatory requirements and existing plant capabilities allow the NRC to conclude that a sequence of events such as the Fukushima Dai-ichi accident is unlikely to occur in the United States. Therefore, continued operation and continued licensing activities do not pose an imminent threat to public health and safety. However, the NRC's assessment of new insights from the events at Fukushima Dai-ichi leads the NRC staff to conclude that additional requirements must be imposed on Licensees and CP holders to increase the capability of nuclear power plants to mitigate beyond-design-basis external events. These additional requirements represent a substantial increase in the protection of public health and safety. The Commission has decided to administratively exempt this Order from applicable provisions of the Backfit Rule, 10 CFR 50.109, and the issue finality requirements in 10 CFR 52.63 and 10 CFR Part 52, Appendix D, Paragraph VIII.

Additional details on an acceptable approach for complying with this Order will be contained in final interim staff guidance (ISG) scheduled to be issued by the NRC in August 2012. This guidance will include a template to be used for the plan that will be submitted in accordance with Section IV, Condition C.1 below.

III.

Reasonable assurance of adequate protection of public health and safety and assurance of the common defense and security are the fundamental NRC regulatory objectives. Compliance with NRC requirements plays a critical role in giving the NRC confidence that Licensees and CP holders are maintaining an adequate level of public health and safety and common defense and security. While compliance with NRC requirements presumptively

ensures adequate protection, new information may reveal that additional requirements are warranted. In such situations, the Commission may act in accordance with its statutory authority under Section 161 of the Atomic Energy Act of 1954, as amended, to require Licensees and CP holders to take action in order to protect health and safety and common defense and security.

To protect public health and safety from the inadvertent release of radioactive materials, the NRC's defense-in-depth strategy includes multiple layers of protection: (1) prevention of accidents by virtue of the design, construction, and operation of the plant; (2) mitigation features to prevent radioactive releases should an accident occur; and (3) emergency preparedness programs that include measures such as sheltering and evacuation. The defense-in-depth strategy also provides for multiple physical barriers to contain the radioactive materials in the event of an accident. The barriers are the fuel cladding, the reactor coolant pressure boundary, and the containment. These defense-in-depth features are embodied in the existing regulatory requirements and thereby provide adequate protection of public health and safety.

In the case of spent fuel pools, compliance with existing regulations and guidance presumptively provides reasonable assurance of the safe storage of spent fuel. In particular, Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 establishes the general design criteria (GDC) for nuclear power plants. All currently operating reactors were licensed to the GDC or meet the intent of the GDC. The GDC provide the design features of the spent fuel storage and handling systems and the protection of these systems from natural phenomena and operational events. The accidents considered during licensing of U.S. nuclear power plants typically include failure of the forced cooling system and loss of spent fuel pool inventory at a specified rate within the capacity of the makeup water system. Further, spent fuel pools at U.S. nuclear power plants rely on maintenance of an adequate inventory of water under accident conditions to provide containment, as well as the cooling and shielding safety functions.

During the events in Fukushima, responders were without reliable instrumentation to determine water level in the spent fuel pool. This caused concerns that the pool may have boiled dry, resulting in fuel damage.[2] Fukushima demonstrated the confusion and misapplication of resources that can result from beyond-design-basis external events when adequate instrumentation is not available.

The spent fuel pool level instrumentation at U.S. nuclear power plants is typically narrow range and, therefore, only capable of monitoring normal and slightly off-normal conditions. Although the likelihood of a catastrophic event affecting nuclear power plants and the associated spent fuel pools in the United States remains very low, beyond-design-basis external events could challenge the ability of existing instrumentation to provide emergency responders with reliable information on the condition of spent fuel pools. Reliable and available indication is essential to ensure plant personnel can effectively prioritize emergency actions.

The Commission has determined that the spent fuel pool instrumentation required by this Order represents a significant enhancement to the protection of public health and safety and is an appropriate response to the insights from the Fukushima Dai-ichi accident. While this consideration is qualitative in nature, the Commission has long taken the position that the determination as to whether proposed backfits represent a substantial safety improvement may be qualitative in nature. Staff Requirements Memorandum, SECY-93-086, "Backfit Considerations" (June 30, 1993), pp. 1-2. However the Commission does not, at this time, have sufficient information to complete a full backfit analysis of the spent fuel pool instrumentation that would be required by this Order. The NRC is analyzing the insights gained from the Fukushima Dai-ichi accident on an accelerated timeline. Additionally, the NRC has considered the

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[2] *See Institute of Nuclear Power Operations (INPO) 11-005, "Special Report on the Nuclear Accident at the Fukushima Daiichi Nuclear Power Station," Revision 0, issued November 2011, p. 36.*

Congressional intent that the agency act expeditiously on Tier 1 recommendations.

The Commission has recognized, in exceptional circumstances, that some proposed rules may not meet the requirements specified in the Backfit Rule but nevertheless should be adopted by the NRC. Hence, the Commission advised the NRC staff that it would consider, on a case-by-case basis, whether a proposed regulatory action should be adopted as an "exception" to the Backfit Rule. This Order represents such a case. Therefore, the Commission has decided to administratively exempt this Order from the Backfit Rule and the issue finality requirements in 10 CFR 52.63 and 10 CFR Part 52, Appendix D, paragraph VIII for several reasons.

The Fukushima Dai-ichi accident was unprecedented in terms of initiating cause and the particular failure sequence. In addition, our review of this event has highlighted the benefits that can be derived from the availability of more diverse instrumentation. Consistent with the final Aircraft Impact Assessment Rule, 10 CFR 50.150, 74 FR 28112 (June 12, 2009), the Commission's decision to administratively exempt this Order from compliance with the Backfit Rule is a highly exceptional action limited to the insights associated with the extraordinary underlying circumstances of the Fukushima Dai-ichi accident and the NRC's lessons learned. Furthermore, the extensive stakeholder engagement and broad endorsement for timely action support the Commission's judgment that immediate action to commence implementation of the spent fuel monitoring requirements is warranted at this time. In addition, pursuant to 10 CFR 2.202, the NRC finds that the public health, safety, and interest require that this Order be made immediately effective.

Based upon the considerations set forth above, the Commission has determined that all power reactor licensees and CP holders must have a reliable means of remotely monitoring wide-range spent fuel pool levels to support effective prioritization of event mitigation and recovery actions in the event of a beyond-design-basis external event. These new requirements

provide a greater capability, consistent with the overall defense-in-depth philosophy, and therefore greater assurance of protection of public health and safety from the challenges posed by beyond-design-basis external events to power reactors. Accordingly, the Commission concludes that all operating reactor licensees and CPs under Part 50 identified in Attachment 1 to this Order shall be modified to include the requirements identified in Attachment 2 to this Order. All combined licenses (COLs) under Part 52 identified in Attachment 1 to this Order shall be modified to include the requirements identified in Attachment 3 to this Order.

IV.

Accordingly, pursuant to Sections 161b, 161i, 161o, and 182 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202, and 10 CFR Parts 50 and 52, IT IS HEREBY ORDERED, EFFECTIVE IMMEDIATELY, THAT ALL LICENSES AND CONSTRUCTION PERMITS IDENTIFIED IN ATTACHMENT 1 TO THIS ORDER ARE MODIFIED AS FOLLOWS:

A. 1. All holders of CPs issued under Part 50 shall, notwithstanding the provisions of any Commission regulation or CP to the contrary, comply with the requirements described in Attachment 2 to this Order except to the extent that a more stringent requirement is set forth in the CP. These CP holders shall complete full implementation **prior to issuance of an operating license.**

2. All holders of operating licenses issued under Part 50 shall, notwithstanding the provisions of any Commission regulation or license to the contrary, comply with the requirements described in Attachment 2 to this Order except to the extent that a more stringent requirement is set forth in the license. These Licensees shall promptly start implementation of the requirements in Attachment 2 to the Order and shall complete full implementation **no later than two (2) refueling cycles**

after submittal of the overall integrated plan, as required in Condition C.1.a, or December 31, 2016, whichever comes first.

3. All holders of COLs issued under Part 52 shall, notwithstanding the provisions of any Commission regulation or license to the contrary, comply with the requirements described in Attachment 3 to this Order except to the extent that a more stringent requirement is set forth in the license. These Licensees shall promptly start implementation of the requirements in Attachment 3 to the Order and shall complete full implementation prior to initial fuel load.

B. 1. All Licensees and CP holders shall, **within twenty (20) days** of the date of this Order, notify the Commission (1) if they are unable to comply with any of the requirements described in Attachment 2 or Attachment 3, (2) if compliance with any of the requirements is unnecessary in their specific circumstances, or (3) if implementation of any of the requirements would cause the Licensee or CP holder to be in violation of the provisions of any Commission regulation or the facility license. The notification shall provide the Licensee's or CP holder's justification for seeking relief from or variation of any specific requirement.

2. Any Licensee or CP holder that considers that implementation of any of the requirements described in Attachment 2 or Attachment 3 to this Order would adversely impact safe and secure operation of the facility must notify the Commission, **within twenty (20) days** of this Order, of the adverse impact, the basis for its determination that the requirement has an adverse impact, and either a proposal for achieving the same objectives specified in the Attachment 2 or Attachment 3 requirement in question, or a schedule for modifying the facility to address the adverse condition. If neither approach is appropriate, the Licensee

or CP holder must supplement its response to Condition B.1 of this Order to identify the condition as a requirement with which it cannot comply, with attendant justifications as required in Condition B.1.

C. 1. a. All holders of operating licenses issued under Part 50 shall **by February 28, 2013**, submit to the Commission for review an overall integrated plan, including a description of how compliance with the requirements described in Attachment 2 will be achieved.

b. All holders of CPs issued under Part 50 or COLs issued under Part 52 shall, **within one (1) year** after issuance of the final ISG, submit to the Commission for review an overall integrated plan, including a description of how compliance with the requirements described in Attachment 2 or Attachment 3 will be achieved.

2. All Licensees and CP holders shall provide an initial status report **sixty (60) days** after the issuance of the final ISG, and **at six (6)-month intervals** following submittal of the overall integrated plan, as required in Condition C.1, which delineates progress made in implementing the requirements of this Order.

3. All Licensees and CP holders shall report to the Commission when full compliance with the requirements described in Attachment 2 or Attachment 3 is achieved.

Licensee or CP holder responses to Conditions B.1, B.2, C.1, C.2, and C.3, above, shall be submitted in accordance with 10 CFR 50.4 and 10 CFR 52.3, as applicable.

As applicable, the Director, Office of Nuclear Reactor Regulation or the Director, Office of New Reactors may, in writing, relax or rescind any of the above conditions upon demonstration by the Licensee or CP holder of good cause.

V.

In accordance with 10 CFR 2.202, the Licensee or CP holder must, and any other person adversely affected by this Order may, submit an answer to this Order, and may request a hearing on this Order, **within twenty (20) days** of the date of this Order. Where good cause is shown, consideration will be given to extending the time to answer or to request a hearing. A request for extension of time in which to submit an answer or request a hearing must be made in writing to the Director, Office of Nuclear Reactor Regulation or to the Director, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and include a statement of good cause for the extension. The answer may consent to this Order.

If a hearing is requested by a Licensee, CP holder, or a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearings. If a hearing is held, the issue to be considered at such hearing shall be whether this Order should be sustained. Pursuant to 10 CFR 2.202(c)(2)(i), the Licensee, CP holder, or any other person adversely affected by this Order, may, in addition to demanding a hearing, at the time the answer is filed or sooner, move the presiding officer to set aside the immediate effectiveness of the Order on the ground that the Order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error.

All documents filed in NRC adjudicatory proceedings, including a request for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with the NRC E-Filing rule (72 FR 49139, August 28, 2007). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on

electronic storage media. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least 10 days prior to the filing deadline, the participant should contact the Office of the Secretary by e-mail at hearing.docket@nrc.gov, or by telephone at (301) 415-1677, to request (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a request or petition for hearing (even in instances in which the participant, or its counsel or representative, already holds an NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the hearing in this proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on NRC's public Web site at *http://www.nrc.gov/site-help/e-submittals/apply-certificates.html*. System requirements for accessing the E-Submittal server are detailed in NRC's "Guidance for Electronic Submission," which is available on the agency's public Web site at *http://www.nrc.gov/site-help/esubmittals.html*. Participants may attempt to use other software not listed on the web site, but should note that the NRC's E-Filing system does not support unlisted software, and the NRC Meta System Help Desk will not be able to offer assistance in using unlisted software.

If a participant is electronically submitting a document to the NRC in accordance with the E-Filing rule, the participant must file the document using the NRC's online, web-based submission form. In order to serve documents through the Electronic Information Exchange, users will be required to install a web browser plug-in from the NRC web site. Further information

on the web-based submission form, including the installation of the Web browser plug-in, is available on the NRC's public Web site at *http://www.nrc.gov/site-help/esubmittals.html*.

Once a participant has obtained a digital ID certificate and a docket has been created, the participant can then submit a request for hearing or petition for leave to intervene. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public Web site at *http://www.nrc.gov/site-help/e-submittals.html*. A filing is considered complete at the time the documents are submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The E-Filing system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the documents on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request/petition to intervene is filed so that they can obtain access to the document via the E-Filing system.

A person filing electronically using the agency's adjudicatory E-Filing system may seek assistance by contacting the NRC Meta System Help Desk through the "Contact Us" link located on the NRC Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by e-mail at MSHD.Resource@nrc.gov, or by a toll-free call at (866) 672-7640. The NRC Meta System Help Desk is available between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have a good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their

initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by: (1) first class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, 20852, Attention: Rulemaking and Adjudications Staff. Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service. A presiding officer, having granted an exemption request from using E-Filing, may require a participant or party to use E-Filing if the presiding officer subsequently determines that the reason for granting the exemption from use of E-Filing no longer exists.

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket, which is available to the public at *http://ehd.nrc.gov/EHD_Proceeding/home.asp*, unless excluded pursuant to an order of the Commission, or the presiding officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings, unless an NRC regulation or other law requires submission of such information. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their submission.

If a person other than the Licensee or CP holder requests a hearing, that person shall set forth with particularity the manner in which his interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.309(d).

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section IV above shall be final twenty (20) days from the date of this Order without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section IV shall be final when the extension expires if a hearing request has not been received. AN ANSWER OR A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

FOR THE NUCLEAR REGULATORY COMMISSION

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Michael R. Johnson, Director
Office of New Reactors

Dated this 12th day of March 2012

POWER REACTOR LICENSEES AND LICENSEES
WITH ACTIVE AND/OR DEFERRED CONSTRUCTION PERMITS

Arkansas Nuclear One
Entergy Operations, Inc.
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6

Mr. Christopher J. Schwarz
Vice President, Operations
Entergy Operations, Inc.
Arkansas Nuclear One
1448 S.R. 333
Russellville, AR 72802

Beaver Valley Power Station
First Energy Nuclear Operating Co.
Docket Nos. 50-334 and 50-412
License Nos. DPR-66 and NPF-73

Mr. Paul A. Harden
Site Vice President
FirstEnergy Nuclear Operating Company
Mail Stop A-BV-SEB1
P.O. Box 4, Route 168
Shippingport, PA 15077

Bellefonte Nuclear Power Station
Tennessee Valley Authority
Docket Nos. 50-438 and 50-439
Construction Permit Nos. CPPR No. 122 and CPPR No. 123

Mr. Michael D. Skaggs
Senior Vice President, Nuclear Generation Development and Construction
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Braidwood Station
Exelon Generation Co., LLC
Docket Nos. STN 50-456 and STN 50-457
License Nos. NPF-72 and NPF-77

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

Browns Ferry Nuclear Plant
Tennessee Valley Authority
Docket Nos. 50-259, 50-260 and 50-296
License Nos. DPR-33, DPR-52 and DPR-68

Mr. Preston D. Swafford
Chief Nuclear Officer and Executive Vice President
Tennessee Valley Authority
3R Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Brunswick Steam Electric Plant
Carolina Power & Light Co.
Docket Nos. 50-325 and 50-324
License Nos. DPR-71 and DPR-62

Mr. Michael J. Annacone
Vice President
Carolina Power & Light Company
Brunswick Steam Electric Plant
P. O. Box 10429
Southport, NC 28461

Byron Station
Exelon Generation Co., LLC
Docket Nos. STN 50-454 and STN 50-455
License Nos. NPF-37 and NPF-66

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

Callaway Plant
Union Electric Co.
Docket No. 50-483
License No. NPF-30

Mr. Adam C. Heflin
Senior Vice President and Chief Nuclear Officer
Union Electric Company
P. O. Box 620
Fulton, MO 65251

Calvert Cliffs Nuclear Power Plant
Calvert Cliffs Nuclear Power Plant, LLC
Docket Nos. 50-317 and 50-318
License Nos. DPR-53 and DPR-69

Mr. George H. Gellrich
Vice President
Calvert Cliffs Nuclear Power Plant, LLC
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

Catawba Nuclear Station
Duke Energy Carolinas, LLC
Docket Nos. 50-413 and 50-414
License Nos. NPF-35 and NPF-52

Mr. James R. Morris
Site Vice President
Duke Energy Carolinas, LLC
Catawba Nuclear Station
4800 Concord Road
York, SC 29745

Clinton Power Station
Exelon Generation Co., LLC
Docket No. 50-461
License No. NPF-62

Mr. Michael J. Pacilio
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

Columbia Generating Station
Energy Northwest
Docket No. 50-397
License No. NPF-21

Mr. Mark E. Reddemann
Chief Executive Officer
Energy Northwest
MD 1023
P.O. Box 968
Richland, WA 99352

Comanche Peak Nuclear Power Plant
Luminant Generation Co., LLC
Docket Nos. 50-445 and 50-446
License Nos. NPF-87 and NPF-89

Mr. Rafael Flores
Senior Vice President and Chief Nuclear Officer
Luminant Generation Company, LLC
Attn: Regulatory Affairs
P. O. Box 1002
Glen Rose, TX 76043

Cooper Nuclear Station
Nebraska Public Power District
Docket No. 50-298
License No. DPR-46

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Nebraska Public Power District
72676 648A Avenue
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Brownville, NE 68321

Crystal River Nuclear Generating Plant
Florida Power Corp.
Docket No. 50-302
License No. DPR-72

Mr. Jon A. Franke
Vice President
Attn: Supervisor, Licensing & Regulatory Affairs
Progress Energy, Inc.
Crystal River Nuclear Plant (NA2C)
15760 West Power Line Street
Crystal River, FL 34428-6708

Davis-Besse Nuclear Power Station
First Energy Nuclear Operating Co.
Docket No. 50-346
License No. NPF-3

Mr. Barry S. Allen
Site Vice President
FirstEnergy Nuclear Operating Company
c/o Davis-Besse NPS
5501 N. State Route 2
Oak Harbor, OH 43449-9760

Diablo Canyon Power Plant
Pacific Gas & Electric Co.
Docket Nos. 50-275 and 50-323
License Nos. DPR-80 and DPR-82

Mr. John T. Conway
Senior Vice President - Energy Supply and Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
77 Beale Street, Mail Code B32
San Francisco, CA 94105

Donald C. Cook Nuclear Plant
Indiana Michigan Power Co.
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74

Mr. Lawrence J. Weber
Senior Vice President and Chief Nuclear Officer
Indiana Michigan Power Company
Nuclear Generation Group
One Cook Place
Bridgman, MI 49106

Dresden Nuclear Power Station
Exelon Generation Co., LLC
Docket Nos. 50-237 and 50-249
License Nos. DPR-19 and DPR-25

Mr. Michael J. Pacilio
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Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

Duane Arnold Energy Center
NextEra Energy Duane Arnold, LLC
Docket No. 50-331
License No. DPR-49

Mr. Peter Wells
Site Vice President
NextEra Energy
Duane Arnold Energy Center
3277 DAEC Road
Palo, IA 52324-9785

Edwin I. Hatch Nuclear Plant
Southern Nuclear Operating Co.
Docket Nos. 50-321 and 50-366
License Nos. DPR-57 and NPF-5

Mr. Dennis R. Madison
Vice President
Southern Nuclear Operating Company, Inc.
Edwin I. Hatch Nuclear Plant
11028 Hatch Parkway North
Baxley, GA 31513

Fermi
Detroit Edison Co.
Docket No. 50-341
License No. NPF-43

Mr. Jack M. Davis
Senior Vice President and Chief Nuclear Officer
Detroit Edison Company
Fermi 2 – 210 NOC
6400 North Dixie Highway
Newport, MI 48166

Fort Calhoun Station
Omaha Public Power District
Docket No. 50-285
License No. DPR-40

Mr. David J. Bannister
Vice President and Chief Nuclear Officer
Omaha Public Power District
444 South 16th St. Mall
Omaha, NE 68102-2247

Grand Gulf Nuclear Station
Entergy Operations, Inc.
Docket No. 50-416
License No. NPF-29

Mr. Michael Perito
Vice President, Operations
Entergy Operations, Inc.
Grand Gulf Nuclear Station, Unit 1
7003 Bald Hill Road
Port Gibson, MS 39150

H. B. Robinson Steam Electric Plant
Carolina Power & Light Co.
Docket No. 50-261
License No. DPR-23

Mr. Robert J. Duncan II
Vice President
Carolina Power & Light Company
3581 West Entrance Road
Hartsville, SC 29550

Hope Creek Generating Station
PSEG Nuclear, LLC
Docket No. 50-354
License No. NPF-57

Mr. Thomas Joyce
President and Chief Nuclear Officer
PSEG Nuclear LLC - N09
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Hancocks Bridge, NJ 08038

Indian Point Energy Center
Entergy Nuclear Operations, Inc.
Docket Nos. 50-247 and 50-286
License Nos. DPR-26 and DPR-64

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Entergy Nuclear Operations, Inc.
Indian Point Energy Center
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James A. FitzPatrick Nuclear Power Plant
Entergy Nuclear Operations, Inc.
Docket No. 50-333
License No. DPR-59

Mike Colomb
Vice President, Operations
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
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Lycoming, NY 13093

Joseph M. Farley Nuclear Plant
Southern Nuclear Operating Co.
Docket Nos. 50-348 and 50-364
License Nos. NPF-2 and NPF-8

Mr. Tom Lynch
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Southern Nuclear Operating Company, Inc.
Joseph M. Farley Nuclear Plant
7388 North State Highway 95
Columbia, AL 36319

Kewaunee Power Station
Dominion Energy Kewaunee, Inc.
Docket No. 50-305
License No. DPR-43

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LaSalle County Station
Exelon Generation Co., LLC
Docket Nos. 50-373 and 50-374
License Nos. NPF-11 and NPF-18

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Limerick Generating Station
Exelon Generation Co., LLC
Docket Nos. 50-352 and 50-353
License Nos. NPF-39 and NPF-85

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Millstone Nuclear Power Station
Dominion Nuclear Connecticut, Inc.
Docket Nos. 50-336 and 50-423
License Nos. DPR-65 and NPF-49

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Monticello Nuclear Generating Plant
Northern States Power Company
Docket No. 50-263
License No. DPR-22

Mr. Timothy J. O'Connor
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Northern States Power Company - Minnesota
Monticello Nuclear Generating Plant
2807 West County Road 75
Monticello, MN 55362-9637

Nine Mile Point Nuclear Station
Nine Mile Point Nuclear Station, LLC
Docket Nos. 50-220 and 50-410
License Nos. DPR-63 and NPF-69

Mr. Ken Langdon
Vice President Nine Mile Point
Nine Mile Point Nuclear Station, LLC
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North Anna Power Station
Virginia Electric & Power Co.
Docket Nos. 50-338 and 50-339
License Nos. NPF-4 and NPF-7

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Oconee Nuclear Station
Duke Energy Carolinas, LLC
Docket Nos. 50-269, 50-270 and 50-287
License Nos. DPR-38, DPR-47 and DPR-55

Mr. Preston Gillespie
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Duke Energy Carolinas, LLC
7800 Rochester Highway
Seneca, SC 29672

Oyster Creek Nuclear Generating Station
Exelon Generation Co., LLC
Docket No. 50-219
License No. DPR-16

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Palisades Nuclear Plant
Entergy Nuclear Operations, Inc.
Docket No. 50-255
License No. DPR-20

Mr. Anthony J. Vitale
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Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
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Palo Verde Nuclear Generating Station
Arizona Public Service Company
Docket Nos. STN 50-528, STN 50-529 and STN 50-530
License Nos. NPF-41, NPF-51 and NPF-74

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Peach Bottom Atomic Power Station
Exelon Generation Co., LLC
Docket Nos. 50-277 and 50-278
License Nos. DPR-44 and DPR-56

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Perry Nuclear Power Plant
First Energy Nuclear Operating Co.
Docket No. 50-440
License No. NPF-58

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FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
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Perry, OH 44081

Pilgrim Nuclear Power Station Unit No. 1
Entergy Nuclear Operations, Inc.
Docket No. 50-293
License No. DPR-35

Mr. Robert Smith
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Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
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Plymouth, MA 02360-5508

Point Beach Nuclear Plant
NextEra Energy Point Beach, LLC
Docket Nos. 50-266 and 50-301
License Nos. DPR-24 and DPR-27

Mr. Larry Meyer
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NextEra Energy Point Beach, LLC
Point Beach Nuclear Plant, Units 1 & 2
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Two Rivers, WI 54241-9516

Prairie Island Nuclear Generating Plant
Northern States Power Co. Minnesota
Docket Nos. 50-282 and 50-306
License Nos. DPR-42 and DPR-60

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Northern States Power Company - Minnesota
Prairie Island Nuclear Generating Plant
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Quad Cities Nuclear Power Station
Exelon Generation Co., LLC
Docket Nos. 50-254 and 50-265
License Nos. DPR-29 and DPR-30

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R. E. Ginna Nuclear Power Plant
R.E. Ginna Nuclear Power Plant, LLC
Docket No. 50-244
License No. DPR-18

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River Bend Station
Entergy Operations, Inc.
Docket No. 50-458
License No. NPF-47

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Entergy Operations, Inc.
River Bend Station
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St. Francisville, LA 70775

Salem Nuclear Generating Station
PSEG Nuclear, LLC
Docket Nos. 50-272 and 50-311
License Nos. DPR-70 and DPR-75

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San Onofre Nuclear Generating Station
Southern California Edison Co.
Docket Nos. 50-361 and 50-362
License Nos. NPF-10 and NPF-15

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Southern California Edison Company
San Onofre Nuclear Generating Station
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San Clemente, CA 92674-0128

Seabrook
NextEra Energy Seabrook, LLC
Docket No. 50-443
License No. NPF-86

Mr. Paul Freeman
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c/o Mr. Michael O'Keefe
NextEra Energy Seabrook, LLC
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Seabrook, NH 03874

Sequoyah Nuclear Plant
Tennessee Valley Authority
Docket Nos. 50-327 and 50-328
License Nos. DPR-77 and DPR-79

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1101 Market Street
Chattanooga, TN 37402-2801

Shearon Harris Nuclear Power Plant
Carolina Power & Light Co.
Docket No. 50-400
License No. NPF-63

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Progress Energy Carolinas, Inc.
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Zone 1
New Hill, NC 27562-0165

South Texas Project
STP Nuclear Operating Co.
Docket Nos. 50-498 and 50-499
License Nos. NPF-76 and NPF-80

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President, Chief Executive Officer and Chief Nuclear Officer
STP Nuclear Operating Company
South Texas Project
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Wadsworth, TX 77483

St. Lucie Plant
Florida Power & Light Co.
Docket Nos. 50-335 and 50-389
License Nos. DPR-67 and NPF-16

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Surry Power Station
Virginia Electric & Power Co.
Docket Nos. 50-280 and 50-281
License Nos. DPR-32 and DPR-37

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Susquehanna Steam Electric Station
PPL Susquehanna, LLC
Docket Nos. 50-387 and 50-388
License Nos. NPF-14 and NPF-22

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NUCSB3
Berwick, PA 18603-0467

Turkey Point
Florida Power & Light Co.
Docket Nos. 50-250 and 50-251
License Nos. DPR-31 and DPR-41

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Vermont Yankee Nuclear Power Station
Entergy Nuclear Operations, Inc.
Docket No. 50-271
License No. DPR-28

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Vermont Yankee Nuclear Power Station
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Virgil C. Summer Nuclear Station
South Carolina Electric & Gas Co.
Docket No. 50-395
License No. NPF-12

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South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
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Jenkinsville, SC 29065

Vogtle Electric Generating Plant
Southern Nuclear Operating Co.
Docket Nos. 50-424 and 50-425
License Nos. NPF-68 and NPF-81

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Southern Nuclear Operating Company, Inc.
Vogtle Electric Generating Plant
7821 River Road
Waynesboro, GA 30830

Vogtle Electric Generating Plant, Units 3 and 4
Southern Nuclear Operating Co.
Docket Nos. 52-025 and 52-026
License Nos. NPF-91 and NPF-92

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Bin B022
Birmingham, AL 35242

Waterford Steam Electric Station
Entergy Operations, Inc.
Docket No. 50-382
License No. NPF-38

Ms. Donna Jacobs
Vice President, Operations
Entergy Operations, Inc.
Waterford Steam Electric Station, Unit 3
17265 River Road
Killona, LA 70057-0751

Watts Bar Nuclear Plant, Unit 1
Tennessee Valley Authority
Docket No. 50-390
License No. NPF-90

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Watts Bar Nuclear Plant, Unit 2
Tennessee Valley Authority
Docket No. 50-391
Construction Permit No. CPPR No. 092

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William B. McGuire Nuclear Station
Duke Energy Carolinas, LLC
Docket Nos. 50-369 and 50-370
License Nos. NPF-9 and NPF-17

Mr. Regis T. Repko
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Duke Energy Carolinas, LLC
McGuire Nuclear Site
12700 Hagers Ferry Road
Huntersville, NC 28078

Wolf Creek Generating Station
Wolf Creek Nuclear Operating Corp.
Docket No. 50-482
License No. NPF-42

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REQUIREMENTS FOR RELIABLE SPENT FUEL POOL LEVEL INSTRUMENTATION AT OPERATING REACTOR SITES AND CONSTRUCTION PERMIT HOLDERS

All licensees identified in Attachment 1 to this Order shall have a reliable indication of the water level in associated spent fuel storage pools capable of supporting identification of the following pool water level conditions by trained personnel: (1) level that is adequate to support operation of the normal fuel pool cooling system, (2) level that is adequate to provide substantial radiation shielding for a person standing on the spent fuel pool operating deck, and (3) level where fuel remains covered and actions to implement make-up water addition should no longer be deferred.

1. The spent fuel pool level instrumentation shall include the following design features:

   1.1 Instruments: The instrumentation shall consist of a permanent, fixed primary instrument channel and a backup instrument channel. The backup instrument channel may be fixed or portable. Portable instruments shall have capabilities that enhance the ability of trained personnel to monitor spent fuel pool water level under conditions that restrict direct personnel access to the pool, such as partial structural damage, high radiation levels, or heat and humidity from a boiling pool.

   1.2 Arrangement: The spent fuel pool level instrument channels shall be arranged in a manner that provides reasonable protection of the level indication function against missiles that may result from damage to the structure over the spent fuel pool. This protection may be provided by locating the primary instrument channel and fixed portions of the backup instrument channel, if applicable, to maintain instrument channel separation within the spent fuel pool area, and to utilize inherent shielding from missiles provided by existing recesses and corners in the spent fuel pool structure.

   1.3 Mounting: Installed instrument channel equipment within the spent fuel pool shall be mounted to retain its design configuration during and following the maximum seismic ground motion considered in the design of the spent fuel pool structure.

   1.4 Qualification: The primary and backup instrument channels shall be reliable at temperature, humidity, and radiation levels consistent with the spent fuel pool water at saturation conditions for an extended period. This reliability shall be established through use of an augmented quality assurance process (e.g., a process similar to that applied to the site fire protection program).

   1.5 Independence: The primary instrument channel shall be independent of the backup instrument channel.

   1.6 Power supplies: Permanently installed instrumentation channels shall each be powered by a separate power supply. Permanently installed and portable instrumentation channels shall provide for power connections from sources independent of the plant ac and dc power distribution systems, such as portable generators or replaceable batteries. Onsite generators used as an alternate power source and replaceable batteries used for instrument channel power shall have sufficient capacity to maintain the level indication function until offsite resource availability is reasonably assured.

1.7 Accuracy: The instrument channels shall maintain their designed accuracy following a power interruption or change in power source without recalibration.

1.8 Testing: The instrument channel design shall provide for routine testing and calibration.

1.9 Display: Trained personnel shall be able to monitor the spent fuel pool water level from the control room, alternate shutdown panel, or other appropriate and accessible location. The display shall provide on-demand or continuous indication of spent fuel pool water level.

2. The spent fuel pool instrumentation shall be maintained available and reliable through appropriate development and implementation of the following programs:

2.1 Training: Personnel shall be trained in the use and the provision of alternate power to the primary and backup instrument channels.

2.2 Procedures: Procedures shall be established and maintained for the testing, calibration, and use of the primary and backup spent fuel pool instrument channels.

2.3 Testing and Calibration: Processes shall be established and maintained for scheduling and implementing necessary testing and calibration of the primary and backup spent fuel pool level instrument channels to maintain the instrument channels at the design accuracy.

REQUIREMENTS FOR RELIABLE SPENT FUEL POOL LEVEL INSTRUMENTATION AT COMBINED LICENSE HOLDER REACTOR SITES

Attachment 2 to this Order for Part 50 Licensees requires reliable indication of the water level in associated spent fuel storage pools capable of supporting identification of the following pool water level conditions by trained personnel: (1) level that is adequate to support operation of the normal fuel pool cooling system, (2) level that is adequate to provide substantial radiation shielding for a person standing on the spent fuel pool operating deck, and (3) level where fuel remains covered and actions to implement make-up water addition should no longer be deferred.

The design bases of Vogtle Units 3 and 4 address many of these attributes of spent fuel pool level instrumentation. The NRC staff reviewed these design features prior to issuance of the combined licenses for these facilities and certification of the AP1000 design referenced therein. The AP1000 certified design largely addresses the requirements in Attachment 2 by providing two safety-related spent fuel pool level instrument channels. The instruments measure level from the top of the spent fuel pool to the top of the fuel racks to address the range requirements listed above. The safety-related classification provides for the following additional design features:

- Seismic and environmental qualification of the instruments
- Independent power supplies
- Electrical isolation and physical separation between instrument channels
- Display in the control room as part of the post-accident monitoring instrumentation
- Routine calibration and testing

As such, this Order requires Vogtle Units 3 and 4 to address the following requirements that were not specified in the certified design.

1. The spent fuel pool level instrumentation shall include the following design features:

   1.1 Arrangement: The spent fuel pool level instrument channels shall be arranged in a manner that provides reasonable protection of the level indication function against missiles that may result from damage to the structure over the spent fuel pool. This protection may be provided by locating the safety-related instruments to maintain instrument channel separation within the spent fuel pool area, and to utilize inherent shielding from missiles provided by existing recesses and corners in the spent fuel pool structure.

   1.2 Qualification: The level instrument channels shall be reliable at temperature, humidity, and radiation levels consistent with the spent fuel pool water at saturation conditions for an extended period.

   1.3 Power supplies: Instrumentation channels shall provide for power connections from sources independent of the plant alternating current (ac) and direct current (dc) power distribution systems, such as portable generators or replaceable batteries. Power supply designs should provide for quick and accessible connection of sources independent of the plant ac and dc power distribution systems. Onsite generators used as an alternate power source and replaceable batteries used for instrument channel power shall have sufficient capacity to maintain the level indication function until offsite resource availability is reasonably assured.

1.4 Accuracy: The instrument shall maintain its designed accuracy following a power interruption or change in power source without recalibration.

1.5 Display: The display shall provide on-demand or continuous indication of spent fuel pool water level.

2. The spent fuel pool instrumentation shall be maintained available and reliable through appropriate development and implementation of a training program. Personnel shall be trained in the use and the provision of alternate power to the safety-related level instrument channels.

Pursuant to Section 223 of the Atomic Energy Act of 1954, as amended, any person who willfully violates, attempts to violate, or conspires to violate, any provision of this Order shall be subject to criminal prosecution as set forth in that section. Violation of this order may also subject the person to civil monetary penalty.

The enclosed Order requires responses and actions within specified timeframes. Please contact your Licensing Project Manager or Mrs. Lisa Regner, Spent Fuel Pool Instrumentation Order Project Manager (301-415-1906), regarding any issues related to compliance with the requirements in the enclosed Order, or if you have other questions.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. The NRC also includes significant enforcement actions on its Web site at (http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/. The enclosed Order has been forwarded to the Office of the *Federal Register* for publication.

Sincerely,

/ra/
Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

/ra/
Michael R. Johnson, Director

Enclosure:
Order (EA-12-051)

cc: Listserv

Distribution: See next page

ADAMS Accession No.: ML12054A682 (package) *e-mail concurrence

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