



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

March 15, 2016

Mr. Sharif Zeid
Councilor Ward 1
Newburyport City Hall
60 Pleasant Street
P.O. Box 550
Newburyport, MA 01950

Mr. Gregory Earls
Councilor-At-Large
Newburyport City Hall
60 Pleasant Street
P.O. Box 550
Newburyport, MA 01950

Dear Mr. Zeid and Mr. Earls:

I am responding to your letter, dated January 4, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16033A494), to the U.S. Nuclear Regulatory Commission (NRC) Chairman Stephen G. Burns regarding the Seabrook Station, Unit 1 (Seabrook).

Your letter requested the NRC withdraw the operating authority for Seabrook for three main reasons: (1) concrete degradation in the plant foundation and safety-related concrete structures place the plant at risk of a nuclear incident, (2) the ability to conduct adequate oversight of alkali-silica reaction (ASR) and other issues, and (3) the perceived inability to conduct a safe, timely evacuation of the residents in the area in the event of an incident leading to a radiological release at Seabrook. Additionally, you asked that the NRC convene the annual assessment meeting for Seabrook in Newburyport, Massachusetts, this year.

I would like to provide you a summary of NRC staff activities regarding the oversight of Seabrook and the license renewal application review as it relates to the ASR issue, and reassure you of our diligence in ensuring that Seabrook meets our safety requirements. We are aware of the concerns of local citizens and representatives with regard to the ASR issue. As a result, we have had numerous discussions and briefings with a number of State and Congressional officials from New Hampshire and Massachusetts, as well as with members of the public, over the past few years. A comprehensive list of our actions and correspondence is posted on the NRC website at: <http://www.nrc.gov/reactors/operating/ops-experience/concrete-degradation.html>.

The NRC continues to carefully and deliberately monitor, assess, and inspect the ongoing actions of NextEra Energy Seabrook, LLC (NextEra) ongoing actions to resolve the ASR issue. When technical issues were identified in the current condition of concrete structures, our inspectors raised those concerns to NextEra and documented their findings in our publicly available inspection reports. Our inspections and reviews of NextEra's engineering evaluations have determined that there are no immediate safety concerns, and that ASR-affected structures

at Seabrook remain capable of performing their intended safety functions, as documented in the references at the website link above.

The NRC continues to perform inspections approximately every 6 months to review NextEra's activities to address the long-term effect of ASR on Seabrook's concrete structures. This interval is reasonable for protection of public health and safety, given the very slow progression of ASR.

As part of our license renewal review process and our oversight of Seabrook's operations under its current license, the NRC will ensure that the Seabrook structures monitoring program properly assesses the condition of structures affected by ASR to ensure they will continue to perform as intended. NextEra's methods and/or monitoring techniques include a combination of periodic examinations and crack measurement and trending of structures affected by ASR, limited core samples of key concrete structures, through-wall expansion measurements using strain gauges, finite element analysis techniques, and monitoring of components that pass between ASR-affected structures. These efforts are directed toward ensuring that there is reasonable assurance of safety for continued operations and that aging effects of ASR on safety-related concrete structures at Seabrook will be adequately managed such that they remain capable of performing their intended functions for the license period, including a period of extended operation if the license is renewed.

The NRC fully expects NextEra to complete its evaluations and to provide to the NRC an acceptable resolution for various ASR non-conforming conditions. NextEra conducted large-scale testing at the University of Texas at Austin, Ferguson Structural Engineering Laboratory, to quantify the effect of different levels of ASR on the long-term structural performance of ASR-affected reinforced concrete structures that do not have through-wall reinforcement, similar to that in the majority of the affected walls in safety-related structures at Seabrook. NRC inspectors visited the testing site several times to verify that appropriate quality assurance test standards are being implemented, and to assess whether the results would impact our conclusions regarding current plant safety. Should NextEra elect to resolve the ASR operable-but-degraded and nonconforming conditions using results from the large-scale testing, the results and the testing methodology and method(s) of evaluation used will be subject to NRC review, pursuant to applicable regulatory processes including Title 10 of the *Code of Federal Regulations* (10 CFR), Sections 50.59 and/or 50.90. NextEra will also need to clearly establish that the results of its large-scale test program are representative of actual conditions at Seabrook.

The NRC staff's review of Seabrook's license renewal application is continuing, and no regulatory decision has been made. The original safety review schedule has been revised several times to allow a thorough review of the applicant's proposed plant-specific ASR monitoring program. The current review schedule and change letters can be found on the NRC website at:

<http://www.nrc.gov/reactors/operating/ops-experience/concrete-degradation.html#publicly>

In the area of radiological emergency preparedness and response, the NRC works in partnership with the Federal Emergency Management Agency (FEMA) for ensuring the onsite and offsite emergency plans applicable to NRC licensees are adequate. The oversight of onsite radiological emergency preparedness falls within the NRC's purview, while the offsite oversight responsibility rests with FEMA. Per the memorandum of understanding contained in Appendix A to 44 CFR 353, the NRC relies on FEMA to make findings and determinations as to whether offsite emergency plans are adequate and if there is reasonable assurance they can be implemented, including the means for the timely evacuation of the public, for protecting the public health and safety.

As you are aware, the Commonwealth of Massachusetts has the overall authority for making protective action decisions (sheltering, evacuation, etc.) for ensuring the safety of their public living in Massachusetts, should a radiological event occur. The State's radiological emergency plan for implementing those decisions was developed by the Massachusetts Emergency Management Agency (MEMA) and determined to be adequate by FEMA. Additionally, FEMA evaluates the implementation of the State's radiological emergency plan during emergency exercises conducted on a biennial basis to ensure continued reasonable assurance. The most recent FEMA emergency exercise report for Seabrook is available to the public in ADAMS Accession No. ML15034A368.

To date, the NRC has not received any concerns from FEMA regarding the State's capability for implementing their plan, including their capability for evacuating the general public in a timely and safe manner. However, we have forwarded your letter to Mr. John Giarrusso, our contact in MEMA, and Mr. Steve Colman, our contact in FEMA, to make them aware of your concerns. You may contact Mr. Giarrusso at (508) 820-2040 and Mr. Colman at (617) 832-4731 for further information and understanding of the State's evacuation plan.

The NRC issues reports on performance for each nuclear power plant twice a year: a mid-cycle assessment report for the prior 12 months at the mid-point of the year and an annual assessment at the end of the calendar year. As you are aware, following the release of the annual assessment letters each March, the NRC meets with the public to discuss our assessment of plant performance and other issues of interest.

For plants, such as Seabrook, that have been in Column 1 of the action matrix during the entire assessment period, our process allows several options for the type of outreach effort to be conducted near the site (see section 09.01 of Inspection Chapter 0305, "Operating Reactor Assessment Program," at ADAMS Accession ML15317A147). Open houses and community outreach events are typically held for plants in this category. They are designed to provide local officials and residents who live near the plant an opportunity to have one-on-one conversations with the NRC staff.

When identifying a location to hold annual assessment meetings, the agency considers a number of factors, including the type of meeting, expected number of attendees, availability of facilities that can accommodate the meeting, and ease of access to the facility for all interested individuals. The NRC normally selects meeting facilities that are located near the plant so those individuals most affected by plant operation can easily attend. For these reasons, the Seabrook annual assessment meetings have typically been held in Hampton, New Hampshire. Its centralized location and proximity to major roadways has provided effective access for residents from all the communities surrounding Seabrook to attend prior annual assessment meetings

and should not present an impediment to any interested Newburyport citizens attending the meeting. The NRC staff tentatively plans to hold the 2016 meeting at the same location, provided it is available on the date selected.

Based on the above, the NRC does not have a current safety or legal basis to modify, revoke, or suspend the operating license for Seabrook. Please note that 10 CFR, Section 2.206, describes the NRC's public petition process, which provides a means for anyone to raise safety concerns in a petition to the NRC to take an enforcement action related to NRC licensees (a 2.206 petition). Additional information on the 2.206 petition process is available on the NRC website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/petition.html>. Although your letter did not cite 10 CFR 2.206, it did request an enforcement action (i.e., shutdown Seabrook by withdrawing its license). As such, please contact Robert Gladney of my staff at (301) 415-1022 or Robert.Gladney@nrc.gov if you want your letter processed pursuant to 10 CFR 2.206, or if you have any further concerns on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Doug Broaddus". The signature is fluid and cursive, with a large initial "D" and "B".

Douglas A. Broaddus, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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/RA/

Douglas A. Broaddus, Chief
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Office of Nuclear Reactor Regulation

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ADAMS Accession No.: ML16039A010 **Package: ML16039A015** *by e-mail

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