



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
2100 RENAISSANCE BLVD.
KING OF PRUSSIA, PA 19406-2713

April 12, 2016

Mr. Jonathan Sherwood
Councilor, District 6
Amesbury City Hall
62 Friend Street
Amesbury, MA 01913

Dear Mr. Sherwood:

I am responding to your letter, dated January 21, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16075A024¹), 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 license for Seabrook for three main reasons: (1) concrete degradation in the plant foundation and safety-related concrete structures that places the plant at risk of a nuclear incident, (2) concerns about the NRC's 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 Massachusetts this year.

Regarding your first and second concerns as stated above, 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 and capabilities 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 actions of NextEra Energy Seabrook, LLC (NextEra), the plant operator, 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.

¹ Designation in parentheses refers to an Agency-wide Documents Access and Management System (ADAMS) accession number. Unless otherwise noted, documents referenced in this letter are publicly available via the NRC's website www.nrc.gov using the accession number in ADAMS.

The NRC continues to perform inspections approximately every six months to review NextEra's activities to address the long-term effect of ASR on Seabrook's concrete structures. We are applying substantial and, in our view, sufficient expertise to verify that NextEra is appropriately addressing ASR. Any concerns identified will be subject to NRC enforcement as appropriate. The inspections are completed by NRC specialists with expertise in structural analyses and requirements. The six-month inspection 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 and able to withstand a variety of structural loads, including seismic response, for the license period, including a period of extended operation if the license is renewed.

The NRC 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 the configuration of 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 nonconforming conditions using results from their 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 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 the most recent change letter dated March 31, 2016, can be found on the NRC website at:

<http://www.nrc.gov/reactors/operating/licensing/renewal/applications/seabrook.html>

Regarding your third concern noted at the beginning of this letter: In the area of radiological emergency preparedness and response, the NRC works in partnership with the Federal Emergency Management Agency (FEMA) to ensure 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. The NRC must rely 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, covering the 2014 exercise, is available to the public in ADAMS Accession No. ML15034A368. The most recent FEMA-evaluated exercise just occurred the week of April 4, 2016; a report on that exercise will be publicly available in the future.

To date, the NRC has not received any concerns from FEMA regarding the State's capability to implement their plan, including their capability to evacuate 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 regarding the State's evacuation plan.

The NRC issues reports on performance for each nuclear power plant twice a year: a mid-cycle assessment report that covers the 12 months ending at the mid-point of the year, and an annual assessment covering 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. Seabrook was in Column 1 of the NRC's oversight action matrix for all of 2015. Column 1, referred to as "Licensee Response", signifies that a plant is operating satisfactorily, such that only the NRC's baseline level of inspection is warranted.

For plants, such as Seabrook, that have been in Column 1 during the entire assessment period, our process allows several options for the type of outreach effort to be conducted near the site. 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. Such a central location also avoids putting an excessive burden on any member of the public, whatever direction they may live from the plant. For these reasons, 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 Amesbury citizens attending the meeting. The NRC staff tentatively plans to hold the 2016 meeting at the same location.

The NRC continues to conclude, based on extensive inspection and oversight, that Seabrook is operating safely and does not pose undue risk to public health and safety. 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. 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 Doug Tift of my staff at (610) 337-6918 or Doug.Tift@nrc.gov if you would like your letter processed pursuant to 10 CFR 2.206, or if you have any further concerns on this matter.

Sincerely,

(/RA Original Signed By Michael L. Scott for)

Daniel H. Dorman
Regional Administrator

cc: John Giarrusso
Steve Colman

The NRC continues to conclude, based on extensive inspection and oversight, that Seabrook is operating safely and does not pose undue risk to public health and safety. 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. 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 Doug Tift of my staff at (610) 337-6918 or Doug.Tift@nrc.gov if you would like your letter processed pursuant to 10 CFR 2.206, or if you have any further concerns on this matter.

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Daniel H. Dorman
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