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NRC Closes Out Confirmatory Action Letter on Steps Taken to Address Concrete Degradation at Seabrook Nuclear Plant

The Nuclear Regulatory Commission has closed out a Confirmatory Action Letter (CAL) issued to NextEra regarding actions to be taken by the company in response to concrete degradation identified at the Seabrook nuclear power plant. A letter formalizing the CAL's closure was issued to NextEra today.

NextEra owns and operates the single-unit pressurized-water reactor, which is located in Seabrook, N.H.

The concrete degradation at Seabrook is caused by alkali silica reaction, or ASR. This is a chemical combining of reactive silica from the concrete aggregate with the alkali from the cement paste in the presence of moisture. (Aggregates are inert granular materials, such as sand, gravel or crushed stone that, along with water and cement paste, are an essential ingredient in concrete.) The result of the reaction is a gel, which can expand and cause micro-cracks in the concrete.

The ASR problem was first identified by Seabrook personnel in 2010. After substantial interaction between the NRC and NextEra, including a public meeting, the NRC issued the CAL to the company in May 2012, confirming that it would complete a variety of actions to address the issue. Since then, the NRC staff has conducted two follow-up team inspections to review the actions taken by NextEra. Those inspections did not identify any concerns with the company's adherence to the commitments.

The NRC staff will continue to provide focused oversight of the company's concrete degradation testing program being conducted at the University of Texas-Austin, as well as of the on-site monitoring of ASR progression in the plant's concrete structures.

"The concrete degradation found at Seabrook is a first-of-a-kind issue for a U.S. commercial nuclear power plant," NRC Region I Administrator Bill Dean said. "Our use of a Confirmatory Action Letter provided us with greater assurance that the kinds of steps necessary to fully diagnose the extent of the problem and develop an approach for dealing with it going forward were being appropriately carried out."

A public meeting to discuss the NRC's basis for closing the CAL had been planned for Oct. 9 but had to be cancelled due to the federal government shutdown. The NRC will seek to reschedule the meeting once normal government operations resume. Further information on the status of the open house and meeting will be posted on the NRC [website](#) as it becomes available.

More information about the NRC's reviews of Seabrook concrete degradation can be found on an agency [webpage](#) devoted to that topic.