

1007

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Originator Name: Bruce Skud and Joanna

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Originator:

Addressee: Chairman Macfarlane

Incoming Task: Letter

OEDO POC: Dan Merzke

OFFICE OF THE SECRETARY
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Date Printed: Aug 30, 2012 15:45

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AUTHOR: Bruce Skud (No More Fukushimas!)
AFFILIATION: MA
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EDO --G20120651

No More Fukushimas!
C/o Bruce Skud
14 Olive Street
Newburyport, MA 01950
978 462 3905

The Honorable Allison M. Macfarlane, Chair
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

August 28, 2012

Dear Dr. Macfarlane:

Congratulations on your confirmation as chair of the Nuclear Regulatory Commission (NRC). As neighbors of a nuclear power plant, we are glad to have someone with your expertise and experience leading this important public safety organization.

We are writing to inform you about the recent activities of municipal, state, and federal elected officials serving Massachusetts communities located near the Seabrook nuclear power plant in New Hampshire. The Seabrook plant has applied for a 20-year addition to its current 40-year (1990-2030) operating license, which would extend this facilities operating timeline to 2050. Local residents and elected officials are extremely concerned that the license extension request will be granted before current safety issues at Seabrook have been fully evaluated and effectively resolved, and without proper monitoring of safety fixes. The grassroots, citizen-based organization we founded – No More Fukushimas! – was formed last year specifically because of widespread safety concerns about the Seabrook plant in local communities.

In recent months, a large number of elected officials in our area contacted your predecessor, Chairman Jaczko, to express concern about public safety at the Seabrook plant, including US Senator John Kerry, Congressmen John Tierney and Edward Markey; Massachusetts Senator Steven Baddour and Representative Michael Costello; Newburyport Mayor Donna Holaday and Haverhill Mayor James Fiorentini; and the governing bodies from Newburyport, Newbury, Salisbury, and West Newbury, Massachusetts—all signed unanimously. (See the attached copies of letters to Chairman Jaczko.) Another letter from a local governing body was sent by the Merrimack Board of Selectmen on August 27, 2012. Some requested that the NRC suspend the relicensing process for the Seabrook nuclear power plant until all current safety issues have been resolved.

As you may be aware, current safety issues at the Seabrook plant (detailed in an attached document) include “moderate-to-severe” concrete degradation in safety-related structures—a novel problem at a US nuclear plant, projections of sea-level rise sufficient to flood plant property, and a recent failed emergency preparedness test. We – residents and elected officials – want assurances that the NRC will require the plant owner to address these risks *before* the plant license extension is considered and, in particular, will not simply accept an aging management plan.

No More Fukushimas!
C/o Bruce Skud
14 Olive Street
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We live in a densely populated coastal area, and the safety of the Seabrook nuclear power plant is absolutely essential. As Commission Chair, we urge you to make public safety the highest priority in the license renewal process at the Seabrook nuclear power plant.

Thank you,

Bruce Skud and Joanna Hammond

Co-founders, No More Fukushimas!

Attachments:

Relicensing Safety Concerns at the Seabrook Nuclear Power Plant

Letters to the Nuclear Regulatory Commission from federal, state, and local representatives concerning license renewal at the the Seabrook plant

Senator John Kerry

Congressmen John Tierney and Edward Markey (3 joint letters)

Massachusetts Senator Stephen Baddour

Massachusetts Representative Michael Costello

Haverhill Mayor James Fiorentini

Newburyport City Council (signed by Mayor Donna Holaday)

Salisbury Board of Selectmen

West Newbury Board of Selectmen

Newbury Board of Selectmen

Merrimac Board of Selectmen

No More Fukushimas!
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RELICENSING SAFETY CONCERNS AT THE SEABROOK NUCLEAR POWER PLANT

WORSENING OF CONCRETE DEGRADATION REFLECTS POOR PLANT MANAGEMENT AND NRC OVERSIGHT

In May 2011 inspection report, the Nuclear Regulatory Commission (NRC) reported on concrete degradation at the Seabrook plant due to unabated groundwater infiltration. Specifically, groundwater infiltration has led to an “alkali-silica reaction” (ASR) in the concrete used in safety-related tunnels and in the plant’s foundation. (In an ASR reaction, a hard gel forms; this creates micro-cracks, potentially weakening structures.) In November 2011, the NRC sent a bulletin to all US nuclear power plants warning them about this discovery at the Seabrook plant (the first US nuclear power plant with a confirmed case of ASR affecting safety structures. Subsequently, the NRC concluded that the ASR problem could pose a threat to long-term plant safety

Fortunately, there are 18 years remaining before the plant’s license expires, which provides the NRC ample opportunity to *fully* assess the problem and to determine the effectiveness of any remedy before considering relicensing. The submission of and approval of the usual “aging management plan” should not be an adequate basis for license renewal in the case of a novel problem of this dimension. Since public safety is the top priority, we urge the NRC to require the plant to fix the concrete, stop the groundwater infiltration, and undertake all remedial steps that engineering studies indicate are necessary. After these steps are implemented, then the NRC should monitor the plant to determine the effectiveness of the solution—before considering license renewal.

The public is concerned also because the plant is located in an area subject to seismic activity. In the 18th century, there was a severe earthquake and we are concerned that the plant’s foundation can withstand an earthquake given its potentially weakening due to concrete degradation.

Although this problem appears to be technical in nature, the ASR issue has raised egregious concerns about the Seabrook plant’s management and the NRC’s regulatory oversight. In fact, in June 2011, the International Atomic Energy Agency (IAEA) found that Seabrook plant management had completely failed to manage the ASR problem. According to the IAEA, the plant knew about the potential for an ASR problem shortly after construction, but the ASR risk “was not reassessed before the relicensing process” because Seabrook plant management failed to conduct test borings until just prior to the relicensing period, suggesting *decades* of negligence.

The extent of ASR degradation at Seabrook means that the NRC’s oversight of this matter has been equally inadequate. How could the concrete degradation due to groundwater infiltration go on *for decades* without being identified earlier? The degradation has progressed to the point where the NRC characterized it as visibly “severe” in some places. For instance, electrical control tunnel B, a key safety structure at the plant, has visible micro-cracks, yet the tunnel is fully accessible to an inspector. (This tunnel is significant since it houses electrical cables that feed power to the cooling system in the case of

No More Fukushimas!
C/o Bruce Skud
14 Olive Street
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a nuclear meltdown.) Why did the inspectors fail to conduct a below-surface inspection at the plant during all those years? We cannot understand how the NRC missed this degradation or, if notified by the plant of the problem, failed to incorporate it into an inspection report until May 2011.

Moreover, the public has learned that the membrane around the plant that was intended to abate groundwater infiltration was ineffective from the start. To compensate for the ineffective membrane, the plant has pumped out groundwater, but this also did not work adequately. The original design called for a barrier since the plant was built on a salt marsh. Why didn't the NRC order the plant to fix or replace it? The NRC's lapse in judgment has certainly exacerbated the ASR problem, shaking our trust.

SEABROOK PLANT FAILS EMERGENCY MANAGEMENT TEST

Public confidence in the safety of the Seabrook nuclear power plant has further eroded when Seabrook failed the NRC's April 2012 simulated emergency test of a radiological release. The NRC reported that the plant failed to identify the simulated radiological release and thus did not notify emergency management authorities. The NRC determined that plant personnel did not become aware of the simulated release until the NRC informed the plant of the incident.

Obviously, we are worried about what would have happened if this had been a real release of radiation. While the NRC issued a "white violation," it is particularly disheartening to know that this test failure occurred during a period of high media, public, and NRC scrutiny, when one would assume the plant would be showing utmost vigilance.

NRC IGNORING POTENTIAL FOR FLOODING OF SEABROOK PLANT

At the recent NRC public meeting held in Hampton, New Hampshire, a new safety issue was raised that NRC regulators seem to be brushing aside. Scientists expect sea levels to rise due to climate change around the Seabrook plant during the proposed license extension period, 2030 to 2050. One audience member at that meeting indicated that the flood maps are now projecting that rising sea levels, increases in storm surges, and increased salinity levels *will* affect the Seabrook plant.

While some safety facilities (e.g., the control room), are situated well above grade, obviously even a mild rise in sea level could affect the plant, potentially accelerating concrete degradation and posing other problems. The NRC has not incorporated this concern among the issues to be addressed by the plant during the licensing process. Ignoring this problem appears to us to be more lax judgment by the NRC.

United States Senate
WASHINGTON, DC 20510-2102

1 Bowdoin Square
10th Floor
Boston, MA 02114

March 23, 2012

Gregory B. Jaczko
Chairman
U.S. Nuclear Regulatory Commission
Mail Stop O-16G4
Washington, DC 20555-0001

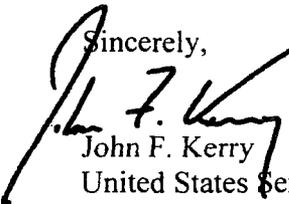
Dear Chairman Jaczko:

I write to raise my concern regarding the lack of mandatory action taken by the Nuclear Regulatory Commission (NRC) related to serious safety issues at the Seabrook Nuclear Power Plant, located in Seabrook, New Hampshire, on the Massachusetts border. I urge you to take action immediately, before the plant becomes more degraded and poses an even more serious risk to the surrounding communities.

According to an NRC inspection report released in May 2011, there has been “moderate to severe” degradation of the concrete in a tunnel that is a vital part of the reactor’s cooling system used to prevent a nuclear meltdown. The structure has lost twenty-two percent of its strength due to groundwater saturation. In the case of the Seabrook plant, an alkali-silica reaction is occurring whereby micro-cracks form as groundwater mixes with the concrete. This degradation poses a nuclear safety threat by weakening the electrical tunnel and possibly—as the NRC acknowledges—the plant’s foundation where it comes in contact with groundwater. Further, it raises serious questions about the plant’s ability to withstand an earthquake.

This represents a failure on the part of the NRC to take appropriate action to address known safety problems at the Seabrook Nuclear Power Plant. I urge you to fully address all issues related to the concrete degradation immediately. We cannot allow nuclear power plants to operate when there are known safety issues.

Thank you for your consideration on this matter. If you have any questions or concerns, please contact Meghan Leahy at [\(617\) 565-8519](tel:6175658519).

Sincerely,

John F. Kerry
United States Senator

Congress of the United States
Washington, DC 20515

June 8, 2011

The Honorable Greg Jaczko
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Jaczko:

We write to urge the Nuclear Regulatory Commission (NRC) to immediately announce its intent to deny NextEra Energy Seabrook, the licensee for the Seabrook nuclear power plant, its June 1, 2010 request¹ for a twenty year operating license that would begin in 2030 and end in 2050². In addition, we urge the NRC to adopt a more general policy of disallowing requests by nuclear power reactor licensees for a twenty-year license extension as early as twenty years prior to the time their current licenses expire.

Granting license extensions so far in advance is particularly unwise in the wake of the Fukushima meltdowns, as the NRC learns of new vulnerabilities at U.S. nuclear power plants that should impact its future licensing decisions related to both new and existing facilities. Moreover, there are additional aging and other safety issues that could not possibly be contemplated or fully understood a full twenty years in advance of the nuclear reactor's end-of-licensed-life, as exemplified by the May 30, 2011 article in *The Boston Globe*³ noting that concrete surrounding a safety-related tunnel at the Seabrook nuclear power plant had lost 22 percent of its strength due to being saturated with water for the past decade. If safety structures that are supposed to help cool the Seabrook nuclear power plant are experiencing such alarming degradation during the reactor's 'adolescence', there is simply no way that the NRC can guarantee that it will remain safe until it enters its 'golden years' almost 40 years from now.

The NRC is currently considering twenty-year license renewal applications for 16 existing reactors at 11 power plant locations.⁴ The NRC website states: "A nuclear power plant licensee may apply for a license renewal as early as 20 years before the expiration of its current license."⁵ Indeed, an examination of NRC records indicates that since 2009, the NRC has begun reviewing license renewal applications for eight reactors more than ten years (and in some cases

¹ <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/seabrook.html>

² http://articles.boston.com/2011-03-27/bostonglobe/29352917_1_seabrook-station-nrc-nuclear-plant

³ http://articles.boston.com/2011-05-30/lifestyle/29600250_1_nrc-seabrook-station-nuclear-power-plant

⁴ <http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html>

⁵ <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/license-renewal-bg.html>

closer to twenty years) before the reactors' current operating license expires.⁶ In fact there is at least one case where renewal was granted more than 20 years in advance. According to its renewal application found on NRC's website, the Catawba Nuclear Power Station 1 in South Carolina had its license renewed 21 years and 1 day before the previous license was set to expire.⁷ There is little reason for such early consideration of a license renewal application by the NRC, as the NRC expects to complete its review of renewal applications within 30 months from receiving the application, if a hearing is required, or within 22 months if no hearing is required.⁸ An examination of NRC re-licensing records indicates that the NRC has approved license renewals for 66 reactors with an average time of 25 months from the time it receives the application to the time the renewal was approved.

If the understanding of the vulnerabilities associated with nuclear power plants never changed, then making a decision in the year 2012⁹ to allow (for example) the Seabrook nuclear power plant to operate until the year 2050 might seem reasonable. But this is not the case.

Some Safety and Aging Issues Might Not Be Known Decades In Advance

As The Boston Globe article¹⁰ noted, water seepage beneath the Seabrook power plant has led to significant degradation of the concrete associated with a tunnel that is part of the reactor's cooling system, and NextEra also identified "corroded steel supports, piping, and anchor bolts in other areas they inspected". As the NRC noted in the May 23 document entitled "NextEra Energy Seabrook - NRC License Renewal Inspection Report 05000443/2011007," "the [NRC] inspection team was unable to arrive at a conclusion about the adequacy of your aging management review for the alkali-silica reaction issue," a reaction between concrete and water that is associated with some of the concrete structures at Seabrook. If these problems are surfacing a mere 21 years into Seabrook's operating life, it seems impossible to conclude that the reactor can be safely operated between the years 2030-50.

Additionally, climate change has the potential¹¹ to impact nuclear power plants through increased temperatures of cooling water, rising sea levels, more frequent and severe heat waves and more intense rainfall with associated flooding. Rep. Markey made a request to the Government Accountability Office in 2010 to review the adequacy of NRC regulations given

⁶ The eight reactors (and years remaining on their operating licenses when the re-license applications were filed) are Seabrook (19.8 years); Hope Creek (16.7 years); Salem Nuclear Generating Station, Unit 2 (10.7 years); Diablo Canyon Power Plant, Unit 1 (15 years), Unit 2 (15.8 years); Columbia Generating Station (13.9 years); South Texas Project, Unit 1 (16.8 years), Unit 2 (18.1 years).

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

⁷ <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/mcguire-catawba/duke-lra.pdf>

⁸ <http://www.nrc.gov/reactors/operating/licensing/renewal/process.html>

⁹ <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/seabrook.html>

¹⁰ http://articles.boston.com/2011-05-30/lifestyle/29600250_1_nrc-seabrook-station-nuclear-power-plant

¹¹ <http://www.globalchange.gov/what-we-do/assessment/previous-assessments/global-climate-change-impacts-in-the-us-2009>

climate change.¹² In 2007, the Browns Ferry unit 2 reactor in Alabama had to shut down because the intake water was so warm that, after being warmed nearly 30°F going through the plant, its release back into the environment would have violated the Clean Water Act.¹³ Moreover, for some coastal nuclear power plants such as Seabrook, a January 2011 study shows that the storm surge from a Category 4 or 5 hurricane could completely inundate the plants within their expected operating lifetimes.¹⁴ But sea level rise may be even more rapid than was understood in 2007, given the accelerating melting of the Greenland and Antarctic ice sheets.¹⁵ Current projections of sea level rise suggest an average 4 foot rise from 1990 levels by 2100.¹⁶

The NRC Has Not Incorporated the Lessons of Fukushima Into its Regulations or Analysis

The Japanese nuclear meltdown shows how readily a total loss of electricity can result in major radiation release – and many have speculated that this vulnerability may have been especially pronounced in Japan because the nuclear reactors involved are much older designs. A staff report recently issued by Rep. Markey’s office¹⁷ details some of the most glaring safety vulnerabilities exposed by the Fukushima events. As operating nuclear power plants reach the end of their initial forty year lifetime and enter their twenty year extended operation periods, there is certain to be new information about aging-related safety issues that the NRC should be continually evaluating.

Additionally, as has been noted previously,¹⁸ we are concerned that the Commission has granted license extensions for four nuclear reactors since the Fukushima meltdown without requiring licensees to comply with the requirements of NEPA that any “new and significant” information regarding the environmental consequences of operating the nuclear reactor be included in the application. It is clear that the environmental consequences of Fukushima will be “new and significant” compared to those that had been previously contemplated, and that an assessment of NRC’s safety regulations will also reveal “new and significant” vulnerabilities when viewed through the post-Fukushima lens. The NRC should not be approving *any* license extensions, let alone those that are only needed to continue operations more than a decade from now, before all of these vulnerabilities are both fully understood and addressed.

Given the changes to our planet, as well as changes to our understanding of safety-related vulnerabilities brought on by either accidents, extreme weather or geologic events, or unanticipated safety problems, the NRC should end its practice of accepting and granting license extensions twenty years before the license expires – and should reject those that it has already

¹² <http://markey.house.gov/docs/gaoinspection.pdf>

¹³ http://www.ucsusa.org/assets/documents/nuclear_power/20071204-ucs-brief-got-water.pdf

¹⁴ linkinghub.elsevier.com/retrieve/pii/S0304211510007329

¹⁵ <http://www.agu.org/pubs/crossref/2011/2011GL046583.shtml>

¹⁶ <http://www.nature.com/climate/2010/1004/full/climate.2010.29.html>

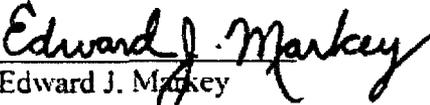
¹⁷ <http://markey.house.gov/index.php?option=content&task=view&id=4352&Itemid=125>

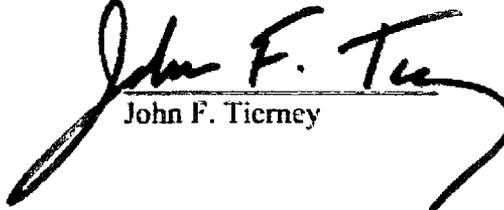
¹⁸ http://democrats.naturalresources.house.gov/sites/democrats.resourcescommittee.house.gov/files/documents/2011-05-13_EJMtoNRCNEPA.pdf

Page 4
Letter to NRC
June 8, 2011

received until the reactor has operated for more time so that potential safety problems can be identified and more fully understood. The NRC should stop making the dangerous assumption that risks, and our understanding of them, will remain static for decades.

Sincerely,


Edward J. Markey


John F. Tierney



COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS SENATE
STATE HOUSE, BOSTON 02133-1053

SENATOR STEVEN A. BADDOUR
FIRST ESSEX DISTRICT
ROOM 208, STATE HOUSE
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CHAIRMAN:
TRANSPORTATION

VICE-CHAIRMAN:
THE JUDICIARY

MEMBER:
WAYS & MEANS
POST AUDIT & OVERSIGHT
GLOBAL WARMING
CONSUMER PROTECTION
FEDERAL STIMULUS OVERSIGHT

December 14, 2011

The Honorable Greg Jaczkö
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Jaczkö:

I am writing to express my deep concern for the public safety of the people and businesses of my district in light of disturbing new information that has come to light this year about the Seabrook nuclear power plant. As the State Senator from Massachusetts' First Essex District that includes the communities of Amesbury, Haverhill, Merrimac, Methuen, Newburyport, North Andover (Precincts 1, 4, 6 and 8) and Salisbury, it is my responsibility to raise what I believe is a serious public safety issue for the people of my district and the many people who visit the region as tourists.

According to a Nuclear Regulatory Commission (NRC) report issued on May 23, 2011, the Seabrook plant has experienced concrete degradation due to years of groundwater infiltration. Specifically, the NRC's inspection team identified concrete degradation characterized as "moderate to severe." The damage was found during a below grade inspection to the accessible portion of the foundation including electrical control tunnel B—a safety structure with vital electric cables that support the cooling system should a meltdown occur. The report indicates that because of the degradation there has been a substantial decrease in the strength and integrity of the concrete. I commend your inspection team for its vigilance in identifying this significant problem.

It is very disturbing, however, that the NRC had to concede that it does not know the scope and severity of the degradation throughout the plant's foundation. As the people of my communities know, a building is no stronger than its foundation. I believe the NRC agrees because in November 2011, you notified other nuclear power plants that have these same emerging concerns relative to the type of concrete used at the Seabrook plant and about which they should be vigilant.

While I appreciate these initial protective steps, I am concerned—as are my constituents—that the plant's operators are rushing to relicense Seabrook. Given our mutual concerns regarding the structural integrity of the foundation at Seabrook, I urge your Agency to take the following action steps:

- Halt relicensing until the Agency fully and comprehensively assesses the problem.
- Require the Seabrook operators to fix both the degraded concrete and abate the groundwater infiltration.
- Ensure that this problem is sufficiently resolved using tests and first-hand inspections over a multi-year time frame.

Finally, Seabrook Station should not be considered for relicensing based on the paperwork "aging management plan" submitted by the Seabrook operators; a paperwork promise to fix the plant is simply not adequate for a matter of this dimension.

There are 18 years left before the current operating expires and I do not believe that given the recently identified problems at the plant, that re-licensing should proceed. The alkali-silica reaction is a new, thorny problem that your staff has thankfully identified, but will require years of intensive research, assessment, and monitoring before relicensing should be even considered.

The safety of the people, businesses, and tourists of Massachusetts' First Essex District is of paramount importance and they deserve complete assurance that there will be no need for Seabrook's emergency sirens to sound the warning to evacuate their communities.

Thank you for your continued vigilance in protecting public safety. I look forward to your detailed response and to working with you on this issue.

Sincerely,



Steven A. Baddour
State Senator
First Essex District

Congress of the United States
House of Representatives
Washington, DC 20515

April 13, 2012

The Honorable Greg Jaczko
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Jaczko:

We write to request that the Nuclear Regulatory Commission (NRC) immediately plan and convene a public meeting at a location near the Seabrook Nuclear Power Plant to discuss the alarming degradation of concrete found in a safety-related tunnel due to its exposure to water. We believe that the NRC's current plan to conduct its sole meeting on this topic at its headquarters in Maryland on April 23 severely limits the ability of those who live and work near the facility to fully understand the nature of this safety- and aging-related problem. We additionally request that such a meeting be conducted using a traditional public format that allows attendees to hear all presentation materials, questions and answers, as opposed to the "open house" style meeting that NRC recently has started to utilize that seems to enable only small group or one-on-one question and answer sessions. It also would be our expectation that appropriate NRC technical subject matter experts be present and available at this meeting to answer questions the public may have. Finally, we encourage you to consider locations in both Massachusetts and New Hampshire for such a meeting.

We wrote you on June 8, 2011¹ urging the Commission to announce its intent to deny NextEra Energy Seabrook, the licensee for the Seabrook nuclear power plant, its June 1, 2010 request² for a twenty-year operating license that would begin in 2030 and end in 2050. We made this request in part on the grounds that there are likely to be additional aging and other safety issues that could not possibly be contemplated or fully understood twenty years in advance of the nuclear reactor's end-of-licensed life. One such issue is clearly the degradation in safety-related concrete structures that led NRC to send a letter³ to NextEra requesting it to attend a meeting to discuss the issue at NRC headquarters on April 23, 2012. If safety structures that are supposed to help cool the Seabrook nuclear power plant are experiencing such alarming degradation during the reactor's 'adolescence', there is simply no way that the NRC can guarantee that it will remain safe when it enters its 'golden years' almost 40 years from now.

¹ <http://markey.house.gov/document/2011/letter-nrc-regarding-seabrook-0>

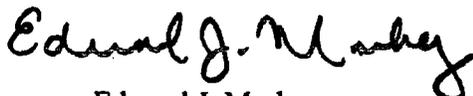
² <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/seabrook.html>

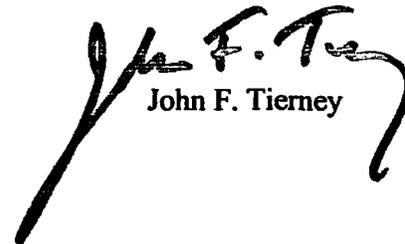
³ ADAMS accession number ML 120480066

The concerns related to Seabrook's concrete structure were also raised by the International Atomic Energy Agency when it recently released a report⁴ detailing an inspection conducted at the Seabrook plant. The inspection team found that the concrete degradation could have been identified earlier had the licensee taken steps to look for it, and that the licensee knew that water was present in proximity to the concrete structures.

We continue to believe that it is grossly premature, as a matter of general policy and in this specific case, to proceed with the license extension process for a nuclear reactor whose current license remains valid until 2030. The concrete degradation found at Seabrook amplifies these views. But it also raises more immediate questions about whether the reactor at Seabrook can be expected to safely operate during the next eighteen years of its existing license. We are pleased that the Commission is continuing to explore this matter, and we urge you to continue and expand upon these efforts. However, we also believe that any failure to conduct a second public meeting on the topic at a location near the Seabrook facility would further undermine the public trust in the Commission's ability and willingness to assure the safety of the reactor. We urge you to quickly schedule such a meeting, and look forward to your prompt response to this request.

Sincerely,


Edward J. Markey


John F. Tierney

⁴ <http://pbadupws.nrc.gov/docs/ML1208/ML12081A105.pdf>

Congress of the United States

Washington, DC 20515

November 30, 2011

The Honorable Greg Jaczko
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Jaczko:

We write to express our concern that the Nuclear Regulatory Commission (NRC) has not taken any mandatory action to address problems related to the dissolution of concrete in safety-related systems at nuclear power plants. This problem was first described in a May 30, 2011 article in The Boston Globe¹ noting that concrete surrounding a safety-related tunnel at the Seabrook nuclear power plant had lost 22 percent of its strength due to being saturated with water for the past decade. Yet instead of taking mandatory action to address a known safety vulnerability, the NRC has chosen to merely issue what amounts to an 'FYI' to its licensees that does not require any "specific action or written response".²

As The Boston Globe article³ noted, water seepage beneath the Seabrook power plant has led to significant degradation of the concrete associated with a tunnel that is part of the reactor's cooling system, and NextEra also identified "corroded steel supports, piping, and anchor bolts in other areas they inspected". As the NRC noted in the May 23 document entitled "NextEra Energy Seabrook - NRC License Renewal Inspection Report 05000443/2011007," "the [NRC] inspection team was unable to arrive at a conclusion about the adequacy of your aging management review for the alkali-silica reaction issue," a reaction between concrete and water that is associated with some of the concrete structures at Seabrook.

On November 18, 2011, the NRC issued "Information Notice 2011-20: Concrete Degradation by Alkali-Silica Reaction" to its licensees. The document describes the process by which concrete can be degraded in the presence of water, describes methods that the American Society for Testing and Materials recommends to test concrete for vulnerability to these sorts of problems during testing, and notes that when Seabrook was constructed, some of these methods were utilized but the problems later occurred anyway. The document also notes that the American Concrete Institute has published a means to evaluate concrete at nuclear power plants after construction to assess whether such degradation has occurred, and describes further technology that could be used to confirm the presence of any suspected degradation.

Yet despite the existence of known methods to periodically assess concrete in nuclear power plants to determine whether it has experienced this sort of degradation and technologies that can verify any suspected problems, the NRC document states that there are currently no regulatory requirements that these be utilized. And moreover, the NRC document contains no

¹ http://articles.boston.com/2011-05-30/lifestyle/29600250_1_nrc-seabrook-station-nuclear-power-plant

² See NRC Information Notice 2011-20

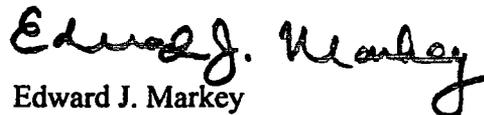
³ http://articles.boston.com/2011-05-30/lifestyle/29600250_1_nrc-seabrook-station-nuclear-power-plant

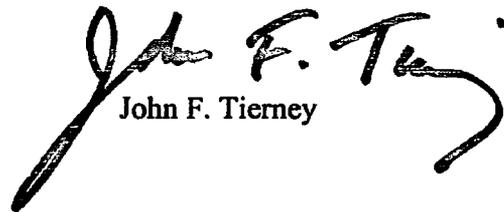
further direction to its licensees – the methods described are apparently just suggestions that could be undertaken on a voluntary basis.

This is a failure to take decisive regulatory action to address known safety vulnerabilities at nuclear power plants. We urge you in the strongest possible terms to take immediate steps to require licensees a) to conduct periodic inspections to assess whether similar concrete degradation of safety-related structures has occurred b) to report all findings to the Commission, and c) to mitigate the effects of any such degradation. Please provide us with your response to this request no later than close of business on December 16, 2011.

Thank you for your consideration of this important matter. If you have any questions or concerns, please have your staff contact Michal Freedhoff (Rep. Markey, 202-225-2836) or Kevin McDermott (Rep. Tierney, 202-225-8020).

Sincerely,


Edward J. Markey


John F. Tierney



HOUSE OF REPRESENTATIVES
STATE HOUSE, BOSTON 02133-1054

MICHAEL A. COSTELLO
REPRESENTATIVE
1ST ESSEX DISTRICT

AMESBURY
NEWBURYPORT
SALISBURY

Committee on:
Financial Services

ROOM 254, STATE HOUSE
Tel. (617) 722-2220
Fax (617) 722-2821

The Honorable Greg Jaczko
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Jaczko:

I am writing to express my deep concern for the public safety of the people and businesses of my district in light of disturbing new information that has come to light this year about the Seabrook nuclear power plant. As the State Representative for the First Essex District that includes the communities of Amesbury, Newburyport, and Salisbury, it is my responsibility to raise what I believe is a serious public safety issue for the people of my district and the thousands of people who visit the region annually as tourists.

According to a NRC report issued on May 23, 2011, the Seabrook plant has experienced concrete degradation due to years of groundwater infiltration. Specifically, the NRC's inspection team identified degradation characterized as "moderate to severe." The damage was found during a below-grade inspection to the accessible portion of the foundation, including electrical control tunnel B – a safety structure with vital electric cables that support the cooling system should a meltdown occur. The report indicates that because of the degradation there has been a substantial decrease in the strength and integrity of the concrete. I commend your inspection team for its vigilance in identifying this significant problem.

It is very disturbing, however, that the NRC had to concede that it does not know the scope and severity of the degradation throughout the plant's foundation. I believe the NRC recognizes the importance of the foundation's integrity. In November 2011, the NRC notified other nuclear power plants that have concrete foundations similar to the one at Seabrook to be vigilant about this issue.

While I appreciate these initial protective steps, I am concerned – as are my constituents – that the plant's operators are rushing to relicense Seabrook. Given our mutual concerns regarding the structural integrity of the foundation at Seabrook, I urge the NRC to take the following action steps:

- Halt relicensing until the Agency fully and comprehensively assesses the problem.
- Require the Seabrook operators to fix both the degraded concrete and abate the groundwater infiltration.
- Ensure that this problem is sufficiently resolved using tests and first-hand inspections over a multi-year time frame.

Finally, Seabrook Station should not be considered for relicensing based on the "aging management plan" submitted by the Seabrook operators; a paperwork promise to fix the plant is simply not adequate for a matter of this dimension.

There are 18 years left before the current operating expires, and I do not believe, given the recently identified problems at the plant, that re-licensing should proceed. The alkali silica reaction is a new, thorny problem that your staff has thankfully identified, but will require years of intensive research, assessment, and monitoring before relicensing should be even considered.

The safety of the people, businesses, and tourists of Massachusetts' First Essex District is of paramount importance and they deserve complete assurance that there will be no need for Seabrook's emergency sirens to sound the warning to evacuate their communities.

Thank you for your continued vigilance in protecting public safety. I look forward to your detailed response and to working with you on this issue.

Sincerely,

A handwritten signature in black ink, appearing to read 'MAC', written in a cursive style.

Michael A. Costello
State Representative



JAMES J. FIORENTINI
MAYOR

CITY OF HAVERHILL
MASSACHUSETTS

CITY HALL, ROOM 100
FOUR SUMMER STREET
HAVERHILL, MASSACHUSETTS
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FAX 978-373-7544
WWW.CI.HAVERHILL.MA.US

March 29, 2012

The Honorable Greg Jaczko
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

RE: Seabrook Nuclear Power Plant

Dear Chairman Jaczko:

As Mayor of the City of Haverhill, a short distance from the Seabrook Nuclear Power Plant, I'm writing to express my concern about information that has come to my attention concerning the Seabrook Nuclear Power Plant.

I am concerned about the concrete degradation of certain of the tunnels in the plant. I have received a copy of a report dated May 23, 2011 concerning this. I commend your inspection team for identifying this problem.

I understand there is an effort underway to relicense the Seabrook Nuclear Power Plant. I urge you to make certain that the Seabrook operators have a plan to fix the degraded concrete and repair this problem prior to relicensing.

Thank you for your attention to this matter.

Very truly yours,

James J Fiorentini, Mayor of Haverhill

JJF/lk

Cc: Joanna Hammond

CITY OF NEWBURYPORT



IN CITY COUNCIL

ORDERED:

Date:
January 30, 2012

RESOLUTION ON SEABROOK STATION RELICENSING

Whereas, in May 2011, the Nuclear Regulatory Commission(NRC) reported that concrete degradation caused by an alkali-silica reaction had significantly weakened foundation structures at the Seabrook nuclear power plant; and

Whereas, the NRC has stated that such degradation has affected a safety structure at the plant; and

Whereas, the NRC admitted it did not know the extent and severity of the degradation throughout the plant's foundation where groundwater has saturated the concrete; and

Whereas, Seabrook Station is the only commercial reactor in the United States with confirmed structural concrete degradation affecting a safety structure; and

Whereas, in light of this condition, the NRC has notified all commercial reactors in the United States to search for similar concrete degradation due to alkali-silica reaction; and

Whereas, the Nuclear Regulatory Commission has the primary responsibility to regulate commercial nuclear reactor operations and protect public safety related to said operations;

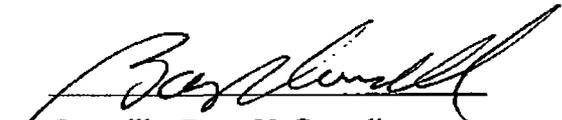
Therefore, be it resolved that the Newburyport City Council request the Nuclear Regulatory Commission to take the following steps:

- Immediately halt all relicensing activities related to Seabrook Station;
- Conduct peer-reviewed studies of the reactor's ability to withstand seismic activity with compromised structural concrete, and publicly report the results of these studies;
- Fully investigate the causes of the unabated groundwater infiltration and resulting concrete degradation, and publicly report the results of such investigation;
- Devise a corrective action program to address both groundwater infiltration and concrete degradation throughout the facility;
- Require the owner and operator of Seabrook Station to take corrective measures to stop groundwater infiltration and related concrete degradation;
- Inspect and monitor the results of those corrective measures over a *sustained* (multiyear) period of time to ensure that corrective measures are effective;

- If, following corrective measures and sustained monitoring, the Nuclear Regulatory Commission determines that degradation of safety structures has not abated, that it suspend the license to operate Seabrook Station until safe operation of this reactor can be assured.


Councillor Kathleen O'Connor Ives

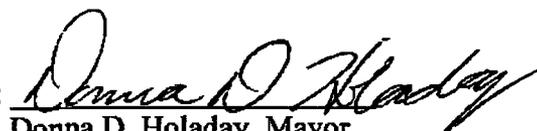

Councillor Edward C. Cameron

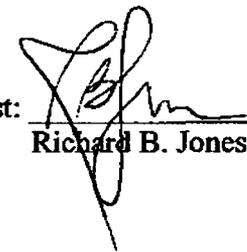

Councillor Barry N. Connell


Councillor Robert J. Cronin

In City Council January 30, 2012

Motion to approve by Councillor Connell, seconded by Councillor Cameron. Roll call vote, 10 yes, 1 absent (Heartquist). So voted.

Approve: 
Donna D. Holaday, Mayor

Attest: 
Richard B. Jones, City Clerk

Date: 2/15/2012



**TOWN OF WEST NEWBURY
BOARD OF SELECTMEN**

**1910 TOWN OFFICE BUILDING
381 Main Street, West Newbury, Mass. 01985
Phone: 978-363-1100, Ext. 115 Fax: 978-363-1117
selectmen@wnewbury.org**

April 5, 2012

Gregory B. Jaczko, Chairman
Nuclear Regulatory Commission
Mail Stop O-16G4
Washington, DC 20555-0001

Dear Mr. Jaczko,

During recent public debate, concerns have been raised about perceived safety issues at the NextEra Energy Seabrook Station nuclear power facility in Seabrook, New Hampshire (Seabrook Station). These concerns have come from media reports and more specifically from a Nuclear Regulatory Commission (NRC) report dated May 23, 2011 regarding alkali-silica reaction (ASR) found in concrete at the Seabrook Station facility (see report 05000443/2011007).

The West Newbury Board of Selectmen considers safety of residents our primary concern and these reports raise worry about the long-term safety of Seabrook Station. Specifically, the NRC report details areas of concern that should be addressed publicly in an open and transparent manner to speak to and alleviate public concerns.

The West Newbury Board of Selectmen requests the Nuclear Regulatory Commission take the following steps:

1. The NRC report details ASR issues with below grade concrete structures. Engineering studies regarding the extent of compromise of those structures from ASR including potential impact to seismic and other safety requirements should be publicly reported. If corrective actions are needed, such actions should be detailed and publicly disseminated.
2. A plan for abating groundwater infiltration causing the ASR at the Seabrook Station site should be developed and implemented as soon as possible, with frequent public communication during the planning, implementation, and completion of such project.
3. The Nuclear Regulatory Commission should review Seabrook Station audit and inspection policies and procedures to determine if they are adequate to insure plant infrastructure remains safe for operations now and the future.

4. As the Seabrook Station facility ages, the Nuclear Regulatory Commission should take a more open and proactive stance in communicating to neighboring municipalities of Seabrook Station. More open and transparent lines of communication can only increase confidence in Seabrook Station policies, procedures, and plant safety.

5. Most importantly, the West Newbury Board of Selectmen insists the facility re-licensing process not be completed if safety issues remain outstanding at Seabrook Station.

Seabrook Station and the Town of West Newbury have been good neighbors during the facility's twenty-two years of operations. We appreciate that the Nuclear Regulatory Commission and NextEra Energy will fully prioritize these areas of concern and will communicate about these issues in an open and transparent manner.

Sincerely,

WEST NEWBURY BOARD OF SELECTMEN

Albert H. Knowles, Jr., Chairman

Thomas M. Atwood

Richard J. Cushing



Town of Salisbury
5 Beach Road
Salisbury, Massachusetts 01952
Board of Selectmen
(978) 462-8232 ext. 100

Henry Richenburg, Chairman
Donald W. Beaulieu
Fred Knowles
Ed Hunt
Jerry Klima

May 21, 2012

The Honorable Greg Jaczko, Chairman
Nuclear Regulatory Commission
1555 Rockville Pike
Rockville, MD 20852

Dear Chairman Jaczko,

I am writing on behalf of the Board of Selectmen of the Town of Salisbury to express our concern for the safety of the people and businesses of our town and the surrounding area in light of the recent discovery that groundwater infiltration has caused concrete degradation at the Seabrook, NH nuclear power plant. We are concerned that the concrete degradation discovered at Seabrook Station is a novel problem for the nuclear industry and that it has already weakened the structure of safety-related parts of the plant. We are also concerned that unless the ground water infiltration problem is solved, the concrete at the plant will continue to degrade.

The Town of Salisbury is adjacent to the Town of Seabrook and well within the danger zone from any possible release of radioactivity. Any problem that affects the structural integrity of safety-related aspects of Seabrook Station must be handled in the most conservative and careful manner to protect the safety of those who live and work nearby.

We appreciate the vigilance of the inspectors of Seabrook Station who discovered the problem. We also appreciate the openness of the response so far both by the NRC and by Seabrook Station's operator, as well as the thorough investigation of the problem that is now underway.

We understand that even though 18 years remain on the term of the operating license for Seabrook Station, the operator has applied to the NRC for a twenty-year extension of its operating license. These circumstances present the NRC with an opportunity to thoroughly evaluate the problems at Seabrook Station and ample time to design a solution and make sure it is effective without adversely affecting the licensee.

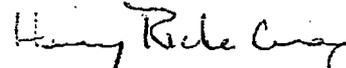
Hon. Greg Jaczko
May 21, 2012
Page two

We request that the NRC not take action to grant the requested license extension for Seabrook Station until

1. a thorough evaluation of the concrete degradation and groundwater infiltration issues affecting all safety-related structures is completed,
2. a remediation plan for both the concrete degradation problem and the groundwater infiltration problem is developed,
3. the NRC concludes that Seabrook Station's operator and personnel fully understand the problems and can successfully implement the plan, and
4. enough time has elapsed after the remediation plan is implemented to allow the NRC to determine that it is effective.

We urge the NRC not rush to judgment on granting the license extension. Delaying the extension will not adversely affect the licensee, but will give time to evaluate and solve a novel and serious problem that endangers public safety.

Sincerely,



Henry Richenburg
Chairman

cc: Board of Selectmen



Town Of Newbury

Office of
The Board of Selectmen
Newbury, Mass. 01951-4799
978-465-0862 x 302
Fax: 978-465-3064

April 24, 2012

The Honorable Greg Jaczko, Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Re: Seabrook Station

Dear Chairman Jaczko:

We are writing to express our deep concern for the public safety of the citizens and businesses of the Town of Newbury. Our concern is the result of the new information that has come to light about the Seabrook Station nuclear power plant through the re-licensing process. As a result of this new information, the Newbury Board of Selectmen request that the Nuclear Regulatory Commission take the following steps:

1. Conduct peer-reviewed engineering studies of the ability of below grade concrete structures with compromised structural concrete to withstand seismic activity and other safety requirements, and publicly report the results of these studies. If corrective actions are needed, such actions should be detailed and publicly disseminated.
2. Fully investigate the causes of the unabated groundwater infiltration and resulting concrete degradation, and develop a plan for abating groundwater infiltration at the Seabrook Station site and implement the plan as soon as possible, with frequent public communication during the planning, implementation and completion of such project.
3. Inspect and monitor the results of these corrective actions over a sustained (multiyear) period of time to ensure that corrective measures are effective.
4. The Nuclear Regulatory Commission should review Seabrook Station audit and inspection policies and procedures and develop a list of improvements that will insure that the plant infrastructure remains safe for operations now and in the future.

5. As the Seabrook Station facility ages, the Nuclear Regulatory Commission should take a more open and proactive stance in communicating to neighboring municipalities of Seabrook Station

6. Most importantly, the Newbury Board of Selectmen respectfully request that the facility re-licensing process not be completed if any short-term or long-term safety issues remain unresolved at Seabrook Station.

It is our hope that the Nuclear Regulatory Commission and Next Era Energy will make these areas of concern a top priority as the re-licensing process moves forward and will communicate about these issues with our board and the general public in an open and transparent manner. More open and transparent lines of communication can only increase confidence in Seabrook Station policies, procedures and plant safety.

Sincerely,

NEWBURY BOARD OF SELECTMEN

James M. ...

Geoffrey Walker

William ...

Chris ...



TOWN OF MERRIMAC
OFFICE OF THE BOARD OF SELECTMEN
2-8 School Street, Merrimac, MA 01860
TEL (978) 346-8862 FAX (978) 346-7832
E-MAIL Selectmen@townofmerrimac.com

August 27, 2012

The Honorable Greg Jaczko
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Chairman Jaczko:

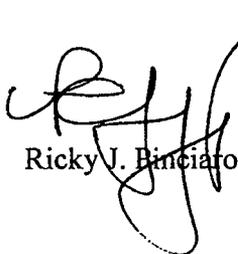
The Board of Selectmen has recently become aware of what we feel are serious issues regarding the concrete degradation of tunnels at the Seabrook Nuclear Power Plant. We have reviewed a copy of the Nuclear Regulatory Commission (NRC) report dated May 23, 2011 addressing these issues. This is of great concern to us and our community as we are within the danger zone from any possible release of radioactivity. Although we appreciate the efforts of the inspectors who discovered the problem, we ask that the NRC report details of the areas of concern are addressed publicly in an open and transparent manner to speak to and alleviate public concerns.

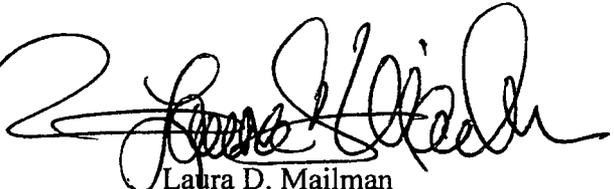
We have learned that Seabrook has applied to the NRC for a twenty year extension of its operating license although 18 years remain on the term of the current license. We urge the NRC to use this time to thoroughly evaluate the issues at Seabrook Station so that you can work to find an effective solution to ensure safety now and in the future.

Sincerely,

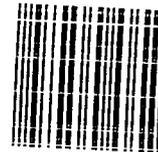
Merrimac Board of Selectmen


W. Earl Baumgardner


Ricky J. Binciaro


Laura D. Mailman

NO MORE FUKUSHIMAS!
c/o BRUCE SKUD
14 OLIVE STREET
NEWBURYPOR^T, MA 01950



1000

20852

DR. ALLISON M. MACFARLANE, CHAIR
NUCLEAR REGULATORY COMMISSION
11555 ROCKVILLE PIKE
ROCKVILLE, MD 20852