

May 27, 2011

The Honorable Deval Patrick  
Governor of Massachusetts  
Office of the Governor  
State House, Room 280  
Boston, MA 02133

Dear Governor Patrick:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letters of April 6, 2011, to Chairman Gregory B. Jaczko in which you expressed concerns about the safety of Pilgrim Nuclear Power Station (Pilgrim). In light of the recent events in Japan, you asked the NRC to describe the near and longer term activities that will occur at Pilgrim to ensure its continued safe operation, you requested the NRC address the safety of spent fuel storage and potential seismic hazards at Pilgrim, and you encouraged the NRC not to proceed with relicensing until it can be assured that we clearly understand and have learned all the implications of the recent events in Japan. You also asked the NRC to respond to many questions from Massachusetts legislative leaders related to various areas of safety for the Seabrook and Vermont Yankee Nuclear Power Plants, as well as Pilgrim.

In response to the recent events in Japan, the NRC has established a senior-level agency task force to conduct a methodical and systematic review of our processes and regulations to make recommendations to the Commission about whether the agency should make additional enhancements to our regulatory system. This activity has both near-term and longer term objectives.

For the near-term effort, the task force has begun a 90-day review. This review will evaluate all of the currently available information from the Japanese events to identify near-term operational or regulatory issues potentially affecting the 104 operating reactors in the United States, including Pilgrim and matters related to spent fuel pools. Areas of investigation will likely include the ability to protect against external environmental events, response to station electrical blackouts, spent fuel accident progression, radiological consequence analysis, and severe accident management issues. Over this 90-day period, the NRC staff will develop recommendations, as appropriate, for changes to inspection procedures and licensing guidance and will recommend whether generic communications, orders, or other regulatory requirements are needed.

The task force's longer term review will begin as soon as the NRC staff has sufficient technical information from the events in Japan, with a goal of commencing no later than the completion of the 90-day near-term effort. The task force will evaluate all technical and policy issues related to the events to identify any potential generic or research issues, changes to the Reactor Oversight Process, and modifications to the NRC's regulations that should be pursued.

With those plans in place and underway, we also are currently pursuing actions that appear prudent, even though we do not yet have all of the details needed to fully assess the implications of the Japanese events for the U.S. reactor fleet. Specifically, we have conducted

inspection activities to look at licensees' readiness to deal with certain design-basis accidents as well as more severe accidents. We have also issued an Information Notice to our licensees to make them aware of the events in Japan. Nuclear plant licensees are voluntarily verifying that their capabilities to mitigate conditions resulting from severe accidents, including the loss of significant operational and safety systems, are in effect and operational. We have also issued a Bulletin to require licensees to verify compliance with NRC requirements for having strategies in place to maintain or restore reactor, containment, and spent fuel pool cooling following the loss of a large area of the plant due to fire or explosion. The information requested by this Bulletin will be used to determine if additional regulatory requirements are necessary, if implementation guidance needs to be improved, if inspection programs need to be enhanced, or if additional assessment of licensee mitigating strategies is needed. Although these requirements were developed following the terrorist events of September 11, 2001, the strategies could also be useful to maintain or restore reactor cooling, containment, and spent fuel pool cooling following other events, such as those that happened in Japan. The NRC will take additional actions that we believe to be appropriate as our understanding of the events in Japan becomes clear.

In your letter, you asked the NRC to inform you of all Pilgrim relicensing actions and encouraged the NRC to not proceed with any steps toward relicensing until we can all be sure that we have learned what we need to from the experience in Japan. At this time, the hearing on Pilgrim's license renewal application review is before the Atomic Safety and Licensing Board and has not been concluded. The NRC staff cannot take action to renew the license until this process is completed; however, we have added your office contact information to our electronic mail distribution list so that you may be informed of all future Pilgrim relicensing actions made by the NRC staff.

With regard to the storage of spent fuel, the agency considers storage in spent fuel pools and dry casks on site to be safe and therefore does not mandate the transfer of spent fuel to dry casks at any nuclear power plant. In its recently updated Waste Confidence Decision, the Commission found that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 60 years beyond the licensed operating life of the reactor, either in a spent fuel pool or in dry-cask storage. The agency is reviewing the lessons learned from the events in Japan with regard to spent fuel storage but at this time has not recommended any regulatory changes in spent fuel storage practices. If changes are recommended for any issues, they will be applied to plants whether or not a plant has a renewed license.

In addition to the seismic assessment activities you mentioned in your letter, we consider seismic hazards as part of our continuous oversight of operating reactors. Should the NRC become aware at any time of information calling into question the continued safe operation of any plant, including Pilgrim, the NRC will take the appropriate actions as part of the agency's ongoing safety oversight. In short, with respect to safety concerns, the NRC does not wait to evaluate and address new information associated with seismic issues.

Finally, you requested a response to a number of questions about the safety and security of the Pilgrim, Seabrook, and Vermont Yankee nuclear power plants. Enclosed you will find responses to all of those questions.

D. Patrick

- 3 -

In closing, I want to assure you that the agency continues to make its domestic responsibilities for the licensing and oversight of U.S. licensees its top priority and that U.S. nuclear power plants continue to operate safely. As the NRC conducts the near-term evaluation of the relevance of the recent Japanese events to the U.S. fleet, the agency is continuing to gather the information needed for us to take a longer, more thorough look at the events in Japan and their lessons for the NRC. Based on these efforts, the agency will take all appropriate actions necessary to ensure the continuing safety of the American public.

I appreciate this opportunity to respond to your questions and trust that I have satisfied your concerns.

Sincerely,

*/RA/*

R. W. Borchardt  
Executive Director  
for Operations

Enclosure:  
As stated

May 27, 2011

The Honorable Therese Murray  
Senate President  
State House, Room 332  
Boston, MA 02133

Dear Ms. Murray:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letters of April 6, 2011, to Chairman Gregory B. Jaczko in which you expressed concerns about the safety of Pilgrim Nuclear Power Station (Pilgrim). In light of the recent events in Japan, you asked the NRC to describe the near and longer term activities that will occur at Pilgrim to ensure its continued safe operation, you requested the NRC address the safety of spent fuel storage and potential seismic hazards at Pilgrim, and you encouraged the NRC not to proceed with relicensing until it can be assured that we clearly understand and have learned all the implications of the recent events in Japan. You also asked the NRC to respond to many questions from Massachusetts legislative leaders related to various areas of safety for the Seabrook and Vermont Yankee Nuclear Power Plants, as well as Pilgrim.

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The task force's longer term review will begin as soon as the NRC staff has sufficient technical information from the events in Japan, with a goal of commencing no later than the completion of the 90-day near-term effort. The task force will evaluate all technical and policy issues related to the events to identify any potential generic or research issues, changes to the Reactor Oversight Process, and modifications to the NRC's regulations that should be pursued.

With those plans in place and underway, we also are currently pursuing actions that appear prudent, even though we do not yet have all of the details needed to fully assess the implications of the Japanese events for the U.S. reactor fleet. Specifically, we have conducted

inspection activities to look at licensees' readiness to deal with certain design-basis accidents as well as more severe accidents. We have also issued an Information Notice to our licensees to make them aware of the events in Japan. Nuclear plant licensees are voluntarily verifying that their capabilities to mitigate conditions resulting from severe accidents, including the loss of significant operational and safety systems, are in effect and operational. We have also issued a Bulletin to require licensees to verify compliance with NRC requirements for having strategies in place to maintain or restore reactor, containment, and spent fuel pool cooling following the loss of a large area of the plant due to fire or explosion. The information requested by this Bulletin will be used to determine if additional regulatory requirements are necessary, if implementation guidance needs to be improved, if inspection programs need to be enhanced, or if additional assessment of licensee mitigating strategies is needed. Although these requirements were developed following the terrorist events of September 11, 2001, the strategies could also be useful to maintain or restore reactor cooling, containment, and spent fuel pool cooling following other events, such as those that happened in Japan. The NRC will take additional actions that we believe to be appropriate as our understanding of the events in Japan becomes clear.

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*/RA/*

R. W. Borchardt  
Executive Director  
for Operations

Enclosure:  
As stated

May 27, 2011

The Honorable Robert A. DeLeo  
Speaker of the House  
State House, Room 356  
Boston, MA 02113

Dear Mr. DeLeo:

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R. DeLeo

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Sincerely,

*/RA/*

R. W. Borchardt  
Executive Director  
for Operations

Enclosure:  
As stated

**NRC RESPONSE TO APRIL 6, 2011, QUESTIONS  
FROM LEGISLATIVE LEADERS IN MASSACHUSETTS**

- 1. Are there any plans for relocation of the spent nuclear material currently held at the plants, which are over-capacity? Will dry storage be considered? Why is dry storage not the preferred method considering its “passive” maintenance requirement?**

The spent fuel pools at Pilgrim are not over capacity. The amount of spent fuel material that can be stored in a spent fuel pool is governed by each plant's Technical Specifications. The original limit, as well as any increases to the limit, are reviewed by the NRC on a plant-specific basis. Current regulations permit re-racking (placing fuel rod assemblies in new storage racks designed to safely allow closer spacing in spent fuel pools) and fuel rod consolidation (i.e., removing the spacers from fuel assemblies and allowing individual rods to be placed closer together), subject to NRC review and approval, to increase the amount of spent fuel that can be stored in the pool.

Many licensees have pursued another option for increasing capacity through storage in an independent spent fuel storage installation (ISFSI). Such storage may be either at the reactor site or elsewhere. The spent fuel may be stored in wet or dry ISFSIs. On-site storage of spent fuel in dry casks has been used increasingly among licensees needing additional capacity for storing spent fuel. The NRC has found these methods of spent fuel storage to be acceptable and protective of public health and safety.

After work on developing the Yucca Mountain repository in Nevada was halted in 2010, the Department of Energy (DOE) established the Blue Ribbon Commission on America's Nuclear Future. This Federal Advisory Committee will evaluate and provide recommendations for developing safe, long-term solutions to managing the Nation's spent nuclear fuel and high-level waste. In the interim, until a permanent repository is identified, licensed and developed, the NRC will ensure that nuclear power plants safely store spent nuclear fuel onsite in accordance with all NRC regulatory requirements.

- 2. Will the NRC and DOE consider seeking changes to the law if necessary to allow for the use of the Nuclear Waste Fund for accelerated dry cask storage and/or the licensing of an interim national repository?**

At this time, we are not aware of any plans to change the current law to allow for the use of the Nuclear Waste fund for accelerated dry cask storage.

- 3. Are there any plans for future spent nuclear material?**

Until a permanent Federal nuclear waste repository is developed, future spent nuclear material will be stored either in a spent fuel pool or in an ISFSI.

Enclosure

**4. For how long does the NRC anticipate that spent fuel will be stored on-site at Pilgrim? What about the other New England facilities?**

For Pilgrim and other New England facilities, spent fuel will be stored either in the spent fuel pool or in an ISFSI until a permanent Federal nuclear waste repository is developed.

**5. Are there plans for storing spent fuel generated by any of the New England plants off-site?**

NRC is not aware of any plans for storing spent fuel generated by any of the New England plants offsite. Currently, Vermont Yankee has several dry casks on site, as does Seabrook Station.

**6. Current understanding is that all the spent material is in the upper levels of the Pilgrim plant and is very susceptible to an aerial attack; are their plans to strengthen/protect the structure from air or relocate the wet pool to a different, more secure location?**

The NRC has studied this issue and does not believe the spent fuel pool at Pilgrim to be susceptible to an aerial attack. The NRC continues to believe that the Pilgrim Nuclear Power Plant, including its spent fuel pools located in the upper levels, can and does operate safely.

**7. Japan reprocesses and reuses spent nuclear material, what are the pros and cons of this approach and are there any plans to implement it in the US?**

Reprocessing of spent nuclear material in the U.S. is both a policy and economic issue. Whether or not the U.S. pursues reprocessing has become an issue that is determined by legislative or executive action. Reprocessing of spent nuclear materials from commercial power reactors took place on a limited basis in the U.S. during the 1960s and early 1970s; however, a ban on reprocessing was implemented in 1977 for nuclear proliferation reasons. There is no commercial reprocessing of nuclear power fuel in the U.S. at present; almost all existing commercial high-level waste is in the form of unprocessed spent fuel. When this ban was lifted in 1981, there was no private sector interest in resuming reprocessing for economic reasons. Should the reprocessing of spent nuclear fuel from commercial power reactors be approved by legislative or executive action, the role of the NRC in licensing any future reprocessing facilities would likely be to ensure that reprocessing is done safely and securely. Discussions regarding the pros and cons of reprocessing are more appropriately addressed by organizations such as the Department of Energy ([www.doe.gov](http://www.doe.gov)) and the Nuclear Energy Institute ([www.nei.org](http://www.nei.org)). For current information on regulatory initiatives within the NRC regarding efforts associated with developing regulations for future reprocessing facilities, please see the NRC's public webpage at the following link:

<http://www.nrc.gov/materials/reprocessing.html>.

**8. The cables powering the Pilgrim plant are not made for a moist environment, though they have spent 40 years in such a situation; what inspection/repair/replacement system is in place to ensure the cables remain in working condition?**

The NRC regulations require licensees to assess the condition of their components; monitor the performance or condition of structures, systems, and components in a manner sufficient to provide reasonable assurance that they are capable of fulfilling their intended functions; and establish a suitable test program to ensure that all testing necessary to demonstrate that components will perform satisfactorily in service is identified and performed. The NRC expects licensees to identify conditions that are adverse to quality for cables, such as long-term submergence in water. Upon discovery of a submerged condition, the licensee should take prompt corrective actions to restore the environment to within the cable's design specifications, immediately determine the operability of the cable(s) to perform its intended design function, and determine the impact of the adverse environment on the design life of the cable. These corrective actions typically involve the removal of water, the installation of a sump pump or the repair of the drainage conditions, and evaluation of the operability of the cable(s) including testing where appropriate. The long-term corrective actions could involve establishment of a condition monitoring program for all cables which are inaccessible, underground, and under the maintenance rule. Long-term corrective actions could also include testing of cables to verify the cables are not degraded, as well as the visual inspection of manholes for water accumulation to ensure continued operability.

**9. Will the NRC allow independent experts with security authorization to see studies they used to conclude further on-site spent material storage was safe?**

In 2004, the National Academy of Sciences (NAS) reviewed the actions taken by the U.S. NRC concerning security and safety of the storage of spent nuclear fuel at both wet storage pools and dry cask storage facilities. The NAS published a classified report in July 2004, "Safety and Security of Commercial Spent Nuclear Fuel Storage" and provided a copy to both the U.S. Congress and the NRC. In March 2005, the Commission provided a Report to Congress on the National Academy of Sciences Study on the Safety and Security of Commercial Spent Nuclear Fuel Storage (Report to Congress) that addressed this agency's proposed actions to be taken to address the NAS recommendations (Agencywide Documents Access and Management System (ADAMS) accession no. ML050280428. The NAS provided an unclassified version of its report to the public on April 6, 2005; that report can be accessed at the following NAS link:

[http://www.nap.edu/catalog.php?record\\_id=11263](http://www.nap.edu/catalog.php?record_id=11263)

**10. Will the NRC provide access to documents it previously has refused to disclose regarding its analysis of the safety and security of our commercial nuclear reactors and spent fuel pools?**

The NRC has traditionally provided the public with a significant amount of information about the facilities and materials for which the NRC has regulatory responsibilities, subject to legislative and presidential restrictions on classified and security-related information. The Atomic Energy Act, subsequent legislation, and various NRC regulations have given the public the right to participate in the licensing and oversight process for nuclear power reactors and other NRC licensees. To participate in a meaningful way, the public must have access to information about the design and operation of regulated facilities and use of nuclear materials. However, NRC

and other government agencies have always withheld some information from public disclosure for reasons of security, personal privacy, or commercial or trade secret protection. Regarding the disclosure of information previously withheld from the public, the NRC would review any requests for the release of specific information provided the individual(s) had a need to know and the release of the information did not pose a security risk to the public.

**11. Pressure build-ups can cause explosions in the [Mark] 1 core design as was seen in Japan, what adjustments have been made to Seabrook and Vermont Yankee to deal with this design flaw? Germany uses a steam release which is then filtered, is this the best option?**

There are generally two types of nuclear power reactors in operation in the U.S.: pressurized water-reactors (PWRs) and boiling-water reactors (BWRs). Seabrook is a PWR and is not similar in design to the plants at the Fukushima Daiichi nuclear facility in Japan. The BWR plants operating in the U.S. include several different containment building designs. Among these is the Mark I containment building design that is similar to plant designs at the Fukushima Daiichi nuclear facility in Japan. Thirty-five of the 104 operating nuclear power plants in the U.S. are BWRs, as are the reactors at Fukushima. Twenty-three of the U.S. BWRs have the same Mark I containment as the Fukushima reactors. At this time, the NRC is not aware of all the differences that may exist between the Fukushima reactors and those of similar design and vintage operated in the U.S. or elsewhere.

Hydrogen explosions have been a major aspect of the Fukushima accident. In the U.S., NRC Generic Letter (GL) 89-16, "Installation of a Hardened Wetwell Vent," conveyed the importance of having a robust pathway for venting the primary containment in certain severe accident scenarios. In response, BWRs such as Pilgrim and Vermont Yankee made modifications to the plant consistent with the intent of the GL. This design feature permits a controlled depressurization of primary containment as well as a controlled release of combustible hydrogen generated by damaged fuel to the vent stack during severe accidents to prevent such explosions. The German design noted was intended to also relieve containment pressure during severe accidents; however, the NRC evaluated the hardened wetwell vent design and determined that it adequately achieved the required safety function.

**12. What emergency planning adjustments will be made?**

No emergency planning adjustments are planned at this time; however, the Commission directed the NRC staff to establish a senior level task force to conduct a methodical and systematic review of NRC processes and regulations to determine whether the agency should make additional improvements to its regulatory system and make recommendations to the Commission for its policy direction. Emergency planning is one of the areas under review by the task force.

**13. Is the 10 mile evacuation zone still accurate? Americans were recommended to evacuate any area within 50 miles of the Fukushima plant.**

Yes, the NRC considers the current 10 mile emergency planning zone (EPZ) to be protective of public health and safety. The 10-mile EPZ is where exposure from a radiological release event would likely be from the radioactive plume, and it is in this EPZ where protective actions such as

sheltering and/or evacuation would be appropriate. Protective actions for the population within the 10 mile EPZ are planned in detail, can be implemented rapidly, and are evaluated by FEMA biennially. These long-standing plans have been in place for over 30 years and have been well practiced by local and State offsite response organizations. FEMA has repeatedly provided NRC with the finding that reasonable assurance exists that protective actions can and will be implemented should it ever be necessary.

Beyond the 10-mile EPZ and out to the 50-mile EPZ is the ingestion exposure pathway where exposure to radionuclides would likely be from ingestion of contaminated food/milk and surface water. These zones are not limits, but rather provide for a comprehensive emergency planning framework that would allow expansion of the response efforts beyond the zones should radiological conditions warrant such expansion. The decision to expand evacuation of U.S. citizens out to 50 miles from the Fukushima Daiichi facility was a conservative decision that was made considering several factors, including an abundance of caution resulting from limited and unverifiable information concerning event progression at multiple reactors at the Fukushima Daiichi facility. The NRC based its assessment on information available at the time regarding the condition of the station which included significant damage to the reactor units 1, 2, and 3, as well as a loss of cooling to one or more spent fuel pools.

**14. Any plans for dealing with people on Cape Cod in an emergency situation considering the prevailing winds travel in that direction?**

The State and local plans that support the Pilgrim station provide very detailed planning for the 10-mile plume exposure EPZ, as well as include plans to address the 50 mile ingestion pathway exposure planning zone. The Cape Cod area is encompassed in the 50 mile ingestion pathway zone.

**15. Any potassium iodine pill stockpiling precautions planned?**

The NRC remains committed to making potassium iodide (KI) available to States with populations within the 10-mile EPZ of nuclear power plants. Each State or local authority develops the plans for KI stockpiling and/or distribution that is most effective for its specific population.

At this time, the NRC is not aware of a plan to stockpiling iodine pills. In the unlikely event of radiological release, the residents should listen to the protective action decisions of their states. The protective action decisions could include actions such as sheltering, evacuation, or taking KI.

**16. Current evacuation reception centers can only deal with 20% of the intended population, are there plans for more/larger centers?**

There are no plans for requiring larger or more reception centers going forward. Research conducted by NRC and FEMA indicates that such centers would not be more widely used in an evacuation; studies of other large evacuations show that most people use hotels or the residence of relatives and/or friends after evacuating their home.

**17. Are there any plans to ensure emergency workers have the proper equipment and communication devices (i.e. interoperable radios)?**

The NRC notes that the Department of Homeland Security has made grants available to improve the equipment available to emergency workers. The adequacy of communications during nuclear plant emergency response is evaluated by FEMA biennially. FEMA has informed NRC that the emergency response capabilities around Pilgrim Station provide reasonable assurance that protective actions can and will be implemented should it be necessary.

**18. Are there any plans to install air radiation monitors around plants to more accurately identify radiation plume direction in the case of a release? What about meteorological monitors?**

There are no plans at this time to install such monitors. However, while fixed air radiation monitors are not required, the capability to monitor radiation and the environment around nuclear plants is required. This capability is evaluated by FEMA and the NRC periodically. In addition, the U.S. Environmental Protection Agency has a nationwide radiation monitoring system, RadNet, to continuously monitor the nation's air and regularly monitor drinking water, milk, and precipitation for environmental radiation. This system has been utilized extensively to detect any radionuclides migrating to the U.S. from releases in Japan.

**19. What is the purpose of the President's 90 day review of our commercial facilities? Will there be an opportunity for the public or interested states to provide input?**

On March 17, 2011, the President of the United States provided an official statement regarding the earthquake and tsunami that struck Japan on March 11, 2011, and the resultant events at the Fukushima Daiichi nuclear facility (see "Remarks by the President on the Situation in Japan" at [www.whitehouse.gov](http://www.whitehouse.gov)). In his remarks, the President stated the following:

Our nuclear power plants have undergone exhaustive study, and have been declared safe for any number of extreme contingencies. But when we see a crisis like the one in Japan, we have a responsibility to learn from this event, and to draw from those lessons to ensure the safety and security of our people. That's why I've asked the Nuclear Regulatory Commission to do a comprehensive review of the safety of our domestic nuclear plants in light of the natural disaster that unfolded in Japan.

It is clear from the statements made by the President that the purpose of the 90-day review is to draw lessons from the events at the Fukushima Daiichi nuclear facility in Japan and to apply those lessons in the U.S. to ensure the continued safety and security of the public. In response to the President's request, the NRC issued a Tasking Memorandum on March 23, 2011 that instructed the NRC staff to review U.S. nuclear power plant safety in the aftermath of the March 11 earthquake and tsunami and the resulting crisis at the Japanese Fukushima Daiichi nuclear power plant. To do this, the NRC created an agency task force, made up of current senior managers and former NRC experts with relevant experience, to conduct both short- and long-term analysis of the lessons that can be learned from the situation in Japan. The NRC is performing a systematic and methodical review, examining all available information from Japan to see if there are changes that should be made to programs and regulations to ensure

adequate protection of public health and safety. The NRC established an aggressive schedule for the task force to provide formal updates to the Commission on the short-term effort in 30, 60, and 90 days. The first 30-day status briefing was provided to the Commission on May 12, 2011. During this briefing, senior NRC staff indicated that opportunities for external stakeholder input and involvement would be available during the longer term evaluations rather than the short-term efforts due to the expediency of these efforts. The NRC staff indicated that it anticipates longer term evaluations by separate working groups or steering committees to address specific issues that it identifies as lessons learned. The results of the task force's work will be made public.

NRC inspectors who are posted at every U.S. nuclear power plant will also support the task force's short-term effort, supplemented as necessary by experts from the agency's regional and Headquarters offices. The task force will help determine if any additional NRC responses, such as orders requiring immediate action by U.S. plants, are called for prior to completing an in-depth investigation of the information from events in Japan.

The longer-term review will inform any permanent NRC regulation changes determined to be necessary. The Task force will begin the long-term evaluation no more than 90 days from March 23, and a report with recommended actions will be provided to the Commission within 6 months of the start of that effort. The Commission plans to hold monthly public meetings on the status of the NRC response to the Japan earthquake and will post the meeting schedule in the NRC's public webpage. Additionally, there are numerous paths for the public to participate in NRC's regulatory processes to include rulemaking, licensing, enforcement, and hearings. The following link provides the various ways the public may participate in the NRC's decision-making process: <http://www.nrc.gov/public-involve.html>.

**20. With no solution to the long-term disposal of spent fuel and in light of the disaster in Japan, will the NRC commit to re-evaluating its current rules and regulations regarding the on-site storage of spent fuel with public input?**

In Staff Requirements Memorandum (SRM-SECY 09-0090) issued in September 2010, the Commission approved revisions to the draft final rule on nuclear waste confidence. It directed the NRC staff to initiate a long-term rulemaking to address impacts of storage of spent fuel at onsite storage facilities, offsite storage facilities, or both, for extended periods. The Commission affirmed its confidence that spent nuclear fuel can be stored safely and securely without significant environmental impacts for at least 60 years after operation at any nuclear power plant either in the SFP or either onsite or offsite ISFSIs. Prior to the events in Japan, the NRC staff provided a proposed plan for the long-term update to the Waste Confidence Rule (10 CFR 51.23) to the Commission in SECY-11-0029 which may be accessed at the following link: <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2011/2011-0029scy.pdf>.

The senior level task force previously mentioned will also evaluate the need for changes in this area going forward.

**21. What assurances can the NRC provide to the Commonwealth that Pilgrim and VT Yankee not just meet current NRC rules and regulations for safety and security but that there are material differences in the way the plants were designed, upgraded and regulated that will reduce the risk of what is happening in Japan, as they are being re-licensed?**

The NRC believes that all U.S. nuclear plants are currently safe. Plant design and operational differences do exist between U.S. and Japanese plants; however, the NRC will analyze the events in Japan and develop lessons learned and recommendations to improve plant safety, as appropriate. The review may involve other Federal departments and agencies. Lessons learned will be used to develop longer-term agency actions. The NRC has already issued an Information Notice to inform licensees about the effects of the earthquake on nuclear power plants in Japan. The NRC has also issued a Bulletin to require licensees to provide verification of compliance with NRC requirements for having strategies in place to maintain or restore cooling, containment, and spent fuel pool cooling following the loss of a large area of the plant due to fire or explosion. The information requested by this Bulletin will be used to determine if additional regulatory requirements are necessary, if implementation guidance needs to be improved, if inspection programs need to be enhanced, or if additional assessment of licensee mitigating strategies is needed. Although these requirements were developed following the terrorist events of September 11, 2001, the strategies could also be useful to maintain or restore core cooling, containment, and spent fuel pool cooling following other events such as those that happened in Japan.

The NRC will take additional actions that it believes to be appropriate as its understanding of the events in Japan becomes more clear independent of whether a plant is being relicensed or not.

**22. Can you provide us with an estimated yearly cost to Massachusetts consumers and taxpayers for the current on-site storage of this spent fuel instead of it being stored off-site?**

The licensee is responsible for the storage of spent fuel. Because the licensee has a contract with the Federal government to take possession of the spent fuel, and that contract is currently not being honored, many licensees have sued the Federal government to recover these storage costs. Since the NRC does not have jurisdiction in this matter, we cannot comment on how these costs are being recovered.

D. Patrick

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In closing, I want to assure you that the agency continues to make its domestic responsibilities for the licensing and oversight of U.S. licensees its top priority and that U.S. nuclear power plants continue to operate safely. As the NRC conducts the near-term evaluation of the relevance of the recent Japanese events to the U.S. fleet, the agency is continuing to gather the information needed for us to take a longer, more thorough look at the events in Japan and their lessons for the NRC. Based on these efforts, the agency will take all appropriate actions necessary to ensure the continuing safety of the American public.

I appreciate this opportunity to respond to your questions and trust that I have satisfied your concerns.

Sincerely,  
*/RA/*

R. W. Borchardt  
Executive Director  
for Operations

Enclosure:  
As stated

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