

**Congress of the United States**  
**House of Representatives**  
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April 15, 2011

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

Dear Chairman Jaczko:

I write to express my concern regarding the post-Fukushima meltdown inspections currently being conducted by Nuclear Regulatory Commission (NRC) personnel at U.S. nuclear power plants. According to reports I have received, the NRC has decided to keep the results of most of these investigations secret, and their scope and depth may be severely constrained. As such, they may not provide the sort of information needed to adequately assess, let alone remedy, the safety of U.S. nuclear facilities.

As you know, on March 23 the Commission voted to require a multi-phase review<sup>1</sup> of U.S. nuclear reactor safety in the wake of the Japanese meltdown. The near-term review portion of these efforts called for the establishment of a task force to:

“Evaluate currently available technical and operational information from the events that have occurred at the Fukushima Daiichi nuclear complex in Japan to identify potential or preliminary near term/immediate operational or regulatory issues affecting domestic operating reactors of all designs, including their spent fuel pools, in areas such as protection against earthquake, tsunami, flooding, hurricanes; station blackout and a degraded ability to restore power; severe accident mitigation; emergency preparedness; and combustible gas control.”

The task force was additionally directed to develop near-term recommendations for regulatory and other changes, and is also required to inform its efforts using stakeholder input. The longer (90 day) review is supposed to include more extensive stakeholder input, and the task force was directed in this phase to “evaluate all technical and policy issues related to the event to identify potential research, generic issues, changes to the reactor oversight process, rulemakings, and adjustments to the regulatory framework that should be conducted by NRC.” All of the results of these efforts were supposed to be made public.

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<sup>1</sup> Tasking Memorandum – COMBJ-11-0002 – NRC Actions Following The Events In Japan

I have recently learned that the NRC has initiated inspections at operating nuclear power plants for purposes of assessing the operational or regulatory issues that may have arisen as a result of the Fukushima meltdown, and that the results of these inspections, which are intended to inform the 90 day review, must be completed by April 29. I have also learned of the following constraints that have been placed on these inspections:

- The NRC is only allowing its inspectors 40 hours in which to perform each inspection for nuclear power plants that contain one nuclear reactor. For nuclear power plants with more than one unit, inspectors are being provided with only 50-60 hours total in which to complete their work.
- The NRC inspectors were initially told to limit their inspections to the adequacy of safety measures needed to respond to Design Basis Events. This meant that inspectors would be assessing licensees' ability to withstand and respond only to events that have already been contemplated and analyzed by the NRC and for which regulatory requirements have been implemented, but not events such as the ones that occurred in Japan, which were previously believed to be impossible.
- After several NRC inspectors complained that it made no sense to limit the scope of the inspections to Design Basis Events, the guidance was changed to enable inspectors to look beyond them; however, they were explicitly told not to record any of their beyond Design Basis observations or findings in documents that would be made public as part of the Commission's review or public report(s). Instead, these findings would be entered into a private NRC database and kept secret.

These limitations, if true, severely undermines my confidence in the Commission's interests in conducting a full and transparent assessment of the ability of U.S. nuclear power plants to be kept safe in the event of an incident that exceeds the current design basis assumptions regarding earthquakes or electricity outages -- such as the ones that occurred in Japan. This also seems entirely at odds with the Commission-approved direction to study the implications of the Fukushima meltdown on U.S. facilities and report publicly on the findings of the study. This is unacceptable, and must immediately be remedied. We should stand prepared to learn from the catastrophe in Japan and plan ahead to address what was unforeseen but occurred anyway, rather than attempting to hide our vulnerabilities from public view and, potentially, use the fact that the information will be kept secret to avoid taking all necessary regulatory action. In order to better understand what the NRC is doing here, I request that you please respond to the following questions and requests for information:

1. Who at the Commission made the decisions to a) initially direct its inspectors to limit the scope of the inspections to Design Basis Events and b) subsequently direct its inspectors not to record findings or observations of any beyond Design Basis Events in a manner that would result in the public disclosure of any identified vulnerabilities? Please provide me with a copy of all documents (including reports, emails, correspondence, memos, phone or meeting minutes or other materials) related to both the

decisions regarding the scope of the inspections as well as the manner in which inspection findings and observations would be recorded and reported.

2. Will you immediately reverse the current direction to NRC inspectors to keep all findings and observations of vulnerabilities of U.S. reactors to beyond Design Basis events secret and excluded from all public reports on the Commission's Fukushima review? If not, why not?
3. The NRC review is supposed to evaluate the currently available information from the events that occurred in Japan to identify changes that might be needed at U.S. nuclear power plants of all designs. For each of the following events that are known to have occurred in Japan, please indicate a) whether the event in question is considered to be a "design-basis event" by the NRC, b) whether NRC inspectors will be required to evaluate whether the U.S. nuclear power plants they are inspecting are capable of preventing or mitigating such an event, c) if not, why not, since the Commission clearly stated that all such events were supposed to be analyzed, d) if not, how regulatory or other recommendations will be developed that ensure that U.S. nuclear power plants are capable of preventing or mitigating such an event, e) whether the findings and observations associated with the inspections designed to evaluate U.S. ability to prevent or mitigate such an event will be made public as part of the NRC's 30, 60 and 90 day reports (and if not, why not), and f) whether the NRC intends to address U.S. vulnerability to the event at all through regulatory or other requirements.
  - i) An earthquake that is more severe than the one the nuclear power plant was designed to withstand.
  - ii) For coastally-located nuclear power plants, a tsunami that is more severe than the one the nuclear power plant was designed to withstand.
  - iii) A loss of operating power that is longer than current regulations are required to address.
  - iv) A total station blackout (i.e. loss of operating power and failure of emergency diesel generators) that is longer than current regulations are required to address.
  - v) A hydrogen explosion that occurs due to the buildup of hydrogen in the core or other areas of a nuclear reactor due to the failure of mitigation technologies such as hardened vents or hydrogen re-combiners, and the causes of such failures.
  - vi) A hydrogen explosion that occurs due to the buildup of hydrogen in the spent fuel storage area of a nuclear reactor due to the absence of mitigation technologies such as hardened vents or hydrogen re-combiners.

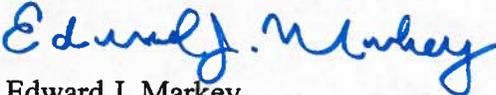
- vii) A breach in the containment vessel of a nuclear reactor core caused by a hydrogen explosion.
- viii) A breach in the structure of a spent nuclear fuel storage area due to an earthquake or hydrogen explosion.
- ix) The failure of the recirculation pump seals within the reactor pressure vessel which may prevent cooling water from fully filling the pressure vessel and thus covering and cooling the nuclear fuel rods contained therein.
- x) The failure of one or more safety relief valves within the primary containment area that could enable the transfer of radioactive core material between the drywell and the torus.
- xi) The potential melting of core material through the pressure vessel and into the drywell or torus of the nuclear reactor.
- xii) The failure of the isolation condenser and/or reactor core isolation cooling systems and subsequent inability to provide cooling function to the nuclear reactor cores.
- xiii) The failure of the primary containment vessel spray cooling and core spray systems.
- xiv) The failure of systems used to cool spent nuclear fuel storage areas, including areas that contain varying amounts of spent nuclear fuel of varying ages.
- xv) The failure of diagnostic equipment to accurately monitor temperature, water levels, hydrogen/oxygen concentrations, pressures and radiation onsite, both during a total station blackout and after basic electricity function is restored (such as if the devices have been damaged by water, radiation or other events).
- xvi) The absence of a source of fresh cooling water with which to cool the reactor core and spent nuclear fuel storage areas.
- xvii) The absence of a means by which to store large quantities of highly radioactive water that has leaked or spilled after being used to cool the core and spent nuclear fuel storage areas.
- xviii) Repeated earthquake aftershocks that further threaten the integrity of the already-compromised reactor core, spent nuclear fuel storage areas, and emergency operations.
- xix) The ability to manually repair or restore function associated with any of the above failures or events when faced with extremely high levels of radiation that may threaten the health and safety of those both on and offsite.

4. The Commission directed its staff to obtain external stakeholder input as part of both its near-term and longer-term work. Please fully describe all plans to solicit such input. Specifically, will any licensee or other nuclear industry personnel be accompanying inspectors during these inspections at nuclear power plants? If so, will NRC also ensure that appropriate non-industry individuals that possess the appropriate expertise and security clearances are also provided such an opportunity?

5. Why have inspectors only been provided with 40 hours (or 50-60, in the case of a multi-unit nuclear power plant) with which to complete their work? Why does the Commission have confidence that the necessary knowledge with which to inform our own safety efforts can be obtained in such a short period of time?

Thank you very much for your attention to this important matter. Please provide your response no later than Friday April 29, 2011. If you have any questions or concerns, please have your staff contact Dr. Michal Freedhoff of my staff at 202-225-2836.

Sincerely,

  
Edward J. Markey