EDWARD J. MARKEY
7TH DISTRICT, MASSACHUSETTS
www.house.gov/markey

ENERGY AND COMMERCE COMMITTEE
RANKING MEMBER
SUBCOMMITTEE ON
TELECOMMUNICATIONS AND
THE INTERNET
RESOURCES COMMITTEE

Congress of the United States
House of Representatives
Washington, DC 20515–2107

2108 RAYBURN BUILDING
WASHINGTON, DC 20515–2107
(202) 225–2836

DISTRICT OFFICES:
5 HIGH STREET, SUITE 101
MEDFORD, MA 02155
(781) 396–2900

188 CONCORD STREET, SUITE 102
FRAMINGHAM, MA 01702
(508) 875–2900

April 13, 2001

Mr. Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Meserve:

I am writing to express my concerns over a recent report indicating potential problems at the Seabrook nuclear plant. According to the U.S. Nuclear Regulatory Commission's (NRC) Daily Event Report 37810 from March 6, 2001, there was an "Unusual Event" at the Seabrook plant, when the supply of offsite power was disrupted by the severe winter storm. Because the power from three offsite lines was interrupted, the Emergency Diesel Generators (EDGs) were activated to bring the reactor down safely.

Obviously, reliance on EDGs is undesirable but sometimes unavoidable. In the face of weather reports indicating severe winds or snow, however, it is likely that the offsite power grid will experience interruptions, and, therefore, it is likely that the operator will be forced to resort to EDGs in circumstances that would make evacuation almost impossible should an accident occur. That is why prudence suggests that plants should be deliberately shut down if the anticipated weather condition is likely to interrupt the offsite power system.

That Seabrook would be allowed to operate in weather conditions that could trigger the activation of the EDGs is a particular cause for concern given Seabrook's history of problems with EDGs. According to the NRC's Weekly Information Report from December 22, 2000, a bearing failed in an EDG while it was being overhauled by the licensee in the wake of a piston failure and crank case explosion. And my letter to you on April 5, 1999, highlighted the fact that faulty relays would have prevented one of the EDGs from providing power to critical systems and that this problem had gone undetected for months.

While it appears that we were fortunate in this most recent episode, I am concerned about the circumstances that led to this event. In the past, licensees have reduced power or shut down in the case of other severe weather, such as hurricanes. For example, an excerpt from the NRC news release No. II-99-47 from September 14, 1999, regarding Hurricane Floyd reads: "In general, safety procedures require nuclear plants to begin shutting down should winds be projected to reach 73 miles per hour." While the winds generated by a hurricane pose the additional risk of high-velocity projectiles endangering the plant, a severe snowstorm can affect the offsite power supplies and also obstruct escape routes in the case of a radiological emergency. Since the effects of the weather conditions do not

PRINTED ON RECYCLED PAPER

seem to have been anticipated in this instance, I am writing to ask your response to the following questions:

(1) What are the standard procedures for nuclear plants in severe or dangerous weather? Is it established practice to reduce power or shutdown in the face of severe weather? Why was it not expected that the offsite power was in danger of being cut off by the storm?

(2) What steps will Seabrook and the NRC take to ensure that transmission lines to power plants will be better protected against severe weather events in the future? What, if any, changes in procedures will Seabrook and the NRC make to ensure that a shutdown from full power during severe weather conditions does not occur again?

(3) Did the EDGs behave satisfactorily during the "Unusual Event"? Were there any failures of those systems?

(4) According to the Daily Event Report, Seabrook's "steam-driven emergency feedwater pump failed to automatically actuate". What is the significance of the emergency feedwater pump failing? Why did it fail? What steps has the licensee taken to ensure that this system does not fail in the future?

(5) According to the Daily Event Report, atmospheric dumps were used as the heat sink. This would mean that the walls of the steam generator tubes were then providing the main barrier against a radiation leak. However, previous problems at other nuclear power plants have indicated that the integrity of steam generator tubes is suspect. What circumstances led to the use of the atmospheric dumps? What protocols generally lead to the use of atmospheric dumps? What procedures are in place in the event of all of the steam generator tubes leaking during situations in which the atmospheric dumps are being used?

(6) What, if any, provision does the Seabrook emergency action plan make for the possibility of a radiological emergency during a severe winter snowstorm of the type New England experienced in early March? What impact would such a storm have on evacuation and emergency response efforts?

(7) I have obtained a copy of a letter from the NRC to the Seacoast Anti-Pollution League dated April 8, 1993, responding to their concerns about a snowstorm from March of that year. The letter reads, in part: "There may, in fact, be circumstances (such as a severe winter storm) where, in the event of a radiological emergency, sheltering rather than evacuation would be the appropriate protective action because evacuation in storm conditions would pose greater risk to the public." What is the acceptable radiological exposure for members of the general public that use "sheltering rather than evacuation"? What are the relevant limits for children and pregnant women?

Later in the same letter, the NRC stated: "As long as the Seabrook plant remained within its license conditions and technical specifications, there was no safety reason for the plant to shut down during the snowstorm." What extremes could be reached in a snowstorm that would cause the plant to exceed its license conditions and technical specifications? Do the license conditions and technical specifications pertain to the integrity of the offsite power supply?

(8) Please provide me with the report from the Special Inspection Team when it is completed.

I appreciate your attention to these matters. I would appreciate it if you could respond to the concerns raised in this letter by May 4, 2001. If you have any questions, please contact Dr. Brendan Plapp or Mr. Jeff Duncan of my staff at 202-225-2836.

Sincerely,

Ed Markey

Edward J. Markey
Member of Congress