ENCLOSURE 1

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 8, 1993

Joan C. Pratt
Charles W. Pratt
Seacoast Anti-Pollution League
5 Market Street
Portsmouth, NH 03801

Dear Ms. Pratt and Mr. Pratt:

I am responding to your letter of March 22, 1993, to Chairman Ivan Selin of the U.S. Nuclear Regulatory Commission (NRC) in which you expressed concern about operation of the Seabrook nuclear power plant during the late winter storm on March 13-14, 1993. You asked who is responsible for deciding to shut a plant down in severe weather conditions and why such a decision was not made in advance of the storm. You also asked whether the law requires an effective emergency plan to be in place during plant operations and suggested that the delayed restart of the Turkey Point plant set a precedent on this issue.

In discussing the NRC's policy toward operation of nuclear reactors in storm conditions, it might be helpful to first consider the role of emergency planning in the NRC's defense-in-depth safety philosophy.

Briefly stated, this philosophy (1) requires high quality in the design, construction, and operation of nuclear plants to reduce the likelihood of malfunctions in the first instance; (2) recognizes that equipment can fail and operators can make mistakes, therefore requiring safety systems to reduce the chances that malfunctions will lead to accidents that release fission products from the fuel; and (3) recognizes that, in spite of these precautions, serious fuel damage accidents can happen, therefore requiring containment structures and other safety features to prevent the release of fission products offsite. The added feature of emergency planning to the defense-in-depth philosophy provides that, even in the unlikely event of an offsite fission product release, there is reasonable assurance that emergency protective actions can be taken to protect the population around nuclear power plants.

Following the incident at Three Mile Island, the Commission issued regulations stipulating that "no operating license for a nuclear power reactor will be issued unless a finding is made by NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency." The regulations gave 16 emergency planning standards and defined the areas of responsibility of the licensee, the State, and local organizations concerned with emergency responses. In essence, the Commission added a fourth layer to the NRC's defense-in-depth safety philosophy.

With respect to the adequacy of emergency plans, the standard of reasonable assurance requires the NRC staff to make a predictive finding that there are no undue risks to the public health and safety. It does not require a finding of zero risk. In particular, the standard of reasonable assurance does not require an absolute demonstration that the population within the plume

exposure emergency planning zone (EPZ) can be evacuated at all times or in all circumstances or within a specific time or that a specified radiation dose can be prevented. 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. Therefore, what constitutes reasonable assurance in the area of emergency planning in the initial licensing phase for a nuclear power plant is a finding that adequate emergency plans are in place to permit a range of protective actions as dictated by conditions, that there are adequate staff and facilities to implement the plans, and that the plans are workable. As stipulated in its regulations, the NRC bases its finding on a review of Federal Emergency Management Agency (FEMA) "findings and determinations as to whether State and local emergency plans are adequate and whether there is reasonable assurance that they can be implemented."

After a plant is licensed, the NRC recognizes that deficiencies may develop in emergency plans for a variety of reasons. There may be natural events, such as snowstorms or floods, that affect emergency response plans. Licensees are not required to shut down their plants solely because of the temporary effects of these conditions on emergency response plans. NRC Regulations [10 CFR 50.54(s)(2)(ii)] provide that, if emergency preparedness deficiencies are not corrected within four months after an NRC finding of lack of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the NRC will determine whether the reactor shall be shut down until the deficiencies are remedied.

Nuclear power plants are designed to operate and shut down safely under very severe natural conditions, including earthquakes, high winds, and flooding. The NRC determines the limits on operation of a nuclear reactor during the licensing process and these limits are reflected in license conditions and the plant technical specifications. 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. In addition, each licensee follows an NRC-approved plan for classifying events based on their severity and initiating appropriate emergency response. Severe natural phenomena are included among these events which are classified in ascending order of seriousness as (1) unusual event, (2) alert, (3) site area emergency, or (4) general emergency. In the case of the Seabrook plant, as you correctly noted in your letter, the licensee issued a notice of unusual event based upon the storm. But this notice did not imply a need for any assistance from State or local authorities.

The NRC monitors plant operations through its inspection program, by the presence of onsite resident inspectors, and has direct communication links on a continuous basis with each control room. Day-to-day decisions concerning plant operation, even under severe weather conditions, are the responsibility of the nuclear power plant licensee. The NRC monitors the operation of the plant, and as long as the licensee operates within the terms of its license, technical specifications, and emergency plan, the NRC would not normally

become involved in day-to-day plant operations. However, under the provisions of the Atomic Energy Act, the Commission has the authority at any time to issue orders to licensees requiring, among other things, plant shutdown if the NRC determines the conditions so warrant.

In the case of Turkey Point, I should point out that the licensee voluntarily shut down the nuclear power plant until FEMA, in cooperation with the State of Florida, Dade and Monroe Counties, and local municipalities, could complete an assessment of offsite radiological emergency preparedness capabilities in the 10-mile emergency planning zone around the plant. This unprecedented assessment was necessary because of the widespread destruction of public and private property and disruption to the emergency preparedness infrastructure in the vicinity of the Turkey Point nuclear power plant caused by Hurricane Andrew.

I hope this information is responsive to your concerns and clarifies the NRC's role in protecting the public health and safety.

Sincerely,

/s/

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

DISTRIBUTION

Central Files	JKnubel	DCrutchfield	RPedersen
PEPB R/F	TMurley	FCongel	FKantor
JTaylor	FMiraglia	EButcher	EFox
JSniezek	WRussell	LJCunningham	TTMartin, RI
HThompson	JPartlow	PMcKee	MGCrutchley (GT0008712)
JBlaha	AGody	RErickson	NRR Mailroom (GT0008712)

* SEE PREVIOUS CONCURRENCES

OFC	SCE:PEPB:NRR	C:PEPB:NRR	TECH EDITOR	OGC	D:DRSS:NRR
NAME	FKantor:jc	RAErickson	RSanders	MYoung	FCongel
DATE	03/31/93*	03/31/93*	03/31/93*	03/31/93*	04/01/93*

OFC	ADT:NRR	DD:NRR	D:NRR		
NAME	WTRussell	FJMiraglia	TEMurley		
DATE	04/01/93*	04/01/93*	4/7/93		

OFFICIAL RECORD COPY DISK/DOCUMENT NAME: A:\ERICKSON\0008712.GT