



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

DEC 24 1980

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REGISTRATION
SERVICES

Ms. Rina Petit
R.F.D. 4, 132 Page Road
Litchfield, New Hampshire 03051

Dear Ms. Petit:

Your letter of November 16, 1980 to Commissioner Hendrie, has been referred to me for reply. Under the Nuclear Regulatory Commission (NRC) rules of practice, Commissioner Hendrie or one of the other Commissioners may be called upon to review decisions regarding the construction and operation of the Seabrook Nuclear Station and hence it would be inappropriate for Commissioner Hendrie to comment on the matters raised in your letter. Therefore, I am commenting on your letter in which you express concern related to (1) insuring your house against a nuclear accident, (2) decommissioning costs of the Seabrook Nuclear Station, (3) evacuation plans around the Seabrook site, (4) routing of the power lines, (5) state and local officials voicing disapproval of the construction of the Seabrook nuclear power plant, and (6) nuclear waste disposal.

Under the Price-Anderson Act (Public Law 85-256, as amended, 42 USC 2210) there is a system of private funds and government indemnity totaling up to \$560 million to pay public liability claims for personal injury and property damage resulting from a nuclear incident. The Act, which was enacted in 1957, extended in 1965 for ten years until 1977 and extended again in 1975 for an additional ten-year period until August 1, 1987, requires licensees of commercial nuclear power plants having a rated capacity of 100,000 electrical kilowatts or more to provide proof to the Nuclear Regulatory Commission that they have financial protection in the form of private nuclear liability insurance, or in some other form approved by the Commission, in an amount equal to the maximum amount of liability insurance available at reasonable cost and on reasonable terms from private sources. That financial protection, presently \$515 million, is composed of primary private nuclear liability insurance of \$160 million available from two nuclear liability insurance pools, American Nuclear Insurers (ANI) and Mutual Atomic Energy Liability Underwriters (MAELU), and a secondary retrospective premium insurance layer. In the event of a nuclear incident causing damage exceeding \$160 million, each commercial nuclear power plant licensee would be assessed a prorated share of damages in excess of the primary insurance layer up to \$5 million per reactor per incident but not in excess of \$10 million for a single reactor in any year. With 71 commercial reactors operating under this system, the secondary insurance layer totals \$355 million.

The difference of \$45 million between the financial protection layer of \$515 million and the \$560 million liability limit is the present government indemnity level. Under the present system, government indemnity

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will gradually be phased out as more commercial reactors are licensed and licensees participate in the retrospective premium system. At the time the primary and secondary financial protection layers by themselves provide liability coverage of \$560 million, government indemnity will be eliminated. The liability limit would increase without any cap on the limit in increments of \$5 million for each new commercial reactor licensed.

When the Price-Anderson Act was originally enacted in 1957, the liability insurance industry made available an underwriting capacity up to \$60 million for each reactor site. This capacity has increased over the years to the present level of \$160 million. It should also be noted that the insurance industry provides up to \$300 million in property insurance coverage for damage to a reactor and associated property of the utility. Taken together, the total commitment of \$460 million in liability and property insurance commitments for a nuclear facility is one of the largest insurance commitments to a single risk.

The question of the "nuclear exclusion" in an individual's homeowner's policy has been raised numerous times over the last few years. While the Price-Anderson Act does not prohibit private insurers from offering this type of insurance, the standard fire and property insurance policies have contained the nuclear exclusion since 1959. Our understanding of this exclusion is that the insurers consider that property damage caused by a nuclear accident would be covered by nuclear liability insurance and that coverage for the same property damage should be excluded from the conventional homeowner's policy to avoid duplication of insurance. Thus, if a property owner suffered damage to his property because of a nuclear accident, the compensation would come through nuclear liability insurance or government indemnity as provided under the Price-Anderson Act.

The nuclear exclusion question is presently being studied by a committee of the National Association of Insurance Commissioners located in Milwaukee, Wisconsin. Although hearings have been held to review the exclusion and to examine methods for possibly eliminating it, no recommendations have yet been made.

It is not presently possible to accurately determine a total damage figure for real estate, or medical expenses that would arise out of an accident at Seabrook. The type of accident at a reactor would be of critical significance in calculating damages. For example, there were a large number of law suits and claims totaling hundreds of millions of dollars submitted as a result of the Three Mile Island accident on March 28, 1979. These claims did not allege damage to property resulting from contamination, but rather to expenses such as temporary living costs incurred by members of the public or to alleged

decline in the value of property. Whereas the claims for living expenses as a result of the accident have been paid by the nuclear insurance pools, these paid claims give little indication of what other outstanding claims would be sustained by the courts. Not until an accident occurred would it be possible to determine with any degree of certainty what the clean-up costs would be.

At the Three Mile Island site where the reactor sustained severe damage, clean-up costs are estimated to be within the range of \$700 million to \$1.1 billion. The licensee maintains a property insurance policy of \$300 million which will cover some of the clean-up costs, Price-Anderson funds would not cover any of these costs.

In your letter you asked whether provisions for the costs for decommissioning Seabrook have been made. The NRC's regulations require that an applicant for a reactor operating license show that it has reasonable assurance of obtaining the funds necessary to cover the estimated costs of permanently shutting down the facility and maintaining it in a safe condition. An NRC staff evaluation of Public Service Company of New Hampshire's ability to fund the decommissioning of Seabrook will be made when the company applies for an operating license.

You stated that you read "where one nuclear reactor's decommissioning actually cost as much as the original building cost." This statement may be superficially correct but is misleading because it compares the cost to build a reactor using today's dollars to the cost of decommissioning 35 or more years from now using the possibly highly inflated dollars of that time. To compare costs properly, the nominal future dollar costs should be adjusted for inflation. NRC studies have indicated that the cost to decommission a large, commercial reactor such as Seabrook will cost from \$40 to \$60 million in today's dollars. This is 5% to 10% of the current dollar cost to construct the plant. By way of analogy, if by the year 2020, inflation caused the cost to decommission Seabrook to escalate 20 times, it is likely that other costs and people's salaries would also escalate similarly.

You also indicated that the New Hampshire State Legislature might "outlaw decommissioning-work-in-progress" because it has previously outlawed Construction-Work-in-Progress (CWIP). Although we cannot speak for the New Hampshire government, our experience has been that many states are beginning to recognize the need to provide for decommissioning and have allowed it to be collected through various mechanisms over the life of the power plant. "CWIP" is a controversial method of allowing a utility to recover construction charges, primarily because such recovery occurs before the plant starts operating. To some state regulators, allowing CWIP

violates the regulatory principle of allowing in the rate base only those charges for facilities that are "used and useful." However, once the plant begins operation, then the recovery of all reasonable operating costs, including decommissioning costs, could be allowed without violating this principle.

The NRC has published new regulations and guidance on emergency preparedness (copies enclosed) with which all nuclear power plants must comply before being allowed to operate (e.g., Seabrook). These regulations emphasize coordination between the management of the nuclear plant and local authorities. They include requirements for development of evacuation plans for the areas within 10 miles of the plant, training of the local response officials, education of the local people on what to do during an accident and installation of a system to alert the local public within 15 minutes of the plant and notifying local officials of a major problem.

By direction of President Carter on December 7, 1979, the Federal Emergency Management Agency (FEMA) is responsible for review of emergency plans, which includes evacuation planning of State and local authorities in the environs of a nuclear power plant. The NRC works closely with FEMA in this regard. Upon completion of its review, FEMA will present its findings on the adequacy of offsite emergency plans to NRC, and NRC will then make the final licensing decision of the overall acceptability of emergency preparedness of the nuclear power plant and the surrounding environs.

With respect to the routing of transmission lines, we understand that the Public Service Company of New Hampshire is going to propose in the very near future some changes to the routing of the transmission lines. Therefore, we suggest that you contact the Public Service Company of New Hampshire or the Public Utilities Commission in your state which is located in Concord, New Hampshire for any information regarding the routing of transmission lines. The transmission line voltage at the Seabrook Station is 345 kV.

In your letter, you also indicated that State and local officials are voicing disapproval of the construction of the Seabrook Nuclear Station.

The Nuclear Regulatory Commission is responsible for the licensing and regulation of nuclear reactors in accordance with the statutory requirements of the Atomic Energy Act of 1954, as amended and the National Environmental Policy Act of 1969. NRC's jurisdiction is generally limited to considerations of radiological health and safety, the common defense and security, environmental impact and antitrust concerns. Although we do review the need for power to be supplied by proposed nuclear plants and whether alternative means could supply this need, NRC's authority does not extend to planning for adequate capacity of electrical generation.

Ms. Rina Petit

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Since our regulatory responsibilities do not include intercession in state and local decisions regarding electric generating plants, we are unable to make a further response to your request.

However, utilities such as Public Service Company of New Hampshire are regulated by State public service commissions and cannot proceed with large capital expenditures required by the construction of electrical generating plants without their approval. We believe your concern could best be addressed by the State regulatory agency. In your State, this is the Public Utilities Commission, Concord, New Hampshire.

With respect to your concern regarding storage of nuclear waste generated by the Seabrook plant, the NRC licenses the disposal of both high-level radioactive wastes (HLW) and low-level radioactive wastes (LLW).

The disposal of all high-level radioactive wastes generated by the nuclear power industry will be handled by the federal government. The U.S. Department of Energy (DOE) has the responsibility of designing, operating, and managing the disposal of HLW under the regulatory supervision of NRC, who will assure that the public health and safety is adequately protected. It has been the policy of the present Administration, as enumerated in President Carter's message to Congress on Radioactive Waste Management of February 12, 1980, that all of the DOE costs including the cost of locating, constructing, and operating permanent geologic repositories, will be recovered through fees paid by utilities and other users of the services and will ultimately be borne by those who benefit from the activities generating the HLW.

The LLW generated by the nuclear power industry, on the other hand, is disposed of in licensed commercial facilities. The commercial facilities charge a fee for the disposal services that would include the costs for insuring that all health and safety requirements specified by the NRC license conditions are met as well as any profit for providing such a service. The NRC staff is presently developing a proposed LLW regulation (10 CFR 61) that contains requirements for the licensee to provide assurances that sufficient funds will be available to cover life cycle costs including post-closure, construction, operation, and care by the site owner. It is anticipated that the proposed LLW regulation will be published for public comment in the second quarter of calendar year 1981.

I trust that you will find this information useful.

Sincerely,

Original Signed By
E. G. Case



Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosures:
As stated