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PDR 2/21/90

August 22, 1989

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U. S. Nuclear Regulatory Commission
Advisory Committee on Reactor Safeguards
Mailstop P-315
Washington, D. C. 20555

Attention: Mr. E. P. Igne,

Dear Al,

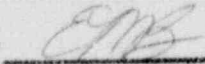
Enclosed is a copy of my comments on the Seabrook meeting of August 17, 1989. If there is a need for any further assistance, please call me.

Sincerely,


M. Bender

Copy to Professor Wm. Kerr

DESIGNATED ORIGINAL

Certified By 

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COMMENTARY ON SEABROOK EMERGENCY PLAN

PREPARED BY M. BENDER, QUERYTECH ASSOCIATES, INC.

August 22, 1989

GENERAL OBSERVATIONS

The Seabrook emergency plan seems to be fully responsive to the NRC regulations. The Licensee has evidently bent every effort to be sure that the local authorities in both Massachusetts and New Hampshire are conscious of their obligations in an emergency and will respond appropriately if the need arises.

Organization for emergency response planning appears to be more elaborate than provided for many other nuclear power sites. Local concern of the citizenry for nuclear accidents probably warrants the level of effort expended but in the longer term it might be more realistic to reduce the size of the response organization and rely on a smaller group to provide key actions if a real emergency arises.

EMERGENCY EVACUATION

Emergencies requiring site evacuation are very low probability events. The licensee's conservative estimate is that at a time of peak occupancy the entire area within the emergency planning zone could be evacuated in less than 8 hours. The transient visitors to the beaches represent the principal load on the emergency routes and under non-emergency conditions, observed subsequent to rainstorm warnings, only about two hours have been needed to clear the beaches.

The licensee's emergency actions are predicated on evacuation at an early stage of an accident. Since the PWR system installed at Seabrook has ample heat capacity and a strong reinforced concrete containment

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structure, there is every reason to believe that even the lowest probability events would not result in potential for significant radionuclide release from the reactor system and its containment before complete evacuation could be implemented.

EMERGENCY RESOURCES

The resources available to the Licensee in the event of a serious accident are not very clearly defined. Presumably, the operating staff understands the basics of dealing with bulk radionuclide releases if they occur. The documentation describing the training for such circumstances is not readily available but the Seabrook SER (NUREG 0896, Supplement 8), indicates that the regulatory staff has reviewed the Seabrook capabilities and found them adequate.

Obviously, there are uncertainties associated with any accident that might not be anticipated by the training program. Backup capabilities to provide advice in such circumstances ought to be identified.

EMERGENCY RESPONSE TESTING

Most of the emergency response tests performed, thus far, seem to involve actions related to a site emergency conditions defined by the 20 critical safety functions outlined in NUREG 0654. The accident scenarios for testing response are developed by the Seabrook emergency planning staff and used to challenge the response of the operating staff and the external emergency response organization. This seems to be an effective approach to making sure that the organization remains "on its toes".

It would be useful to compare the test scenarios being used to real emergency circumstances that, in the past, raised questions about emergency response capabilities at nuclear power plant sites (e.g. TMI-1,

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the Browns Ferry Fire, the Fermi simulator-error initiated operating mistake, the Davis-Besse feedwater malfunction, loss-of-power at Millstone) to see how they would be addressed in current emergency response planning. Such a review should show that all of the previous deficiencies in emergency response capability have been addressed.

TOWN OF ESSEX SAFETY ISSUES

The classical issues raised in the July 31, 1989 letter from the Town of Essex should be recognized in Seabrook emergency plans. Effectiveness of the containment in limiting the dispersal of radionuclides in the event of an accident, even if leakage occurs, should be established. The experience at TMI-1 shows that even with substantial core melting, only the noble gases are likely to escape and these will be quickly dispersed in a manner that results in negligible health threat to the public.

The NRC staff should be able to provide documentation to support such a position in order to display appropriate interest in questions of this sort when raised by public intervenors.