

BOSTON EDISON COMPANY
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SENIOR VICE PRESIDENT
NUCLEAR

January 10, 1984
BECO 84-007

Mr. Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C.

License No. DPR-35
Docket No. 50-293

Response to NRC Letter Denying Boston Edison's Position on EOF
Habitability dated November 3, 1983.

Dear Sir:

This letter is in response to your request, pursuant to 10 CFR 50.54 (f), that Boston Edison furnish plans for establishing an EOF concept for the Pilgrim Nuclear Power Station (PNPS) consistent with the guidance provided in Supplement 1 to NUREG 0737.

It is our intention to comply with the guidance set forth in Supplement 1 to NUREG 0737 by either (a) building or occupying a structure within 10 miles of PNPS which will be equipped with HEPA filters, and have a protection factor equal to or greater than 5; or (b) building or occupying a structure between 10 and 20 miles of PNPS. In either case, dose assessment, communications, and coordination of decision-making functions will be moved to the new facility.

We have been examining several options to address this issue in anticipation of your letter. These options include (1) assisting a town in the EPZ to acquire land and construct a new police station, with approximately 3000 square feet of the basement set aside as a new EOF; (2) acquiring and equipping existing commercial space, ten to twenty miles from PNPS, as an EOF; and (3) relocating the EOF to buildings in Bridgewater, approximately 19 miles from PNPS, which currently serve as an AEOF and as the Area 2 Headquarters of the Massachusetts Civil Defense Agency.

We shall evaluate these options carefully over the coming months, and coordinate our decision with the appropriate state and local authorities. As you are aware, siting the EOF more remotely involves numerous conceptual changes in plans and procedures, an ambitious program to relocate communications and other equipment, and careful coordination with State authorities. We expect to make a determination on or before March 31, 1984. At that time Boston Edison will submit a Supplement to its submittal pursuant to Generic Letter #82-33 which will reflect detailed plans and schedules for integrating the new EOF into response plans.

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BOSTON EDISON COMPANY

Mr. Darrell G. Eisenhut
January 10, 1984
Page 2

The decision to take this action is based upon Boston Edison's recognition that the existing EOF is not equipped with HEPA filters and does not have the recommended protection factor, and that the Commission has not agreed to waive habitability criteria for the use of onsite trailers as it does in cases where new buildings are constructed.

Boston Edison would like to take this opportunity to make some observations on the enclosure to your letter, entitled "Basis for Denial of Boston Edison Company's Proposed Emergency Operations Facility (EOF) location".

The enclosure states that the results of the BECo habitability study "are dependent upon all releases being elevated by the plant stack and the assumption that this elevated radioactive plume will not reach ground level at the EOF".

This statement is incorrect. Our report number P103-EC6, entitled "Engineering Calculations Related to the Habitability of the Emergency Operations Center Under Accident Conditions", and supporting calculations, indicate that a ground level release from the turbine building was considered coincident with a release from the main stack. (This ground level release is attributable to MSIV leakage).

We submit that nowhere in NUREG 0737 or in other guidance has it been indicated that failure of the main stack or the reactor building is a basis for habitability analyses.

The enclosure further states that "the use of certain meteorological conditions cannot be depended upon as a protective device unless extensive plume trajectory and site analyses studies establish that the assumed conditions will always be present".

Regulatory Guide 1.145 (which does require that fumigation be considered for 2 hours following an accident) allows a probabilistic estimate of dispersion factors beyond 2 hours based on a 95% non-exceedance probability. Clearly, the characteristics and behavior of a plume are not necessarily relied upon to always exist, but are rather relied upon to be exceeded less than 5% of the time. A study entitled "A Site Investigation of the Seabreezes" was performed at the Pilgrim site prior to startup which included smoke tests. The results of this investigation indicate that although fumigation will likely occur, the location of interception of the Thermal Internal Boundary Layer with the plume will result in plume touchdown at ground level well beyond the current location of the EOF.

In addition, the enclosure states that "a more realistic evaluation of possible plant release pathways and plume trajectories under adverse meteorological conditions would show that the EOF would not meet GDC-19...".

BOSTON EDISON COMPANY

Mr. Darrell G. Eisenhut
January 10, 1984
Page 3

It is unclear to us what type of analyses constitute a "more realistic evaluation". NUREG 0737 does not prescribe different criteria for analyses of vital areas (Control Room, TSC, EOF, PASS, etc.) than those used in our EOF analyses. In fact the assumptions on contained sources, primary containment leakage rates, release pathways and treatment used in our EOF analyses are, to the best of our knowledge, consistent with the guidance of NUREG 0737. We would therefore appreciate clarification on this issue.

I trust this letter is responsive to your needs.

Very truly yours,

W.D. Harrington

Commonwealth of Massachusetts)
County of Suffolk)

Then personally appeared before me W. D. Harrington, who, being duly sworn, did state that he is Senior Vice President -- Nuclear of Boston Edison Company, the applicant herein, and that he is duly authorized to execute and file the submittal contained herein in the name and on behalf of Boston Edison Company and that the statements in said submittal are true to the best of his knowledge and belief.

My Commission expires: *October 21, 1988*

Peter M. Kahler
Notary Public