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G. CARL ANCOGNINI
SUPERINTENDENT
NUCLEAR OPERATIONS DEPARTMENT

January 31, 1980

BECo, Ltr, #80-20

Mr. Brian K. Grimes
Director - Emergency Preparedness Task Group
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Docket Number 50-293
License No. DPR-35

Boston Edison Company Response
to NRC Request of November 29, 1979

Dear Sir:

Pursuant to your letter request of November 29, 1979, Boston Edison Company has prepared evacuation time estimates for areas near the Pilgrim Station Nuclear Power Plant. The information in the attached report is in direct response to the specific requirements enumerated in your letter. The report is in draft form at this time; however, it reflects the best available evacuation time estimates we can provide.

Also attached is a letter from the Massachusetts Civil Defense Agency, the State agency with primary responsibility for emergency preparedness. The letter cites concurrence with the information presented in the Boston Edison report.

Please call me with any question you may have on the attached material.

Very truly yours,

G. Carl Anagnini

Attachments:

Commonwealth of Massachusetts Letter
to Boston Edison Company (1/28/80)

Evacuation Times Estimates for Areas
Near Pilgrim Station

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EDWARD J. KING
GOVERNOR

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EXECUTIVE DEPARTMENT

CIVIL DEFENSE AGENCY AND OFFICE OF EMERGENCY PREPARATION

400 WORCESTER ROAD
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ROBERT H. CUNNINGHAM
DIRECTOR

January 28, 1980

Mr. Harrison Balfour
Boston Edison Company
800 Boylston Street
Boston, Massachusetts 02199

Dear Mr. Balfour:

Please accept this letter as the official commentary of the Massachusetts Civil Defense Agency on HMM document No. 79-048, titled Evacuation Time Estimates for Areas Near Pilgrim Station (January, 1980 draft).

I hope and expect that, since Massachusetts lacks the county structure common to most other states with nuclear power stations, the Nuclear Regulatory Commission's Emergency Preparedness Task Group will accept these comments as representative of the 13 cities and towns involved in plume exposure pathway planning.

1. Evacuation Time Estimates

The calculated evacuation times are consistent with MCDA's estimates, which were based upon experience and upon some basic load-loading analyses using techniques developed in the context of the FEMA Crisis Relocation Planning program.

2. Special Facilities

The discussion on special facilities (Section 6.1) adequately reflects MCDA thinking on the special facilities in the Plymouth area.

It should be noted that MCDA has undertaken engineering analyses of the radiation protection factor and air exchange rate at Jordan Hospital and the Plymouth County Jail. These analyses indicate that the possible need to evacuate these facilities cannot, in all instances, be precluded. State and local officials are working with facility personnel in the development of detailed evacuation plans for these facilities.

3. Confirmation of Evacuation

MCDA concurs with assignment of 35 to 60 minute confirmation times since, presumably, the same mechanisms (mobile police, fire units) would be utilized, travelling the same routes as for notification.

However, the following comments may be pertinent:

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--The mechanisms used for notification in most Massachusetts communities would provide for a high degree of awareness on the part of local law

enforcement officials of the degree of compliance with any evacuation order. Verification of evacuation could proceed more quickly than in areas where audible warning devices are in use, since notification units would already be in the field, on pre-planned routes.

- The effectiveness of the mechanism mentioned in Mr. Grimes' letter for verification (instructions to the public to tie a handkerchief to a door or gate can be questioned. People may be reluctant to comply because of a generally held, if unfounded, belief that looting is a major problem in evacuated areas). Also, the mechanism would be ineffective in multiple unit dwelling areas. Door-to-door verification may be the only effective means.
- Studies have shown that the public views an audible warning signal (sirens) as less authoritative sources of warning than door-to-door warning delivered by local police or verbal warnings from touring patrol cars. As and when Massachusetts communities incorporate sirens or other audible systems into their response plans, MCDA will advise these communities to incorporate specific plans for verification of protective action.

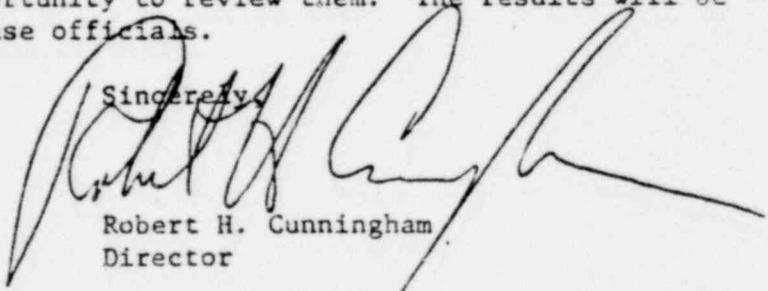
4. Notification Times

The notification times reflected appropriately reflect MCDA estimates of the time necessary to complete notification to 100% of the public within 5 miles, and 90% of the public within ten miles, using existing local capabilities as reflected in local plans.

Addition of this notification time to computed evacuation times in all cases yields a conservative result. The reason for this is that a majority of residents within either 5 or 10 miles would receive notification within 15 minutes, at which time any recommended evacuation would begin. To the extent that route capacities constrain evacuation times, simple addition of the notification time is a conservative approach.

The material in the proposed submission will prove a useful tool in determining the appropriateness of various protective actions in the event of an accident. MCDA will incorporate the results in the Massachusetts radiological emergency response plan, after Federal officials have had an opportunity to review them. The results will be made available to local emergency response officials.

Sincerely,



Robert H. Cunningham
Director

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