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Docket No. 50-320

The Honorable Leon E. Panetta, Member  
United States House of Representatives  
380 Alvarado Street  
Monterey, California 93940

Dear Congressman Panetta:

This is in response to your letter of May 5, 1981, requesting our assistance in responding to the inquiry of Ms. Mary Phillips regarding meteorological data relating to the accident at Three Mile Island, Unit 2.

Your request indicates that Ms. Phillips has read conflicting information regarding the wind direction at the time of the Three Mile Island nuclear accident. She requested information on the wind direction and velocity at the time of the accident and a meteorological map for that time.

Enclosed for your use are copies of available meteorological data relating to wind speed and direction from 1:00 a.m., March 28, 1979, to April 3, 1979, taken hourly from the meteorological tower at the Three Mile Island site (Enclosure 1). In addition, I am providing regional meteorological data taken from six locations surrounding TMI as well as the TMI site, which were utilized by the Atmospheric Release Advisory Capability (ARAC) to vector aircraft and ground teams to monitor the plume wherever it went. These data are hourly readings from 2:00 a.m., March 28, 1979, to 6:00 p.m., April 30, 1979 (Enclosure 2).

The above material offers the most comprehensive description of the meteorological conditions affecting the accident plume and were utilized by the various official investigatory groups in their inquiries on the accident. We do not have a meteorological map, per se, for the time of the accident. Such maps, which are generated by the National Weather Service for forecasting purposes, are over an area too large to provide sufficient detail in the area of interest regarding the plume and were, thus, inadequate for plume tracking purposes.

Also included is a graph depicting the source term (release) as a function of time and release rate, which can be utilized, together with the meteorological data, to determine the plume characteristics during the most important hours of the accident.

It is important to note that the course of the accident ran for several days, during which time major variations occurred in both release rate and meteorological conditions. Wind speed and direction varied over a wide range, as did

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The Honorable Leon E. Panetta

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the release. There was no one direction of the plume nor single, discrete release episode. However, through the use of station monitoring devices, aircraft tracking, mobile ground team surveys, and fixed dosimeter and sampling stations, the plume and its effects have been sufficiently characterized to determine the cumulative population dose and the dose to the maximum individual resulting from the accident. The highest actual individual offsite dose identified was received by an individual who was on Hill Island (northwest of the site) for short periods of time during the accident.

To assist you further in your response to Ms. Phillips, I have also enclosed a copy of the report of the NRC's Special Inquiry Group on the accident. The radiological releases and their effects are discussed in Volume II, Part 2, Section B.

Sincerely,

(Signed) E. Kevin Cornell

William J. Dircks  
Executive Director for Operations

Enclosures:  
As stated

*W.E.K.*  
DSI:NRR  
Kredger  
5/19/81

*W.E.K.*  
DSI:NRR  
Mattson  
5/19/81

OFFICE	TMIPO	TMIPO	ELD	NRR	NRR	EDO	OCA
NAME	OLynch/ned	BSnyder		Case	HDenton	WDircks	
DATE	5/15/81	5/15/81	5/15/81	5/ /81	5/ /81	5/ /81	5/ /81