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SHIELDS L. DALTROFF
VICE PRESIDENT
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May 6, 1982

Re: Docket Nos. 50-277
50-278

Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: NUREG 0737 Item III.A.2, Meteorological Monitoring System - Peach Bottom Atomic Power Station

Dear Mr. Eisenhut:

This letter requests an adjustment in the implementation schedules established by the NRC for several modifications in the meteorological monitoring system at Peach Bottom Units 2 & 3. The implementation schedules for this equipment are presented in NUREG-0737, Item III.A.2, in NUREG-0654, and in the Proposed Revision 1 of Regulatory Guide 1.23 issued in September 1980.

Since the revision of Regulatory Guide 1.23 has not been issued, much of the design criteria has not been clarified until recently during informal discussions with the NRC staff. This situation delayed the initial engineering of the system. For this reason the finalized software and hardward design, procurement, and installation necessary to satisfy the regulatory guide and NUREG's cannot be completed on the schedule identified in Item III.A.2.

It is our understanding that the NRC is considering a revision to the implementation schedule. For reasons stated above, we request that the implementation date be extended at least until January 1, 1983. We are also requesting that the

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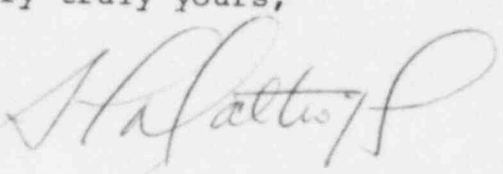
compliance dates for the Class B dose model be postponed until an appropriate time after regulatory guidance in this area is issued.

On December 9, 1981 PECo personnel met with members of the NRC meteorology staff at Peach Bottom and presented to them our plans for upgrading the meteorological monitoring system. We did not receive any negative feedback and are proceeding with the system modification.

Attached is a description of the Meteorological Monitoring System currently planned for Peach Bottom. This system has been engineered based on our interpretation of the regulatory guides and NUREG documents. All of the system hardware and software have been ordered. Any comments on areas where our interpretation differs from that of the NRC staff would be appreciated.

Very truly yours,



Enclosures

Docket Nos. 50-277
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## Description of Meteorological Monitoring System Currently Planned

The meteorological monitoring system, at PBAPS is being modified to comply with Regulatory Guide 1.23, proposed Rev. 1 and NUREG-0654 criteria. All of the sensors are being upgraded to meet the stringent sensitivity requirements. The primary equipment will remain located on the microwave tower which is situated on a hill top a short distance northeast of the off gas stack (Weather Tower No. 2). The signals from the sensors will be digitized and transmitted to a computer in the control room so that real time meteorology is available to operating personnel for environmental radiation dose assessment. A backup weather tower is being installed to supply data in the event that the primary weather tower is inoperable. Any wind patterns caused by channeling or draining flow into the river valley will be monitored by sensors installed on a transmission tower located in the river (River Tower). This data will be radio telemetered to the primary weather tower, then by cable to the control room. Supplemental data will be collected at Weather Tower 1A located on the shoreline a short distance south of the generating station.

The location of the weather towers are shown on Figure 1. Table 1 provides the specific types of sensors and their respective elevations above ground. All of the data will be recorded on strip charts located in shelters at the base of tower 1A and tower 2 prior to being telemetered to the control room. In the control room the data will be processed by a data logger to produce a continuous printout of 15 min. and 60 min. averaged meteorological parameters. In addition, the real time data will be recorded on strip charts which are mounted in the meteorological data display panel in the control room. This system provides sufficient redundancy to assure that the meteorological data required for dose assessment will be available should various components of the meteorological monitoring system fail.

All of the meteorological data will be transmitted from the computer in the control room to a Nuclear Data ND6650 computer located on the first floor of the Emergency Operations Facility/Technical Support Center located at Unit 1. The data will then be accessible from the EOF and TSC through CRT terminals and by the appropriate federal and state agencies by means of telephone lines to the ND6650 computer.

The primary Class A dose model for Peach Bottom will be run on the ND6650 computer thereby making the required portions of the output available to outside agencies through the telephone remote interrogation hardware. A backup version of the Class A model is available on the PECo corporate computer located in Philadelphia with access through a CRT terminal located in the EOF. The attached block diagram illustrates the planned system (Figure 2).

The Class A dose assessment model is a straight line continuous point source Gaussian distribution model. This model was developed specifically for PBAPS and has the following capabilities:

1. corrects effective plume height for site specific terrain

2. calculates Vent Plume rise based on model developed by PBAPS Vent Plume Behavior Study

3. can process doses for up to 300 receptor locations in each of 16 polar sectors radiating from the point of release

4. variable time step (optimum 15 min.)

5. uses modified Brookhaven turbulence classification

6. downwash from vent release is calculated

7. X/Q's and doses from 3 simultaneous sources can be determined when required

8. calculates cross wind distance to 10% of plume centerline concentration

9. calculates the following doses to 50 miles

    a. Iodine - inhalation and ingestion
    b. Noble gas - skin and whole body
    c. Shine from elevated plume (out to 10 miles)

10. maintains and updates historical cumulative doses at all receptor locations in each of the 16 sectors from the beginning of the release.

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TABLE 1: PLANNED ELEVATIONS OF METEOROLOGICAL SENSORS

| SENSOR | ELEVATION (ground) |
|---|---|
| TOWER 1A | |
| 2 wind speed | 30' & 92' |
| 2 wind direction | 30' & 92' |
| 2 temperature | 33' & 89' |
| 1 rain gage | 15' |
| RIVER TOWER | |
| 1 wind speed | 55' |
| 1 wind direction | 55' |
| BACK UP POLE | |
| 1 wind speed | 30' |
| 1 wind direction | 30' |
| TOWER 2 | |
| 3 wind speed | 30', 75', & 320' |
| 3 wind direction | 30', 75', & 320' |
| 3 temperature | 30', 146', & 316' |
| 1 dew point | 30' |
| 1 rain | 5' |

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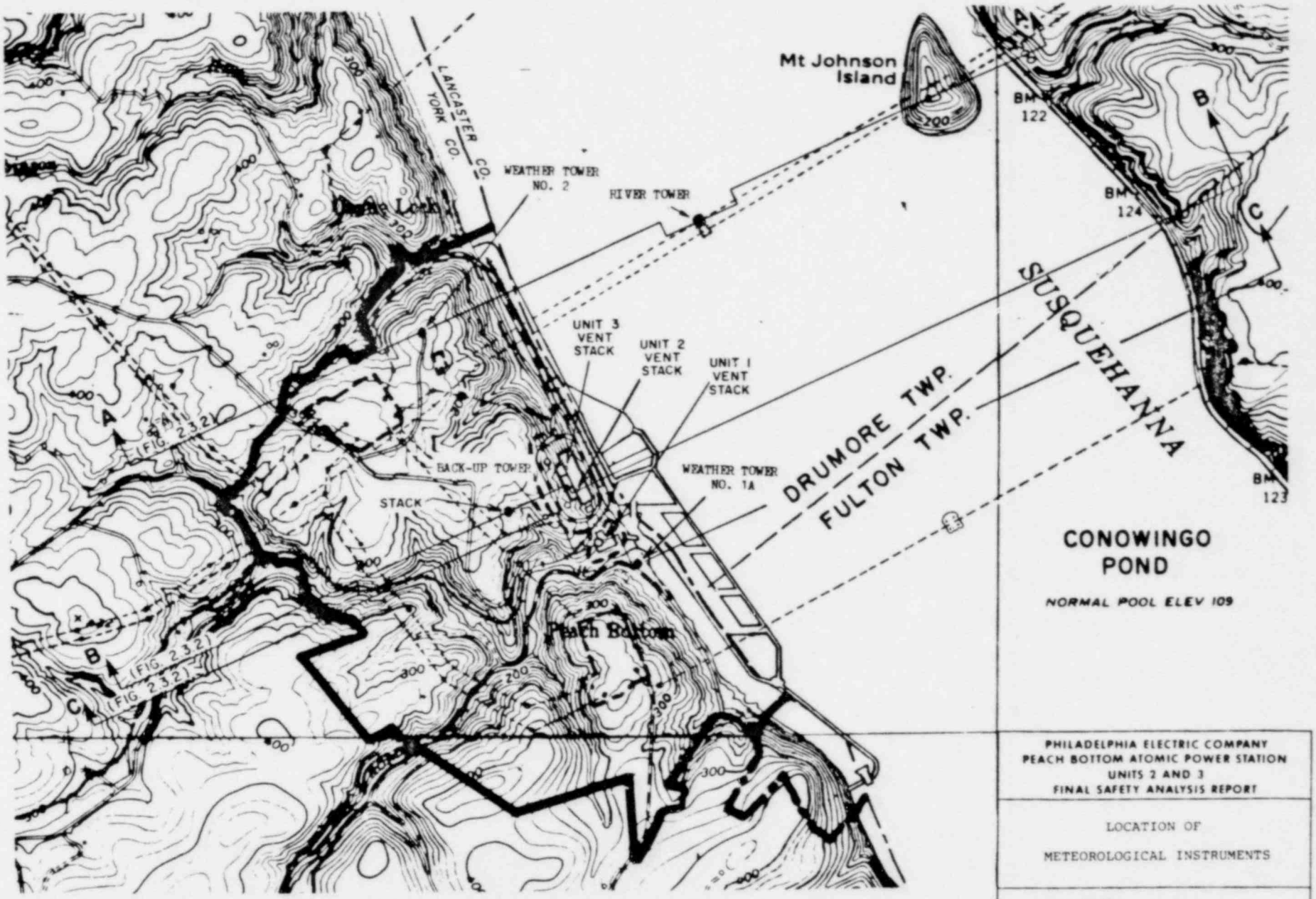


PHILADELPHIA ELECTRIC COMPANY
PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3
FINAL SAFETY ANALYSIS REPORT

LOCATION OF
METEOROLOGICAL INSTRUMENTS

FIGURE 1

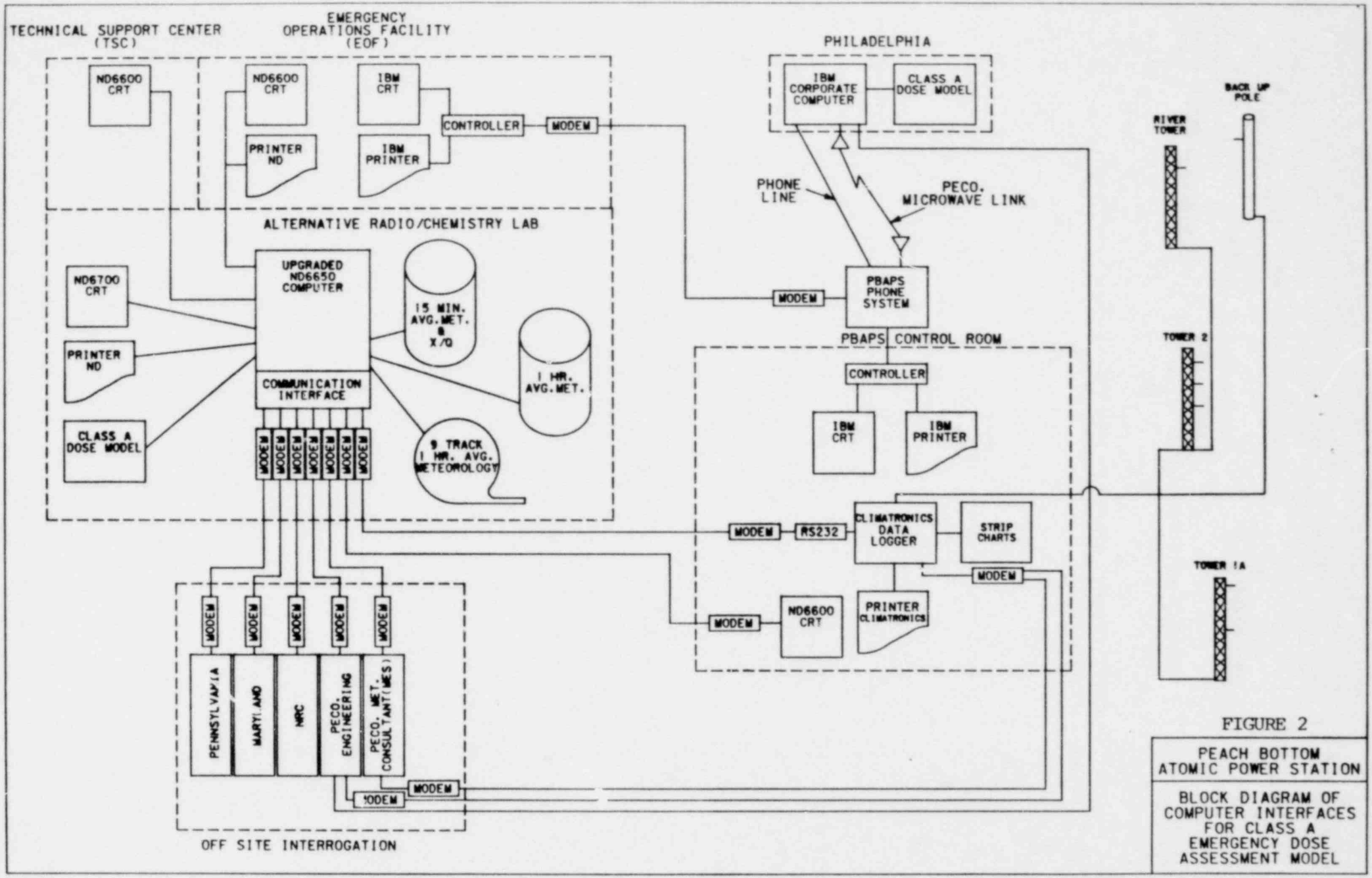


FIGURE 2

PEACH BOTTOM ATOMIC POWER STATION

BLOCK DIAGRAM OF COMPUTER INTERFACES FOR CLASS A EMERGENCY DOSE ASSESSMENT MODEL