05-05-82

50-277/81-28
50-278/81-31

APR 2 9 1982

Docket No. 50-277
Docket No. 50-278

Philadelphia Electric Company
ATTN: Mr. Shields Daltroff
Vice President, Electric Production
2301 Market Street
P. O. Box 8699
Philadelphia, PA 19101

Gentlemen:

Subject: Emergency Preparedness Appraisal

To verify that licensees have attained an adequate state of onsite emergency preparedness, the Nuclear Regulatory Commission is conducting special appraisals of the emergency preparedness programs at all operating nuclear power reactors. The objectives of these appraisals are to evaluate the overall adequacy and effectiveness of emergency preparedness and to identify areas of weakness that need to be strengthened. We will use the findings from these appraisals as a basis not only for requesting individual licensee action to correct deficiencies and effect improvements, but also for effecting improvements in NRC requirements and guidance.

During the period of December 7-17, 1981, the NRC conducted a special appraisal of the emergency preparedness program at the Peach Bottom Atomic Power Station, Units 2 and 3. This appraisal was performed in lieu of certain routine inspections normally conducted in the area of emergency preparedness. Areas examined during this appraisal are discussed in the enclosed reports (50-277/81-28 and 50-278/81-31). Within these areas, the appraisal team reviewed selected procedures and representative records, inspected emergency facilities and equipment, observed work practices, and interviewed personnel.

The findings of this emergency preparedness appraisal indicate that certain corrective actions are required in your emergency preparedness program. These are discussed in Appendix A, "Significant Emergency Preparedness Findings." Your commitments to correct each of the items were discussed in a confirmatory action letter dated December 24, 1981. A copy of the letter is included as enclosure 5.

Other areas for improvement are discussed in Appendix B, "Preparedness Improvement Items."

In conjunction with the aforementioned appraisal, emergency plans for your facility were reviewed by the Emergency Preparedness Licensing Branch, Division of Emergency Preparedness, Office of Inspection and Enforcement. The results of this review indicate that certain deficiencies exist in your emergency plan: These are discussed in Appendix C, "Emergency Preparedness Evaluation Report."

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We recognize that an explicit regulatory requirement pertaining to each item identified in Appendices A, B, and C may not currently exist. Notwithstanding this, you are requested to submit a written statement within thirty (30) days of the date of this letter describing your planned actions for improving each of the items identified in Appendix A and the results of your consideration of each of the items identified in Appendix B. This description is to include: (1) steps which have been taken; (2) steps which will be taken; and (3) a schedule for completion of actions for each item. This request is made pursuant to Section 50.54(f) of Part 50, Title 10, Code of Federal Regulations. With regard to Appendix C, within 90 days of the date of this letter, you are requested to provide changes to the emergency plan correcting each deficiency. Copies of these changes are to be submitted in accordance with the procedures delineated in 10 CFR 50.54(q).

This is to inform you that should the deficiencies addressed in Appendix A not be corrected by the commitment dates provided, the Nuclear Regulatory Commission will determine whether enforcement action is appropriate.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room unless you notify this office, by telephone, within ten days of the date of this letter and submit written application to withhold information contained therein within thirty days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1). The telephone notification of your intent to request withholding, or any request for an extension of the 10 day period which you believe necessary, should be made to the Supervisor, Files, Mail and Records, USNRC Region I, at (215) 337-5223.

The reporting requirements contained in this letter affect fewer than ten (10) persons and are, therfore, not subject to Office of Management and Budget clearances as required by P.L. 96-511.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you. Should you have any questions concerning the items of Appendix C, please contact Mr. Robert DeFayette, Emergency Preparedness Development Branch, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, or telephone him at 301/492-4507.

Sincerely,

Original Signed by
Robert Crocker

George H. Smith, Director
Division of Emergency Preparedness
and Operational Support

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Enclosures:
1. Appendix A, Significant Emergency Preparedness Findings
2. Appendix B, Preparedness Improvement Items
3. Appendix C, Emergency Preparedness Evaluation Report
4. NRC Region I Combined Inspection Report No. 50-277/81-28 and 50-278/81-31
5. Confirmation of Action Letter dated December 24, 1981

cc w/encl:
W. T. Ullrich, Station Superintendent
Troy B. Conner, Jr., Esquire (Without Report)
Eugene J. Bradley, Esquire (Without Report)
Raymond L. Hovis, Esquire (Without Report)
Michael J. Scibinico, II, Assistant Attorney General, State of Maryland (Without Report)
J. W. Brucker, Director, FEMA Region III
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
Commonwealth of Pennsylvania
NRC Resident Inspector

bcc w/encl:
Region I Docket Room (with concurrences)
Chief, Operational Support Section (w/o encls)
Al Kenneke, OPE

RI:DEPOS	RI:DEPOS	RI:DRP	RI:DEPOS
Crocker:hh	Snyder	Starostecki	G.Smith
4/26/82	4/27/82	4-28-82	

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HR concurrence received via D. Haverkamp 4/22/82. FLOC.

APPENDIX A

SIGNIFICANT EMERGENCY PREPAREDNESS FINDINGS

Based on the results of the NRC's appraisal of the Peach Bottom Atomic Power Station Emergency Preparedness Program conducted December 7-17, 1981, the following improvements are required: (References are to sections in the NRC Region I Inspection Report Nos. 50-277/81-28 and 50-278/81-31.

1. Develop and implement a method to insure that updated emergency procedures are available for use when and where needed by all persons who have emergency response roles. (See Section 5.5.3)

2.a Expand on your letter to the NRC, dated April 3, 1981, to describe how the shift personnel discussed in the letter will fulfill the intent of the functions listed in Table B.1 of NUREG-0654 for 30 minute augmentation.

b Describe your plan for assuring that a plant staff manager will be onsite in about 60 minutes to assume the role of EOF Director.

c Demonstrate by unannounced drills that additional specified persons in the proposed staffing plan can be onsite in about 60 minutes after initial notification. Records must be kept. (See Section 2.2)

3.a Complete the development of and formalize the emergency preparedness training program for Peach Bottom personnel having emergency response roles and supporting personnel.

b Promptly conduct training to assure that several individuals are fully trained in each functional area described in the Peach Bottom emergency response organization.

c Complete initial training of other personnel. (See Sections 3.1 and 3.2)

4. Prepare a job description for the Site Emergency Planning Coordinator position which describes the responsibilities and authorities for coordinating all emergency response planning and preparedness functions at the Peach Bottom Atomic Power Station. (See Section 1.4)

5. Review all emergency procedures to eliminate deficiencies and identify missing procedures. Issue revised and new procedures, as necessary. (See Section 5.1)

6. Clarify the emergency response organizational concepts (especially Table 5.4 of the Emergency Plan) to show the EOF as the primary emergency coordination location (the TSC retains the primary responsibility for plant operations). All other organizations which provide support, including corporate organizations, will provide this support through the EOF Director. (See Section 2.1)

7. Perform an analysis of the stack sampling system to verify that samples are representative, and if they are not, provide a description of necessary remedial actions and a schedule for their completion. (See Section 4.1.1.7)

APPENDIX B

Emergency Preparedness Improvement Items

Based on the results of the NRC's Appraisal of the Peach Bottom Atomic Power Station Emergency Preparedness Program conducted December 7-17, 1981, the following items should be considered for improvement: (references are to sections in Office of Inspection and Enforcement Report Nos. 50-277/81-28 and 50-278/81-31).

1. Develop emergency preparedness instructor selection and qualification criteria. (See Section 3.2 of this report)

2. Develop a procedure for emergency training of augmentation personnel during an emergency. (See Section 3.2 of this report)

3. Increase the use of handouts and other instructional aids in emergency training classes. (See Section 3.2 of this report)

4. Provide a backup method to verify the habitability of the TSC. (See Section 4.1.1.2 of this report)

5. Develop a procedure which reflects the current TSC which encompasses the EOF; activation of this singular facility; and a diagram of the working spaces in the TSC and EOF functions including equipment allocation. (See Section 4.1.1.2 of this report)

6. Provide dedicated maintenance and radiation protection survey equipment within the primary OSC location. (See Section 4.1.1.3 of this report)

7. Provide a procedure and equipment for transporting post-accident reactor coolant samples to the laboratory to minimize the radiation dose to personnel. (See Section 4.1.1.5 of this report)

8. Provide a procedure to ensure safe transport of the exhaust stack air samples and cartridges. (See Section 4.1.1.7 of this report)

9. Determine if the sample station in the base of the stack would be habitable during accident conditions. (See Section 4.1.1.7 of this report)

10. Develop a procedure for identifying locations and taking liquid effluent samples following an accident. (See Section 4.1.1.8 of this report)

11. Provide appropriate supplies to enable decontamination and record tracking for the number of persons that might be expected during an emergency. (See Section 4.1.2.3 of this report)

12. Document within the Emergency Plan those facilities planned for use for expanded support. (See Section 4.1.3 of this report)

13. Complete the installation of the telephone service in the Muddy Run News Center. (See Section 4.1.4 of this report)

14. Include high range survey instruments in the emergency kits. (See Section 4.2.1.1 of this report)

15. Demonstrate and document the ability to detect radioiodine in the presence of noble gases and particulate radioactivity in the air as required by NUREG-0654. (See Section 4.2.1.1 of this report)

16. Include a list of the nonradiation process monitors within the Emergency Plan. (See Section 4.2.1.3 of this report)

17. Document the procedures used for the inspection of the instrumentation in the control room and the meteorological towers and verify that these procedures are being followed. (See Section 4.2.1.4 of this report)

18. Provide quarterly calibration of the meteorological instrumentation as opposed to semi-annually. (See Section 4.2.1.4 of this report)

19. Relocate the major storage site for emergency SCBA devices out of the main reactor buildings to areas of lower radiological hazard. (See Section 4.2.2.1 of this report)

20. Relocate the refilling area for emergency SCBAs out of the main reactor buildings to areas of lower radiological hazard. (See Section 4.2.2.1 of this report)

21. Evaluate dedicated equipment needs for damage control, corrective action and maintenance, and the positioning of this equipment at specified locations for use during an emergency, and make changes where necessary. (See Section 4.2.4 of this report)

22. Check the type of equipment that will be borrowed during emergencies from sister plants and supplied by RMC for compatibility with existing equipment. (See Section 4.2.5 of this report)

23. Provide transportation from the main parking lot to the assembly area for potential stragglers during a site evacuation. (See Section 4.2.6 of this report)

24. Obtain or designate sufficient vehicles to permit vital emergency functions to continue under any conditions. (See ection 4.2.6 of this report)

25. Clarify the reporting requirements for a General Emergency and revise the procedures accordingly. This action is part of the overall procedure review identified as necessary for Section 5.1. (See Section 5.4.1 of this report)

26. Provide an implementing procedure to aid the person assigned the responsibility for coordination of assessment actions for trend analysis, for escalation or de-escalation, and for protective action recommendations. The procedure should guide this person to the correct actions when indicated by sample analysis and process instrumentation. (See Section 5.4.2 of this report)

27. Provide radiation protection guidance to offsite teams surveying in the plume. (See Section 5.4.2.1 of this report)

28. Revise data sheets to include provision for recording the time of each survey, duration of meter reading and mode of operation, in procedure EP-205B. (See Section 5.4.2.1 of this report)

29. Identify in procedure EP-205B emergency equipment location for the onsite survey team. (See Section 5.4.2.2 of this report)

30. Identify in procedure HPO/CO-66 sampling points for the site perimeter. (See Section 5.4.2.2 of this report)

31. Provide for primary and backup communication methods within procedure EP-205B. (See Section 5.4.2.2 of this report)

32. Revise procedure EP-205B to include radiation protection guidance for in-plant survey teams, methods or reference to procedure for use of all in-plant survey equipment, and listing of instrument(s) and type(s) of surveys to be completed by in-plant teams. (See Section 5.4.2.3 of this report)

33. Provide an emergency plan implementing procedure for reactor coolant sampling for the current and/or the new system being installed to meet the NUREG-0578 requirements. (See Section 5.4.2.4 of this report)

34. Provide an implementing procedure in the EP series that provides for: methods of analysis; the limitation of radiation levels to be applied to personnel and facilities; tracking of samples; reporting of data (keyed to emergency action levels) to the personnel responsible for assessment and protective actions; and escalation and de-escalation of the emergency classification. (See Section 5.4.2.5 of this report)

35. Provide an emergency plan implementing procedure which includes the information contained in the HPO/CO procedures 121, 124 and 125. In addition, consideration should be given to providing a checklist, data sheets and provision for prelabeling samples. (See Section 5.4.2.6 of this report)

36. Provide a procedure in the EP series which addresses post-accident sampling analysis. The procedure should include checklists, data sheets, labeling of samples, and reporting of results. (See Section 5.4.2.7 of this report)

37. Provide an Emergency Plan Implementing Procedure for Sampling of the Exhaust Air Release Points which integrates the sampling steps in HPO/CO-126 into the Emergency Procedure. Consider the inclusion of a data sheet to record vital information relevant to the sample and method for providing packaging and pre-labeling. (See Section 5.4.2.8 of this report)

38. Include a procedure for post-accident sampling of displaced liquid and liquid effluent in the emergency plan implementing procedures. (See Section 5.4.2.10 of this report)

39. Amend the follow-up instructions in EP-205C for the Personnel Dosimetry, Bioassay and Respiratory Protection Group Leader to include reference to procedures to process respiratory equipment for reuse. (See Section 5.4.3.1 of this report)

40. Decrease the time required to identify onsite and missing individuals from 60 minutes to 30 minutes. (See Section 5.4.3.3 of this report)

41. Revise the appropriate procedures to include: methods of monitoring and decontaminating large groups of personnel during accident situations; special considerations for skin contaminated with radioiodine; data sheets and body sketches to track decontamination events; and ensuring that collected data are provided to the emergency organizational element responsible for radiation protection during emergencies. (See Section 5.4.3.4 of this report)

42. Implement emergency procedure 207A. (See Section 5.4.3.5 of this report)

43. Submit procedure PP-10 to PORC for review and train the security force on its contents. (See Section 5.4.4 of this report)

44. Incorporate into EP-206B specific locations and description of equipment (e.g., radiation detection instruments, tools, etc.); the criteria and logistics of selection of repair team members; communication means and precautions to be employed. (See Section 5.4.5 of this report)

45. Complete the recovery organization chart and amend the Emergency Plan to include the revised chart. (See Section 5.4.6 of this report)

46. Revise the emergency equipment inventory and calibration procedure to define the specific checks required to ensure instrument operability, and steps to take when discrepancies are encountered. (See Section 5.5.1 of this report)

47. Provide a Radiological Monitoring ST/EP to include an annual drill in addition to the annual exercise. The ST/EP shall be compatible with NUREG-0654, Section N.2.d. (See Section 5.5.2 of this report)

48. Provide a Health Physics ST/EP to include semi-annual and annual drills in addition to the annual exercise. The ST/EP shall be compatible with NUREG-0654, Section N.2.c.1. (See Section 5.5.2 of this report)

49. Review existing ST/EPs and bring all references to EPs up-to-date. (See Section 5.5.2 of this report)

50. Standardize ST/EP format so that all procedures clearly indicate critique responsibilities and the responsibility for corrective actions. (See Section 5.5.2 of this report)

51. Amend ST/EP-8 to include provision for backshift and unannounced exercises as required by NUREG-0654, Section N.1.b. (See Section 5.5.2 of this report)

52. Distribute recent changes of the emergency plan to those on the distribution list. (See Section 6.1 of this report)

53. Include all letters of agreement and memos of understanding within the emergency plan. (See Section 6.1 of this report)

54. Complete and distribute to the general public, the brochure covering emergency information. (See Section 6.2 of this report)

55. Conduct a meeting with the news media to acquaint them with the emergency plan. (See Section 6.3 of this report)

56. Perform a medical drill in accordance with required frequency. (See Section 7.1 of this report)

57. Provide a time restraint for corrective actions identified by drills. (See Sction 7.1 of this report)

58. Training on the new EAL table in EP-202 should include the purpose of EALs, and emphasize that no waiting is necessary for dose calculations (after a general emergency is declared) before notifying offsite authorities. This should also be emphasized to the offsite authorities during their training. (See Section 7.2.1 of this report)

APPENDIX C

EMERGENCY PREPAREDNESS EVALUATION REPORT

BY THE

DIVISION OF EMERGENCY PREPAREDNESS

OFFICE OF INSPECTION AND ENFORCEMENT

U. S. NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF

PEACH BOTTOM ATOMIC POWER STATION

DOCKET NOS. 50-277, 50-278

MARCH 1982

INTRODUCTION

As required by the regulations, the Philadelphia Electric Company filed with the Nuclear Regulatory Commission an emergency plan for its Peach Bottom Atomic Power Station. This plan was revised in November, 1981. This revised plan was reviewed against the sixteen planning standards in Section 50.47 of 10 CFR Part 50, the requirements of Appendix E to 10 CFR Part 50, and the criteria of NUREG-0654/FEMA-REP-1, Revision 1 entitled "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November 1980.

This evaluation report follows the format of Part II of NUREG-0654 in that each of the Planning Standards is listed followed by a summary of the applicable portions of the plan and the deficiencies that relate to that specific standard. The final section of this report provides our conclusions.

A separate report will be issued describing the findings and determinations of the Federal Emergency Management Agency on the State and local emergency response plans.

EVALUATION

A. ASSIGNMENT OF RESPONSIBILITY (ORGANIZATION CONTROL)

Planning Standard

Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the Emergency Planning Zones (EPZ) have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

Emergency Plan

The Federal, State, and private sector organizations that are intended to be a part of the overall response are identified. Since the plume EPZ encompasses parts of Pennsylvania and Maryland, the Pennsylvania Emergency Management Agency (PEMA) and the Maryland Civil Defense and Disaster Preparedness Agencies have lead State response roles. The plan notes specific responsibilities assigned to State agencies in Pennsylvania. Reference is also made to the roles of Pennsylvania and Maryland Counties (Lancaster, York, and Chester County (PA) Emergency Management Agencies and Harford and Cecil County (MD)) Civil Defense Agencies. Federal support from NRC, DOE and FEMA are also described. Private sector response from contractors (Bechtel, General Electric, INPO, Radiation Management Corporation, etc., are also described.

A concept of operations and its relationship to the total effort is specified. The interrelationships are illustrated in Figures 5.3 and 5.4 of the onsite emergency plan.

The Emergency Director (Station Superintendent) is identified as the person who has direct responsibility for plant operations in an emergency. The Site

Emergency Coordinator (Superintendent, Generation Division/Nuclear) manages and supervises the EOF and coordinates actions of onsite and offsite emergency groups. The emergency control officer (from the Office of the Vice President Electric Production Department) manages the overall corporate support functions.

Provisions for 24-hour per day licensee emergency response, including manning of communication links is provided.

The plan contains several written agreements with several support organizations having a response role. Those organizations with which letters of agreement had been developed included medical groups, response agencies within Pennsylvania and DOE.

The Emergency Director aided by the Administrative and Logistics Manager are assigned responsibility for the continuity of resources to support the emergency response.

Deficiencies

1. The plar should provide more descriptions of the response of Maryland State and local response agencies, including communications capabilities and concepts of operation.

2. Letters of agreement should be completed with all private sector State/local organizations having an emergency response role.

3. The organizational concepts in the plan should be clarified to show the EOF as the primary emergency response coordination location. More details on this are specified in the confirmation of action letter from NRC to Philadelphia Electric Company dated December 24, 1981.

B. ONSITE EMERGENCY ORGANIZATION

Planning Standards

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various response activities and offsite support and response activities are specified.

Emergency Plan:

The onsite emergency organization of plant personnel for all shifts and its relation to the responsibilities and duties of the normal staff complement are specified. Plant emergency assignments are described.

The position of Emergency Director corresponds to the position title specified in NUREG 0654 as Emergency Coordinator. The plan states that the Shift Superintendent will assume duties as the Interim Emergency Director and has the authority to initiate emergency actions until relieved of such duties by the Emergency Director. The responsibilities that cannot be delegated are listed, including the responsibility and

authority to provide protective action recommendations to offsite authorities.

The line of succession for the Emergency Director is specified in the plan, as are the conditions under which higher level utility officials will assume this function.

The positions or title and major tasks to be performed by the persons to be assigned to the functional areas of emergency activity are specified. The staffing requirements of Table B-1 of NUREG-0654 are addressed in the licensee's letter dated April 3, 1981.

The interfaces between and among the onsite functional areas of emergency activity and the offsite emergency organization made up of corporate support, local services support, and State and local government response organizations are specified. Block diagrams are provided in Figures 3.1, 5.3 and 5.4 of the plan.

The corporate management, administrative, and technical support personnel who will augment the plant staff as specified in Table B-1 of NUREG 0654 and also in the areas of logistical and technical support are indicated.

The contractor and private organizations who may be requested to provide technical assistance to and augmentation of the emergency response organization are specified.

The services to be provided by local agencies for handling emergencies, including police, ambulance, medical hospital, and fire-fighting organizations are specified.

Deficiencies

1. The plan should provide a commitment that the minimum staffing requirements including the times for augmentation from offsite personnel will be as specified in Table B-1 of NUREG 0654, Rev. 1 by July 1, 1982. More details on this commitment are given in the confirmation of action letter from NRC to Philadelphia Electric Company dated December 24, 1981.

2. The areas of responsibility for contractors who perform emergency functions should be more clearly specified in the plan.

C. EMERGENCY RESPONSE SUPPORT AND RESOURCES

Planning Standard

Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

Emergency Plan:

The Site Emergency Coordinator is the primary onsite contact for Federal and State response agencies which dispatch personnel to the plant vicinity.

Facilities will be available at the Emergency Control Center (ECC) or the Emergency Support Center for State or local representatives.

The plan indicates that additional laboratory facilities are available at backup site laboratories, Radiation Management Corporation and the Bureau of Radiation Protection.

Deficiencies

1. The plan should specify the principal offsite Emergency Operations Center to which the Emergency Director would dispatch a company representative.

2. The plan should specify the resources available to support the Federal response.

D. PLANNING STANDARD

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

Emergency Plan:

The licensee has established an emergency classification and emergency action level scheme compatible with the scheme set forth in Appendix 1, NUREG 0654, Rev. 1.

Specific instruments, parameters or equipment status for each emergency class are established in the emergency procedures and in the plan.

Postulated accidents (Section 14 of the FSAR) and the example initiating conditions in Appendix 1, NUREG 0654, Rev. 1 are covered in Table 4.2 of the plan.

Deficiencies:

1. Emergency Action Levels (EALs) should be established for all the applicable example initiating conditions in Appendix 1 to NUREG 0654.

2. EALs should be developed based on projected dose rates consistent with Appendix 1 to NUREG 0654.

E. NOTIFICATION METHODS AND PROCEDURES

Planning Standard

Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all response organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instructions to the populace within the plume exposure pathway Emergency Planning Zone have been established.

Emergency Plan:

The plan describes mutually agreeable bases for notification of response organizations consistent with the emergency classification and action level scheme, including means for confirmation.

The Emergency Plan lists various communications systems which will be used to make initial notifications. Details of the basis and procedures for notification of response organizations and for mobilizing licensee response personnel are contained in implementing procedures.

The plan briefly describes the communication equipment used to promptly notify offsite authorities and the public of an emergency.

Procedures for alerting, notifying and mobilizing emergency response personnel are established, including means of notifying onsite staff and off-shift personnel as needed for minimum emergency staffing levels.

A corporate communications plan has been developed which provides general guidance for the release of information to the public.

Deficiencies:

1. Contents of initial and follow-up messages should be developed and included in the plan and implementing procedures.

2. The plan should be updated to provide a detailed description of the administrative and physical system to be used for the prompt alerting and notification of the public in the event of a serious emergency.

F. EMERGENCY COMMUNICATION

Planning Standard

Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

Emergency Plan:

The plan describes primary and backup means of communications with offsite response organizations. Initial notification and verifications will occur using the telephone.

Communications with contiguous State/local governments within the EPZ are provided.

Communications with Federal emergency response organizations are provided.

Communications between the Nuclear Facility Control Room, the Emergency Control Center, State and local EOC's and monitoring teams are addressed.

Means to alert or activate onsite emergency personnel are provided.

Communications by the licensee with NRC headquarters, the NRC Regional Office, and the Emergency Control Center are addressed.

Test of communications links are conducted monthly between the site and PEMA, DER/BRP, Maryland Civil Defense and the five Counties within the plume EPZ. Communications with Delaware and New Jersey are checked quarterly. Communications with field assessment teams are checked annually. The NRC communication link is tested daily. The public prompt notification system (sirens) will be tested monthly.

Deficiencies:

1. No provision is made for a coordinated communication link for fixed and mobile medical support facilities.

G. PUBLIC EDUCATION AND INFORMATION

Planning Standard

Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

Emergency Plan:

The plan indicates that a program has been developed to inform the public about nuclear power and the Peach Bottom Atomic Power Station. However, details of that program were not included in the plan and could not be reviewed.

A Near-Site News Center will be established at the Muddy Run Park and will be supervised by the Manager Public Information.

The plan indicates that a training program is offered to news media personnel annually and that press kits are available for use by the media.

Deficiencies

1. The plan should contain details about the licensee's public education provisions, including how they will be notified and what their actions should be in an emergency. The description in the plan should address the specific criteria of NUREG 0654, Section G.1 (a-d). Means of dissemination and sample copies of prepared information should be provided.

2. The plan should also contain details on how the transient population will be provided information.

3. The plan should provide coordinated arrangements for dealing with rumors.

H. EMERGENCY FACILITIES AND EQUIPMENT

Planning Standard

Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

Emergency Plan:

The licensee has established a Technical Support Center on the third floor of the Unit 1 Administration Building. The plan indicates that the facility is shielded, and has communications equipment to assess plant status and make recommendations on plant operations.

An Operational support Center (OSC) is established in the plant in close proximity to the Control Room and will serve as an assembly area for emergency workers. In the event the OSC becomes uninhabitable alternate locations have been designated.

The plan describes the licensee's Emergency Operations Facility which is established on the second floor of the Unit 1 Administration Building. The ECC will serve as the central location for coordinating response activities between the site and offsite groups. Functions of environmental sampling, dose projection will also be performed at the ECC.

The plan describes the geophysical, radiological, process and combustion monitors used to initiate emergency measures.

Meteorological information is fed into the Control Room from two separate onsite weather towers for use in dose projections.

Procedures to maintain and periodically inventory emergency kits are described in the plan.

Deficiencies

1. The plan should provide further information regarding meteorological capabilities to enable a determination as to compliance with Appendix 2 to NUREG 0654.

2. Although an OSC has been established, there is not enough detail to assess adequacy of equipment and supplies.

3. The plan does not indicate if the TSC, EOF, or OSC meets the design criteria of NUREG 0696.

I. ACCIDENT ASSESSMENT

Planning Standard

Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

Emergency Plan:

The plan identifies plant system and effluent parameter values characteristic of a spectrum of off-normal conditions and accidents.

Onsite capability and resources are provided for initial and continuing assessment during an accident, including instrumentation for detection of inadequate core cooling, in-plant iodine instrumentation, and post-accident sampling capability.

A method to determine the magnitude of release based on system parameters and effluent monitors has been provided.

The plan lists effluent monitors used in determining offsite dose projections.

A method for determining release rate/projected dose if the instrumentation used is offscale or inoperable is described.

The plan indicates that two meteorological towers are located on site, near Unit 1 and north of the site micro-wave tower, and data from them are transmitted to the Control Room. A closed-circuit television camera in the control room can transmit this data to other locations such as the TSC and EOF.

Capability and resources for field monitoring within the EPZ are described.

Deficiencies:

1. The plan indicates that dose projection methods have been developed and are contained in Appendix C, but there is no Appendix C.

2. A description should be provided for upgrading the post-accident sampling capability to meet the criteria of NUREG-0737.

3. The plan should describe the capability and resources for field monitoring within the plume exposure EPZ to detect and measure radioiodine as low as 10^{-7} microcuries/cc.

4. The plan in Section 7.3.1.f refers to an Appendix E, but there is no Appendix E.

5. The plan should describe specifically the means of transportation available for field assessment teams in all types of weather. It should also discuss deployment times for these teams.

6. The plan should discuss provisions for access, by an offsite NRC center, for meteorological information. It should also discuss provisions to make available to the State suitable meteorological data processing interconnections.

J. PROTECTIVE RESPONSE

Planning Standard

A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

Emergency Plan:

The licensee has established the means to warn, advise, account for, radiologically monitor and evacuate onsite personnel.

Radiological monitoring has been provided for evacuees.

Methods are in place to account for all individuals onsite at the time of emergency in less than 30 minutes.

Individuals remaining onsite will be furnished with protective clothing, respiratory equipment and issued radioprotective drugs if necessary.

The plan identifies the mechanism for promptly recommending protective actions to appropriate State and local authorities, and provides time estimates for evacuation within the plume exposure EPZ.

Deficiencies:

1. The plan contains maps showing preselected sampling points around the plant site but the maps are extremely difficult to read and are unusable as a viable reference.

2. The licensee should implement that portion of the plan which states that the site maintains a vehicle with snow plowing and road salting capabilities.

3. The plan, in Appendix J, Section J.10.b. refers to an Appendix C and to Figures 10.2 and 10.3 for population distribution. There is no Appendix C or Figures 10.2 and 10.3 in the plan.

4. The plan does not include a discussion of the protection afforded by residential units or other shelter facilities in case sheltering is recommended.

5. The plan contains insufficient information with regard to assumptions and methods used to calculate evacuation times. Specifically: no general description of computer methodology (as per NUREG-0654 Appendix 4.I.C), no estimate of number of people to be evacuated (as per NUREG-0654 Appendix 4.II.A.B.C), no table of roadway segment characteristics (as per NUREG-0654 Appendix 4.III.B), insufficient detail or methods of analysis and data report of evacuation times (see NUREG-0654 Appendix 4.IV.A and Table 2), and frequency and type of inclement weather used to predict evacuation times.

K. RADIOLOGICAL EXPOSURE CONTROL

Planning Standard

Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

Emergency Plan:

The licensee has established onsite exposure guidelines consistent with EPA standards, has provided an onsite radiation protection program and identified the Emergency Director as the individual who can authorize exposures in excess of 10 CFR Part 20 limits.

The plan provides for 24-hour a day capability to determine the radiation dose received by emergency workers; distribution of dosimeters and maintenance of dose records; decontamination of personnel, supplies, instruments and equipment and onsite contamination control.

Deficiencies:

1. The plan should identify the action levels for determining the need for decontamination.

2. The plan should provide more detail on decontamination facilities at the emergency assembly areas.

3. The plan should provide more detail for disposal of contaminated waste from the emergency assembly areas.

4. The plan should specify the criteria rather than using the term "allowable limits," for returning contaminated items and areas to normal use.

L. MEDICAL AND PUBLIC HEALTH SUPPORT

Planning Standard

Arrangements are made for medical services for contaminated injured individuals.

Emergency Plan:

Arrangements have been made with a local and backup hospital for the treatment of individuals involved in a radiological accident.

Onsite first aid capability is provided, including an individual onsite at all times who is trained in first aid techniques.

Arrangements have been made for the transportation of victims of radiological accidents to the medical support facilities.

M. RECOVERY AND REENTRY PLANNING AND POST-ACCIDENT OPERATIONS

Planning Standard

General plans for recovery and reentry are developed.

Emergency Plan:

General plans and procedures for reentry and recovery have been developed, and the means by which decisions are made to relax protective measures are addressed.

The title, authority and responsibilities of individuals filling key positions in the facility recovery organization are specified.

The Emergency Director is responsible for maintaining contact with State and local governments and keeping them apprised of plant and radiological conditions through the recovery operations.

A method for periodically estimating total population exposure has been established.

N. EXERCISES AND DRILLS

Planning Standard

Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

Emergency Plan:

An emergency preparedness exercise will be conducted as set forth in the NRC rule.

A joint exercise involving the mobilization of State and local personnel and resources is provided.

The plan provides for a critique of the annual exercise by qualified observers.

Communications with State and local governments within the plume exposure pathway EPZ will be tested monthly and communications with NRC will be tested daily.

Quarterly fire drills will be conducted.

Annual medical emergency drills will be conducted.

Annual radiological monitoring drills will be conducted.

Annual health physics drills involving airborne and liquid samples and direct radiation measurements in the environment will be conducted, and annual health physics drills involving analysis of in-plant liquid samples with elevated radiation levels will be conducted.

The scenarios to be used in the exercises and drills will include: (1) basic objectives of the exercise or drill including evaluation criteria; (2) date, time period, and participating agencies; (3) events to be simulated; (4) approximate time schedule of real and simulated events; (5) a narrative summary description of the exercise or drill; and (6) arrangements made for qualified observers.

The plan identifies the management controls which have been established to ensure that corrective actions stemming from drills and exercises are implemented.

Deficiencies:

1. Semi-annual health physics drills should be conducted rather than the annual drill as specified in the plan.

2. The plan should specify that State participation in exercises shall be as frequent as required in the regulations, and not as ambiguous as "perhaps every five years."

O. RADIOLOGICAL EMERGENCY RESPONSE TRAINING

Radiological emergency response training is provided to those who may be called on to assist in an emergency.

Emergency Plan

The plan provides for the initial training and retraining of site and corporate personnel who will respond to an accident or emergency as well as offsite fire and rescue personnel.

Annual retraining of licensee personnel is provided.

First aid personnel will receive training equivalent to Red Cross Multi Media Training.

Deficiencies:

1. The plan should provide for training which includes demonstrations of an individual's ability to perform assigned emergency tasks such as exams, practical drills, or walk-throughs.

P. RESPONSIBILITY FOR THE PLANNING EFFORT

Planning Standard

Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

Emergency Plan:

The Vice President of Electric Production has the overall authority and responsibility for radiological emergency response planning.

The Director, Radiation Protection Section, Generation Division, Nuclear, is the Emergency Planning Coordinator and has the responsibilities of updating emergency plans and coordinating these plans with other response organizations.

Updated plans will take into account changes identified in drills and exercises and be certified on an annual basis to be current.

Controlled copies shall be used to keep the emergency organization cognizant of changes to the plan and the Emergency Procedures Document.

The plan contains a listing of supporting plans.

A listing of the procedures required to implement the plan and the section of the plan to be implemented by each is provided as part of the emergency plan.

Annual reviews of the emergency plan and implementing procedures will be conducted by the Electric Production Department.

The telephone numbers in the Emergency Procedures will be maintained current.

Deficiencies:

1. The plan states in Section 8.6 that an independent audit of the emergency plan will occur every two years. This should be changed to every year to be consistent with Section 8.2.1 and NUREG-0654.

CONCLUSION

Based on our review, we conclude that the Peach Bottom Atomic Power Station Emergency Plan, upon satisfactory correction of the deficiencies identified in this report, will meet the planning standards set forth in NUREG-0654, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," November, 1980.

The NRC evaluation on the overall state of emergency preparedness for the Peach Bottom site will be made following review of the findings and determinations made by FEMA on the State and local emergency response plans, and the review of the joint exercise to be held to demonstrate the capability to implement the onsite and offsite plans.