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June 18, 1981

Mr. Boyce H. Grier, Director  
U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

Dear Mr. Grier:

RESPONSE TO EMERGENCY PREPAREDNESS  
APPRAISAL (APPENDIX A AND B)  
MARCH 23 - APRIL 2, 1981  
SALEM GENERATING STATION  
DOCKET NOS. 50-272 AND 50-311

We have reviewed the results of your Appraisal which was conducted on March 23 - April 2, 1981, and transmitted with your letter of May 19, 1981. Our response to the Appendix A and B items is attached as Enclosures 1 and 2 respectively. The response and implementation of the Appendix A items were reviewed and found to be responsive by Mr. Dale Donaldson of your staff. A revised Salem Emergency Plan and Procedures which reflects our overall response to the Appraisal was submitted to the U.S. Nuclear Regulatory Commission on May 26, 1981.

We feel that our Emergency Preparedness Program including the commitments and programs described in Enclosure 1 provides for an adequate state of on-site emergency preparedness as required by 10 CFR 50.47(a)(2).

If you have any further questions concerning this matter, please feel free to contact me.

Sincerely,



Enclosures

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ENCLOSURE 1

RESPONSE TO EMERGENCY PREPAREDNESS APPRAISAL  
APPENDIX A

- Item 1      The Manager - Emergency Preparedness has been given the direct working level responsibility and authority over all aspects of the development and maintenance of the Emergency Preparedness Program. A description of this authority and responsibility is given in Section 18 of the Emergency Plan (Revision 0).
- Item 2      Section 3 of the Emergency Plan has been revised to reflect functional areas of the emergency activity, reporting chains and interrelationships for functional areas down to the working level. New functional descriptions, job descriptions and organization charts have been added. A cross reference to Table B-1 of NUREG-0654 has also been provided.
- Item 3      The Assistant to Manager - Salem Generating Station has been charged with the responsibility of maintaining a list of qualified individuals who perform emergency planning activities. Addendum 1 currently lists those individuals who are assigned specific on-site emergency response functions. Update training was completed on May 15, 1981 and as a result a revision to Addendum 1 will be made.
- Item 4      Figures 3-1, 3-2 and 3-3 of Section 3 of the Emergency Plan show how the Radiation Management Corporation and the Salem Memorial Hospital report into the Emergency Response Organization. Other support organizations will be directed to report to the Site Support Manager (shown in Figure 3-3) for reassignment to other individuals within the Emergency Response Organization. These assignments will be made on a case by case basis and in accordance with the services to be provided. Section 4 of the plan identifies off-site support organizations. The various administrative off-site support groups are listed in EP II-6.
- Item 5      Section 3 of the Emergency Plan contains a functional description of each position noted on the Organization Charts. The candidates to fulfill those positions are noted as a part of the functional descriptions. EP II-4 contains a list of those corporate individuals who are qualified to perform emergency response functions.

- Item 6 A new Emergency Preparedness Training Program is presently under development and will be completed by September 1, 1981. This training program will contain lesson plans, training objectives, and means for verifying attendee performance and the means to train the emergency organization in changes of assignment or responsibilities.
- Item 7 Short term training has been provided to individuals assigned Emergency Preparedness duties and records of this training are available at Salem Generating Station for NRC inspection. This training fell into three categories, initial emergency preparedness training of approximately 2 hours duration, emergency preparedness changes training of approximately 1 to 2 hours duration and Operations Support Center training of approximately 1-1/2 hours duration. Training in accordance with the training program being developed under Item 6 noted above will be completed by January 1, 1982.
- Item 8 The conceptual use and staffing of the TSC has been reviewed in light of the organization described in Section 3 of the Emergency Plan. Section 3 describes the transfer of the various emergency planning functions from the normal on-shift organization (Control Room) to the Technical Support Center and then to the Emergency Operations Facility. Section 9 of the Emergency Plan gives a description of the facilities available at the TSC.
- Item 9 The Operations Support Center has been reevaluated in light of the organizational changes and the location in the aisleway between the two Control Rooms has been found to be adequate. If increased staffing is required, the function of the Operations Support Center will be transferred to the Machine Shop in the Clean Facilities Building (B Building). An OSC coordinator, described in Section 3 of the Plan, will direct the operations of the OSC. EP I-19 details the activation of this facility.
- Item 10 The Emergency Operations Facility and its conceptual use and staffing has been reviewed in light of the organizational changes. Section 3 of the Emergency Plan describes this functional use and staffing and Section 9 describes the facility itself. This new organization reflects the overall coordination of response consistent with NUREG-0654.

- Item 11 EP V-2 describes the procedures for obtaining plant vent samples. Demonstrating that plant vent samples collected with the Interim High Level Sample System emergency conditions will be representative was provided via Porter Consultants analysis dated April 22, 1981 (entitled "Sample Line Plateout Factors for Particulate & Halogens In the Interim High Level Sample System"). Implementation of this plateout information will be via a revision to EP V-2.
- Item 12 Assembly/Reassembly areas for individuals who may be evacuated from Hope Creek and Salem and/or recalled to augment the on-site response organization have been reevaluated. The new areas are the Salem or Hope Creek parking lots or Quinton Township School.
- Item 13 Provision for supplies and equipment for decontaminating persons and vehicles evacuated from Salem and Hope Creek are described in Emergency Procedure EP I-12.
- Item 14 As a result of the reevaluation of the Operations Support Center, it has been determined that no additional equipment is needed in the OSC to support repair and corrective action teams. These teams will obtain the necessary equipment for performing their functions from their normal duty stations. If radiation protection and/or habitability equipment is needed for these teams, it is available at the control point in sufficient quantity.
- Item 15 The Salem Generating Station Emergency Instructions have been appropriately revised to direct the operators to reference the new Accident Classification Guide in EP I-0. This Accident Classification Guide then directs the operator to take emergency actions under Emergency Procedures EP I-1 through EP I-4. The Accident Classification Guide is contained in Section 5 of the Emergency Plan. Appropriate on the spot changes to specific Emergency Instructions have been made.
- Item 16 The emergency action levels have been reviewed and a new Accident Classification Guide in EP I-0 has been developed which provides clear, readily observable, site specific indications that EALs have been reached or exceeded. Direction to proceed to the Accident Classification Guide is given in the Salem Generating Station Emergency Instructions.

- Item 17      Emergency procedures have been developed for the Emergency Response Manager EP II-1, Site Support Manager EP II-2 and the Radiological Emergency Manager EP II-3 which are the three primary functions associated with making recommendations for protective actions to off-site authorities from the Emergency Operations Facility. These procedures describe how functions are transferred from the Technical Support Center to the Emergency Operations Facility. Procedure EP II-4 has been implemented for calling in all corporate licensee personnel having emergency duties associated with the Emergency Operations Facility. Call in procedures for station personnel are contained in EP I-1 through 4. The call in list is contained in Addendum 1.
- Item 18      Protective Action Guides have been developed that correlate certain plant conditions directly with EALs. This procedure, EP I-4, Attachment 5, gives actual distance and sector protective action recommendations based upon plant conditions and wind direction.
- Item 19      Procedures for containment air sampling under accident condition using interim equipment have been developed and are EP IV-121 for Unit 1 and EP IV-122 for Unit 2.
- Item 20      A new Evacuation Procedure for personnel at the Salem and Hope Creek sites has been implemented. This new procedure EP I-12 (Table V) takes into account the single access road and provides the option for evacuating personnel to other areas on Artificial Island based upon meteorology and projected dose.
- Item 21      Personnel and vehicles evacuated from the Salem/Hope Creek sites requiring monitoring and decontamination will be accommodated at a decontamination facility run by the State of New Jersey in Quinton. Procedures for the operation of this facility are provided as a part of the New Jersey Radiological Emergency Response Plan. Salem Emergency Procedures are available for backup to the State procedures if needed. Evacuation will be in accordance with EP I-12 and any decontamination conducted by Salem personnel will be in accordance with EP IV-119 and EP IV-120.
- Item 22      A new section of the Emergency Plan Procedures with 5 procedures has been provided to account for the actions of the Security Force under emergency conditions. These procedures cover activation of the TSC and EOF, station accountability, site evacuation and communication equipment and are referenced in EP I-21.

- Item 23 Procedure EP I-17 has been developed and incorporated into Emergency Plan Procedures and governs emergency actions of the repair and corrective action teams. This group is described functionally in Section 3 of the Plan.
- Item 24 Procedure EP VI-1 has been developed and incorporated into the Emergency Plan Procedures for reviewing, approving, and distributing the revisions to the documents comprising the Emergency Preparedness Program and its implementation. This procedure insures proper review of all revisions in accordance with the Facility Technical Specifications. Maintenance and scheduled review of the Emergency Preparedness Program documents is accomplished in accordance with Section 18 of the Plan.
- Item 25 The Salem Emergency Plan and Emergency Plan Procedures have been reviewed by the Station Operations Review Committee and Manager - Emergency Preparedness. Subsequent to this review it was determined that the Manager -Salem Generating Station had not reviewed and signed approval of the SORC meeting recommendation due to an administrative oversight. This deficiency was immediately corrected. In the future, the Manager - Salem Generating Station will sign each Procedure and Plan Section prior to implementation. EP VI-1 will be revised to insure proper approval signatures prior to implementation.
- Item 26 The interface between the NRC (Director of Site Operations) and the PSE&G Emergency Organization is shown on the Emergency Organization Charts in Section 3 of the Emergency Plan. The Emergency Response Manager who is located in the EOF has responsibility for overall direction and control. All NRC interaction will be coordinated at this level.
- Item 27 Information regarding actions to be taken by individuals within the Emergency Planning Zone during a radiological emergency has been distributed to individuals within the Plume EPZ in the State of New Jersey. Similar information tailored to the State of Delaware will be given to the State for distribution.

ENCLOSURE 2

RESPONSE TO EMERGENCY PREPAREDNESS APPRAISAL  
APPENDIX B

- Item 1 It is not intended at this time to develop or implement a selection and qualification criteria specifically for individuals performing emergency preparedness activities. Personnel assigned to perform these activities meet the corporate selection criteria for employment with the Company.
- Item 2 It is not intended at this time to develop a specific structured program for training individuals who are assigned emergency planning responsibilities. As training programs, seminars or other meetings which pertain to emergency preparedness become available, Company personnel who are assigned emergency preparedness developmental and/or implementation functions may be given the opportunity to attend. Attendance at such programs or meetings will be based upon the individual's specific function and relevance to the material being presented, the availability of the individual's time and the cost associated with the program.
- Item 3 Training will be documented by use of a training matrix. This matrix will indicate what training each Functional Title will be given. In addition, the Assistant to the Manager will develop and maintain records that will list each Function and the names of those individuals qualified to perform the Function as well as the training they have received. This item will be initiated by September 1, 1981.
- Item 4 We will continue to use individuals who are familiar with the Emergency Plan and Procedures as instructors. We do not anticipate developing specific criteria for qualification of emergency preparedness instructors.
- Item 5 The habitability and accoustics of the interim TSC located on the third floor of the Clean Facilities Building are considered acceptable until the interim TSC is moved to a new location on the second floor of the Clean Facilities Building. This change in location is necessary to permit construction of the ultimate TSC in the location where the interim TSC (third floor of Clean Facilities Building) now exists. The location of the new interim TSC on the second floor of the Clean Facilities Building should afford somewhat better accoustics because it contains an accoustical tile ceiling.

- Item 6 A specific area designated "NRC" will be provided in the TSC. The ENS, HPN, and two dedicated commercial telephones will be located in this area. This modification will be accomplished as part of our TSC upgrade program.
- Item 7 The present computer displays are part of the interim TSC. This data system will be used until it is replaced by an emergency response facility data system. Consideration will be given to providing units for plant parameters in our proposed data system.
- Item 8 The present computer displays are part of the interim TSC. This data system will be used until it is replaced by an emergency response facility data system. Consideration will be given to providing an independent TSC display capability in our proposed data system.
- Item 9 Existing procedures will be revised to provide for staffing the Technical Document Room with appropriately qualified personnel. These revisions will be included in Revision 1 to the Emergency Plan Procedures. The procedural improvements of Revision 0 of the Emergency Plan Procedures and the proposed improvements to plant data transmission outlined in Items 7 and 8 above should provide improved data transmission.
- Item 10 A system to provide multiple high radiation liquid and gas samples during normal and post accident conditions has been selected and shall be installed by January 1, 1982.
- Item 11 The necessary post accident reactor coolant sample analytical supplies are now stored in a designated area in the chemistry lab. The supplies shall be periodically inventoried. The inventory will be requested by an inspection order card as described in Station Administrative Procedure AP-10.
- Item 12 The equipment for obtaining the remote plant vent and containment sample has been assembled. It is stored in the emergency locker at the control point.
- Item 13 The representativeness of post accident containment air samples has been determined empirically from actual air samples. An insufficient Iodine source term was present in the containment at the time of the sample and a correction factor for Iodines will be determined when the source term is adequate. Until a specific value is obtained the particulate correction factor will be used for Iodines.



- Item 14 The location of the Operations Support Center in the hallway between the two Control Rooms has been found acceptable in light of the new organization described in Section 3.0 of the Emergency Plan. If additional space is required to assemble support personnel, provisions have been made to use the Machine Shop in the Clean Facilities Building.
- Item 15 PSE&G has received separate correspondence from the U.S. Nuclear Regulatory Commission dated May 5, 1981 which requests that we address the "bay breeze" question. Our response to this May 5, 1981 letter will be provided by July 1, 1981.
- Item 16 Information on severe weather warnings or watches is announced via the National Warning System (NAWAS). This system is monitored in the Senior Shift Supervisor's office.
- Item 17 Procedures EP I-1, EP I-2, EP I-3 and EP I-4 are being reviewed to determine where it may be necessary to include references to appropriate procedures, be more specific on who is responsible for implementing the procedures and identify which responsibilities can or cannot be delegated by the person performing the duties of the Emergency Coordinator. These changes will be made in Revision 1 to the Emergency Plan Procedures.
- Item 18 Procedures have been reviewed and, where necessary, telephone numbers will be referenced or included. These changes will be made in Revision 1 to the Emergency Plan Procedures.
- Item 19 EP I-1, EP I-3 and EP I-4 will be revised to provide for notification of the NRC Resident Inspector. These changes will be made in Revision 1 to the Emergency Plan Procedures.
- Item 20 It is not necessary to provide for an automatic activation of the TSC in response to a Radiation Alert Alarm. The Emergency Plan Procedures EP I-2 thru 4 require an announcement over the public address system of "Radiation protection personnel report to your emergency duty stations." and a proceeding step in the procedure requires the Senior Shift Supervisor/EDO to verify activation of the TSC by the Shift Technician - Nuclear.
- Item 21 The Health Physicist and Radiation Protection Engineer will review existing procedures and incorporate additional discussions, where necessary, to provide for integration and prioritization of assessment data. This review will be completed prior to Revision 1 to the Emergency Plan Procedures.

- Item 22 The existing dose assessment procedures were reviewed and the timeliness for manual dose assessment improved in Revision 0 to the Emergency Plan Procedures.
- Item 23 Procedure PD 15.12.315 has been incorporated into the station emergency procedures and is now referred to as EP IV-110. The dose data tables were corrected and included in Revision 0 to EP IV-110.
- Item 24 Procedure EP IV-110 (previously PD 15.12.315) has been reviewed with the following results:
- a. Radiation Protection guidance provided in Revision 0 is considered adequate.
  - b. The flow of information between the TSC and the survey teams by radio is now discussed in the procedure. Documentation of survey results is achieved through the use of an emergency survey log which is included as an attachment to the procedure.  
  
The procedure will be revised in Revision 1 to include returning the samples to the counting room, for logging and storage.
  - c. The new onsite survey points were included in Revision 0 to the procedure.
- Item 25 The procedures governing routine surveys (dose rate, contamination and air sampling) were reviewed and will be revised in Revision 1 to the Emergency Plan Procedures.
- Item 26 The seemingly long time required to acquire the primary coolant sample which was observed was because the available radiation protection personnel were assigned to higher priority activities while the plant was brought to a safe condition. It is felt that the sample was conducted in accordance with the priority assigned to it at the time.
- Item 27 We have not previously noted problems communicating with Control Room personnel during sampling drills. However, we will review communications requirements during primary sampling and install equipment or revise procedures if necessary by January 1, 1981.
- Item 28 Procedure EP V-1 "Interim Post Accident Primary Coolant Sampling" (Rev. 0) requires verification that the following are obtained or achieved prior to initiating the sampling process: 1) availability of the proper survey meters, 2) use of protective clothing, 3) appropriate respiratory device, 3) dosimetry and 4) worker briefings. The details on specific protective measures and briefings are identified in EP IV-106 "Alara Task Review" (Rev. 0).

- Item 29 An alternate counting facility is located in the radiation protection office area beyond the Control Point. This item is addressed in the procedure for primary coolant sampling (PD-3.8.032) and will be included in the next revision to the procedure for sample analysis (PD-3.5.071).
- Item 30 The dissemination of the containment air sample analytical results is provided in Emergency Plan Procedure EP IV-118 "High Activity Sample Analysis" (Rev. 0) which requires that the person performing the analysis notify both the individual requesting the analysis and the Alara/Dose Assessment Supervisor of the results.
- Item 31 The necessity to verify containment vent flow rate will be reviewed further to determine the necessity for flow rate verification.
- Item 32 The transportation of post accident plant vent samples will be reviewed and equipment provided where required by January 1, 1982.
- Item 33 Procedure EP V-2 "Emergency sampling procedure for the plant vent" (Rev. 0), currently includes a precaution statement identifying the hazards of high contamination and high dose rates. Additionally, procedure EP IV-106 "Alara Task Review" is listed as a prerequisite.
- Item 34 Radiation Protection precautions for high activity post accident plant vent sample analysis is provided in Emergency Plan Procedure EP IV-118 "High Activity Sample Analysis" (Rev. 0). An organization for receipt and distribution of analytical results and the administration of original data sheets has been agreed upon and will be included in Revision 1 to the Emergency Plan Procedures.
- Item 35 Upon review of the data by a Chemistry Supervisor, the data will be presented to the Radiation Protection Engineer/Designee. Original data sheets will be retained (during the emergency) by the chemistry group. Copies of the plant vent analytical results will be transmitted to the Radiological Emergency Manager for his use during an emergency. Chemistry procedures will be revised to show this routing in Revision 1 to the Emergency Plan Procedures Section IV.
- Item 36 An EAL will be provided which will interface post accident plant vent sample analytical results. This EAL will be provided in Revision 1 to the Emergency Plan Procedures. An interface between the post accident analytical results and protective action recommendations is currently provided in Emergency Plan Procedure EP I-12 (Rev. 0).

- Item 37 Precautions and prerequisites for analysis for high activity liquid effluent samples was provided in Revision 3 to the sample analysis procedure (PD-3.5.071).
- Item 38 Emergency Plan implementation training is provided for all personnel badged for access to the station. This training program and the individual departmental training programs provide direction on evacuation of the site. This program coupled with direct guidance from radiation protection personnel in the Controlled Areas of the station is considered adequate to direct personnel from these areas in the event of an evacuation.
- Item 39 Procedures will be revised to address accident class deescalation and event termination. The criteria which will be used to determine if deescalation is appropriate will be the plant observables of the Accident Classification Guide.
- Item 40 The "kitchen card" which has been provided for the States of Delaware and New Jersey has been placed in the press kits. These "kitchen cards" contain the information on protective actions to be taken by the Public.