

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

SHIELDS L. DALTROFF
VICE PRESIDENT
ELECTRIC PRODUCTION

(215) 841-5001

September 7, 1984

Docket No. 50-352

Inspection Report No. 50-352/84-18

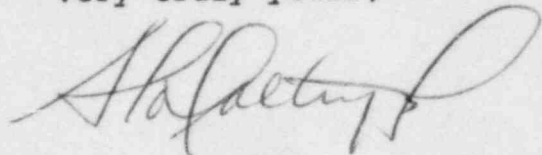
Mr. Thomas T. Martin, Director
Division of Engineering & Technical Programs
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Dear Mr. Martin:

Your letter dated August 14, 1984, T. T. Martin, NRC, to J. S. Kemper, PECO, forwarded the Emergency Preparedness Appraisal Report (50-352/84-18). Appendix A to your letter addresses certain corrective actions required in our emergency preparedness program. Appendix B to your letter addresses areas needing improvement. These items are restated in Attachment A along with our responses.

If you have any questions regarding our responses, please contact us.

Very truly yours,



cc: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

J. T. Wiggins, Site Inspector

See Attached Service List

cc: Judge Lawrence Brenner
Judge Peter A. Morris
Judge Richard F. Cole
Judge Christine N. Kohl
Judge Gary J. Edles
Judge Reginald L. Gotchy
Troy B. Conner, Jr., Esq.
Ann P. Hodgdon, Esq.
Mr. Frank R. Romano
Mr. Robert L. Anthony
Ms. Maureen Mulligan
Charles W. Elliott, Esq.
Zori G. Ferkin, Esq.
Mr. Thomas Gerusky
Director, Penna. Emergency Management Agency
Angus Love, Esq.
David Wersan, Esq.
Robert J. Sugarman, Esq.
Martha W. Bush, Esq.
Spence W. Perry, Esq.
Jay M. Gutierrez, Esq.
Atomic Safety & Licensing Appeal Board
Atomic Safety & Licensing Board Panel
Docket & Service Section
James Wiggins
Timothy R. S. Campbell

50-352/84-18-01

Formally assign an on-site Emergency Preparedness Coordinator (EPC) using selection criteria equivalent to those for Supervisors in ANSI N 3.1. This individual should report to the Station Superintendent and be given direct working level responsibility and authority over all aspects of the development and maintenance of the LGS Emergency Preparedness Program (EPP). Revise normal organizational charts, position analysis descriptions, and other related documents to reflect the EPC assignment in addition to describing the scope of duties, authority, and reporting chain.

Response

As indicated in Section 2.2 of the LGS Emergency Plan, the PECC Emergency Preparedness Coordinator required by 10CFR50 is the Director, Emergency Preparedness. The Director, Emergency Preparedness supervises the Emergency Preparedness Section. The LGS Site Emergency Preparedness Coordinator (SEPC) will report directly to the Director, Emergency Preparedness Section. This position is presently filled by a member of the station's staff.

The Limerick SEPC will have at least a high school diploma and a minimum of 4 years experience in an area related to emergency planning. At least one year shall be nuclear related experience.

The LGS SEPC works with Station and corporate personnel to review and revise the emergency plan and procedures, maintain emergency response facilities, assist in emergency response training, and conduct drills and exercises.

The LGS SEPC is responsible for maintaining emergency preparedness and verifying that emergency preparedness activities are performed correctly. The LGS SEPC is responsible for the review of emergency preparedness deficiencies identified through drills and exercises. This review includes examining causes of deficiencies and reviewing adequacy of corrective actions. After discussion with the EPC, the LGS SEPC will report deficiencies to the Station Superintendent who will provide the LGS SEPC with the authority to ensure the deficiencies are corrected.

The Emergency Preparedness Section, which is supervised by the Director, Emergency Preparedness, with input from the LGS SEPC makes detailed recommendations for revised plans and procedures, equipment resources, training requirements, drill, and exercise requirements or other

means of emergency preparedness. These activities are completed in accordance with EP-500, LGS Administrative procedures, LGS surveillance test procedures, and Section 8.0 of the Emergency Plan.

The LGS SEPC will work in conjunction with the Emergency Preparedness Section personnel located in the corporate office who:

- a. Evaluate QA audit reports, drill and exercise critiques, surveillance test results and recommend corrective actions.
- b. Review regulatory requirements and external emergency preparedness experience information and distribute pertinent information to the Limerick SEPC.
- c. Track implementation status of drill and exercise corrective actions, regulatory requirements, and surveillance test corrective actions.
- d. Provide on-site technical and logistic assistance, to assist the Limerick SEPC.
- e. Act as liaison between the Limerick SEPC and corporate personnel who provide assistance in emergency preparedness and those who are members of the emergency response organization.
- f. Assist in emergency preparedness training.

Also, because the Limerick and Peach Bottom plants are similar, many of the Peach Bottom SEPC's assessments, particularly in the areas of training, corrective actions, plans, and procedures may be directly applicable to Limerick and vice versa. The Peach Bottom SEPC and LGS SEPC positions have equivalent responsibilities. The two SEPC's exchange information on a regular basis.

The Director of the Emergency Preparedness Section reports to the Superintendent-Nuclear Services.

The normal organizational charts, existing position descriptions, and other related documents for the Limerick SEPC will be revised prior to 5% rated power of Unit 1.

50-352/84-18-02

Develop and identify tasks, strategies, and landmarks to implement and efficiently coordinate the onsite EPP to include as a minimum: indication of the responsibilities and authorities of the individuals involved; the extent of participation of onsite technical groups in the development and implementation of training; implementation of procedures, and the selection of equipment and supplies.

Response

At the time of the appraisal, an emergency preparedness implementation program existed that identified by functional area those activities to be completed. This program addressed the development of procedures, procurement of equipment, completion of facilities, training of personnel and the conduct of practice drills. Several schedules were available to personnel involved in emergency preparedness that indicated responsibilities and milestones. Additionally, drill action item tracking existed to correct deficiencies identified during practice drills. A computer program exists to track outstanding items. All these activities were undertaken to support the activities described in Section 8 of the Emergency Plan.

To further enhance the coordination and implementation of the emergency preparedness program, the existing program will be revised to more closely coordinate the program and activities described above. Tasks necessary to enhance the present emergency preparedness program and emergency response will be identified based upon regulatory requirements, utility actions necessary to maintain emergency preparedness, and activities required to conduct an annual emergency response exercise. From the task identification, a planning and scheduling document will be developed indicating manpower requirements and milestone dates for the responsible individuals and groups. The tasks, as a minimum, will include training, drill and exercise conduct, plan and procedure revision, surveillance of past performance, procedure implementation, and selection of additional equipment and supplies. The identification of tasks and development of a planning and scheduling document is anticipated to be complete within 3 months.

50-352/84-18-03

Review the description of your emergency organization and revise it as necessary to provide for a clear depiction of all emergency functions required during initial, intermediate, and final phases of augmentation and recovery; update the site and corporate Emergency Plans to describe the revised organization; revise and issue implementing procedures which have been human engineered so that all emergency response tasks can be carried out using the command and information pathways of the organizations. The updated description of your emergency organization should include a sufficient level of detail, unambiguously delineate the command hierarchy, clearly specify its structure, reporting chains and interrelationships at any phase of augmentation, and include supervisory as well as non-supervisory elements.

Response

The emergency plan and procedures will be reviewed by personnel familiar with emergency preparedness and human factors aspects of written material. These personnel will develop revised descriptions of emergency plan functions to clarify personnel responsibilities. Additionally, revised charts will be developed to clearly depict the phases of augmentation from initial to recovery. The emergency plan procedures will be revised to minimize extraneous material and to concisely define action steps and the related communications pathways. The revised plan, charts and procedures will be revised so as to ensure the command structure, interrelationships, and communications flows are clearly defined.

The revised material will be incorporated into the ongoing training program so that emergency response personnel will be familiar with the material prior to the 1985 annual emergency response exercise.

50-352/84-18-04

Provide greater depth in the line of successions for the various supervisory elements of the emergency organization.

Response

The emergency response organization has been reviewed for line of succession. The Team Leader positions, Emergency Director, Site Emergency Coordinator, and Corporate Spokesman require depth of succession. At the present time, the Site Emergency Coordinator position has one primary and two alternates, thus providing a sufficient line of succession. The Emergency Director, Team Leader and Corporate Spokesman positions will have additional alternates designated and trained by 5% rated power. The revision of the emergency plan and procedures addressed in 50-352/84-18-03 will include these alternates.

50-325/84-18-05

Establish qualification criteria for instructors.

Response

Qualification criteria for instructors presently exist as per Section 3.10 of the Nuclear Training Section Training Manual.

- a. The Director, Emergency Preparedness Section, or a designated member of that staff, is responsible for certifying the technical competence of emergency preparedness instructors.
- b. Documentation of these certifications is in progress and is expected to be completed in October 1984.

50-352/84-18-06

Establish a single point of responsibility for across-the-board Emergency Plan Training.

Response

The single point of responsibility for across-the-board emergency plan training within PECO is the Superintendent, Nuclear Training Section. This individual delegates LGS Emergency Planning Training responsibilities to the LGS Training Coordinator.

50-352/84-18-07

Establish qualification criteria for each emergency response function in such a manner that a clear line of progression, from untrained to qualified, including hands-on demonstrations, can be achieved.

Response

The PECO Emergency Preparedness Section will develop a job description for each emergency response function and in cooperation with the Nuclear Training Section - Limerick, will verify that applicable training (both hands-on as well as classroom) is presently being implemented or will be developed in order to provide a clear line of progression from untrained to qualified. The Nuclear Training Section - Limerick has, since the appraisal, taken steps to:

1. Identify members of the Emergency Response Organization are lacking necessary training and then provide the necessary training.
2. Develop qualification cards for each emergency response member to trace qualification from untrained to qualified. These cards will include standardized emergency planning and practicality training for each individual.

This activity will be completed prior to the 1985 annual emergency response exercise in conjunction with the corrective action for 50-352/84-18-03.

50-352/84-18-08

Organize and consolidate training records so that it is possible to track the progress of qualification for each individual assigned to specific emergency response duties.

Response

To track and consolidate training records of the individual LGS emergency response team members, from untrained to qualified, under the domain of the LGS - Nuclear Training Section, the following programs have been implemented and will be continued to completion by the LGS - Nuclear Training Section:

1. Emergency Plan Training Computerized Tracking System
 - a. Attendance sheets for each emergency plan classroom lecture identifying the individual by name and the individual's emergency response team are submitted to the computer section and are entered into a computer training program.
 - b. Routine printouts are generated to track the individual's emergency plan training in accordance with the emergency plan training matrix (by lesson plan number and the date that the lesson was successfully completed) from untrained to the point at which the individual has completed the required training.
 - c. PECO department heads submit a monthly update of personnel assigned to their sections to the LGS training department. New hires or personnel who have not received emergency plan training are placed on the printout under their respective emergency plan function identifying what training they must receive to meet the requirements of the emergency plan training matrix.

2. Emergency Plan Training Qualification Cards

a. The Emergency Plan Qualification Card as presently designed will document the following information for each member of the PECO staff assigned to the on-site emergency response organization.

- (1) Name
- (2) PECO Payroll Number
- (3) Emergency Response Organization Title
- (4) Date of Birth
- (5) PECO Title (Normal Working Title)
- (6) Social Security Number
- (7) Classroom Instruction
 - (a) Standardized training - date completed, requalification date.
 - (b) Emergency plan training - date completed, requalification date.
- (8) Practicality Training
 - (a) Type of training - date completed.
- (9) Mini-Drills/Exercise Participation
 - (a) Documenting the date participated and the emergency response function in which the individual participated.
- (10) Approval of Student's Emergency Plan Training Qualifications
 - (a) Normal Duties

Approval signature blocks for the
LGS Training Coordinator.

(b) Emergency Plan Duties

Approval signature block for person observing emergency response skills including observer's position.

(c) Attendance sheets documenting the type of training (classroom/practicality) and whether or not the individual has successfully completed the training, are retained by the respective group performing the training.

(d) Emergency plan training and drill attendance sheets are processed and placed on the nuclear personnel records computer system, along with results of the quizzes taken for each respective lesson plan.

These qualification cards may be modified as additional experience is accumulated in their use.

50-352/84-18-09

Develop a means to evaluate and record individual proficiency for out of classroom training activities, walkthroughs, mini-drills, and other.

Response

See response to 30-352/84-18-08.

50-352/84-18-10

Specify General Employee Training (CET) and retraining requirements in the Emergency Plan (EP).

Response

This item will be added to the LGS Emergency Plan during the review and revision of the plan addressed in 50-352/84-18-03 which will be completed prior to the 1985 annual emergency response exercise.

50-352/84-18-11

Complete training and qualify all emergency organizational elements, so that instructors can verify with a reasonable degree of assurance that they will effectively perform their emergency duties during actual emergencies.

Response

Standardized and Emergency Plan initial training is on-going with the majority of personnel who have been on-site for greater than 30 days already trained. Standardized and Emergency Plan requalification training will be implemented as required by the LGS training manual, with initial training continuing as an on-going effort for new hires and personnel transferred to LGS.

Each instructor will verify that his respective part of the training has been successfully completed. The LGS Training Coordinator and SEPC or his representative will verify the training as being complete and the person's qualifications to perform their emergency plan functions by signing the Emergency Plan Training Qualification Card.

Training, documentation and training implementation will be assigned to a specific member of the LGS - Nuclear Training Section for coordination to maintain the qualifications of members of the LGS PECO Emergency (on-site) Response Organization.

50-352/84-18-12

Implement a centralized Emergency Plan training records system consistent with the findings of Section 3.1 (50-352/84-18-08), and the revised emergency organization which will allow determination of the progress of emergency response personnel toward full qualification.

Response

See response to 50-352/84-18-08 and 50-352/84-18-11.

50-352/84-18-13

Complete control room Unit 1 and common area installations and ensure that all emergency equipment, supplies, and supporting documentation are in place.

Response

Unit 1 Control Room and common equipment needed for fuel load will be completed. Emergency equipment and supplies specified in Section 6.3.1 of ST-0-EPP-351-0 will be in place prior to fuel load. Procedures have been placed in the control room.

50-352/84-18-14

Complete installation, testing, and turnover of the Technical Support Center (TSC) communications, ventilation, radiation monitoring, Emergency Response Facility Data System (ERFDS), personal dosimetry, and thyroid blocking systems and equipment.

Response

a. Communications

The TSC Communication links are complete with the exception of the Emergency Notification System (ENS) and the Health Physics Network (HPN).

The ENS and HPN communication lines are ordered by the NRC directly from AT&T Information Systems (ATTIS). The ENS equipment is currently being installed on-site. The schedule for the installation and operation of these systems is between the NRC and ATTIS.

As stated in the Appraisal Report, Section 4.1.1.2, some radio units were inoperative during the June appraisal. These units included the State and County police channels, Plant Operations Radios, and the Control Room Radio Console. Since the appraisal these items have been installed and satisfactorily tested. The radio system is complete.

b. Ventilation

Testing and turnover of the TSC ventilation system has been completed.

c. Radiation monitoring

At the time of the appraisal, a PING-3 monitor was available and operable in the hallway of the TSC. Calibration of the TSC PING-3 will be completed prior to exceeding 5% rated power.

d. Emergency Response Facility Display System (ERFDS)

As stated in the Appraisal Report, ERFDS was installed, but not fully operational during the June appraisal.

All ERFDS hardware is installed and powered up. The system is presently undergoing calibration and software debugging. The Safety Parameter Display System (SPDS) displays can be called up in the Control Room, TSC, and EOF. Operator training on use of the system is complete. However, additional time will be required to complete the software debugging process, and until complete, the ERFDS and SPDS cannot be considered functional.

PECo has requested the deferral of ERFDS and SPDS in accordance with the following schedule:

- o Hardware Installed and Powered-Complete
- o SPDS Display Formats Loaded into ERFDS-Complete
- o Operator Training-Complete
- o SPDS Displays Functional-March 1, 1985
- o Reg. Guide 1.97 Displays Functional-April 1, 1985

This deferral request was transmitted via letter from J. S. Kemper (PECo) to A. Schwencer (NRC), dated 7/17/84. At the present time PECO is awaiting a response to this deferral request.

e. Personnel Dosimetry

Procedure HP-610, Issuance and Control of Routine and Emergency Dosimetric Devices, was issued on June 18, 1984, during the appraisal. This procedure, in conjunction with EP-221, Personnel Dosimetry, Bioassay and Respiratory Protection Group, dated 6/8/84, describes the control and use of dosimetry relative to the TSC, including storage location.

f. Thyroid Blocking Systems

The procedure EP-313, Distribution of Thyroid Blocking Tablets, 6/8/84 will be revised to indicate the storage location of KI. Placement of KI stores will be performed prior to unit 5% of rated power.

50-352/84-18-15

Ensure that TSC direct radiation protection factors comply with habitability guidance of paragraph 2.6 of NUREG-0696.

Response

Calculations by Philadelphia Electric Company and its contractor during the design of the TSC indicate that the post-accident doses will be well below the criteria established for the TSC. These doses are summarized below:

	Calculated Dose (REM)	GDC 19 Dose Criteria (REM)
Gamma-Whole Body	4.1	5
Thyroid Inhalation	3.4	30
Beta Skin	4.9	30

50-352/84-18-16

Remove the wooden bridge which is installed to couple the Unit 1 protected area with the TSC since it violates the integrity of the protected area isolation zone.

Response

The wooden bridge over the protected area boundary fence was removed on August 14, 1984.

50-352/84-18-17

Establish an equipment and supply inventory for the Operations Support Center (OSC). Outfit the space, stow emergency materials and install locks or seals as appropriate.

Response

Equipment for the OSC specified in section 6.3.2, 6.3.3, 6.3.4, and 6.3.5 of ST-0-EPP-351-0 will be in place, properly stored and controlled prior to fuel load.

50-352/84-18-18

Review the concept of operations of the OSC with respect to the number of personnel assigned under all conditions.

Response

Procedures EP-110 and EP-202 will be updated to reflect the use of an auxiliary OSC as demonstrated in the July 25, 1984 exercise. This update will be completed prior to fuel load.

50-352/84-18-19

Designate a specific location for an alternate OSC; define the staffing therein; revise supporting documentation as required to ensure continuity of operations in the alternate OSC.

Response

Procedures EP-110 and EP-202 will be changed to provide for an auxiliary OSC location, staffing of the facility, and continuity of operations in the auxiliary OSC prior to fuel load.

50-352/84-18-20

Establish means for access control for the EOF.

Response

A means of access control will be established for the EOF and included in the appropriate procedures prior to 5% rated power.

50-352/84-18-21

Include checklists used in the EOF in EP-203 "EOF Activation".

Response

The checklists used in the EOF will be included in EP-203 "EOF Activation" prior to 5% rated power.

50-352/84-18-22

Complete the acceptance testing, verify the operability of the PASS station, and ensure that the facility meets the criteria of NUREG-0737 to allow post accident primary coolant sampling and analysis.

Response

Philadelphia Electric Company has previously committed by letter (J. S. Kemper to A. Schwencer, 7/6/84) that "The PASS will be operational before exceeding 5% power".

The design of the LGS PASS is described in detail in FSAR Section 11.5.5. The NRC SER indicates compliance of the LGS design with NUREG-0737 Item II.B.3 and Regulatory Guide 1.97 requirements in SER Section 9.3.2. Subsequent to the publication of the SER, the need for a generic design modification to GE post-accident sampling systems was identified. This change was reviewed with the NRC staff and their approval was indicated by letter (W. V. Johnston to G. G. Sherwood, 7/17/84). Appropriate FSAR revisions were provided by the previously referenced PECO letter. The generic modification will be completed in September 1984.

50-352/84-18-23

Complete the acceptance testing, verify the operability of the PASS station, and ensure that it meets the criteria of NUREG-0737 to allow post accident containment air sampling and analysis.

Response

Philadelphia Electric Company has previously committed by letter (J. S. Kemper to A. Schwencer, 7/6/84) that "The PASS will be operational before exceeding 5% power".

The design of the LGS PASS is described in detail in FSAR Section 11.5.5. The NRC SER indicates compliance of the LGS design with NUREG-0737 Item II.B.3 and Regulatory Guide 1.97 requirements in SER Section 9.3.2. Subsequent to the publication of the SER, the need for a generic design modification to GE post-accident sampling systems was identified. This change was reviewed with the NRC staff and their approval was indicated by letter (W. V. Johnston to G. G. Sherwood, 7/17/84). Appropriate FSAR revisions were provided by the previously referenced PECO letter. The generic modification will be completed in September 1984.

50-352/84-18-24

Demonstrate that a gas and particulate sample can be obtained from the Wide-Range Gas Monitor (WRGM) under severe accident conditions, (i.e., in full respiratory protection gear and carrying the transport cask) utilizing the access routes given in EP-231.

Response

The Wide Range Accident Monitor (WRAM) is located in an area which is accessible without respiratory protection under conditions evaluated in accordance with NUREG-0737, Section II.B.2. The total inhalation pathway dose during retrieval of the samples through the south stack was found to be a small fraction of external doses.

Since the Emergency Preparedness Appraisal, a transport cask has been fabricated and is available for use. In addition, support equipment for use in transporting the cask has been installed in the south stack.

EP-231 will be revised by 5% rated power to include the south stack pathway. This pathway will be used when the normal route down the north stack stairs is not accessible.

In order to show that the WRAM samples are retrievable, a full demonstration of the procedure will be completed during the next annual emergency response exercise. A walkthrough will be completed prior to 5% rated power.

50-352/84-18-25

Develop plans/schemes and procedures for handling, storing, transferring, and discharging post-accident liquid wastes.

Response

The Limerick liquid radwaste collection system is designed to minimize the amount of Post-Accident waste which could be released from the primary and secondary containments. The Drywell sump discharges are isolated on a Primary Containment Isolation signal. The secondary containment (reactor enclosure) sump pumps are stopped on high containment radiation. The reactor enclosure floor drain sump pump trip can be bypassed from outside the reactor enclosure building and the discharge from these pumps diverted from the radwaste system to the suppression pool. This would allow any leakage from the primary containment to secondary containment to be returned to the suppression pool (primary containment).

During LOCA the drywell sumps would be isolated before fuel failure would occur. The secondary containment sump pumps would be tripped when fuel failure has occurred (high containment radiation). The amount of radioactivity released to secondary containment up to this point would be minimal. Because the primary containment isolation system would isolate primary containment and the reactor from the remainder of the plant (except for the ECCS systems), liquid leakage from the primary containment to secondary containment would also be minimal. Bechtel Power Corporation has calculated this leakage to be 6.36 gpm for Post-LOCA - short term, HPIC and RCIC operating and 0.83 gpm for Post-LOCA - long term, no HPIC or RCIC operation. Our LOCA transient analysis has indicated that HPIC and RCIC will isolate on Low Steam Line pressure within the first minute of the transient. Therefore the liquid leakage from the primary containment sumps (one would overflow to the other) above the first sump pump start level to be 3074 gals. Within 1.0 gpm leakage, it would take 51 hours to overflow the secondary containment sumps. Even at worst case leakage (6.36 gpm) it would take 8.0 hours to overflow these sumps. Based on our LOCA transient analysis, the secondary containment floor drain sump pumps would be unable to return water to the suppression pool for only the first 6.0 hours of the transient due to high drywell pressure (greater than 17.0 psig). Below this pressure the sump pumps would transfer greater than 22.0 gpm of water. Based on this analysis, we have concluded that sufficient capacity is present to

store and transfer post accident liquid wastes. In the worst case analysis, 8.0 hours of storage is provided when only 6.0 hours are required until the secondary containment sump pumps could begin pumping.

In Section 4.1.1.8 of your report, you stated that startup testing of the reactor enclosure sump pumps showed that these sump pumps could not pump for more than 10 minutes without the pumps heating up and tripping the breakers. Since that time these pumps have been rebuilt and are now working satisfactorily.

We also have comments on two statements made in Section 4.1.1.8 of the referenced report.

1. A statement in the report says that during normal operations the drywell pressure is too high for the reactor enclosure sump pumps to pump to the drywell. During the normal operation drywell pressure is below 1.0 psig, a pressure well below 17.0 psig at which the pumps would pump 22.0 gpm.
2. A inference is made that 200,000 gallons of water would be released to the secondary containment sumps during a LOCA. Our calculation indicates for the worst case condition (6.36 gpm leakage) less than 2,000 gallons would be released before the sump pump would return it to the suppression pool.

50-352/84-18-26

Identify permanent back-up capability for performing chemical and radio-chemical analysis during emergencies, so that the time for sample measurement and analysis will not exceed the limits of NUREG-0737.

Response

NUREG-0737, page II.B.3.1-3, Section II.B.3.(8), is a clarification of the original NUREG-0737 requirements. The referenced section states, "If in-line monitoring is used for any sampling and analytical capability specified herein, the licensee shall provide back-up sampling through grab samples, and shall demonstrate the capability of analyzing the samples".

Since Limerick does depend on the Post-Accident Sample System for in-line monitoring of any 0737 specified parameters, there is no need to provide back-up capabilities.

The Limerick emergency organization and laboratory facilities are designed to enable the sampling and analysis of PASS grab samples within three hours.

The fact that Limerick can use the station chemistry labs and counting room under any postulated accident condition precludes the need for back-up facilities. In order to enhance the sample analysis capability, Limerick has gone beyond the specified requirements and is arranging a contract with Babcock and Wilcox to perform analyses on selected samples as requested.

The PECO Peach Bottom facilities are also available for analysis of selected samples as deemed necessary.

50-352/84-18-27

Specify alternate assembly areas in the event that primary areas should become uninhabitable; mark primary and alternate assembly areas; revise the Emergency Plan and EPIP-110 to identify all assembly and re-assembly areas; identify monitoring and decontamination capability for each and where no capability exists at the assembly area, identify the sources from which support equipment and supplies would be obtained.

Response

Procedure EP-110 will be revised to incorporate additional assembly areas and those assembly areas will be marked prior to fuel load. For off-site assembly areas, the decontamination capability and source of additional equipment are described in EP-254.

50-352/84-18-28

Establish an onsite medical facility as required by 10 CFR 50, Appendix E and NUREG-0654, which is capable of supporting the various scenarios that may occur during accidents including the simultaneous or sequential handling of several injured and contaminated persons.

Response

An onsite medical facility has been established at Limerick. It is located adjacent to the Personnel Processing Center and is capable of handling injured or contaminated persons.

50-352/84-18-29

Provide equipment, supplies and procedures for the decontamination facility and modify the internal structure of this facility to ensure adequate contamination control.

Response

Decontamination supplies and equipment will be in place at the decontamination facility prior to initial criticality. Procedure HP-818, Personnel Decontamination, has been approved and can be implemented using existing facilities.

Modifications to improve the decontamination facility in the radwaste enclosure will be complete prior to exceeding 5% of rated power.

50-352/84-18-30

Develop means for the disposal of radioactive wastes at assembly areas.

Response

Procedures for assembly areas will be revised prior to 5% rated power to provide direction on the disposal of radioactive wastes.

50-352/84-18-31

Designate fixed facilities with existing communications capability, (e.g., personnel processing center and training center) for administrative and logistical support in the event of a prolonged emergency response and modify the EP as necessary to reflect these changes.

Response

The Emergency Plan will be revised to indicate the use of fixed facilities including the personnel processing center and the training center. The emergency plan will be revised by commercial operation.

50-352/84-18-32

Upgrade the Emergency Plan to include provisions for the Emergency Director to have the option to activate the Emergency News Center prior to a site area or general emergency.

Response

The Emergency Plan will be revised prior to the 1985 annual emergency response exercise to allow the Emergency Director to have the option to activate the Emergency News Center prior to the Site Emergency level.

50-352/84-18-33

Ensure that the contents of all emergency kits are as described in the Emergency Plan and Implementing Procedures, that inventories are consistent with the description of contents in ST-O-EPP-351-0, Rev. 2, and verify that portable radiological survey instrumentation in emergency kits are calibrated.

Response

All equipment in ST-O-EPP-351-0, Rev. 2, except for Health Physics instruments, will be in place prior to fuel load. All portable radiological survey instrumentation in emergency kits will be in place and calibrated prior to initial criticality.

50-352/84-18-34

Verify the operability and adequacy of all Process Radiation Monitors; establish procedures for calibration and calibrate all ARMs and PRMs.

Response

The area radiation monitors have been proven operable by the completion of pre-operation test 1P79.1. The process radiation monitors will be proven operable by the completion of pre-operation test 1P79.2 A-F prior to fuel load.

Forty-five of the fifty-one calibration procedures for the area radiation monitors and process radiation monitors have been completed and approved. The remaining procedures will be completed and approved prior to fuel load.

50-352/84-18-35

Complete the installation, and verify the operability of Reg. Guide 1.97 type A-D non-radiation process monitors.

Response

All Regulatory 1.97 instruments specified in FSAR Table 7.5-3 will be operable prior to fuel load except for the following:

ERFDS Instruments	-	Commercial Operation
Drywell Sump Level		
SLCS Storage Tank Level		
Containment Hydrogen	-	Initial Criticality
Containment Oxygen	-	Initial Criticality
Main Steam Bypass	-	Initial Heatup
Valve Position		

The response to 50-352/84-18-14 indicates the completion schedule for Regulatory Guide 1.97 ERFDS displays.

50-352/84-18-36

Provide a communications link and procedures with the National Weather Service from which meteorological conditions representative of the region surrounding the site can be obtained.

Response

LGS procedures EP-315, Calculation of Offsite Doses During a Radiological Emergency Using RMMS in the Manual Mode, dated 7/17/84, and EP-316, Cumulative Population and Near Real-Time Emergency Dose Calculations for Airborne Releases - Manual Method, dated 7/24/84, provide for communication with National Weather Service to obtain regional meteorology in the event that the LGS on-site meteorological monitoring system is not operational. Communication is by commercial telephone with the telephone number indicated in the procedures referenced above.

50-352/84-18-37

Provide equipment and/or procedures for the National Weather Service to notify the Control Room shift personnel of severe weather conditions affecting or likely to affect the site.

Response

Operating practices within the Philadelphia Electric generating system are such that weather data especially severe weather warnings are provided by systems operations personnel to the various plant sites including LGS.

50-352/84-18-38

Improve the exposure of sensors on the primary tower.

Response

The dirt pile located adjacent to Meteorological Tower 1 will be regraded so that the siting criteria of Regulatory Guide 1.23, Proposed Rev. 1 are met. This work will be completed prior to 5% rated power.

50-352/84-18-39

Establish by means of sufficient data that the current meteorological measurements system provides reliable indication of meteorological variables.

Response

Computer magnetic tapes containing data from the LGS meteorological monitoring system are being submitted to the NRC on a quarterly basis to demonstrate monitoring system reliability and a high rate of data recovery. To date, three quarterly periods have been submitted covering October 15, 1983 to July 15, 1984. The data are under review by the NRC.

50-352/84-18-40

Provide updated radiological assessment/projection procedures which are consistent with acceptable atmospheric stability estimators.

Response

Procedures EP-315, Calculation of Off-Site Doses During A Radiological Emergency Using RMMS in the Manual Mode, dated 7/17/84 and EP-316, Cumulative Population and Near Real-Time Emergency Dose Calculations for Airborne Releases - Manual Method, dated 7/24/84, have been implemented. These procedures incorporate the Pasquill-Gifford atmospheric stability classification system.

50-352/84-18-41

Implement procedures for inspecting the instrumentation at the meteorological towers and establish means to document results.

Response

A procedure for inspecting the instrumentation at the meteorological towers and documenting the results will be prepared by September 24, 1984.

50-352/84-18-42

Implement a program to certify that personnel are respirator qualified to support emergency activities.

Response

Personnel assigned to the emergency response organization who may be required to use emergency respiratory protection will be medically qualified and indoctrinated in the use of such equipment prior to exceeding 5% rated power. However, no protection factors will be taken until the LGS respiratory protection program is in compliance with 10 CFR 20.103.

50-352/84-18-43

Provide protective clothing supplies for all locations for emergency response functions consistent with the types and levels of radioactive contamination expected during emergencies.

Response

Sufficient stocks of protective clothing to support emergency operations have been received and are in central storage at Unit 1. Placement of protective clothing consistent with emergency equipment inventory listings will be completed prior to fuel load.

50-352/84-18-44

Incorporate into the EP and EPIPs details of the communication links between each organizational element and identify associated equipment used for emergency communications.

Response

Figure 7.2 of the Emergency Plan indicates the emergency communications links between facilities and identifies the associated equipment. The plan will be reviewed and revised to clarify the equipment available between organizational elements prior to commercial operation. This revision will be accomplished as indicated in 50-352/84-18-03. Telephone numbers are included in telephone books located in the various facilities. The telephone equipment and books will be addressed in ST-0-EPP-351-0 prior to 5% rated power.

50-352/84-18-45

Complete installation, and testing, and ensure operation of the prompt alert and notification (siren) system in the plume exposure EPZ.

Response

The installation and testing of the public alert/notification system is scheduled for completion in October 1984. Operation of installed sirens is verified on an individual basis as each siren installation is completed. One hundred thirteen (113) sirens were activated on July 25, 1984 during the emergency response exercise. The entire system will be tested for operability during a Federal Emergency Management Agency (FEMA) siren evaluation proposed for the last quarter 1984.

50-352/84-18-46

Provide a means to ensure reliability and operation of the siren warning system.

Response

Public Alert/Notification System

Each siren site maintains a two-way communications path between itself and the controllers and the counties of Montgomery, Berks and Chester. Also, the sites communicate with the backup controller located at LGS. This path provides control to the siren and siren status to the controllers. Siren operation status, power failure and malfunction are promptly reported to the controllers through CRT readouts, alarms or printouts.

Site Evacuation Alarm

The site evacuation alarm malfunctioned when tested during the June appraisal. The evacuation alarm had not undergone preoperational testing at that time. Since the June appraisal, the preoperational test on the site evacuation alarm has been conducted and the alarm has been successfully tested. The evacuation alarm will be tested monthly as part of Surveillance Test ST-6-EPP-310-0.

50-352/84-18-47

Determine the needs for prepositioned inplant damage control kits, outfit and position kits in marked storage lockers, and revise EPP's accordingly.

Response

A review of the present positioning of tools within the plant indicates that prepositioned kits would not enhance emergency response. The normal toolroom in the Maintenance Shop which is the assembly area for Damage Repair personnel is well-equipped. Personnel leaving for other areas of the plant would be able to obtain appropriate tools and supplies at this location. The contaminated toolroom is located at elevation 217, in the Turbine Building and also has sufficient, accessible supplies.

50-352/84-18-48

Identify in the EPIP's transportation arrangements to be provided for site personnel in the event of a site evacuation.

Response

Procedure EP-305 will be revised to show that personal vehicles will be used for a site evacuation prior to 5% rated power.

50-352/84-18-49

Review Emergency Plan Implementing Procedures and make revisions to:

- (a) Specify duties and responsibilities of emergency personnel performing emergency response tasks;
- (b) Correct ambiguities, inconsistencies, omissions, errors, wordy discussions, unnecessary references, lists of contents, and other extraneous materials in order to help users perform their duties during emergencies more efficiently;
- (c) Provide specific cross-references to other procedures in the action steps when needed to further detail and clarify actions;
- (d) Identify lines of command, communications, and information flow necessary to perform emergency tasks and response actions; and
- (e) Ensure that emergency response tasks are coordinated between the appropriate elements of the emergency organization and are consistent with the organizational structures.

Provide adequate procedures to implement the Emergency Plan in these areas:

- (a) On-site (out-of-plant) radiological surveys during emergencies;
- (b) Sampling and analysis of high radioactive liquid waste;
- (c) Personnel accountability;
- (d) Security during emergencies;
- (e) Operation of radio chemistry analysis equipment.

Response

LGS will review the EPIP's that have been written using the guidance provided by the NRC in Section 5.0 of your letter. The necessary revisions will be completed as indicated in 50-352/84-18-03.