

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Philadelphia Electric Company	)	Docket Nos. 50-352
	)	50-353
(Limerick Generating Station	)	
Units 1 and 2)	)	

APPLICANT'S ANSWERS TO  
INTERVENOR CITY OF PHILADELPHIA'S  
INTERROGATORIES IN THE LIMERICK  
OPERATING LICENSE HEARINGS

DISCOVERY 27  
FEBRUARY 21, 1984

8402280479 840222  
PDR ADDCK 05000352  
C PDR

INTERROGATORY NO. 14

Provide PECO's list of all equipment important to safety. Identify separately that equipment which is "safety-related" and that equipment which is "important-to-safety" as defined in the November 20, 1981 Denton Memorandum. Equipment in this case includes electrical, mechanical and hydraulic/fluid systems and components.

ANSWER

The list of Limerick Generating Station electrical equipment important to safety which is located in a potentially harsh environment is provided by Appendix B of the Environmental Qualification Report (October, 1983) as revised by transmittal from J. S. Kemper to A. Schwencer dated 2/16/84 (revised Appendix B). See also answer to Interrogatory No. 18, infra.

PARTICIPANTS IN PREPARATION OF ANSWER

John S. Kemper  
Vice President, Engineering and Research  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

William J. Eoyer  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

INTERROGATORY NO. 15

Regarding the "List of Systems Important to Safety" in Appendix A of the Environmental Qualification program submittal (October, 1983):

- a. Which of the systems are important-to-safety but not safety related?
- b. Are there components in other systems which are important to safety but not safety-related? If the answer is affirmative, please provide a list of these components and their qualification status.
- c. Please provide a list of the systems and components in Appendix A of the EQ submittal which were reviewed for compliance with 10CFR50.49(i)(5) regarding the need to show that failure of important-to-safety equipment which is not fully qualified will result in "[n]o...misleading information to the operator as a result of failure of equipment under the accident environment resulting from a design basis event."
- d. For Section IX E of Appendix A provide the documentation of the analysis described in (15)(c) above to demonstrate compliance with 10CFR50.49(i)(5).

ANSWER

- a. None
- b. No
- c. All equipment identified by the revised Appendix B list is expected to be qualified by fuel load; therefore, 10CFR50.49(i)(5) is not applicable. The following systems were reviewed in establishing the Appendix A list:

High Pressure Coolant Injection  
Nuclear Boiler Instrumentation  
Residual Heat Removal  
Core Spray  
ADS

15c. (Continued)

Nuclear Boiler System (Reactor Vessels and Auxiliaries, and  
Main Steam Piping and Valves)  
Nuclear Steam Supply Shutoff  
MSIV Leakage Control  
Reactor Water Cleanup  
Reactor Protection  
S/R Valve Position Indication  
Reactor Recirculation  
Leak Detection  
Reactor Core Isolation Cooling  
Standby Liquid Control  
Control Rod Drive Hydraulic  
Fuel Pool Cooling, Cleanup System and Refueling Pool  
Process Radiation Monitoring  
Neutron Monitoring System (APRM, IRM, SRM)  
Containment Atmosphere Control included Containment Purge,  
Containment Vacuum Relief, Combustible Gas Control,  
Containment Isolation Gas  
Reactor Manual Control including Rod Sequence Control,  
Refueling Interlock and Rod Position Information  
Feedwater Control  
Area Radiation Monitoring  
Fuel Handling  
Main Steam System  
Solid Radwaste  
Liquid Radwaste  
Gaseous Radwaste Recombiners and Filters including Offgas  
Standby Gas Treatment  
Control Enclosure Unit Coolers including Chilled Water System  
Spray Pond Pump Structure HVAC  
Pressure Regulator and Turbine Generator  
Cable Spreading/Auxiliary Switchgear Room HVAC  
Emergency Switchgear, Battery and Inverter HVAC  
Safety Parameter Display System  
Primary Containment including Penetrations  
Drywell HVAC (Cooling)  
Safeguard Piping Fill  
Radwaste Enclosure HVAC  
EHC Turbine Stop Valve  
Reactor Enclosure Main Crane  
Refueling Interlocks  
Control Enclosure HVAC  
Refueling Floor HVAC  
Non-Safeguard DC Power (125 & 250 VDC)  
208V/120V Vital AC and Instrument AC  
Safeguard DC Power (125V/250V)  
13.2 kV Auxiliary Power

15c. (Continued)

4 kV Power  
2.3 kV Power (Non-Safeguard)  
440V Load Centers and MCCS  
Service Water  
Emergency Service Water  
RHR Service Water  
Fire Protection  
Reactor Enclosure Cooling Water  
Service Air  
Instrument Air  
Primary Containment Instrument Gas  
Low Pressure Air  
Diesel Generator and Auxiliaries (including Fuel Oil and  
Lube Oil)  
Diesel Generator Enclosure HVAC  
Fuel Oil Transf. Enclosure HVAC  
Emergency Fresh Air Supply  
Control Room HVAC  
Reactor Enclosure HVAC  
Circulating Water  
Condensate Storage and Transfer  
Main Condenser Evacuation System  
Condensate Cleanup  
Feedwater including Pump Turbines  
Extraction Steam  
Feedwater Heater Vents and Drains  
Equipment and Floor Drains  
Demineralized Water Makeup including Demineralizer  
Drywell Chilled Water  
Post Accident Sampling  
Auxiliary Equipment Room HVAC  
SGTS Equipment Compartment HVAC  
RHR, HPCI, RCIC, and CS Rooms HVAC  
Reactor Enclosure Isolation  
Suppression Pool Cleanup  
Remote Shutdown  
Process Sampling

ANSWER

- d. Appendix A contains no section IX E. The equipment on the revised Appendix B list is associated with the systems



15c. (Continued)

identified on Appendix A. Since all equipment on the Appendix B list is expected to be qualified by fuel load, 10CFR50.49(i)(5) is not applicable.

PARTICIPANTS IN PREPARATION OF ANSWER

John S. Kemper  
Vice President, Engineering and Research  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

William J. Boyer  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

D. J. Thompson  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

INTERROGATORY NO. 16

- a. Provide a list of all important-to-safety equipment which is subject to a harsh environment during an accident but for which exception is taken with respect to that harsh environment.
- b. For each item on the list in (16)(a), above, identify the specific basis for exclusion or exception from qualification.

ANSWER

The specific basis for each equipment item for which exception is taken is listed below. The specific basis(es) is identified by a number 1 through 4 corresponding directly to the bases on pages 2.2 and 2.3 of the Environmental Qualification Report (October, 1983).

<u>Plant ID</u>	<u>Description</u>	<u>Exemption Basis</u>
FT-55-1N051	Flow Transmitter	2
HV-55-1F054	Motor Operator	2
LSH-55-1N014	Level Switch	2
PT-55-1N013	Pressure Transmitter	2
PT-55-1N050	Pressure Transmitter	2
PT-56-1N052	Pressure Transmitter	2
PT-56-1N053	Pressure Transmitter	2
PT-56-1N055B	Pressure Transmitter	2
PT-56-1N055D	Pressure Transmitter	2
PT-56-1N055F	Pressure Transmitter	2
PT-56-1N055H	Pressure Transmitter	2
PT-56-1N056B	Pressure Transmitter	2
PT-56-1N056F	Pressure Transmitter	2
ZS-56-111	Position Switch	2
ZS-56-112	Position Switch	2
56-10P213	Pump Motor	2
56-10P215	Condensate Pump Motor	2
56-10P216	Motor	2
56-10S211	Turbine Controls	2
XV-59-140A	Shear Valve	3
XV-59-140B	Shear Valve	3
XV-59-140C	Shear Valve	3
XV-59-140D	Shear Valve	3
XV-59-140E	Shear Valve	3
XV-59-141A	Solenoid Valve	3
XV-59-141B	Solenoid Valve	3
XV-59-141C	Solenoid Valve	3
XV-59-141D	Solenoid Valve	3
XV-59-141E	Solenoid Valve	3

<u>Plant ID</u>	<u>Description</u>	<u>Exemption Basis</u>
48-1AP208	Pump Motor	1
48-1BP208	Pump Motor	1
48-1CP208	Pump Motor	1
48-1AS213	Pump Motor	1, 3
48-1BS213	Pump Motor	1, 3
TSHL-48-1N003	Temperature Switch	1
TE-48-1N006	Temperature Element	1
10D201	Motor Control Center	2
10D202	Motor Control Center	2
10D203	Motor Control Center	2
LSH-50-110	Level Switch	2
LSH-50-120	Level Switch	2
50-10S212	Turbine Controls	2
HS-46-127	Hand Switch	3
HS-45-128	Hand Switch	3
TE-44-1N007	Temperature Element	1
TIS-44-1N008	Temperature Switch	1
FT-43-1N024A	Flow Transmitter	1
FT-43-1N024B	Flow Transmitter	1
FT-43-1N024C	Flow Transmitter	1
FT-43-1N024D	Flow Transmitter	1
	Neutron Monitoring System	1, 3

PARTICIPANTS IN PREPARATION OF ANSWER

John S. Kemper  
Vice President, Engineering and Research  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

William J. Boyer  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

Daniel J. Thompson  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101



INTERROGATORY NO. 17

Is Limerick Unit 1 in complete compliance with the requirements of 10CFR50.49 and the Final Rule on Environmental Qualifications? If not, describe the variance and the justification for each variance.

ANSWER

Limerick Unit 1 is expected to be in compliance with 10CFR50.49 without variance by fuel load.

PARTICIPANTS IN PREPARATION OF ANSWER

John S. Kemper  
Vice President, Engineering and Research  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

William J. Boyer  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

INTERROGATORY NO. 18

- a. Has PECO accepted the Denton definitions of safety-related and important-to-safety as defined in the November 20, 1981 Memorandum? If not, describe which definitions are not accepted.
- b. Has the LGS EQ program been planned, performed, and reviewed, using the Denton definitions as in (18)(a), above? If not, state the differences. If yes, document and explain.

ANSWER

- a. A review of the Denton definitions has not been performed with respect to the Limerick equipment qualification program. The Limerick Environmental Qualification Program utilizes the definition of important-to-safety equipment (to be qualified) which is provided in 10CFR50.49.
- b. No; see response to part a. above. While the Limerick Environmental Qualification Program was planned and partially performed prior to the issuance of 10CFR50.49, it has been determined to be in compliance with 10CFR50.49.

PARTICIPANTS IN PREPARATION OF ANSWER

John S. Kemper  
Vice President, Engineering and Research  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

William J. Boyer  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

INTERROGATORY NO. 19

- a. Has PECO installed all the BWR post-accident monitoring equipment identified in Regulatory Guide 1.97, Rev. 2? If not, identify each piece of equipment not installed and the reason why not.
- b. Identify the status of qualification of each piece of Regulatory Guide 1.97, Rev. 2 equipment which is installed.

ANSWER

- a. See FSAR Section 7.5.2.5.1.1.2 and FSAR Table 7.5-5 for a discussion of Limerick's compliance with Regulatory Guide 1.97 Rev. 2.
- b. All Regulatory Guide 1.97, Rev. 2 equipment requiring environmental qualification is included in the Limerick Environmental Qualification Program. This equipment is identified by a Note 0 in revised Appendix B, except the Neutron Monitoring System (see answer to Interrogatory No. 16). All equipment including Regulatory Guide 1.97 instrumentation listed in the revised Appendix B is expected to be installed and qualified by fuel load.

PARTICIPANTS IN PREPARATION OF ANSWER

John S. Kemper  
Vice President, Engineering and Research  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

William J. Boyer  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

INTERROGATORY NO. 20

- a. For each piece of Regulatory Guide 1.97, Rev. 2 equipment not installed, identify equipment (systems and components) which are relied on to perform the same function after an accident.
- b. Identify the safety classification and qualification status of the equipment used to serve the RG 1.97 Rev. 2 function.

ANSWER

- a. All Regulatory Guide 1.97, Rev. 2 equipment included in revised Appendix B is expected to be installed and qualified by fuel load; therefore, it will not be necessary to rely on alternative equipment or systems. See also the answer to Interrogatory 19.a.
- b. The specific qualification status is reflected on the EQRR sheets and revised Appendix B.

PARTICIPANTS IN PREPARATION OF ANSWER

John S. Kemper  
Vice President, Engineering and Research  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

William J. Boyer  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

INTERROGATORY NO. 21

Kindly provide any actions PECO has taken to insure that LGS equipment operability is not impaired due to:

- a. qualification methodology shortcomings;
- b. design bases shortcomings;
- c. inadequate equipment.

Reference: Environmental Qualification Briefing of Chairman By Sandia (Board Notification - 84-004), January 5, 1984.

Dated: February 3, 1984

ANSWER

Philadelphia Electric Company has a long record attesting to its recognition of its responsibility to ensure that electrical equipment, which is important to safety, is environmentally qualified. PECO has had continuous representation on the IEEE subcommittee or its associated working groups which authored the basic qualification standard IEEE-323-1971 since 1974. In addition, PECO is a member of the EPRI Advisory Group On Equipment Qualification which serves as a forum for environmental qualification information exchange between utilities. Information exchange meetings between this group and Sandia Laboratories Research personnel have been held on several occasions, thus giving PECO representatives access to information concerning Sandia test programs through technical presentations by the Sandia representatives. As a member of the EPRI Advisory Group On Equipment Qualification, the PECO representative may suggest the initiation of test programs where needed to advance the state-of-the-art concerning qualification and is responsible for reviewing and commenting on EPRI



sponsored research programs. The results of the EPRI research projects are periodically reviewed by Advisory Group members via technical presentations by those organizations performing research under contract to EPRI, giving PECO representatives direct access to EPRI research. PECO is represented on the AIF Subcommittee On Equipment Qualification which has an established dialogue with the NRC Staff on equipment qualification. The AIF Subcommittee has met with NRC Staff representatives on a number of occasions allowing PECO representatives direct access to NRC interpretations and philosophies concerning environmental qualification requirements and guidelines. PECO representatives have authored technical position papers on equipment qualification and have participated in several workshops from which technical position papers have been developed.

PECO sponsored a meeting between the utilities which operate BWR nuclear plants in response to the NRC request to the utilities to re-review the environmental qualification of their safety-related electrical equipment. This meeting led to the organization of the Utility Equipment Qualification - BWR Owners Group which PECO chaired throughout its active period of approximately 2 years. PECO representatives have also participated in co-authoring the NSAC Guide On Equipment Qualification which has been made the subject of an educational seminar to the nuclear industry throughout the United States.

PECO's participation in industry groups and standards committees has resulted in its personnel gaining extensive experience in all aspects of equipment qualification. This experience is concentrated

within the PECO Electrical Engineering Division Environmental Qualification Group (EQG) which has prime responsibility to assure that Limerick's safety related electrical equipment is environmentally qualified. The PECO EQG is supported by the Limerick Architect Engineer, Bechtel Power Corporation which has significant environmental qualification expertise in its own right.

Sandia research is regularly reviewed and evaluated by the PECO EQG to determine its relevance to the Limerick Equipment Qualification Program. PECO's experience has been that upon completion of its evaluation the research testing is usually not directly relevant to Limerick either because the equipment tested is different than that installed at Limerick or the test conditions are significantly different from those to which the Limerick equipment would be exposed by the postulated design basis event. An industry comment that has been repeatedly offered to Sandia at technical exchange meetings is that if industry were offered the opportunity to review Sandia test plans, they could be restructured to have greater relevance to the nuclear plants. In the reference cited by this interrogatory, the Sandia representatives' presentation makes this same point. Without the pre-established relevance, as discussed above, the concerns expressed by Sandia personnel via the cited reference are of academic interest. When there is relevance, PECO takes action to address the research findings within the EQ Program. For example the synergistic effects of radiation and temperature on cable have been addressed within the Limerick EQ Program.

The environmental qualification program has a great deal of margin factored into it in several different ways. First the environmental conditions to which the equipment is tested are based on conservative calculations which reflect co-incidental occurrences, as improbably as they may be, such as a design basis accident (DBA) Loss of Coolant Accident (LOCA) with a loss of all off-site power and the single active failure of redundant plant safety equipment. In concert with these assumptions, the reactor core is assumed to non-mechanistically degrade resulting in elevated radiation dose assumptions for equipment exposure in addition to the elevated temperatures resulting from the line break effluent. In addition to the post accident service condition conservativisms, the qualified operating time has varying degrees of margin over the specified operating time for the safety equipment.

For the majority of plant equipment the actual test itself introduces a conservatism because the test laboratories cannot replicate the postulated plant profile for temperature and corresponding ambient pressure. The test pressure is generally at least several times greater than the postulated pressure. This conservatism results in forcing the adverse test environment into equipment enclosures at a much faster rate than that which would occur in response to the postulated pressure. Many equipment items have been generically tested to environmental conditions significantly greater than the postulated Limerick environment.

The Limerick post accident service environment for the reactor enclosure is assumed to be at the maximum design temperature prior to the postulated accident. Even with this conservatism,

the maximum temperature to which the reactor enclosure rises is 120°F. This temperature is well within recognized capabilities of standard industrial plant equipment and well below published temperature limits for materials commonly used in electrical equipment. Although the reactor enclosure is postulated to reach a maximum temperature of 120°F, it should also be recognized that this maximum temperature will not be reached until approximately 30 hours after the postulated accident. By this time, the majority of plant equipment will have performed its safety function and only a limited number of equipment items will be required to support the plant in the shut-down condition.

When revisions to plant design have required the procurement of new equipment, the most recent qualification requirements have been reflected in the plant specifications. In some instances the equipment qualification review identified qualification deficiencies which were resolved by procuring replacement equipment qualified to the most recent guidance.

In summary, the Limerick EQ program is administered and performed by PECO personnel who are nationally recognized industry leaders in equipment qualification. Sandia research is routinely reviewed and evaluated by PECC. In those cases where sufficient relevance to Limerick can be established, steps are taken to ensure that the results of the research are addressed within the EQ Program. The combinations of design basis occurrences, initial condition assumptions, and method of calculation result in conservative postulated accident service conditions for equipment qualification. The standard industry EQ test



practices add additional margin to the environmental qualification of equipment.

In some cases environmental qualification documentation deficiencies has led to the procurement of new equipment qualified to the latest guidance. It is the environmental qualification review program which formalizes the results of these reviews and ensures that there is no inadequately qualified equipment installed at Limerick.

PARTICIPANTS IN PREPARATION OF ANSWER

John S. Kemper  
Vice President, Engineering and Research  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101

William J. Boyer  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, PA 19101



COMMONWEALTH OF PENNSYLVANIA :  
COUNTY OF PHILADELPHIA :

SS.

J. S. Kemper, being first sworn, deposes and states:

That he is Vice President of Philadelphia Electric Company, the Applicant herein; that he has read the foregoing Applicant's Answers to Intervenor City of Philadelphia's Interrogatories in the Limerick Operating License Hearings and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information, and belief.

John S. Kemper  
Vice President

Subscribed and sworn to  
before me this 21<sup>st</sup> day  
of February, 1984.

Patricia D. Scholl  
Notary Public

PATRICIA D. SCHOLL  
Notary Public, Philadelphia, Philadelphia Co.  
My Commission Expires February 10, 1986

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Philadelphia Electric Company	)	Docket Nos. 50-352
	)	50-353
(Limerick Generating Station,	)	
Units 1 and 2)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicant's Answers to Intervenor City of Philadelphia's Interrogatories in the Limerick Operating License Hearings" dated February 22, 1984, in the captioned matter have been served upon the following by deposit in the United States mail this 22nd day of February, 1984:

- |                              |                               |
|------------------------------|-------------------------------|
| * Lawrence Brenner, Esq. (2) | Atomic Safety and Licensing   |
| Atomic Safety and Licensing  | Appeal Panel                  |
| Board                        | U.S. Nuclear Regulatory       |
| U.S. Nuclear Regulatory      | Commission                    |
| Commission                   | Washington, D.C. 20555        |
| Washington, D.C. 20555       |                               |
|                              | Docketing and Service Section |
| * Dr. Richard F. Cole        | Office of the Secretary       |
| Atomic Safety and            | U.S. Nuclear Regulatory       |
| Licensing Board              | Commission                    |
| U.S. Nuclear Regulatory      | Washington, D.C. 20555        |
| Commission                   |                               |
| Washington, D.C. 20555       | * Ann P. Hodgdon, Esq.        |
|                              | Counsel for NRC Staff Office  |
| * Dr. Peter A. Morris        | of the Executive              |
| Atomic Safety and            | Legal Director                |
| Licensing Board              | U.S. Nuclear Regulatory       |
| U.S. Nuclear Regulatory      | Commission                    |
| Commission                   | Washington, D.C. 20555        |
| Washington, D.C. 20555       |                               |

\* Hand Delivery

Atomic Safety and Licensing  
Board Panel  
U.S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

Philadelphia Electric Company  
ATTN: Edward G. Bauer, Jr.  
Vice President &  
General Counsel  
2301 Market Street  
Philadelphia, PA 19101

Mr. Frank R. Romano  
61 Forest Avenue  
Ambler, Pennsylvania 19002

Mr. Robert L. Anthony  
Friends of the Earth of  
the Delaware Valley  
106 Vernon Lane, Box 186  
Moylan, Pennsylvania 19065

Mr. Marvin I. Lewis  
6504 Bradford Terrace  
Philadelphia, PA 19149

\*\* Phyllis Zitzer, Esq.  
Limerick Ecology Action  
P.O. Box 761  
762 Queen Street  
Pottstown, PA 19464

Charles W. Elliott, Esq.  
Brose and Postwistilo  
1101 Building 11th &  
Northampton Streets  
Easton, PA 18042

Zori G. Ferkin, Esq.  
Assistant Counsel  
Commonwealth of Pennsylvania  
Governor's Energy Council  
1625 N. Front Street  
Harrisburg, PA 17102

Steven P. Hershey, Esq.  
Community Legal  
Services, Inc.  
Law Center West North  
5219 Chestnut Street  
Philadelphia, PA 19139

Angus Love, Esq.  
107 East Main Street  
Norristown, PA 19401

Mr. Joseph H. White, III  
15 Ardmore Avenue  
Ardmore, PA 19003

Robert J. Sugarman, Esq.  
Sugarman & Denworth Suite  
510 North American Building  
121 South Broad Street  
Philadelphia, PA 19107

Director, Pennsylvania  
Emergency Management Agency  
Basement, Transportation  
and Safety Building  
Harrisburg, PA 17120

Martha W. Bush, Esq.  
Kathryn S. Lewis, Esq.  
City of Philadelphia  
Municipal Services Bldg.  
15th and JFK Blvd.  
Philadelphia, PA 19107

Spence W. Perry, Esq.  
Associate General Counsel  
Federal Emergency  
Management Agency  
500 C Street, S.W., Rm. 840  
Washington, DC 20472

Thomas Gerusky, Director  
Bureau of Radiation  
Protection  
Department of Environmental  
Resources  
5th Floor, Fulton Bank Bldg.  
Third and Locust Streets  
Harrisburg, PA 17120

\*\* Federal Express

Jay M. Gutierrez, Esq.  
U.S. Nuclear Regulatory  
Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

James Wiggins  
Senior Resident Inspector  
U.S. Nuclear Regulatory  
Commission  
P.O. Box 47  
Sanatoga, PA 19464

  
Mark J. Wetterhahn