

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 FIRST SET OF INTERROGATORIES
AND REQUEST FOR PRODUCTION OF
DOCUMENTS TO FRIENDS OF THE EARTH

Pursuant to the Rules of Practice of the Nuclear Regulatory Commission ("NRC"), 10 C.F.R. §2.740b, and the Atomic Safety and Licensing Board's Memorandum and Order Confirming Schedules Established During Prehearing Conference (May 16, 1983), Philadelphia Electric Company ("Applicant") hereby propounds the following interrogatories to Friends of the Earth ("FOE") to be answered fully in writing, under oath, in accordance with the definitions and instructions below.

Additionally, pursuant to 10 C.F.R. §2.741, Applicant requests that FOE produce for inspection and copying (or provide copies of) those documents designated by intervenors in their respective answers below.

Definitions and Instructions

1. For each interrogatory, please state the full name, work address, and title or position of each person providing information for the answer to the interrogatory.

2. The following definitions shall apply:

- a. "Intervenor" shall refer to Friends of the Earth, or any officer, member, employee or consultant thereof.
- b. "Document" shall mean any written, printed, typed or other graphic matter of any kind or nature, and all mechanical and electronic sound recordings or transcripts thereof, in the possession, custody, or control of intervenor, or its officials, employees, or agents; it shall also mean all copies or drafts of documents by whatsoever means made.
- c. "Date" shall mean the exact day, month and year, if ascertainable, or, if not ascertainable, the best approximation (including the event's relationship to other events in the relevant context of the interrogatory).
- d. "NRC" or "Commission" shall mean either the Atomic Energy Commission or the Nuclear Regulatory Commission, as appropriate, including its regulatory staff and adjudicatory boards, as indicated by the context of the interrogatory.
- e. "Specify", when referring to a proceeding before the Nuclear Regulatory Commission, means that the answer shall set forth the proceeding, applicant, docket number, relevant date, and any

other descriptive information appropriate to the request.

f. "Specify" or "identify", when referring to an individual, corporation, or other entity, means that the answer shall set forth the name, present or last known work address, and, if a corporation or other entity, its principle place of business or, if an individual, his or her title or titles and employer. Once an individual, corporation or other entity has been thus identified in answer to an interrogatory, it shall be sufficient thereafter when identifying that individual, corporation or other entity to state merely his, her or its name.

3. These interrogatories request all knowledge and information in intervenor's possession and/or knowledge and information in the possession of intervenor's agents, representatives, consultants, and, unless privileged, attorneys.

Interrogatories

1. State whether you intend to present any expert witnesses on the subject matter at issue in Contentions V-3a and V-3b. If so, identify each such expert witness and further state (a) his professional qualifications; (b) the subject matter on which the expert is expected to testify; (c) the substance of the facts and opinions to which the expert is expected to testify; (d) the grounds for each

opinion. Identify by court, agency, or other body, each proceeding in which such individual rendered testimony on this (these) subject(s).

2. Identify by title, author, publisher and date of issuance or publication, all documents that you rely upon as a basis for your contention or that you intend to use (by way of reference or evidentiary proffer) in presenting your direct case on Contentions V-3a and V-3b and all documents to which you intend to refer in conducting cross-examination of other witnesses who may testify in connection with any such contention(s).

3. To the extent that your answer to any interrogatory is based upon one or more documents, (a) identify each such document on which your answer is based; (b) identify the specific information in such document upon which you rely; (c) explain how such information provides a basis for your answer.

4. To the extent that your answer is based upon any study, calculation, research or analysis, (a) describe the nature of the study, calculation, research or analysis and identify any documents which discuss or describe the study, calculation, research or analysis; (b) identify the person(s) or entity(ies) who performed the study, calculation, research or analysis; (c) describe in detail the information which was the subject of the study, calculation, research or analysis; (d) describe the results of such study, calculation, research or analysis; (e) explain how such study,

calculation, research or analysis provides a basis for your answer.

5. To the extent that your answer is based upon conversations, consultations, correspondence or other communications with one or more individuals or entities, (a) identify each such individual or entity; (b) state the educational and professional background of each such individual, including occupation and institutional affiliations; (c) describe the nature of each communication, including time and context, and describe the information received from each such individual or entity; (e) explain how such information provides a basis for your answer.

Contention V-3a

6. Specify all applicable NRC regulations, General Design Criteria, guidelines or other regulatory requirements, or portions thereof, pertaining to the phenomenon of siphoning in the event of a gas pipeline rupture which intervenor asserts are applicable to Limerick.

7. Specify each section of the Limerick FSAR, including Applicant's response to Staff questions, which intervenor asserts may be relevant to the consideration of the phenomenon of siphoning in the event of a gas pipeline rupture and specify, to the extent applicable, any failure to meet the regulatory requirements set forth in response to Interrogatory 6 above.

8. Define what is meant by "siphoning" in the context of this contention.

9. Describe the "worst case pipeline accident" which is postulated in this contention, including (a) the exact location of the rupture(s) of the pipeline in relation to Limerick, other portions of the pipeline or physical configurations in the Limerick area as may be relevant, including the relevant time intervals between ruptures if multiple ruptures are involved; (b) the postulated operational mode of the pipeline both during and after the hypothetical rupture(s), including all failures of such pipeline systems; (c) a description of the physical mechanism by which the siphoning would occur, including all calculations necessary to quantify the results of the siphoning; (d) an analysis of the calculated consequences of such a hypothetical event; (e) the location at which the detonation is assumed to occur; (f) the concentration of the mixture prior to detonation; (g) the quantity of material which is assumed to detonate; (h) the calculated overpressure at each critical area of the facility, including an identification of the design overpressure for the critical location(s).

10. Specify and describe in detail the extent to which the answer to Interrogatory 9 above involves an analysis of the geomorphology of the pipeline area as well as the area into which gasoline from pipeline rupture(s) would be expected or postulated to drain.

Contention V-3b

11. Specify all applicable NRC regulations, General Design Criteria, guidelines or other regulatory

requirements, or portions thereof, pertaining to the effect of radiant heat from a deflagration of gas or petroleum due to pipeline rupture upon components or areas of a nuclear facility which intervenor asserts are applicable to Limerick.

12. Specify each section of the Limerick FSAR, including Applicant's response to Staff questions, which intervenor asserts may be relevant to consideration of the effect of radiant heat from a deflagration of gas or petroleum due to pipeline rupture upon the diesel generators and associated diesel fuel storage facilities and specify, to the extent applicable, any failure to meet the regulatory requirements set forth in response to Interrogatory 11 above.

13. Specify, in Btu/sq. ft./hour, intervenor's estimate of the radiant heat load on the surface of the Limerick Unit 2 reactor or diesel generator enclosure which would result from the deflagration of (a) gasoline vapor or other chemical transported by the ARCO pipeline and (b) natural gas which would result from the worst-case accident hypothesized by intervenor. As to each estimate, describe in detail the mechanism which leads to the hypothesized deflagration and the manner in which intervenor has calculated the radiant heat load. Such description of intervenor's analysis should include calculations as to the distribution of radiant heat load upon exposed surfaces enclosing the diesel generators and associated diesel fuel storage facilities.

14. Describe your understanding of the location of the diesel fuel storage facilities, how such facilities are designed to be protected against deflagration, and the heat loading on the surface of the structures which would affect the operation of any or all of the diesel generators. Specify the exact effect of such calculated heat loading on the operation of the diesel generator(s).

15. Describe in detail what effect, if any, such radiant heat loading would have upon the operation of the diesel generators. Specify all analyses and computations by which these conclusions were reached. State whether and to what extent reduction of radiant heat from deflagration of gas and petroleum vapors has been attributed to intervening terrain and other structures.

Request for Production of Documents

Please attach to your answer(s) to the interrogatories listed above a copy of all documents applicable to such answer(s), or upon which you otherwise intend to rely in the presentation of your direct case or in the cross-examination of other witnesses. Alternatively, state that all such

documents will be produced at a reasonable time and place to be agreed upon by the Applicant for inspection and copying.

CONNER & WETTERHAHN, P.C.



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June 3, 1983