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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board  
OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

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

APPLICANT'S ANSWER TO RESPONSE OF FRIENDS  
OF THE EARTH PROPOSING TEN NEW CONTENTIONS

Preliminary Statement

On July 7, 1982, Friends of the Earth in the Delaware Valley ("FOE") filed a pleading which proposes the admission of ten new contentions relating to the analysis in the Limerick Generating Station Final Safety Analysis Report ("FSAR") of potential hazards from offsite explosions and releases of toxic fumes. The pleading purports to respond to a portion of the Special Prehearing Conference Order ("SPCO") dated June 1, 1982 by the Atomic Safety and Licensing Board ("Licensing Board" or "Board") in which the Board initially rejected Contention V-3 for lack of specificity. The Board permitted FOE to amend this contention by filing within 30 days "contentions which allege specific deficiencies which FOE believes exist in the FSAR analysis" of offsite fires and explosions.<sup>1/</sup>

1/ SPCO at 146 (emphasis added).

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In Applicant's view, several of the new proposed contentions filed by FOE widely exceed the scope of the original contention which the Board rejected but permitted FOE to replead with greater specificity. Thus, nothing in this most recent filing indicates why particular contentions relating to the alleged potential for toxic releases from industrial accidents are deemed to fall within the scope of the original contention. In any event, all of the proposed contentions still fail to meet the requirements under the Commission's Rules of Practice for adequate "bases" and "reasonable specificity" inasmuch as no explanation is given as to why the analysis of the particular matters they address in the FSAR is inadequate or incorrect.

#### Argument

Each of the proposed contentions will be discussed seriatim below. Initially, however, it should be noted that FOE has improperly expanded the limited opportunity granted by the Board to provide bases and reasonable specificity for proposed Contention V-3, which alleged possible hazards from fire and explosion resulting from a rupture of gas and liquid refined petroleum pipelines and also alleged the potential for fire and explosion from certain hazardous materials stored at two particular industrial plants or transported by railroad. The new proposed contentions, however, improperly go beyond the potential for fire and explosion, the subject of the original contention, to address control room habitability issues, e.g., they seek to

explore the effect of releases of "toxic fumes" from plastic manufacturing plant fires<sup>2/</sup> and possible releases of vinyl chloride.<sup>3/</sup> These particular contentions or portions thereof should be denied as inexcusably late and beyond the scope of the Board's authorization.

Additionally, none of the specific contentions proposed by FOE meets the standard for an acceptable contention. FOE has failed to allege "specific deficiencies"<sup>4/</sup> in the FSAR analysis as required by the Board. Inasmuch as the Board has given FOE an opportunity to provide reasonable specificity in order to cure deficiencies in its original contention, it follows that the degree of specificity required at this juncture is even greater.<sup>5/</sup> Unlike other contentions where the record of the application may not be complete, these contentions relate to aspects covered by the FSAR long available to FOE. See generally Cleveland Electric Illuminating Company (Perry Nuclear Power Plant, Units 1 & 2), LBP-81-24, 14 NRC 175, 182-83 (1981).

With these principles in mind, Applicant now addresses the proposed contentions.

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<sup>2/</sup> See Proposed Contention 8.

<sup>3/</sup> See Contentions 2 and 6. These matters are interspersed in a number of the other proposed contentions.

<sup>4/</sup> SPCO at 146.

<sup>5/</sup> Thus, Applicant believes that the test cited by the Staff for establishing adequate bases for these contentions discussed in its Reply at page 4 should be applied to the contentions as now proposed, rather than at some later stage.

Contention V-3.1. This contention deals with the potential hazard to Limerick's switchyard and diesel generators resulting from missiles generated by an explosion of a propane car. While the proposed contention asserts that a "drastic threat" exists, no basis is given for any disagreement with the specific analysis of missile generation from such an explosion as discussed in FSAR Section 3.5.1.5. or with the design of the diesel generators as related to missile protection.<sup>6/</sup> Thus, there has been no showing by FOE that the Limerick design is inadequate when compared to the requirements of the Commission's regulations to provide the necessary protection against external missile generation.

Contention V-3.2. This proposed contention raises the potential for releases of chlorine and vinyl chloride fumes to the Limerick control room.<sup>7/</sup> Contrary to FOE's allegation, FSAR Section 6.4 specifically explains the design bases which "preclude the effects of a chlorine

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<sup>6/</sup> FOE points to no Commission requirement that the switchyard must be protected against missiles. To the contrary, General Design Criterion 17 does not require single failure protection for the switchyard. Loss of offsite power is assumed for analysis of transient and accident situations.

<sup>7/</sup> Initially, this contention asserts that FSAR Table 2.2-6 is flawed because it fails to indicate the frequency of propane rail shipments. No reason for this assertion is given. Explosion of a propane tank car is in fact a design basis event analyzed in FSAR Sections 2.2.3.1.1 and 3.5.1.5. As its content indicates, Table 2.2-6 pertains to hazardous chemical releases, not propane or other inflammable substances.

release accident onsite or offsite from affecting the habitability of the control room."<sup>8/</sup> Moreover, as the proposed contention itself acknowledges, hazardous chemicals which pose a potential threat to control room habitability have been identified and analyzed in FSAR Table 2.2-6. As discussed in FSAR Section 2.2.3.1.3, the 21 chemicals listed in Table 2.2-6 constitute an inclusive list of all hazardous chemicals which, if spilled, could possibly exceed threshold limit values in the control room. No basis is shown for any defect in this discussion and analysis in the FSAR.

Contention V-3.3. This proposed contention deals with explosion and fire resulting from a ruptured pipeline. FSAR Section 2.2.3.1.1 expressly states that it has considered the "worst-case pipeline accident" that could occur near Limerick and presents the results of such a postulated occurrence. No basis is given in the proposed contention for disputing this fact, or for challenging the validity of the analysis of possible missile generation in FSAR Section 3.5.1.5. There is no showing that there will be any multiple explosions or that any postulated combination of explosions could be worse than the occurrence analyzed in the FSAR. While FOE states there is no consideration of the "siphon effect," it has overlooked the specific discussion of possible siphoning in FSAR Section 2.2.3.1.1, which concludes that siphoning will not occur because air would

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<sup>8/</sup> FSAR Section 6.4.1. See generally FSAR Sections 6.4.2.2 and 6.4.3.2.

enter the pipeline and break the siphon at the high points. FOE provides no plausible scenario to the contrary for such an occurrence. The proposed contention is therefore totally lacking in any basis.

Moreover, FSAR Section 2.2.3.1.4 considers potential adverse effects of radiant heat load and smoke generation resulting from the same "worst-case" event. No facts are cited by FOE to dispute the conclusion in that section that the "radiant heat effects of such fire are negligible" and that control room ventilation design provides adequate isolation.<sup>9/</sup> Thus, potential impacts from such events, as discussed above in answer to Contention V-3.1, have been fully considered.

Contention V-3.4. This proposed contention asserts that petroleum fumes and natural gas in shallow strata which have leaked from pipelines have not been evaluated in the FSAR. FOE ignores the fact, however, that the FSAR, as discussed above, has in fact considered the "worst case" gas pipeline rupture and explosion. Resultant missile generation and fire have similarly been considered. FOE has failed to assert any basis which would support the proposition that its theoretical hypothesis could possibly result in a situation beyond those considered in the FSAR.

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<sup>9/</sup> See also FSAR Section 2.2.3.2, regarding radiant heat load from a propane tank car fire and smoke from a pipeline fire.

Contention V-3.5. This contention asserts that no consideration is given in the FSAR to radiant heat from a gas and petroleum fire on woodland, roads, diesel generators, fuel storage and other facilities. The proposed contention mentions worker access and safety. Obviously, all personnel necessary to bring the Limerick plant to a safe shutdown, if necessary, are onsite at all times. In fact, safe shutdown must be and is achieved from the continuously manned control room.<sup>10/</sup> Contrary to FOE's assertion, radiant heat load resulting from such fires is expressly considered in FSAR Section 2.2.3.1.4, which concludes that the impact would be roughly equivalent to solar heat at midday. No basis is given by FOE for any disagreement with this analysis.

Contention V-3.6. This proposed contention deals with the discussion of chemical releases in the FSAR. FOE refers to the evaluation of potentially hazardous releases in FSAR Table 2.2-6, but states no basis for its conclusion that control room personnel would be threatened by any such release. As noted above in the response to proposed Contention V-3.2, no basis is stated for any disagreement with the control room habitability analysis in FSAR Section 6.4. nor with the means Applicant will utilize to assure control room habitability. Further, nothing is stated with regard to the Hooker Chemical Company (formerly the

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<sup>10/</sup> See 10 C.F.R. Part 50, Appendix A, General Design Criterion 19.

Firestone plant) in particular as a basis for disputing the FSAR analysis.<sup>11/</sup>

Contention V-3.7. This contention asserts that there is no evaluation in the FSAR of toxic and flammable materials at nearby industrial plants. This assertion is simply and clearly incorrect. FSAR Section 2.2.2.1 expressly states that all industries within five miles of the Limerick facility have been identified and analyzed. The specific plants named by FOE are referenced in this analysis and on the related FSAR Table 2.1-17. Only the Hooker Chemical Company was deemed to have significant quantities of hazardous materials stored on site such as to require detailed analysis. No basis for disputing this conclusion in the FSAR has been shown.

Contention V-3.8. This proposed contention also relates to the potential for the release of toxic fumes as a hazard to the Limerick plant. As noted in the discussion above relating to proposed Contention V-3.2 and V-3.6, all local industries near the Limerick facility have been identified and analyzed to determine the existence of

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<sup>11/</sup> In fact, FSAR Section 2.2.2.1 states that all industries within five miles of Limerick have been evaluated and that the Hooker Chemical Company is "the only establishment near the Limerick Generating Station which has significant quantities of hazardous material stored onsite." FOE may be unaware that the plant which was previously operated by the Firestone Rubber and Tire Company is now operated by the Hooker Chemical Company, whose operations are expressly considered in FSAR Section 2.2.3.1.3 and charted on Tables 2.2-1 and 2.2-6.

hazardous materials used or stored onsite.<sup>12/</sup> Possible exposure to hazardous chemical releases has been fully analyzed and mitigating action taken where necessary to assure control room habitability.<sup>13/</sup> Any potential releases have been anticipated and accounted for in the discussion of the safety design features necessary for control room habitability.<sup>14/</sup>

Contention V-3.9. This proposed contention asserts the possibility of sequential explosions starting with an accidental explosion at the Pottstown Trap Rock Quarry. FOE is simply incorrect in asserting that the FSAR does not consider the quantity of explosives on hand at the quarry or how often they are used. FSAR Section 2.2.2.1 expressly states:

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<sup>12/</sup> FSAR Section 2.2.2.1.

<sup>13/</sup> FSAR Section 2.2.3.1.3; Table 2.2-6.

<sup>14/</sup> FSAR Section 6.4. If FOE is alleging that the FSAR must consider the simultaneous occurrence of a radiological emergency and a major industrial disaster, its contention is beyond the scope of the Commission's requirements. Under the emergency planning provisions of 10 C.F.R. §50.47 and Appendix E thereto or in NUREG-0654, there is no requirement for contingency plans based upon the simultaneous occurrence of a radiological emergency and major industrial disasters. It is unnecessary to consider the possibility of such multiple disasters, given the extreme improbability of such events. As the Commission stated in the San Onofre proceeding, "the proximate occurrence" of a radiological emergency and an offsite disaster that could disrupt normal emergency planning "appears sufficiently unlikely" that it need not be considered in licensing proceedings. Southern California Edison Company (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-81-33, 14 NRC 1091, 1092 (1981).

The industry nearest the site is the Pottstown Trap Rock Quarry, Inc. Operations at the Quarry include the detonation of explosives in the process of quarrying stone. However, the use of explosives is infrequent, and only enough explosives are brought to the quarry for one particular application. There are no explosives stored on the quarry site.

No basis is shown in the proposed contention for disputing this analysis nor has FOE demonstrated a mechanism for initiating the sequential accidents it has postulated in this proposed contention. In any event, as discussed above in response to proposed Contentions V-3.1 and V-3.3, the potential for missile generation affecting the plant, however initiated, has been fully considered in FSAR Section 3.5.1.5 and related Table 3.5-5.

Contention V-3.10. This proposed contention alleges that the FSAR is deficient in failing to consider the unavailability of cooling water necessary for a safe shutdown as a result of a rupture of tunnels and pipes under railroad tracks from tank car explosions. To the contrary, as noted above in the response to proposed Contentions V-3.1, V-3.3 and V-3.9, the FSAR has fully considered all potential impacts by missile generation upon structures and components necessary for a safe shutdown of the Limerick plant. Since the spray pond is the ultimate heat sink for the facility<sup>15/</sup> and has sufficient water storage for 30 days even without makeup from the Schuylkill River, the

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<sup>15/</sup> See FSAR Section 2.2.2.3.1.5.

pipeline rupture postulated by FOE is immaterial to safe shutdown. FOE has made no showing to the contrary.

Conclusion

For the reasons discussed above, several of the contentions proposed by FOE are new and are therefore inexcusably late. They are clearly beyond the scope of its original contention which the Licensing Board permitted FOE to amend in order to provide adequate bases and reasonable specificity. In any event, all of the proposed contentions fall far short of providing the requisite bases and specificity, particularly where a party has been given an opportunity to amend its proposed contentions to provide such specificity. Each of the ten proposed contentions should therefore be denied.

Respectfully submitted,

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