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USNRC

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NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD  
OFFICE OF SECRETARY  
AND SERVICE

BEFORE ADMINISTRATIVE JUDGES:

Lawrence Brenner, Chairman  
Dr. Richard F. Cole  
Dr. Peter A. Morris

SERVED NOV 23 1982

In the Matter of  
PHILADELPHIA ELECTRIC COMPANY  
(Limerick Generating Station,  
Units 1 and 2)

Docket No. 50-352  
50-353

November 22, 1982

ORDER  
(CONCERNING PROPOSED FOE CONTENTIONS  
ON HAZARDS FROM INDUSTRIAL ACTIVITIES)

In the Special Prehearing Conference Order (SPCO), LBP-82-43A, 15 NRC  
\_\_\_\_\_ (June 1, 1982), the Board denied admission to Contention V-3 which  
was advanced by FOE. In so doing, the Board stated:

Our finding that the contention lacks basis indicates only that the FSAR does include this matter, contrary to the representations of FOE. It does not reflect a judgment on the adequacy of the discussion in the FSAR. If it so desires, FOE may, within 30 days of the service of this order, file contentions which allege specific deficiencies which FOE believes exist in the FSAR analysis of these matters.

Id., slip op. at 146-47.

On July 7, 1982, FOE filed a response to the SPCO in which it listed ten contentions allegedly detailing deficiencies in the FSAR in this regard. Both the Applicant and the Staff have replied to these proposed contentions.

The Applicant argues that the proposed new contentions exceed the scope of the originally proposed Contention V-3. The original contention stated:

The hazards from the operation of the Limerick plant and the chances of adding to or precipitating a nuclear accident from pipelines, flood waters, railroad, and nearby industries have not been sufficiently analyzed.

In general, the newly proposed contentions are within the scope of this original contention, particularly as it was elaborated upon in the basis section of the proposed contention. Certain aspects of control room habitability are addressed in the new contentions, and the concept of control room habitability was not discussed expressly in the original contention or its basis. However, aspects of these new contentions which are concerned with control room habitability logically are related to the allegations of the nearby industrial hazards and therefore are not rejected on the ground that they exceed the scope of the original contention.

The Applicant argues that none of the newly proposed contentions is admissible. The Staff believes that Contentions 1-4, 5 (in part) and 9 are admissible, but need to be made more specific. The Board does not agree that an opportunity for further specification is appropriate in this instance. In allowing these contentions to be filed, the Board has already provided one opportunity for greater specificity. Moreover, this is not an instance where the documents upon which the contentions are based have been unavailable. There is no reason why the contentions could not have been stated with specificity.

Having stated these general principles, we turn to a discussion of the particular contentions.

#### Contention 1

Contention 1 states that metal missiles generated by explosions of a propane railroad car threaten the plant's switchyard, diesel generator, reactor building and "other vital plant facilities," potentially interrupting offsite and onsite power. The FSAR indicates that safety-related buildings will be hardened to resist missiles which may be generated. FSAR § 3.5.<sup>\*/</sup> Missiles from railroad explosions are considered, albeit briefly. FSAR § 3.5.1.5. There is no indication or even allegation in the contention of why the protective measures undertaken would be inadequate. Thus, there is no basis for contending that the

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<sup>\*/</sup> Structures and barriers designed to provide for protection from external missiles include the diesel-generator enclosure and the earth above the underground diesel fuel oil tank. FSAR Table 3.5-7. See also, FSAR §§ 3.5.1.5, 3.5.2 & 3.5.3.

damage would occur despite these measures. Therefore, the contention lacks basis and will not be admitted.

### Contention 2

This proposed contention alleges that workers in the control room and in other parts of the plant would be exposed to hazardous levels of chlorine and vinyl chloride in the event a train derailed, ruptured and released these chemicals. FSAR § 6.4 indicates that control room habitability systems are designed to protect control room workers in the event of a chlorine or toxic chemical release. FOE has provided no basis for a contention that the control room design is inadequate to achieve that purpose. Therefore, the contention is not admissible as to workers in the control room. As to "other workers", the contention is overly vague and provides no basis for adverse safety consequences given the control room habitability protection.

### Contention 3

Contention 3 alleges that fire and explosion from ruptured pipelines could persist more than 20 minutes since there is no proof that a siphon effect will not occur. In addition, the contention alleges that missiles of pipe fragment or rock could damage plant facilities.

Insofar as it concerns damage from missiles, this contention essentially repeats the allegations made in Contention 1, although the

missiles are generated by a different mechanism. This contention lacks basis for the same reason Contention 1 lacked basis.

The contention is, however, admissible as it relates to siphoning. Siphoning is not considered in the FSAR because "it is expected that air would enter the line and break the siphon at the high points." FSAR § 2.2.3.1.1. There is no reason given for this expectation. Therefore, it appears there is a basis for contending that siphoning has not been adequately considered.

This would be of concern in developing the worst case pipeline rupture scenario. The Applicant has determined that this scenario would involve a rupture in the ARCO pipeline, and FUE has not challenged that determination.

In order to focus this contention on the areas of concern, the Board has rewritten it as follows:

In developing its analysis of the worst case rupture of the ARCO pipeline, the Applicant provided no basis for excluding consideration of siphoning. Thus, the consequences from the worst case pipeline accident are understated.

As rewritten, the contention is admitted. In order that a consistent numbering scheme is followed, this contention will be referred to as Contention V-3a.

Contention 4

In this contention, FOE alleges that confinement of petroleum fumes and natural gas in shallow strata has not been evaluated in the FSAR. FOE has provided no basis for considering such an occurrence to be a possibility. Nor has FOE provided any basis for an assumption that, if such confinement occurred and an accident resulted, the consequences of the accident would be more severe or different from the consequences of the worst case pipeline accident considered in the FSAR. Therefore, the contention is denied as lacking basis.

Contention 5

Contention 5 asserts that no consideration is given to the effect of radiant heat from fires associated with pipeline ruptures on woodlands, roads, diesel generators, fuel storage and "other key facilities". In addition, it alleges that worker safety would be endangered.

This contention, because of its genesis in the original Contention V-3, must be limited to matters impacting on the safe operation of the plant. Impacts on woodlands, roads, and general worker safety do not impact on plant safety. Therefore, they are excluded. The reference to "other key facilities" is too vague to be litigable. Concerns about the impact of a pipeline fire on the diesel generators and the diesel fuel storage facilities are not discussed explicitly in the FSAR.

The Board has rewritten this contention to state

In discussing deflagration of gas and petroleum due to pipeline rupture, no specific consideration has been given to the effect of radiant heat upon the diesel generators and associated diesel fuel storage facilities.

As so stated, the contention is admitted. It is renumbered as Contention V-3b.

Contention 6

Contention 6 alleges that chemical releases (again citing chlorine and vinyl chloride) are inadequately evaluated in the FSAR. As FOE notes, potentially hazardous fumes are listed in Table 2.2-6 of the FSAR. It is unclear whether FOE is challenging the values in the table or whether it accepts the values, but is concerned with the way such releases might impact upon control room personnel. Therefore, the contention is vague. Moreover, as discussed previously in our rejection of Contention 2, FOE has provided no basis to contend that the control room habitability systems will not protect plant operators from such toxic fumes. This contention is not admitted.

Contention 7

In Contention 7, FOE alleges that there is no evaluation in the FSAR of the hazards arising from the use and storage of toxic and flammable materials at the Eastern Warehouses, Structural Foam or AMERIND Mackissic plants. Accepting that these plants exist, however, there is no basis provided for an allegation that they use or store toxic or flammable materials and hence should have been evaluated. Indeed, the Applicant and Staff have replied that near the Limerick plant only the Firestone Tire and Rubber Company facility (now operated by the Hooker Chemical Company) stores significant quantities of hazardous materials. See also, FSAR § 2.2.2.1. Therefore, this contention is not admitted.

Contention 8

This contention alleges that the FSAR does not consider toxic fumes from industry fires. It is vague in that it does not indicate the toxic materials or industries which are of concern, or how such fumes would affect nuclear safety. In addition, it lacks basis since exposure to hazardous vapors is explicitly considered in the FSAR. See §§ 2.2.3.1.3. and 6.4, and our discussion above of Contentions 2 and 6. The contention is not admitted.

Contention 9

In Contention 9, FOE asserts that the FSAR does not consider the quantity or frequency of explosive storage at the Pottstown Trap Rock Quarries or the possibility of a series of chain fires along a train spreading from the quarry to the vicinity of the reactors. The FSAR does not present any detailed analysis of why explosions at the quarry (located about 2,000 feet from the site according to FSAR Figure 2.2-2) need not be considered further. However, FOE is incorrect in its assertion that the quantity or frequency of explosive storage at the quarry is not considered in the FSAR. The FSAR notes that only enough explosives are brought to the quarry for one particular application, and that such use is infrequent. See FSAR § 2.2.2.1. Further, no basis is set forth or apparent to us for believing that the effect of such quarry explosions, either expected or accidental, would be greater than the potential explosion of the ARCO pipeline, located about 2,500 feet from the site. The potential ARCO pipeline explosion is considered in the FSAR (§ 2.2.3.1.1). The potential for a siphoning effect on the ARCO pipeline analysis will be considered by us under Contention 3 (V-3a), admitted above. Moreover, FOE has not described a credible mechanism whereby a fire at the quarry site is spread to the Limerick facility along a train. In any case, the effects of a railway explosion are considered in the FSAR. § 2.2.3.1.1. For these reasons, the contention is denied as being without basis and lacking specificity.

Contention 10

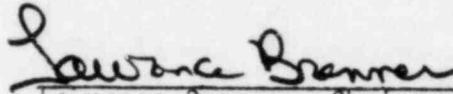
Contention 10 asserts that the FSAR is deficient because it does not include a study of the possibility that a railroad tank car explosion might damage tunnels and pipes running under the tracks to the plant, cutting off cooling water supplies and preventing a safe shutdown. FOE has not alleged which pipes and tunnels, which could be damaged by a railroad explosion, carry water necessary for a safe shutdown. It appears, in fact, that none of these pipes or tunnels carry water necessary for a safe shutdown since the ultimate heat sink is the spray pond. Therefore, this contention is denied as lacking specificity and basis.

Conclusion

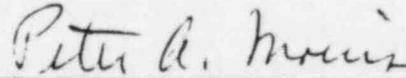
In summary, Contentions V-3a and V-3b, as rewritten by the Board (originally Contentions 3 and 5), are admitted. Contentions 1, 2, 4, 6, 7, 8, 9 and 10 are denied.

IT IS SO ORDERED.

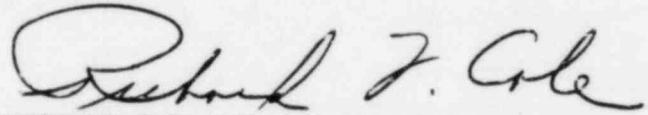
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Bethesda, Maryland  
November 22, 1982