

DOCKETED
USNRC

RE: Philadelphia Electric Co. Limerick Generating Station, Units 1 & 2

Docket # 50-352,353

RESPONSE OF R.L. ANTHONY AND F.O.E. TO SPECIAL PREHEARING CONF. ORDER

Robert Anthony and Friends of the Earth in the Delaware Valley accept the opportunity recorded in the Prehearing Conference Order dated 6/1/82 to file contentions on specific deficiencies in the FSAR relative to the dangers of fire and explosions from pipelines, industry and transportation (p.145-147), i.e. FOE contention V-3.

We call attention again to the uncalled for risks in locating a nuclear power plant in the immediate proximity of pipelines carrying natural gas and inflammable liquids, and adjacent to industries using inflammable and explosive materials. These pose the possibility of damage to the nuclear plant with accompanying release of radioactive poisons. Visa versa, the possibility of an explosion at the nuclear plant jeopardizes pipelines, industry and transportation, threatening drastic results for health and economy of the community.

A more specific analysis of Sect. 2.2 of FSAR reveals a number of severe deficiencies among which are the following:

1. An explosion of a propane car on the railroad, FSAR 2.2-5, stresses overpressurization while almost ignoring the dangers from missile generation. Sect. 3.5. We contend that the propelling of metal from tank cars and railway objects is a drastic threat to the plant's 220KV switchyard and the diesel generators, 130 and 500 feet respectively from the tracks, posing the potential for interrupting off-site as well as on-site emergency power which would threaten operation and safe shutdown. Other vital plant facilities would be exposed as would the reactor building itself.

2. It is a serious flaw that the frequency of propane rail shipments: are not recorded in Table 2.2-6. This table indicates, however, that there will almost certainly be cars of chlorine as well as vinyl chloride in any train which is derailed and ruptured since the shipment frequency of each is 500-1000 carloads per year. This indicates that the release of toxic fumes in excess of TLV, Table 2.2-6, to the control room and to other workers in the plant would be inevitable, along with toxic fumes from fire accompanying a propane, or other explosion on the tracks.
or other fire

3. Ruptured pipelines, 2.2-5, 6 will not in all likelihood be confined to one explosion and would probably combine explosion and fire and could persist more than 20 minutes; in fact for hours since there is no proof that there will not be a syphon effect in the pipe line. Additionally, should air and flammable fumes mix in the pipe as indicated, there would be the ^{explosion} potential for propulsion of pipe fragment missiles and rock,

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impacting and damaging the diesel and reactor buildings, 500KV switchyard, fuel supply, access road and other essential facilities. Such missile probabilities are not considered in FSAR 2.2-5, 6 and Sect. 3.5, in the event of a pipeline rupture and explosion adjacent to the plant.

4. Confinement of petroleum fumes and natural gas in shallow strata via slow leaks in pipelines is not evaluated in FSAR and the accompanying potential for explosion and missile generation and fire.

5. In discussing deflagration of gas and petroleum from pipeline ruptures, 2.2-6, 7, no consideration is made for radiant heat on woodland, roads, diesel generators, fuel storage and other key facilities, also including worker access and safety, thereby endangering plant operation, emergency shutdown and the safety of the public.

6. Evaluation of chemical releases in FSAR is deficient. Chlorine is rated in Table 2.2-6 with the highest maximum toxic concentrations above TLV (3502.), thus threatening control room personnel from a railway tank rupture (@ 500-1000 54 ton cars per year). Vinyl chloride is listed as the next most toxic chemical, TLV (707.4) (@ 500-1000 92 ton cars/ year.) Nor is there a study of the threat to the Limerick plant of maximum storage of 1,500 tons of vinyl chloride at the Firestone plant 6,000 feet from the reactor building; Firestone itself being subject to fire and explosion from traffic on two railway lines at 100 feet and 500 feet away.

7. There is no evaluation in FSAR of the hazards in use and storage of toxic and flammable materials, and which materials exist at the industrial plants within the LPZ, EROL Figure 2.1-7. Only one of the plants, Firestone, is analysed, EROL 2.1-20. There is nothing for Eastern Warehouses, the closest, at 2700 feet from the reactors, or Structural Foam or AMERIND Mackissic, Inc.

8. We are informed by the Philadelphia Fire Marshall that toxic fumes from plastic plant fires are a growing concern, causing mounting dangers for firemen and neighbors. FSAR does not consider toxic fumes from industry fires in the LPZ or their possible frequency. Such fires could impede or incapacitate nuclear workers, endangering operation, threatening nuclear accidents and radiation releases. Some of the toxic materials and products of toxic fires are included in N.I. Sax "Dangerous Properties of Industrial Materials" and National Fire Prevention Assn. manual # 49, "Hazardous Materials Guide".

9. FSAR does not consider amounts or how often explosives are on hand at Pottstown Trap Rock QUARRIES, and the risks of rupture of cars on the adjacent railway as a sequence from a quarry accidental explosion. Nor is there an evaluation of chain fires and explosions along a train, started by the quarry and spreading to a point adjacent to the reactors and diesel generators with accompanying threat to safe operation and shutdown.

10. FSAR is deficient in its lack of any study of impact and damage to tunnels and pipes under the railway tracks from tank car explosions and fire, thereby cutting off reactor cooling water, threatening the Limerick plant operation and means of safe shutdown.

FOE asserts that the above are serious deficiencies in FSAR and that these contentions must be admitted to any consideration of a possible operating license for the Limerick plant.

July 7, 1982

Robert L. Anthony

Copies for the Limerick licensing service list,

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