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 Atomic Safety and Licensing Board Panel

SUBJECT: Statement of matl facts as to which no genuine issue exists to be heard in support of request for summary disposition of ozone portion of Contention 17. Max ground level ozone concentrations near lines will be far below allowable limit.

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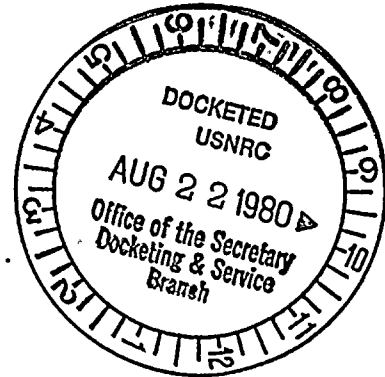
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD



In the Matter of)
PENNSYLVANIA POWER & LIGHT COMPANY)
and)
ALLEGHENY ELECTRIC COOPERATIVE INC.)
(Susquehanna Steam Electric Station,)
Units 1 and 2))

Docket Nos. 50-387
50-388

APPLICANTS' STATEMENT OF MATERIAL
FACTS AS TO WHICH THERE IS NO GENUINE
ISSUE TO BE HEARD (OZONE)

Pursuant to 10 C.F.R. §2.749(a) Applicants state, in support of their Motion for Partial Summary Disposition of Contention 17 (Ozone) in this proceeding, that there is no genuine issue to be heard with respect to the following material facts:

1. The Environmental Protection Agency has established a national primary and secondary ambient air quality standard for ozone of 120 parts per billion ("ppb") by volume, with this maximum concentration not to be exceeded as an hourly average concentration more than once per year. 40 C.F.R. §50.9(a).

2. The national primary air quality standard for ozone of 120 ppb was determined by EPA to be sufficiently prudent to adequately protect public health, 44 Fed. Reg. 8202, 8217 (February 8, 1979). See also Applicants' Brief in support of this Motion ("Brief"), at pp. 3-7.

3. The national secondary air quality standard for ozone was also set at 120 ppb because EPA determined that there is no evidence of significant decrease in yield or growth to crops for short term exposures to ozone concentrations below 120 ppb. 44 Fed. Reg. 8202, 8204 and 8217-18 (February 8, 1979); Brief at p. 5.

3. Extensive field measurements have been conducted by electric utilities and research institutions to determine the levels of ozone generation near high-voltage transmission lines. Lehman Aff., paras. 3-5.

5. The transmission lines at which field measurements were taken are expected to generate comparable or greater amounts of ozone than the 500 kV transmission lines used to transmit electric power generated by the Susquehanna facility. Lehman Aff., paras. 3-5.

6. The field measurements have revealed that only small amounts of ozone are generated in the vicinity of the conductor surface, and that negligible amounts of ozone (1 ppb or less) generated by the transmission lines are found at ground level, even during weather conditions favoring the generation of ozone. Lehman Aff., paras. 3-5.

7. Calculations of ozone concentrations at ground level at the center of the right-of-way of Susquehanna's 500 kV lines have been performed. Those calculations utilized analytical methods validated by measured data, and assumed a very favorable (and improbable) set of conditions for ozone generation, including: maximum design operating voltage (550 kV); stable, low-speed wind (2.5 mph) blowing exactly parallel to the lines; heavy rain rate of one inch per hour; maximum corona loss; no ozone decay due to chemical reaction or due to the effect of rain and humidity; and no upward migration of ozone as it is generated. Lehman Aff., para. 6.

8. Under the assumed conditions, which are likely to exist (if at all) for a period of one hour or less each year in the area traversed by the Susquehanna 500 kV lines, the maximum calculated ozone concentration near a Susquehanna 500 kV transmission line during a one-hour period will be 19 ppb. Lehman Aff., para. 7.

9. Variation in any of the conditions assumed in the calculations to incorporate a more realistic scenario will reduce the estimated maximum ozone concentration significantly. For instance, assuming a rain rate of .05 inches per hour instead of one inch per hour reduces the maximum ozone concentration by 44%. Assuming fair weather conditions reduces the maximum ozone concentration by at least 98%. Assuming the wind to blow at a slight (10°) angle to the line reduces the maximum ozone concentration by 70%. Assuming unstable wind would reduce the maximum ozone concentration by 97%. Utilizing the expected 30 minute half-life for ozone applicable during high humidity conditions reduces the maximum ozone concentration by 63%. Utilizing the nominal 500 kV operating voltage instead of 550 kV reduces the maximum ozone concentration by 65%. Lehman Aff., para. 8. Each of these reductions would operate independently. Id.

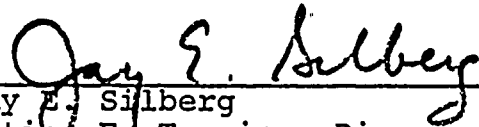
10. Based on experimental measurements and calculated levels using very conservative assumptions, the maximum ground level ozone concentrations generated by the Susquehanna 500 kV transmission lines will be very low and are unlikely to ever reach more than a small

fraction of the national primary and secondary air quality standards for ozone. Lehman Aff., para. 9.

Dated: August 22, 1980.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE



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