August 13, 1981

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
PENNSYLVANIA POWER & LIGHT COMPANY	)	
	)	
and	)	Docket Nos. 50-387
	)	50-388
ALLEGHENY ELECTRIC COOPERATIVE, INC.	)	
	)	
(Susquehanna Steam Electric Station, Units 1 and 2)	)	

APPLICANTS' STATEMENT OF MATERIAL FACTS
AS TO WHICH THERE IS NO GENUINE
ISSUE TO BE HEARD (CONTENTION 2) (SOURCE TERM)

Pursuant to 10 C.F.R. § 2.749(a) Applicants state, in support of their Motion for Partial Summary Disposition of Contention 2 (Source Term) in this proceeding, that there is no genuine issue to be heard with respect to the following material facts:

1. The anticipated releases of radionuclides from the Susquehanna Steam Electric Station ("Susquehanna") to the Susquehanna River and the atmosphere were computed utilizing the "GALE" computer code, which was developed for the NRC Staff by Battelle Pacific Northwest Laboratories, and which consists of a series of calculations and data that model the various pathways by which radioactive matter can be released from a nuclear power plant that features one or more boiling water reactors. Affidavit of John C. Dodds in Support of Partial Summary

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Disposition of Contention 2, ("Dodds Aff."), para. 3.

2. The mathematical models in the GALE code have been developed over a period of many years based on typical plant systems common to most boiling water reactors, operating reactor data, field tests, and laboratory data for specific systems. The models in the code are adjusted to account for plant-specific data, which are entered as inputs to the code. This was done in the case of Susquehanna. Dodds Aff., para. 4.

3. The radioactive releases computed by the GALE code have been compared to recent plant release data. The GALE code has been found to provide conservatively high estimates of plant releases. Id., para. 5.

4. The GALE code is under continuous revision to incorporate the most recent data from operating plants, and/or to update the release models, as necessary. One such revision was issued in 1979 to account for the better performance of the newer General Electric fuel cladding (such as will be used in the fuel for Susquehanna), and to provide a more exact estimate of radioiodine releases as well as more up-to-date estimates of releases of other radionuclides. The net result of the changes in the GALE code, as applicable to Susquehanna, would be a 17% reduction in the offgas system noble gas releases, a minor reduction in gaseous iodine releases, a 33% reduction in the liquid releases adjustment factor (which is a conservative margin to account for uncertainties in the calculations), and a 20% increase in the tritium (H-3) releases due to more current plant data on actual tritium releases. Id., para. 6.

5. The expected amounts of radionuclides released from Susquehanna, as computed using the 1976 version of the GALE code, are minute and constitute small fractions of the maximum permissible concentrations under 10 C.F.R. Part 20. While some of the release figures computed using the earlier version of GALE would become somewhat larger or smaller if computed using the more recent version of the code, the estimated releases would remain within the same order of magnitude and therefore would remain minute. Id., para. 7.

6. In particular, the estimated concentration of cesium-137 in Susquehanna releases is .025 Ci/yr, and that for cobalt-60 is .0096 Ci/yr. The corresponding concentrations in the river water at the Danville intake would be 3.9×10^{-3} pCi/l of cesium-137 and 1.5×10^{-3} pCi/l of cobalt-60. Id., para. 8.

7. The cesium-137 release figure would be modified slightly to .029 Ci/yr if recomputed utilizing the 1979 version of the GALE code. The cobalt-60 release figure would remain unchanged. The release figures for these radionuclides remain quite small. Id., para. 9.

8. The radionuclide release estimates in the Susquehanna Environmental Report, including those cited above for cesium-137 and cobalt-60, represent conservatively high estimates

of the actual releases that will take place when Susquehanna goes into operation. Id., para. 10.

Dated: August 13, 1981.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

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