

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

February 2, 1993

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. 93-003
SPS/JH/ETS R7
Docket Nos. 50-280
50-281
License Nos. DPR-32
DPR-37

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
SURRY POWER STATION UNITS 1 AND 2
SUPPLEMENTAL RESPONSE TO GENERIC LETTER 88-14
INSTRUMENT AIR SUPPLY SYSTEM PROBLEMS
AFFECTING SAFETY-RELATED SYSTEMS

By letter dated April 20, 1992 (Serial No. 92-168), Virginia Electric and Power Company provided supplemental information regarding our actions pursuant to Generic Letter 88-14, Instrument Air Supply System Problems Affecting Safety-Related Equipment. In that letter we stated that, although we do not consider the existing particulate content in the containment instrument air (IA) system to be a reliability or operability concern for the air operated components in containment, we would be implementing a sampling program to more precisely characterize this particulate matter. The purpose of this program was to assist in identifying any additional maintenance or modifications to enhance air quality or system operation.

We have recently completed a series of special tests which were developed to evaluate the particle content in the containment IA system. This testing included measurement of the range of particle sizes using a laser particulate counter. In addition, particles were collected for analysis by passing air from the containment IA system through a filter bank. The testing was performed for both Units 1 and 2 over two months of normal, full power operation. Sample locations were selected to be representative, to the extent practical, of the system conditions at the end use components. A total of 14 test performances were completed.

The results of the laser particulate counter portion of the test have indicated that there is very little particulate matter in the containment IA system. During the first performance of the test, a scattering of particles of varying size were noted. However, we believe that this particulate matter was residual material remaining from the installation of the test points in the containment IA piping. Particulate content was measured in terms of the number of particles per 0.10 cubic feet of air. The total particulate count taken in the last 13 tests encompassing a cumulative air volume of 1.3 cubic feet on each unit, are provided in the following table:

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	<u>Particle Size (Microns)</u>				
	<u>≥5</u>	<u>≥10</u>	<u>≥20</u>	<u>≥30</u>	<u>≥40</u>
Unit 1	13	0	0	0	0
Unit 2	19	3	0	0	0

The highest particulate count in a single test was 6 particles per 0.10 cubic feet, which corresponds to 60 particles per cubic foot.

The results of laboratory analyses confirm the laser particle counter observations. The initial sample was taken over a 60 minute air flow period and did not produce a measurable accumulation of material deposited on the filter disks. Increasing the sample time to two hours still did not produce sufficient accumulation of material on the filter disks for analysis. Further increases in sample time were not attempted since it was apparent that the particulate content of the containment IA was extremely low.

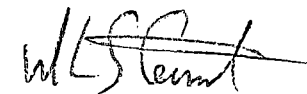
In our April 20, 1992 letter, we indicated that the particulate content of the containment IA system had been measured at 2 to 110 particles per cubic foot equal to or larger than 3 microns. The maximum particle count measured in the recently completed special test was equivalent to 60 particles per cubic foot equal to or larger than 5 micron particle size. It should be noted that the previous testing employed a particle counter with a maximum size range of 3 microns. In the recently completed special tests, the particle counter had a minimum size range of 5 microns and a maximum size range of 40 microns. Determining the maximum particle size was the objective of the special tests.

Based on the results of the special tests, the maximum particle size measured in the containment IA system is less than 20 microns. We intend to utilize system performance testing and preventive maintenance activities to initiate appropriate actions for maintaining this level of particulate performance within the containment IA system. Maintaining this level of particulate count and size will not pose any operability or reliability concern for the end use components. It should also be noted that the safety-related air operated components inside containment have pressure regulators with integral 40 micron screens.

The containment IA system is being reviewed as part of the reliability centered maintenance program to assess the operability and reliability of the components in the system. Any additional maintenance activities to enhance air quality or system reliability identified during this review will be evaluated and implemented as appropriate.

Please contact us if you have any questions.

Very truly yours,



W. L. Stewart
Senior Vice President - Nuclear

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