

Aerojet  
Energy Conversion  
Company

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March 28, 1986  
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Mr. G. C. Lainas  
Assistant Director, BWR Licensing  
Division of BWR Licensing  
Office of Nuclear Reactor Regulation  
United States Nuclear Regulatory Commission  
Washington, DC 20555

Subject: Submittal of Revision 1 to Aerojet Energy Conversion Company  
Topical Report No. AECC-4-P(NP)

Dear Mr. Lainas:

On January 15, 1986, Aerojet Energy Conversion Company submitted a revised Mobile Volume Reduction System Topical Report AECC-4-P(NP) to the U.S. NRC for review. In the transmittal letter, AECC described the changes made to the system since acceptance was granted on the original Topical Report in October, 1984. We also discussed the independent testing on the venturi scrubber systems that was to be performed by Chemecology, Inc. during the final phases of the acceptance test.

We are pleased to report that we have completed an extensive series of tests on the Dresden MVRS during which we combusted over 35,000 pounds of trash. We have received the results from Chemecology, in which they determined the distribution of particle sizes and grain loadings at three points in the system: the inlet to the primary scrubber, the outlet of the primary scrubber (or inlet to secondary scrubber), and the outlet of the secondary scrubber. Nine separate tests were run, with varying operating parameters in the incinerator, feed system and off-gas system.

While we expected to achieve 99% efficiency (DF of 100) in the secondary scrubber, the tests results indicated a lower efficiency. The particle size distribution in the off-gas was significantly weighed towards the <.8 micron range. With these particle sizes, the scrubbers designed for Dresden's MVRS operated at a 95-98% efficiency level, depending on temperatures and feed conditions in the unit. These efficiency levels are acceptable for operation at Dresden since the total DF assumed in the Commonwealth Edison permit application was 200. Following the issuance of the NRC's revised Safety

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Evaluation Report, AECC will reissue the Topical Report with the following DF claims:

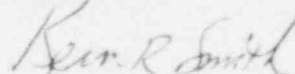
Incinerator	20
Venturi Scrubbers	50
HEPA Filters	200
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TOTAL	$2 \times 10^5$

It is important to note that the particle size distributions obtained from these tests will be utilized on future MVRS units, including the MVRS destined for B&W's Parks Township facility, to further optimize the performance of the scrubbers. AECC still expects to obtain efficiencies of greater than 99% in the off-gas system scrubbers.

It is also important to realize that these "particulate removal" tests do not correspond directly to "decontamination factor" tests. It is likely that the actual DF in the MVRS is higher than  $2 \times 10^5$ , but this can only be proven through operation with radioactive materials in the field. Results from operating the MVRS at Dresden can certainly be utilized to confirm this possibility.

Thank you again for your cooperation in reviewing AECC's Topical Report. We look forward to presenting all of the test data to the NRC following completion of our tests.

Regards,



K. R. Smith

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Mr. R. Ench - US NRC, Mail Stop P-433  
Mr. P. Loyson - US NRC, Mail Stop 396-55  
Mr. J. Scott - Commonwealth Edison  
Mr. A. S. Dam - Babcock & Wilcox