



Department of Energy  
Richland Operations Office  
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Richland, Washington 99352

0057732

NOV 23 2005

06-AMCP-0055

Mr. Richard Albright, Director  
Office of Air, Waste, and Toxics  
U.S. Environmental Protection Agency, Region 10  
1200 Sixth Avenue  
Seattle, Washington 98101

Mr. Allen W. Conklin, Supervisor  
Air Emissions and Defense Waste Section  
Washington State Department of Health  
P.O. Box 47827  
Olympia, Washington 98504

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EDMC

Addressees:

#### REQUEST TO REDESIGNATE PUREX 291-A-1 STACK AS A MINOR EMISSION POINT

The purpose of this letter is to transmit the results of the Deep Bed Filter #2 efficiency test and a request that the PUREX 291-A-1 stack be redesignated as a minor emission point. The request is based on criteria for stack designation provided by the U.S. Environmental Protection Agency (EPA) in the National Emission Standards for Hazardous Air Pollutants; Radionuclides in Title 40 Code of Federal Regulations Part 61, Subpart H, Section 61.93. The Section 61.93 requirements are also adopted by the State of Washington in the Washington Administrative Code (WAC) Chapter 246-247-035. In the EPA June 30, 2005, and Washington State Department of Health (WDOH) July 1, 2005, letters it was proposed that the U.S. Department of Energy, Richland Operations Office's (RL) conduct an efficiency test of the deep bed filter under current operational parameters to demonstrate the efficiency assumption made in the estimate of potential emissions. RL accepted the proposal and performed a current test to conclusively eliminate any question of configuration, flow rates, or changes in efficiency. RL contractor Fluor Hanford, Inc. (FHI) developed and performed an aerosol test for the PUREX Deep Bed Filter #2. The test was conducted August 30 – September 1, 2005, as witnessed by WDOH staff member Roy Evans. The conclusion of this test is that the current PUREX Deep Bed Filter #2 efficiency is 99.967 percent  $\pm$  0.001 percent at one standard deviation. The measurement data and evaluation are provided in the attachment.

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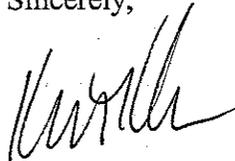
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The filter efficiency result is consistent with the assumed efficiency of 99.97 percent from the calculations of potential (unabated) emissions, as provided in document HNF-20611, Unabated Emissions Estimate for the PUREX 291-A-1 Stack. The results support the previously calculated potential for offsite impact of approximately 0.031 mrem per year total effective dose equivalent to the maximally exposed public individual.

It is RL's understanding that the deep bed filter efficiency is the sole remaining issue regarding stack redesignation and that the results of this test would be sufficient to establish the stack designation. RL requests redesignation of the PUREX (291-A-1) stack as a minor emission point based on this new confirmatory data. Please review the attached documentation, and provide approval of the stack downgrade accordingly. Upon receiving approval, RL will follow up with requests to WDOH and the State of Washington Department of Ecology for modification to the appropriate permitting documentation.

If you have any questions, please contact me, or your staff may contact Matt McCormick, Assistant Manager for the Central Plateau, on (509) 373-9971.

Sincerely,



Keith A. Klein  
Manager

AMCP:FMR

Attachment

cc w/attach:

N. Ceto, EPA  
S. L. Clark, WDOH  
L. J. Cusack, Ecology  
R. Evans, WDOH  
R. W. Poeton, EPA  
J. W. Schmidt, WDOH  
D. Zhen, EPA  
Administrative Record (PUREX Stack  
291-A-1 downgrade)  
Environmental Portal

cc w/o attach:

J. A. Bates, FHI  
L. D. Crass, FHI  
L. P. Diediker, DFSH  
R. H. Englemann, DFSH  
L. L. Fritz, FHI  
G. J. LeBaron, FHI  
J. K. Perry, FHI

**Attachment**

**HNF-27781, Rev. 0  
PUREX Deep Bed Filter #2 Aerosol Test  
and Efficiency Evaluation**