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Department of Energy  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

04-FTD-0017

NOV 26 2003

Mr. Nicholas Ceto, Program Manager  
Office of Environmental Cleanup  
Hanford Project Office  
U.S. Environmental Protection Agency  
712 Swift Boulevard, Suite 5  
Richland, Washington 99352

RECEIVED  
DEC 09 2003  
EDMC

Dear Mr. Ceto:

AIR MONITORING PLAN ADDENDUM FOR THE 100-K REMEDIAL ACTIONS  
(GROUP 4 WASTE SITES)

Attached is an addendum for specific revisions to portions of the 100-K Remedial Action (Group 4 Waste Sites) Air Monitoring Plan (AMP) for your review and approval. Mr. Larry Gadbois, of your staff, has reviewed the addendum.

These revisions are necessary to allow for the accelerated remediation of additional waste sites in the 100-K Area that were not within the scope of the original AMP. These waste sites are the 116-KE-1 and 116-KW-1 condensate cribs. Remediation of these sites is expected to start December 8, 2003. Approval of the addendum is needed prior to starting work.

If you should have any questions, please contact Jamie Zeisloft, of my staff, at (509) 372-0188.

Sincerely

*for*   
Joel B. Hebdon, Director  
Regulatory Compliance & Analysis Division

FTD:JZ

Attachment

cc w/attach:  
J. W. Donnelly, BHI  
Administrative Record – 100 K Area

Air Monitoring Plan Addendum for the 100-K Remedial  
Actions (Group 4 Waste Sites)  
(November 2003)

Revisions authorized by this addendum:

1. Add the following information to the existing Air Monitoring Plan as Attachment 7: air emission calculation summary for waste sites 116-KE-1 and 116-KW-1 located in the 100-K Area, and the figure showing the waste site locations and air monitors. The figure and calculation summary is attached to this addendum.
2. Attachment 2, Section *Potential-to-Emit Air Emissions*: Change the dose for 100-K Area (Group 4) from 4.02E-01 mrem/yr. to 4.10E-01 mrem/yr.
3. Attachment 2, Section *Potential-to-Emit Air Emissions*, last sentence: Add another sentence to state "See Attachment 7 for the 116-KE-1 and 116-KW-1 air emission calculation summary."
4. Attachment 3, Section *Near-Field Air Monitoring Locations*, 100-K Area (Group 4) line: Add a sentence to state "For the 116-KE-1 and 116-KW-1 waste sites, 4 downwind monitors (N403, N404, N477, and N528) are necessary (See Attachment 7).

Attachment 7  
Air Calculation Summary for 116-KE-1 and 116-KW-1 Condensate Cribs

**Total Effective Dose Equivalent Values  
for Remediation  
of the 116-KE-1 and 116-KW-1  
Condensate Cribs.**

Isotope	Total Inventory <sup>a</sup> , Ci	Release Fraction	Potential to Emit, Ci/yr	Unabated TEDE to the MEI <sup>b</sup> , mrem/yr
H-3	6.36E+01	1.00E+00	6.36E+01	1.90E-03
C-14	2.19E+02	1.00E-03	2.19E-01	3.62E-04
Co-60	2.83E+01	1.00E-03	2.83E-02	3.55E-03
Sr-90	3.16E-02	1.00E-03	3.16E-05	2.67E-06
Y-90	3.16E-02	1.00E-03	3.16E-05	5.76E-09
Cs-134	2.25E-07	1.00E-03	2.25E-10	1.54E-11
Cs-137	1.47E+00	1.00E-03	1.47E-03	4.41E-05
Ba-137m	1.39E+00	1.00E-03	1.39E-03	1.29E-12
Eu-152	2.23E+00	1.00E-03	2.23E-03	2.68E-04
Eu-154	2.28E+00	1.00E-03	2.28E-03	2.21E-04
Eu-155	6.30E-02	1.00E-03	6.30E-05	2.70E-07
U-233	1.76E-02	1.00E-03	1.76E-05	4.75E-05
U-235	1.28E-02	1.00E-03	1.28E-05	3.23E-05
U-238	6.00E-01	1.00E-03	6.00E-04	1.42E-03
Total				7.85E-03

<sup>a</sup>Radionuclide annual possession quantities are presented in Calculation No. 0100K-CA-V0017, *TEDE Calculation for 116-KE-1 and 116-KW-1 Condensate Cribs*, Rev. 0, November 2003, Bechtel Hanford, Inc., Richland, Washington.

<sup>b</sup>The annual unabated dose was determined using the CAP88-PC, Version 2 model. The potential to emit (Ci/yr) was input to the model, and the model generated the annual unabated dose. The distance to the MEI from the waste sites is 9345 meters northwest at the site boundary. The CAP88-PC model summary and synopsis are presented in Calculation No. 0100K-CA-V0017, *TEDE Calculation for 116-KE-1 and 116-KW-1 Condensate Cribs*, Rev. 0, November 2003, Bechtel Hanford, Inc., Richland, Washington.

MEI = Maximally exposed individual

TEDE = Total effective dose equivalent

Attachment 7  
Location of 116-KE-1 and 116-KW-1 Condensate Cribs and Air Monitors

