U.S. Department of Energy
Office of River Protection
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

0065328

MAY 2 4 2005

05-ED-038

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99352

Dear Mr. Wilson:

NOTIFICATION OF INTENT TO OPERATE A TEMPORARY SOIL SCREENING OPERATION TO SUPPORT THE BULK VITRIFICATION TEST AND DEMONSTRATION FACILITY

References:
1. ORP letter from R. J. Schepens to M. A. Wilson, Ecology, "Notice of Construction (NOC) for the Bulk Vitrification Test and Demonstration Facility and Partial Retrieval of Tank 241-S-109, Revision 1," 04-ED-076, dated September 7, 2004.

2. Ecology letter from M. A. Wilson to R. J. Schepens, ORP, "Notice of Construction (NOC) for the Bulk Vitrification Test and Demonstration Facility and Partial Retrieval of Tank 241-S-109, Revision 1, Approval Order," dated December 15, 2004.

The attachment to this letter provides both the notification and emissions information on the planned operation of a portable and temporary soil screening plant meeting the requirements of Washington Administrative Code 173-400-035, "Portable and Temporary Sources."

The need for the soil screening operation is the result of a refinement in the bulk material fill process design for obtaining clean soil for use in the Bulk Vitrification Test and Demonstration Facility discussed in Reference 1 and approved by Reference 2. Reference 2 discussed bringing fill soil to the site location for the Bulk Vitrification Test and Demonstration Facility and storing it in piles. As a refinement to the design, soil removed from the site location will be screened, placed in suitable containers (e.g., tote bags), and stored in the bags until required for use. This design enhancement will essentially trade fugitive emissions from the soil storage pile for those from the screening operation.

Approval of this notification of intent is requested so the screening operation can occur during the summer months to take advantage of the lower soil moisture content.

If you have any questions, please contact me, or your staff may contact Dennis W. Bowser, Environmental Division, (509) 373-2566.

Sincerely,

Roy J. Schepens
Manager

ED:DWB

Attachment

cc w/o attach:
B. G. Erlandson, BNI
E. S. Aromi, CH2M HILL
C. J. Kemp, CH2M HILL (w/attach)
J. Cox, CTUIR
S. Harris, CTUIR
S. L. Dahl, Ecology
D. W. Hendrickson, Ecology (w/attach)
J. L. Hensley, Ecology
J. J. Lyon, Ecology
O. S. Wang, Ecology (w/attach)
J. A. Bates, FHI
W. E. Green, FHI (w/attach)
G. Bohnee, NPT
K. Niles, Oregon Energy
M. F. Jarvis, RL
A. W. Conklin, WDOH
R. Jim, YN
Administrative Record
CH2M Correspondence Control

Attachment
05-ED-038

Notification of Intent to Operate a Portable and Temporary Source on the Hanford Site

Notification of Intent to Operate a Portable and Temporary Source

This notification of intent to the State of Washington Department of Ecology (Ecology), for operation of a portable and temporary screening facility on the U.S. Department of Energy's Hanford Site is submitted in accordance with *Washington Administrative Code* 673-400-035, "Portable and Temporary Sources." The notification provides the necessary information noting the new emission source will not cause a violation of applicable ambient air quality standards.

The portable source is a trailer-transported, vibratory soil screen. Operation of the vibratory soil screen will occur during approximately a three-month interval during the June to November 2005 time period. The planned start date is during the month of June. To meet desired moisture content levels of approximately 3 percent, screening is planned to occur during warm weather months. After screening, the soil will be placed into storage containers (e.g., tote bags) and stored for subsequent use for container fill material at the Bulk Vitrification Test and Demonstration Facility. Ecology has previously issued Approval Order DE 04NWP-002 for the Bulk Vitrification Test and Demonstration Facility. Because of the refinement in bulk fill material design, there are no fugitive emissions from a soil pile as originally planned. Originally, soil screening would have occurred off the Hanford Site.

The screening operation will process approximately 6,000 yds^3 of soil that were removed from the site for the Bulk Vitrification Test and Demonstration Facility. This processing will provide approximately 2,000 yds^3 of container fill soil, of the appropriate size, stored in 1-3 yd^3 containers (e.g., tote bags). Unused screened soil will be used for site backfill material as needed. Prior to conducting the screening operation, an area of approximately 3,000 yds^2 will be cleared of scrub vegetation and graded to provide a storage area. Conservatively, grubbing and grading will disturb the soil to a depth of 1 yard (3,000 yds^3). Fugitive particulate emissions are expected to occur during both the screening and clearing/grading activities. Due to the need to obtain the required soil moisture content, wetting of the screened soil is not planned. As an abatement control, the screening operation will be suspended if wind exceeds 15 mph. Abatement control for the clearing and grading of the storage area will be the use of water prior to, and during, this portion of the work. Clearing and grading of the storage area may occur in stages rather than the entire area being done at one time.

Fugitive emissions from the soil screening are 1.25 lbs/hr for a maximum daily PM_{10} emission rate and 0.31 ton/year annual average PM_{10} emission rate. Fugitive emissions are calculated as shown in Appendix A. Fugitive emissions from grubbing and grading add an additional 50 percent to these values. The totals are 1.88 lbs/hr for a maximum daily PM_{10} emission rate and 0.46 ton/year annual average PM_{10} emission rate. Fugitive emissions from the soil pile addressed in Approval Order DE 04NWP-002 were 0.07 lbs/hr for a maximum daily PM_{10} emission rate and 0.32 ton/year annual average PM_{10} emission rate.

Emission Calculation for PM/PM_{10} - Soil Screening											
AP-42 Emisson Factor from AP-42 Chapter 11.19.2, Table 11.19.2-2 uncontrolled screening											
Emission Factor	0.025	lb/ton									
Hanford soil density	98.00	Average density of soil at Hanford lb/ft3									
Volume of soil	6000.00	yd3									
Annual Operation Hours	500	hrs									
Processing rate	50	tons/hour									
Emission Point Description	Weight of Soil Processed	Soil Screening Duration *	Maximum Hourly PM_{10} Emission Rate	PM_{10} Emissions for 500 hours of operation							
	(tons)	(hours)	(lb/hr)	(tons/yr)							
Soil Screening	7,938	159	1.2500	0.3125							
	Weight of Soil Processed = Volume of Soil x Hanford soil density x 27/2000										
	Maximum Hourly PM10 Emission Rate = Processing rate x Emission Factor										
	PM10 Emissions for 500 hours of operation = Maximum Hourly PM10 Emission Rate x Annual Operation Hours/2000										
* Although PM emissions are calculated based on 500 hours of operation, the actual screening duration will be about 159 hours											