0089514

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950

July 27, 2010

Ms. Shirley Olinger, Manager
Office of River Protection
United States Department of Energy
P.O. Box 450, MSIN: H6-60
Richland, Washington 99352

Re: Acknowledgement of Pretreatment Facility Process Vessel Vent Control Equipment Change

Dear Ms. Olinger:

This letter is in response to your notice and description (Reference 1) of emissions control change within a portion of the Waste Treatment and Immobilization Plant (WTP). You described a change in off-gas treatment of the Pretreatment Facility (PTF) Process Vessel Vent (PVV) system from the use of a Thermal Oxidizer to a Thermal Catalytic Oxidizer.

This equipment change is a reversal of a change identified by the United States Department of Energy in 2004. That change was approved within Amendment 1 (Reference 2) to ORDER DE02NWP-002 (Reference 3) which authorized the construction and operation of the WTP. The treatment equipment change is anticipated to increase volatile organic compound (VOC) emission estimates by 1.64 tons per year. The emissions increase falls below permitting action thresholds of Washington Administrative Code (WAC) 173-400-110(5). The control equipment change is not subject to permitting action provisions of WAC 173-400-114 as you have not yet installed or operated the control device.

Finding 2 of ORDER DE02NWP-002, as amended in Amendment 1 (Reference 2) had previously increased emission estimates to those of Table 1, below. As your current estimate of VOC emissions from the project are 35.2 tons per year (Reference 1), no emissions increase is granted herein.

RECEIVED
JUL 29 2010
EDMC

H-08

Table 1: Approved Emissions Estimates	
POLLUTANT	**TONS/YEAR**
PM-10	>15 Covered by PSD
Sulfur Oxides	11.47
Nitrogen Oxides	> 40 Covered by PSD
Volatile Organic Compounds, total	< 38.00
Carbon Monoxide	70.59
Lead	0.01
Ozone Depleting Substances	0.00
Toxic Air Pollutants	As specified in Tables in attachment 1

The Department of Ecology (Ecology) understands and accepts that the previously proposed Thermal Oxidizer is not an available and appropriate treatment technology as you have determined through continued treatment investigation. Ecology accepts and FINDS the use of a Thermal Catalytic Oxidizer as the Best Available Control Technology for Toxics (tBACT) for the VOC components of the PTF PVV off-gas.

As currently written, no conditions of ORDER DE02NWP-002, as amended, are altered by the above FINDING. However, as the FINDING is a distinct elaboration of FINDING 4 of ORDER DE02NWP-002, you are directed to retain this FINDING on file with your permit authorization. Application of tBACT remains an enforceable condition of ORDER DE02NWP-002. FINDING 4 of ORDER DE02NWP-002 continues to read:

> *Thermal oxidizers with a removal efficiency of 99% or thermal catalytic oxidizers with a removal efficiency of 95% are T-BACT for the control of VOCs in the pretreatment, LAW vitrification, and HLW vitrification plants.*

Your letter also referred to pending design changes which may alter estimated VOC emissions. In the absence of any submitted information, we may only advise that you comply with New Source Review provisions of WAC 173-400-110 should you anticipate emission increases.

If you have any questions or require additional information regarding this response, please contact me at 509-372-7983.

Sincerely,

Doug Hendrickson, P.E.
Lead Air Engineer
Nuclear Waste Program

js

References:

1. *Volatile Organic Compound (VOC) Control Technology Change in the Pretreatment Facility (PTF) Process Vessel Vent (PVV) Emissions Unit*, 10-ESQ-181, W.J. Taylor to J. A. Hedges, June 10, 2010. 0088570
2. "04-ED-069" Hanford Waste Treatment and Immobilization Plant (WTP) Non-Radioactive Air Emissions Approval Order Revision Request, M. Wilson to R. Schepens, August 23, 2004. D5530679
3. River Protection Project-Waste Treatment Plant Notice of Construction (NOC) Approval Order, M. Wilson to J. E. Rasmussen, July 8, 2002. 0057720

cc:
Dennis Bowser, USDOE
William J. Taylor, USDOE
Lee Bostic, BNI
Robert Haggard, BNI
John Martell, WDOH
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Susan Leckband, HAB
Ken Niles, ODOE
Administrative Record
Environmental Portal
USDOE-ORP Correspondence Control