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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950

October 23, 2007

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

RECEIVED  
OCT 29 2007

EDMC

Re: Ecology Review of Emissions in Excess of Order 94-07

References:

1. USDOE-ORP Letter 07-ESQ-113, *Hanford Air Operation Permit (AOP), 30-Day Notification Report for Discharge Point P-296A042-001 Annual Ammonia Sample Exceedance of Notice of Construction (NOC) Limit*, July 27, 2007.
2. NOC Approval Order 94-07, *AY and AZ Tank Farms Ventilation Upgrades*, August 26, 1994.

Dear Ms. Olinger:

This letter communicates the findings of the Ecology review of the referenced submittal (Reference 1) regarding excess ammonia emissions from the 241-AY and 241-AZ Tank Farm operations under Order 94-07 (Reference 2).

Our review finds that:

1. Your notification was submitted in compliance with Condition 4.5.2 of the Standard Terms and General Conditions of the Hanford Air Operating Permit (AOP), 00-05-006, and Chapter 173-400-107 Washington Administrative Code (WAC).
2. Your operations were, and may continue to be, emitting ammonia in excess of that provided under Approval Condition 1 of NOC Approval Order 94-07.
3. The excess emissions exhibited were not due to startup or shutdown. [WAC 173-400-107(4)]
4. The excess emissions were not due to failure to operate and maintain appropriate abatement equipment. [WAC 173-400-107(5)]
5. The excess emissions were due to unavoidable upset (raw material change):
  - a. The emissions excursion was not caused by inadequate design, operation, or maintenance. [WAC 173-400-107(6)(a)]
  - b. The emissions excursion was not of a recurring pattern indicative of inadequate design, operation, or maintenance. [WAC 173-400-107(6)(b)]



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- c. Although no explicit corrective action was taken, the standard for relief from penalty does take into account the impact of the excursion. The United States Department of Energy (USDOE) – Office of River Protection has demonstrated that the excess ammonia emissions are well within Acceptable Source Impact Levels of WAC 173-460 and have not injured the public or environment.  
[WAC 173-400-107(6)(c)]

**In view of our findings, your reported deviation is an excusable excess emission under the provisions of WAC 173-400-107(2), and therefore not subject to penalty.**

Ecology does believe that compliance with permit conditions should be considered in your operation of waste material transfers into these tanks. The waste materials transferred in late 2006 and early 2007, appear to have contained higher concentrations of ammonia than previously anticipated. The ventilation of these tanks increased ammonia releases greater than four times historic rates. These increases did not require notice under the provisions of WAC 173-460-040(2)(c). The existence of Approval Condition 1 of NOC Approval Order 94-07 does, however, establish a burden upon you to request a permit amendment to encompass operating ammonia emission increases.

The Permit amendment is necessary so that you may resume compliance with emission limitations. In addition, your amendment and its scope, are necessary to consider future waste material transfer-generated excess emissions as unavoidable events. Submit your request for a permit amendment of ammonia emission limitations within 90 days of receipt of this letter.

Section 6 of your notification (Reference 1) states that no Toxics-Best Available Control Technology (T-BACT) was credited for ammonia abatement. Ecology has determined that existing permit limitations and requirements have been properly based upon USDOE submittals. Your submittals claimed ammonia abatement as achieved by the ventilation system condenser. As you prepare a permit amendment, please consider your claimed emission controls in your assessment of ambient impact.

Recent permit actions involving other tank farms have highlighted emission of toxic air pollutants other than those which may have been identified in application leading to Order 94-07. If the USDOE requests a permit change suggesting the removal of the high-efficiency gas adsorber from the T-BACT abatement train, Ecology will consider such a request as a permit modification which may involve establishment of new emission standards.

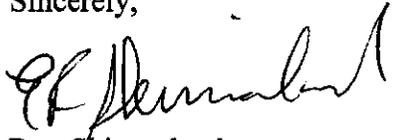
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If you have any questions regarding our findings, permit amendment or permit modification, please contact Doug Hendrickson of my staff at 509-372-7983.

Sincerely,



Ron Skinnarland  
Manager, Waste Management Section  
Nuclear Waste Program

dwh:pll

cc: Dennis Bowser, USDOE  
Chris Kemp, CH2M  
Lucinda Penn, CH2M  
Stuart Harris, CTUIR  
Gabriel Bohnee, NPT  
Russell Jim, YN  
Susan Leckband, HAB  
Ken Niles, ODOE  
John Martell, WDOH *H-0-9*  
Administrative Record: AIR Permits *S-2-3*  
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