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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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March 7, 2008

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

Mr. William S. Elkins, Project Director
Bechtel National, Inc.
2435 Stevens Center Place, MSIN: H4-02
Richland, Washington 99354

Re: Steam Cleanout of Plugged Piping

References:

1. Letter 07-ESQ-242 dated January 22, 2008, from S. J. Olinger, USDOE-ORP, to J. A. Hedges, ECY, "Submittal of Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit Modification Notification Form 24590-HLW-PCN-ENV-06-026" 0075862
2. E-mail dated December 26, 2007, from B. Dubiel, BNI, to T. Williams, ECY, "Informal Review HLW-06-026"

Dear Ms. Olinger and Mr. Elkins:

During informal review of reference 1, the Department of Ecology expressed concerns regarding the use of steam to clear a plugged drain line/filter in the Melter Cave Support Handling System (HSH) Decontamination Tanks (HSH TK-00001/2). Bechtel National Inc. (BNI) responded to Ecology's concerns in reference 2 stating that a plug in the HSH tank drain is very unlikely. However, having the ability to clean plugged drain lines with steam is prudent because of lessons learned at Savannah River.

Ecology commends BNI's efforts to consider "lessons learned" from Savannah River's experience. Lessons learned from other processing plants can improve the Waste Treatment Plant's (WTP) design and prevent problems. However, using steam to clear a plugged line or filter involves relatively large amounts of energy that could become uncontrolled with a sudden release of the obstruction. This sudden uncontrolled release of energy could damage critical equipment or systems, or spread dangerous waste beyond the boundary of the containment system and present hazards to human health. Ecology is concerned that the effects of such an event, or the alternatives for preventing such an event, may not have been fully evaluated or assessed. Nor is it certain that using steam to remove pipe plugging is a viable option.



Reference 2 states that "The work order to clean the drain plug would be evaluated for all hazards associated with the job." Application of the integrated safety management system (ISMS) to the development of work orders supporting plant operations will greatly contribute to achieving the goal of a safe and accident free working environment. However, Ecology is concerned that BNI is not fully implementing the ISMS during the WTP design phase, but rather deferring the application of ISMS principles for plant operations. The ISMS principles should be applied to all phases of the project to achieve the most appropriate resolution to potential problems.

Ecology is also concerned that frequent application of steam could result in distribution of large quantities of dangerous waste within the secondary containment boundary, thus bringing into question the currently permitted containment boundary definitions.

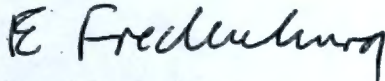
Because of our stated concerns pertaining to the HSH system, Ecology is interested in knowing how BNI intends to use steam to clear plugged lines throughout the WTP. For this reason, Ecology requests the following information:

- A listing of locations within the WTP where it is anticipated that steam will be used for clearing plugged lines.
- For each specific location, provide the following:
 - An estimate of the number of times steam would be used for clearing each of the plugged lines.
 - A listing of the equipment that could be damaged from an uncontrolled release of energy and the extent of the potential damage.
 - An estimate of the area that would be potentially contaminated by a sudden release of steam energy while unplugging a pipe or drain.
 - The hazards to human health resulting from an uncontrolled release of steam energy.
 - The design and/or engineered measures that could be applied to prevent any possible damage or spread of dangerous waste.
 - The design features or operational procedures that allow detection and removal of waste within 24 hours.
- Existing test results or planned testing activities to demonstrate the viability of using steam to clear a plugged line or filter.
- References to historical operational experience where steam has been successfully used for clearing obstructions from plugged piping systems.

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If there are any questions, contact me at 509-372-7899 or David Becker at 509-372-7990.

Sincerely,



Edward Fredenburg
Acting Tank Waste Disposal Specialist
Nuclear Waste Program

dlb/aa

cc electronic:

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Administrative Record: Waste Treatment Plant
Environmental Portal
Hanford Operating Record General File
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