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

July 9, 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

Re: Department of Ecology Comments on the 242-A Evaporator Tank System and the 242-A PC-5000 Transfer Pipeline Integrity Assessment Reports

Reference: Letter 08-TPD-025, dated May 27, 2008, from S. J. Olinger, USDOE-ORP, to J. A. Hedges, Ecology, "Submittal of 242-A Evaporator Tank System and the 242-A PC-5000 Transfer Pipeline Integrity Assessment Reports" 0077590

Dear Ms. Olinger:

The Department of Ecology reviewed the 242-A Evaporator Tank System and the 242-A PC-5000 Transfer Pipeline Integrity Assessment Reports (Reference). The enclosed Review Comment Record (RCR) contains our comments. We will contact your representatives to schedule a meeting to discuss our comments.

The United States Department of Energy-Office of River Protection must correct the Independent Qualified Registered Professional Engineer signature and certifications of the documents before we can accept that the information related in the referenced reports meets the intent of Washington Administrative Code 173-303-640, *Dangerous Waste Regulations: Tank Systems*. Comment #1 in the RCR details this issue.

We look forward to resolving our comments. If there are any questions, contact me at 509-372-7914.

Sincerely,

for

Jeffery J. Lyon
Tank Waste Storage Project Manager
Nuclear Waste Program

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EDMC

laf/aa
Enclosure

cc: See next page

cc w/o enc:
Toni Faust, CH2M
Moses Jaraysi, CH2M
Phil Miller, CH2M
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Susan Leckband, HAB
Ken Niles, ODOE

cc w/enc:
Administrative Record:
CH2M Correspondence Control
USDOE-ORP Correspondence Control
Environmental Portal

REVIEW COMMENT RECORD	Date	Review No.
	Project No.	Page 1 of 4

Document Number(s)/Title(s)	Program/Project/Building Number	Reviewer	Organization/Group	Location/Phone
• *IQRPE Integrity Assessment Report for the 242-A Evaporator Tank System,* RPP-RPT-33306, Revision 0, released 12/28/2007. • *IQRPE Integrity Assessment Report for the 242-A Evaporator Tank System,* RPP-RPT-33306, Revision 0-A, released 4/2/2008. • *IQRPE Integrity Assessment Report for the 242-A Transfer Pipeline,* RPP-RPT-33307, Revision 0, released 12/26/2007		D. W. Hendrickson L. A. Fort O. S. Wang	Ecology	3100 Port of Benton Blvd Richland, WA 99354 509-372-7984

Comment Submittal Approval: Agreement with indicated comment disposition(s) Status:

Organization Manager (Optional)	Date	Reviewer/Point of Contact	Date	Reviewer/Point of Contact
		Author/Originator		Author/Originator

Item	Page # Section # Line #	Comment (s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	Hold Point	Disposition (Provide justification if NOT accepted)	Status
1.	RPP-RTP-3306 R0, cover page and page 118	Affixing a signed PE seal on a sheet of paper then adding it to the cover sheet of the document is in violation of WAC 173-303-810 (13)(a) and in addition, the terms of WAC 196-23-70; Signature. *The terms "signature or signed," as used in chapter 18.43 RCW and/or Title 196 WAC, shall mean the following:* *(1) A handwritten identification that represents the act of putting one's name on a document to attest to its validity. The handwritten identification must be:* *(a) Original and written by hand;* *(b) Permanently affixed to the document(s) being certified;* *(c) Applied to the document by the identified licensee;*			

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		(d) Placed directly over the seal/stamp of the licensee. Furthermore, page 118 of the Integrity Assessment Report (IAR) has the approval section is not signed, dated, nor sealed by the IQRPE. This inappropriate certification and approval action must be corrected.			
2.	Page 11 of 121 (RPP-RPT-33306 Rev 0)	A leak was discovered under Nozzle E in the Evaporator Pump Room during the Vapor Liquid Separator Subsystem leak test. A work package to fix the leak has been developed, and repair is expected prior to the next campaign. WAC 173-303-640 (2) (e) requires the Permittee to develop a schedule based on the results of this IAR. Provide a clear statement that the repair is a pre-condition for the start of the next campaign.			
3.	RPP-RTP-3306 R0, Figure 1.6	Pressure relief systems – PSE-PB2-1 and PSV-PB2-1 adequacy of design is in question when destination of liquor on failure. With rupture of the PSE, the PSV may fail by fouling. If both open cleanly, the destination of the slurry remains ill-defined as "To Drain System." The report should clearly identify tank or sump destination in such an event; and review adequacy of pressure relief system design. Figure 1.13 appears to designate destination, via sump pump, to 241-AW-102, this needs to be confirmed and provided within the text of the IAR.			
4.	RPP-RPT-33306 R0A, Table 2.1.1	E-C-1, Primary Condenser: The recommendation is to conduct additional inspections and tests. Again, WAC 173-303-640 (2) (e) requires the Permittee to develop a schedule based on the results of this IAR. Provide additional information and detail as to what are the requirements and timeline to comply with those requirements.			
5.	RPP-RPT-33306 R0A, Table 2.1.1	E-C-2, Inter Condenser: Uncertain if referenced 2004 replacement was also certified by code data report to ASME VIII, Div 1. If so, say "'installed in 2004' in accordance with …."			

REVIEW COMMENT RECORD	Date	Review No.
	Project No.	Page 3 of 4

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6.	RPP-RPT-33306 R0A, Table 2.1.1	E-C-3, Inter (Should be 'After') Condenser: Uncertain if referenced 2004 replacement was also certified by code data report to ASME VIII, Div 1. If so, say "'installed in 2004' in accordance with …."			
7.	RPP-RPT-33306 R0A, Table 2.1.1	P-B-1, Recirculation Pump: Identification that no seismic analysis was conducted should have some recommendation for action in order to assure that the system will not leak, rupture, or fail as a result of a seismic incident. IQRPE must address this aspect.			
8.	RPP-RPT-33306 R0A, Table 2.1.1	P-B-2, Bottoms Pump: Sans analysis, should have some recommendation for action in order to assure that the system will not leak, rupture, or fail. Add appropriate information to document.			
9.	RPP-RPT-33306 R0A, Table 2.1.1	P-C-100, Condensate Pump: Sans analysis, should have some recommendation for action in order to assure that the system will not leak, rupture, or fail. Add appropriate information to document.			
10.	RPP-RPT-33307 R0, Page 17 and page 54	Project E-528, leak detection system upgrade should be recommended as priority despite alternate visual inspection. Add appropriate information to document.			
11.	RPP-RPT-33307 R0, Page 24	Agree with pressure relief recommendations by IQRPE. However, not quite sure how a 2007 report was recommending installation of the rupture disk which was installed in 2006. Provide verification/additional text as to this recommendation being addressed and closed.			
12.	RPP-RPT-33307 R0, Page 112	IQRPE Recommendations should not be set to a "priority." The IQRPE found deficiencies that "must" be corrected prior to further use of the evaporator system. To reflect a "priority" to the deficiencies is inappropriate. Clarification is warranted, and this section needs to be re-written or re-structured.			
13.	Page 2 (2.0) of Attachment	The Evaporator Flowsheet Model underestimated vessel vent ammonia concentration in 1994. A work package to modify the ammonia monitor range was developed, and the deficiency should			

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	11 (RPP-RPT-33306 Rev 0)	have been fixed prior to the 1995campaign. The deficiency should have been fixed at the start of the 1995 campaign. There was no record of repair mentioned in the IAR (rectify). If the deficiency was not fixed, then system operation could be slowed down to lower the ammonia discharge concentration below operational limit. Clarify findings and state the results in the text of the IAR.			
14.	Page 19 of Attachment 11 (RPP-RPT-33306 Rev 0)	Booster Pump PC-105-A was found to have a mechanical seal leak during the 2000 campaign. Engineers recommended a replacement pump more compatible with handling ammonia-bearing solution. There was no indication the pump had been replaced (rectify). If the pump seal was not replaced, the seal leak could continue to be an operational problem and therefore, some path forward must be identified and documented to resolve this deficiency. Clarify findings in the text of the IAR.			