



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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

September 27, 2010

Ms. Stacy L. Charboneau  
Office of River Protection  
United States Department of Energy  
P.O. Box 450, MSIN: H6-60  
Richland, Washington 99352

Re: 241-AP Double Shell Tank (DST) Farm Annulus Leak Detection Replacement  
Construction Assessment Field Visit

Dear Ms. Charboneau:

On August 13, 2010, the Department of Ecology (Ecology) visited the 241-AP DST Farm to assess the construction activities. Ecology found that the site was organized and good progress has been made on the Leak Detection within the DST Annulus. The Interim Assessment Report on Construction Activities is enclosed

If there are questions, contact me at 509-372-7970, Kristi Wold at 509-372-7985, or Jeff Lyon at 509-372-7914.

Sincerely,

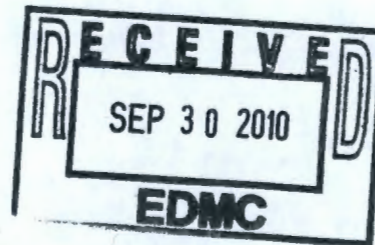
Michelle L. Hendrickson, CHMM, PE  
Tank Waste Storage Project Engineer  
Nuclear Waste Program

aa  
Enclosure

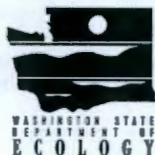
cc w/enc:

Lori Huffman, USDOE  
Michael Royack, USDOE  
Chris Sorenson, USDOE  
Carol Slack, WRPS  
Del Scott, WRPS  
Sherm Tift, WRPS  
Eric Van Mason, WRPS  
Felix Miera, WRPS  
Stuart Harris, CTUIR

Gabriel Bohnee, NPT  
Susan Leckband, HAB  
Russell Jim, YN  
Ken Niles, ODOE  
Administrative Record: DST/Tank Waste Storage  
Environmental Portal, LMSI  
USDOE-ORP Correspondence Control  
WRPS Correspondence Control







## INTERIM ASSESSMENT REPORT

### Construction Activities

#### A. GENERAL INFORMATION

Project:	241-AP Tank Farm ENRAF Construction		
Project Contact:	Carol Slack	Phone:	373-7241
Review Date:	8/13/2010		
Reviewer:	Michelle Hendrickson, CHMM, PE		
USDOE Project:	US Department of Energy-ORP		
USDOE Contact:	Chris Sorenson		
Prime Contractor:	WRPS		
Project Manager:	Del Scott	Phone:	373-2207
Location:	241-AP Farm		
Scheduled Start Date:	July 2010	Actual Start Date:	July 2010
		Completion Date:	Sept. 2010
Contract Amount:	Approximately 5.6 Million		
Sub-Contractor:	None- All work done by WRPS.		
Location:	200 East Area, Hanford Nuclear Reservation, Richland, WA		

#### PROJECT DESCRIPTION:

Remove the existing three Manual Tape (conductivity leak detectors) in the DST annulus and replace with them with automatic level detectors or Honeywell ENRAFs. The ENRAFs will be connected to the Tank Monitor and Control System (TMACS) and permanent power within the Farm.

The field installation consists of: 1.) Installing 16 (two of three at each DST annulus) ENRAFs including electrical and communication components, 2.) Testing, powering, calibrating, and tying the components into TMACS, 3.) Removing the Manual Tape detectors and associated components to the extent possible, 4.) Installing the remaining eight ENRAF detectors (third of three at each DST annulus), 5.) Testing, powering, calibrating, and tying the components to TMACS for the last set installed.

The ENRAFs will be installed into the annulus Risers -069, -070, and -071 for each DST. A power transfer switch to provide options between main and secondary sources in the 241-AP-271 Instrument Building and a weather protective power connector for alternate power to the transfer switch will also be installed.

The ENRAFs are being installed per the "SY Settlement Agreement" in response to Administrative Order 98NW-007 and resulting Penalty. The Manual Tapes previously installed in the AP Farm were aged past their useful life expectancy and difficult to read on a daily basis. In addition, the alarms sound only in the control room and their housings require frequent repair. Additional constraints are caused during power outages. Wires must be disconnected and relanded in the Flake Boxes and functional tests must be performed for the Manual Tapes after an outage.



**B. RECORDS AND PROCEDURES**

1. Personnel Contacted During Assessment

	<u>Name</u>	<u>Title or Duties/Organization</u>	<u>Phone</u>
a.	Carol Slack	Environmental Project Support	373-7241
b.	Del Scott	Project Manager	373-2207
c.	Sherm Tiff	Environmental Field Rep.	372-2678
d.			

2. Progress

a. Scheduled Percentage 20 %

	Yes	No	NA	See Remarks
3. Stockpiled equipment or materials				
a. Records adequate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X
b. Protected?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
4. As-built information up to date?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
5. Construction logs up to date?	X	<input type="checkbox"/>	<input type="checkbox"/>	X
6. Adequate involvement in change orders?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
7. Change orders appropriate and submitted to Ecology?	X	<input type="checkbox"/>		X
8. Shop drawings procedure adequate?	X	<input type="checkbox"/>	<input type="checkbox"/>	X
9. Permit No/TPA Requirement:				

**C. CONSTRUCTION**

The 241-AP Farm is the first of 3 DST Farms. The 241-AW Farm is scheduled for October to December of 2010. The 241-AN Farm is scheduled to begin in January 2011. Also, four SST Farms are schedule to have ENRAFs installed into their primary tanks once the DSTs are completed.

Thus far, excavation is completed and conduit has been laid in the farm. Sixteen ENRAFs have been installed, calibrated and transitioned over to operations with temporary power. Temporary rounds to test and document the operations of the ENRAFs will be conducted by Craft personnel.

Over the next two weeks, tie-ins will be made and the ENRAFs will be connected to the TMACS. All 24 conductivity probes have been removed. The last eight were removed as of 8/12. Pipe-fitters installed ball-valves and a dust cover on 8/12. Work witnessed by Ecology on 8/13 included wiring, QA/QC checking and installation of some of the remaining eight ENRAFs and flush site glass. Ecology also noted that supplies were being unloaded from trucks outside the farm and loaded onto wagons to be distributed at their needed locations within the farm. Two HPTs were positioned outside the farm to survey crews in and out as needed. A sun shade, chairs, and water were also on hand so that crews could continue working and taking needed rest breaks as temperatures rose. Level D PPE and safety glasses were required for work in the farm.

Work is expected to continue over the weekend. On Monday, 8/16, power to the primary tank ENRAFs will be taken down to facilitate the connection of ENRAFs to that power supply.

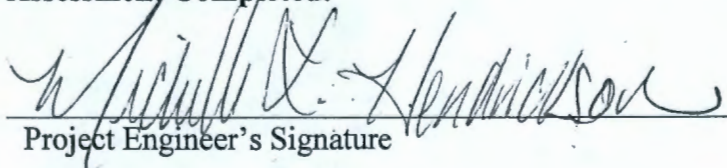


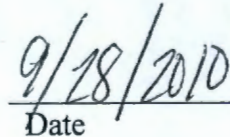
	Yes	No	NA	See Remarks
1. Comply with Plans and Specifications?	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Field Test Being Accomplished?	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Satisfactory Contractor Quality Control?	X	<input type="checkbox"/>	<input type="checkbox"/>	X
4. Inspection Documentation Satisfactory?	X	<input type="checkbox"/>	<input type="checkbox"/>	X
5. Site Condition (Drainage - Erosion)				
a. Orderly?	X	<input type="checkbox"/>	<input type="checkbox"/>	X
b. Dust control adequate?	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Miscellaneous structures adequate?	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Construction bypassing satisfactory?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
7. Unsafe Conditions/Health Hazards Observed?	<input type="checkbox"/>	X	<input type="checkbox"/>	X
8. Is Project Construction on Schedule?	<input type="checkbox"/>	X	<input type="checkbox"/>	X
9. Is the Operations and Maintenance Documentation on Schedule?	X	<input type="checkbox"/>	<input type="checkbox"/>	X
10. Is the Maintenance Management System on Schedule?	X	<input type="checkbox"/>	<input type="checkbox"/>	X
11. Traffic control and traffic safety?	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>

**REMARKS:**

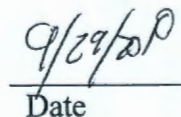
- WRPS Procurement system handles and checks in all materials arriving to the Hanford site for use in Tank Farms.
- Work Records are updated daily.
- A Change ECN has been written for an updated timing relay part that was evaluated by Engineering.
- This work is being performed in response to the SY Settlement Agreement.
- As part of the mechanical and electrical work packages, QA/QC personnel accompany the ENRAFs at each step. Calibration and testing is completed in the shop AND in the field once the ENRAF is installed.
- The site is extremely orderly and well maintained. Work progresses in stages. Several operations besides ENRAF installation including: preparation for radiation monitoring poles removal, pre-work staging for upgrades of jumpers in the AP Valve pit, ultra-sonic testing examination of the AP-3 Tank annulus, were also on-going. Also, excavation was completed on a tank by tank basis and this also helped to maintain an orderly farm.
- A pre-job is conducted daily and both HPTs and IH support are on hand to monitor and ensure the farm remains a safe environment work in.
- The project is approximately two weeks behind schedule. (This really is pretty good.)
- Operations and maintenance documents for the first sixteen ENRAFs installed have been turned over to Base Ops and Maintenance. Procedures are being updated and finalized.

**Assessment Completed:**

  
 Project Engineer's Signature

  
 Date

  
 Permit Manager's Signature

  
 Date