

MEETING NOTES

Selection of Next Four TX Farm Direct Push Locations

MEETING DATE: October 24, 2013

LOCATION: Washington State Department of Ecology, Richland Office

ATTENDEES:

Mike Barnes (Ecology)	Kent Reynolds (Energy Solutions)
Penny Berlin (Energy Solutions)	Julie Robertson (Freestone Environmental Services)
Joe Caggiano (Ecology)	Marysia Skorska (Ecology)
Les Fort (WRPS)	Harold Sydnor (WRPS)
Doug Hildebrand (DOE)	Cindy Tabor (WRPS)
Art Lee (CHPRC)	Becky Wiegman (WRPS)
Dan Parker (WRPS)	

BACKGROUND: This meeting was part of the continuing effort to ensure timely communication between Ecology and DOE representatives regarding the field work being conducted pursuant to the *200 West Area Tank Farms Interim Measures Work Plan* (RPP-PLAN-53808, Revision 1) and *Sampling and Analysis Plan for Soil Samples in Support of Interim Measure Planning at the 241-TX Tank Farm* (RPP-PLAN-54376, Rev. 1). The purpose of this meeting was to select four direct push locations in TX Farm.

DISCUSSION:

Prior Meeting Notes: Dr. Skorska accepted two sets of meeting minutes, provided by Ms. Tabor for Ecology Project Manager approval:

- TX Interim Measure Planning and Soil Sample Depths for C8800 and C8804, meeting held October 3, 2013
- TX Tank Farm Probe Hole Location Selection Criteria, meeting held October 8, 2013.

Both sets of meeting minutes were previously signed by Mr. Hildebrand for DOE.

Field Status: Ms. Tabor reviewed the status of the TX Farm interim measure investigation. Sampling is complete at all eight initial TX Farm locations, and deep electrodes have been installed at all eight locations. Field work at all eight locations is near completion. Ms. Tabor also reported having received quick-turn analytical results from all eight locations.

Site Selection Criteria: Ms. Tabor reviewed the site selection criteria, developed jointly by Ecology and DOE on October 8, 2013, which are to be used to site four additional direct push holes at TX Farm. The meeting attendees discussed a suggestion made by Mr. Caggiano to add a criterion related to the use of the porewater extraction (PWX) process. The discussion concluded with an agreement that the ability to deploy the PWX process at a site should not be a criterion for site selection. However, the attendees

also agreed that each of the four selected sites should be characterized and evaluated to determine whether the site could be a candidate for the PWX process.

Site Selection: Ms. Tabor showed a graphic that illustrated sites likely to be candidates for direct push investigation, in relation to the TX Farm tanks and areas of known soil contamination. The meeting attendees discussed the relative merits of characterization in three focus areas in the vicinity of 241-TX-103/104/107, 241-TX-101/102/105, and 241-TX-113/114/117. The attendees discussed key differences between the sites, related to the following points:

- Site potential for testing the beta probe (likelihood of the presence of elevated Tc-99)
- Existence of data from prior investigations, which would allow for data comparisons over time
- Lack of data in areas where better characterization is desired
- Results of leak assessment evaluations.

The attendees discussed the following specific information.

- The area around 241-TX-103/104/107 appears to be a promising location for beta probe testing, due to the likelihood of there being elevated Tc-99 in the soil. There is also soil contamination data available in this area from characterization efforts undertaken approximately 10 years ago.
- Elevated cesium has been detected in dry wells around 241-TX-113/114/117, indicating there may also be elevated Tc-99; therefore, this area might support beta probe testing.
- Additional characterization data would be valuable in the vicinity of 241-TX-101/102/105. Tank 241-TX-105 is a known leaker, with a uranium plume extending southwest of this tank as evidenced by existing data from dry wells and direct push holes.
- Ms. Tabor noted that it is possible that none of the selected locations have Tc-99 at concentrations high enough to test the beta probe (i.e., 100 pCi/g concentration).

The attendees felt there would be value in choosing two locations around 241-TX-104 and two locations around 241-TX-114. Both areas appear to be more likely to have elevated Tc-99 than the vicinity of Tank 241-TX-105, which indicates a higher likelihood that the areas could be used for beta probe testing.

Based on the factors listed above, the meeting attendees agreed that probe holes should be pushed in the following locations:

- Between 241-TX-104 and 241-TX-107 (promising for beta probe, supports evaluation of data sets taken over time, provides characterization data)
- Slightly south of the midpoint between 241-TX-104 and 241-TX-103 (provides characterization data, supports evaluation of site value for testing of beta probe).
- East of 241-TX-114/between 241-TX-113 and 241-TX-114 (promising for beta probe, provides characterization data)
- Between 241-TX-114 and 241-TX-117 (promising for beta probe, provides characterization data)

Logistics: The meeting attendees discussed the logistics of how field work will proceed at the four selected locations, following completion of field walk downs and ground-penetrating radar surveys. Mr. Sydnor indicated that he thought the most expedient path forward will be to push the initial logging hole at each location, then log at each of the four locations, then push a sampling hole at each location.

Ms. Tabor noted that at locations selected for beta probe testing, a third direct push hole will be needed to install electrodes, since the original logging hole will also be used to conduct beta probe testing and won't be viable for resistivity electrode placement. See attached figure. She indicated that the beta probe field sampling and analysis plan (to be developed in the future) will describe the additional push required for beta probe testing, and this plan will be provided to Ecology for informational purposes. Ms. Tabor stated that testing is anticipated at two locations.

The attendees then discussed various aspects of beta probe calibration and use, and then concluded the meeting.

<u>R. Douglas / J. Debra</u> DOE Project Manager (print)	<u>[Signature]</u> DOE Project Manager (signature)	<u>12-4-2013</u> Date
<u>Jeffery J. Lyon</u> Ecology Project Manager (print)	<u>[Signature]</u> Ecology Project Manager (signature)	<u>12-10-13</u> Date

Typical Direct Push consists of 2 Holes



Logging Hole:

- (#1) Gamma and Moisture Logging entire length
- Electrodes placed during decommissioning



Sampling Hole:

- (#2) Samples collected at select intervals

Direct Push Beta Probe Testing consists of 3 Holes



Logging Hole:

- (#1) Gamma and Moisture Logging entire length
- (#3) Gamma, Moisture, and Beta Logging at select intervals during decommissioning



Sampling Hole:

- (#2) Samples collected at select intervals



Resistivity Hole:

- Electrodes placed