

Meeting Notes: M-45-92 Annual Barrier Monitoring Meeting

Meeting Date: November 30, 2011, 10:00 am

Location: 2440 Stevens Center, room 1770

Purpose: Per M-45-92: Review the monitoring data, agree to changes in monitoring (if needed) and assess the performance of the demonstration barrier.

Attendees: Jeff Lyon, Ecology, Joe Caggiano, Ecology, Michelle Hendrickson, Ecology, Mike Barnes, Ecology, Bob Lober, ORP, Dan Glaser, WRPS, Susan Eberlein, WRPS, Mike Connelly, WRPS, Jeff Luke, WRPS

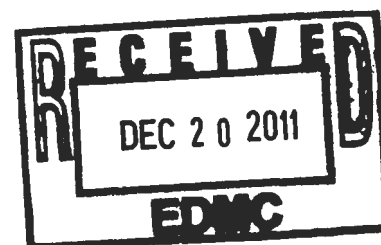
Background:

TPA Milestone M-45-92 requires, in part, the following:

- DOE and Ecology will meet yearly to review the monitoring data, agree to changes in monitoring (if needed) and assess the performance of the demonstration barrier.

Topics discussed:

1. ORP provided a brief summary of monitoring information to date
 - A summary of the data collected from the capacitance probes and the neutron moisture logging at the T-106 and TY Interim Surface Barriers (ISBs) was presented.
 - The data was evaluated to determine whether changes to the frequency of data collection would affect the value of the data for its intended purpose of demonstrating to the public that the ISBs were indeed functioning.
 - Reducing data collection frequency for the capacitance probe from 20 times per day to once per day, did not affect the mean or standard deviation of the data significantly. Trends were still maintained. Trends were mainly maintained until the data was collected only on a 1/month frequency. At this collection frequency larger amounts of variance and co-variance in the data were present.
 - It was noted that outliers were removed from the capacitance probe data set before statistical analysis was performed (standard practice for statistical analysis). The outliers were typically associated with physical equipment malfunctions (e.g. battery failure), and could be verified by other means not to constitute valid measurements. Removal of these outliers does not negatively impact the statistics for this type of evaluation.
 - Neutron moisture logs have been collected quarterly.
 - For T-106 ISB (data collection starting in 2008), statistical evaluation suggested that reducing frequency from quarterly to semi-annually or annually would not degrade the value of the data for its intended purpose.
 - The data showed that some seasonal variability occurs within the top 5 feet at the location that is outside the barrier.
 - Too few measurements had been performed for the TY ISB to draw a conclusion.
 - A written report on this data evaluation is being developed. The draft report will be provided to Ecology for their review and comment before it is finalized.
2. ORP provided recommendations regarding future monitoring



- ORP recommended that the data collection frequency (i.e. the frequency at which the automated system records a measurement) for the capacitance probe be changed to once a day from 20 times per day.
- Ecology agreed that this change to a daily measurement is acceptable.
- Ecology noted that a change to the Monitoring Plans and ISBs Inspection/Maintenance Manual and Checklists will be needed to include daily measurements. These Plans and Manuals should also include quarterly operational and maintenance reviews of the data and associated instrumentation to ensure that equipment failures are addressed in a timely manner.
- Ecology noted that a change to the plan to include daily measurement should address the period of time within which downloaded data should be reviewed for quality purposes, to minimize potential for data loss.
- ORP recommended that the neutron moisture logging frequency be changed from quarterly to annually.
- Ecology expressed concern that annually may not be adequate, and deferred any decision until they could review the data evaluation report and proposed plan.

3. ORP provided current view of barrier effectiveness

- ORP reported that both the T and TY ISBs are performing as anticipated. Precipitation is being prevented from entering the soil directly under the barriers. Any drying effect under the barriers are occurring very slowly. The data reflects that there is likely some moisture gradient occurring at the barrier edge. This will be discussed more in the upcoming report.

Actions:

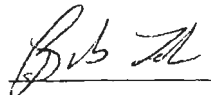
- ORP provide the draft written report on the monitoring data evaluation to Ecology for their review and comment. (Anticipated in January)
- ORP provide a draft change to the ISB Monitoring Plan to Ecology for their review and approval. (Anticipated in January)
- ORP provide the ISB Inspection and Maintenance Manual and checklists to Ecology for their review, showing any changes that may be needed to address changes to the Monitoring Plan. (Anticipated in January)

Conclusion:

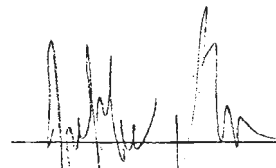
This meeting completes the 2011 commitment in TPA Milestone M-45-92 that requires the following:

- DOE and Ecology will meet yearly to review the monitoring data, agree to changes in monitoring (if needed) and assess the performance of the demonstration barrier.

Concurrence:



 Bob Lober, ORP Date 12/15/2011



 Jeff Lyon, Ecology Date 12-19-11