



MEETING MINUTES

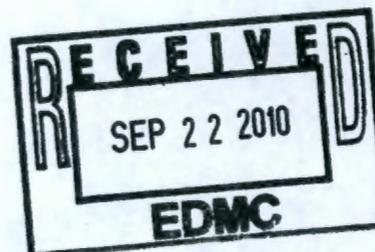
Title: Scoping Meeting for Data Quality Objectives for Evaluation of Locations for Installation and Use of Monitoring Wells for the Low Level Burial Ground 3 (218-W-5), Trenches 31 and 34.

Attendees: (Electronic Distribution)

NAME	ORGANIZATION	FUNCTION/ROLES
Jeff Ayres	Washington Department of Ecology	Hydrologist/ DQO Decision Maker
Dib Goswami	Washington Department of Ecology	Hydrologist
Asopuro Okemgbo	Washington Department of Ecology	Chemist
Deborah Singleton	Washington Department of Ecology	Project Manager
Joanette Biebesheimer	Washington Department of Ecology	Permit Writer
Doug Hildebrand	Department of Energy	Area Manager/ DOE DQO Decision Maker
Stuart Luttrell	CHPRC	RCRA Monitoring Manager
Daniel Gamon	CHPRC	RCRA Monitoring Hydrologist
Gustavo Aljure	CHPRC	Environmental Protection/ RCRA Subject Matter Expert
Scot C. Adams	CHPRC	DQO Facilitator

Other Distributions:

Jane Hedges, Ecology, MSIN H0-57
 John G Morse, DOE/RL, MSIN A5-11
 Tony Miskho, CHPRC, MSIN T4-10
 Craig Swanson, CHPRC, MSIN R3-50
 Cliff Narquis, CHPRC, MSIN R3-50
 Bonnie Howard, CHPRC, MSIN R3-60
 Rick W Oldham, CHPRC, MSIN R3-60
 Administrative Record



From: Scot C. Adams

Date: September 1, 2010

Location: This meeting was held in the Washington Department of Ecology building

Objective:

The general purpose of the meeting was to discuss where new monitoring wells needed to be drilled and how many were needed. Potential use of existing wells and point of compliance were reviewed.

Topics Discussed:

Groundwater modeling, WAC 173-303-645 requirements, interaction of facility monitoring, flow paths and chemistry related to the ZP-1 treatment facility.

A summary of the discussion follows.

The potential locations of mixed waste TSD monitoring wells were discussed. Ecology identified that the driving requirement was WAC 173-303-645.

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Dan Gamon presented a description of the trenches, a stratigraphic section, cross sections, and a conceptual model. Doug Hildebrand requested that one more cross section be presented (C-C').

Dan Gamon and Doug Hildebrand discussed the Cold Creek stratigraphy and possible perched water and lateral movement of leachate in the vadose zone. This potentially could impact the points of compliance for locating wells.

Dan Gamon presented working figures and modeling inputs supplied through S.S Papadopoulos & Associates. The 200-ZP-1 Version 3 hydrologic model and particle tracking were applied specifically to Trenches 31 and 34. Aspect were:

1. The current flow path for 2010-2011 was represented from the model. This path represents current conditions.
2. The flowpath from 2011 through 2014 was presented to show the impact of ZP-1 extraction and injection. The Trench 31 & 34 area flow path is impacted by new injection wells northeast and south east of the facility. The groundwater elevation contours are shifted by the treatment process. Dib Goswami interpreted the impacts to mean that there would be a progressive shift and mixing of the waters and that water chemistry would be dynamically shifting. The ZP-1 IW4 well will have the greatest impact on the groundwater flow, because of proximity and injection at 150 gallons per minute.
3. The flow path for 2014 through 2017 was presented. The flow path would continue to be dominated by ZP-1 extraction and injection wells.

Extensive discussion followed on how to locate up and down gradient wells in the environment of change in the flow regime. The relative merits of multiple locations were discussed.

Doug Hildebrand noted that a good understanding of the complex water chemistries will be needed.

Asopuro Okemgbo noted that statistical methods to interpret water chemistries will be needed.

Stuart Luttrell emphasized that specific chemical indicators need to be identified for interpreting monitoring results. He suggested that control charts might be the best way to interpret the data in the environment of change and mixing of waters. Unique chemical indicators must be identified.

Deborah Singleton and Joannette Biebesheimer stated that specific indicators would be needed for inclusion in the revised permit. All of the details of a monitoring plan will be needed to write the permit.

Dan Gamon identified that the waste inventory and waste acceptance criteria needed to be understood and would be the primary bases for developing monitoring parameters. Discussion was held as to whether waste contaminants would be released or detected owing to the existing packages, absorbent, and liners, as well as the absence of liquid waste.

All agreed that the location of wells should be the primary focus for the short term. Chemical aspects should be deferred and addressed later in a separate meeting. Planning is needed for that.

The duration of the renewed permit was planned by Ecology to be for 10 years. There needs to be enough flexibility in planning for changing conditions and drilling additional wells, as needed. Primary planning should be for 5 years with flexibility to extend monitoring to 10 years. Deborah Singleton elaborated that a compliant monitoring network and monitoring plan are needed now, regardless of changing conditions later.

Doug Hildebrand identified that internal CHPRC work is needed to try to determine what effect the Cold Creek zone will have on vadose zone flow and the point-of-compliance issue. Potential lateral flow in the vadose zone needs to be considered.

Doug Hildebrand noted that potential well locations are constrained by operational needs of the active disposal facility and the wells need to be protected from operational activities.

Dib Goswami initiated a summary process for the meeting as follows:

1. One more cross section is needed
2. A groundwater monitoring plan will be needed for the facility.
3. Down gradient points of compliance are needed. This will be determined by Ecology and discussed with EPA in a separate meeting.
4. The number of new wells and use of existing wells will be evaluated by Ecology and discussed with EPA.
5. As a minimum, at least one up gradient well and one down gradient well will be needed.
6. The M-24 drilling priorities need to be re-evaluated. Some of these wells may be higher priority than some other wells already scheduled for drilling. Dib Goswami will evaluate drilling and compliance issues.
7. Technical and regulatory justification will be needed for the placement and number of wells.

Agreements Made:

DOE will deliver meeting minutes for approval and release and released viewgraph figures to Ecology in the middle of September. This material will provide technical input to Ecology and EPA discussion of points of compliance.

See other tasks below.

Action Items:

Name of responsible party	Task	Due date by month, day, year
Dan Gamon	Prepare cleared viewgraphs of presentation and submit to the Administrative Record	September 15, 2010
Scot C. Adams	Prepare cleared meeting minutes for this meeting and submit to the Administrative Record	September 15, 2010
Dan Gamon	Prepare cross section C-C' to supplement the view graphs	September 15, 2010
Dan Gamon	Verify an up-gradient screen design on an existing potential up-gradient well.	September 15, 2010
Dan Gamon	Evaluate the Cold Creek Formation in surrounding/adjacent wells: 1. Continuity 2. Lithology 3. Thickness	September 15, 2010
Dan Gamon	Compile hydrologic test information for adjacent wells	September 15, 2010

Ecology and EPA	Meet and define : 1. The point of compliance for down gradient wells 2. The number of needed wells 3. The location of needed wells.	TBD
Ecology	Prepare a Fact Sheet for Trench 31 & 34	TBD
Scot C. Adams	Prepare a draft analyte list for monitoring and hold a DQO planning session with Ecology and DOE	October 1, 2010
DOE/RL and CHPRC	Prepare a draft monitoring plan for the Trench 31 & 34 unit	December 1, 2010
Dib Goswami	Evaluate TPA M-24 for potential modification and reprioritization of well drilling.	TBD
DOE	Schedule well drilling DQO planning and sampling and analysis plan	TBD