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Meeting Minutes Cover Sheet

Please find attached the Open Meeting Minutes from the Groundwater/Vadose Zone Integration Project of March 19, 2001.

If you have any comments or changes to these minutes, please reply to this email and your comments will be incorporated into the next meeting minutes.

Environmental
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Meeting Minutes

SUBJECT GROUNDWATER/VADOSE ZONE INTEGRATION PROJECT MEETING - MARCH 19, 2001

TO Distribution

FROM Michael J. Graham, Groundwater/Vadose Zone Integration Project Manager

DATE March 26, 2001

ATTENDEES
See Attached List

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NEXT GW/VZ INTEGRATION PROJECT OPEN MEETING:

Next Meeting: Monday, April 2, 2001 – 1-3 p.m.

Location: Bechtel Hanford, Inc., Assembly Room (Badging Required)

Local Call-In Number: (509) 376-7411

Toll Free Call-In Number: (800) 664-0771

MEETING MINUTES:

A Groundwater/Vadose Zone (GW/VZ) Integration Project Open Meeting was held on March 19, 2001, in Richland, Washington, at the Bechtel Hanford, Inc. (BHI) Assembly Room.

PROJECT REPORT:

General Project Update (Lynn Curry)

We have had a lot of activity on the project and I just want to highlight a couple of items. The Management and Integration group is in the process of planning for the National Academy of Science (NAS) meeting next week. There are a couple of people going to that meeting. The Systems Assessment Capability (SAC) group started doing model runs for history matching last week. In Groundwater, In Situ Redox Manipulation (ISRM) installed a compliance well last week. This week they start installing wells at the west end of the existing barrier. Immobilized Low-Activity Waste (ILAW) started drilling a borehole last week and has made good progress.

QUESTION: Where is that well?

ANSWER: It is just west of PUREX near 4th Street.

QUESTION: Is that what you are referring to when you talk of field study?

ANSWER: Yes. That's due to start up this week.

Schedule Update (Michael Graham) (Attachment)

The project reviews were completed last week. ISRM is slightly ahead of schedule. We are a little behind in Groundwater Monitoring because we are having some trouble getting sampling. SAC has taken a little longer than expected with history matching, but that is something we've watched and have been aware of all along. The Science & Technology (S&T) efforts are in good shape. We are a little behind on the Groundwater Interface and Risk work. All in all, we are approaching mid-year in good shape.

QUESTION: What is the purpose of the new ILAW well?

ANSWER: In order to support the Performance Assessment (PA), we are focusing on a couple of interface layers that we want to understand better. We are looking at hydraulic properties.

QUESTION: Is it part of a hydrologic map?

ANSWER: Yes. We are trying to understand the vadose zone better.

QUESTION: Do you have any specific budget problems for the Integration Project?

ANSWER: Well, it's tight. We hit some things we didn't anticipate. For example, decommissioning the wells along the river corridor. We approximated there to be 90. It looks like there are 125. And, we found an old well with some sort of oil in it. That was unanticipated. We also hit a culturally sensitive area at ISRM and have to take on the scope of dealing with that. All in all though we are in pretty good shape. SAC is a little over-spent, but we knew that going in.

Integration Project Meeting with Washington Department of Ecology and Oregon Office of Energy (Bob Bryce)

We met with Dib Goswami (Ecology), Sue Safford and Dirk Dunning (Oregon Office of Energy) last week. They had some questions on information we provided at the project public meeting a month ago. We went through each of the figures and addressed their questions. The focus of the first portion of the discussion was on the shape of the technetium inventory curve, so we had a technical discussion on the factors influencing the shape of the curve. It was a good discussion on inventory.

QUESTION: Where are the coordinates?

ANSWER: The horizontal axis is curies. One of the things that raised questions with Oregon was the fact that we smoothed the curve rather than showing each realization.

QUESTION: That looks like a high level of complexity. It makes it look like you really have a lot of data.

ANSWER: By smoothing it?

COMMENT: A simple bell-curve would suggest you don't have much data, which would be correct.

RESPONSE: We have used a very simple triangular uncertainty model for the volume of material that went to a waste site and a natural log model for the concentration in the material that went to the site. What the figure shows is the summation of the inventory estimated for each site using these uncertainty estimates.

QUESTION: What's your spread on the lower axis?

ANSWER: 25,000 curies up to 40,000 curies. We are interested in whether the central tendency for this summation is close to the total technetium known to have been generated on the site. The peak that is shown here is very close to the total technetium generated on site as indicated by the ORIGEN computer runs.

We also talked about the fact that at high volume liquid discharge sites we used a soil column cross sectional area of twice the waste site area to account for the spreading that occurs as moisture moves through the vadose zone. This gives a much better match for history matching at these sites. We also had a lot of discussion on the history matching results for the river.

COMMENT (Sue Safford): We very much appreciated everyone coming down and providing those explanations.

The February 28 Earthquake's Effects at Hanford (Stephen Reidel)

A copy of Stephen Reidel's presentation slides is available on the GW/VZ Web Site.

QUESTION: What is a hypocenter?

ANSWER: The third dimension of the epicenter, going down deep.

QUESTION: I've heard that the Hanford site is better instrumented. If you instrumented places that believe they are earthquake free, would you get this information?

ANSWER: The world is waking up to the fact that no place is free of earthquakes. Accelerometer networks are slow to coming on to sites.

QUESTION: Did the Laser Interferometer Gravitational-Wave Observatory (LIGO) have any effects?

ANSWER: Alan Rohay was actually doing vibration studies out at that site. There was no impact to LIGO. They felt the vibrations.

QUESTION: If there were a magnitude 9 quake in Seattle, what sort of magnitude would you expect at Hanford?

ANSWER: A report in terms of ground motion was done. Ground motion would be significant. A magnitude 9 would be near the surface.

QUESTION: Has there been any attempt to corroborate the observation of a crack in one of the tanks in C Farm?

ANSWER: Not that I know of.

QUESTION: What would be the capital outlay and operation cost of setting up a seismic monitoring site?

ANSWER: For remote sites, a typical seismometer is a couple of thousand dollars. Installation costs are about ten thousand dollars. Some sites would run more than others would. Our system has been around for a long time. Some of our technology is current, and some is out of date. Our radios are old and we are starting to have failures. If we were to set it up now, we would use satellite systems. The big problem with our radio system is that we operate on government frequency and we experience a lot of interference at times. They were inexpensive, but now they are out of date. We upgrade slowly, to stay within our budget.

UPCOMING EVENTS (Michael Graham)

We have budget meetings coming up. And the Oregon Hanford Waste Board is meeting on March 27-28, 2001.

QUESTION: There was talk of canceling those budget meetings because they didn't have the data ready.

ANSWER: They have held some of the budget meetings already. I attended the afternoon break-out sessions. There were detailed discussions of the plans, not the budgets. It was walking the audience through what was in the scope of the Fluor contract.

QUESTION: Can I get the amount budgeted for the vadose zone last year?

ANSWER: Yes. The latest Semi-Annual Report would be the best reference for that information.

QUESTION: What is the status of the report?

ANSWER: It's complete and we are planning on sending it out.

There is a public meeting tomorrow night on the river corridor contract. We have our next GW/VZ Integration Project Open Meeting April 2, 2001. On April 9, 2001, there is a Complex-Wide Vadose Zone Science and Technology Road Map Roundtable. That will be at Washington State University in the Tri-Cities.

NOTES:

GW/VZ Web Site location: <http://www.bhi-erc.com/projects/vadose>

If you have questions or comments, please contact Steve Sautter (509-372-9692) or Alison Kent (509-372-9192).

ATTACHMENTS:

1) GW/VZ Integration Project Two Month Look Ahead Calendar

ATTENDEES:

Marty Bensky – Tri-City Caucus

Don Clarke – DEC

Lynn Curry – BHI

John Fruchter – PNNL

Michael Graham – BHI

Mary Harmon – DOE-HQ (by phone)

Doug Hildebrand – DOE-RL

Judith Hines – Nez Perce Tribe

Alison Kent – BHI

Charles Kilbury – HAB

Fred Mann – CHI

Steve Reidel – PNNL

Wade Riggsbee – Yakama Nation

Gordon Rogers – HAB

Sue Safford – Oregon Office of Energy (by phone)

Steve Sautter – BHI

John Silko – DOE-RL

Rob Yasek - ORP

GW/VZ INTEGRATION PROJECT
MARCH 19, 2001 – MAY 21, 2001
TWO MONTH LOOK AHEAD CALENDAR

March 19	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
March 20	Hanford's 2003 Budget Public Meeting (Seattle Center, Seattle, WA) 7:00 p.m. – 9:00 p.m.
March 27-28	Oregon Hanford Waste Board (Mission, OR)
April 2	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
April 5-6	HAB
April 9	DOE Complex-Wide Vadose Zone Science and Technology Road Map Roundtable (Washington State University) 9:00 a.m. – 4:00 p.m.
April 16	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
April 25-27	IPEP Meeting (BHI Assembly Room, Richland, WA)
May 7	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)
May 21	GW/VZ Project Open Meeting BHI Assembly Room – 1-3 p.m. (Contact: Steve Sautter)