

CCN: 074043

SUBJECT GROUNDWATER/VADOSE ZONE INTEGRATION OPEN PROJECT MEETING -
OCTOBER 18, 1999

TO Distribution

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

DATE October 28, 1999

ATTENDEES

See Attached List

DISTRIBUTION

Attendees
GW/VZ Distribution List
Document and Information Services H0-09

NEXT GW/VZ INTEGRATION PROJECT OPEN MEETING:

Next Meeting: Monday, November 1, 1999 – 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 October 18, 1999 in Richland, Washington, at the Bechtel Hanford, Inc. (BHI) Assembly Room.

RIVER PROTECTION PROJECT (RPP) – UPDATE ON FINDINGS FROM BOREHOLE AT SX-115
(Tony Knepp):

We have completed the drilling in the SX Tank Farm just south of Tank SX-115. We drilled all the way down to the groundwater, and a sample of the groundwater was sent to the lab. The sample returned a hit on technetium of 34,000 picocuries per liter. None of the other wells in that area have ever returned a reading that high. When we were in the planning stages for drilling this well, there were a lot of issues raised about the location. This just shows that the selection of this site was justified. Due to the levels of contamination, it was decided to convert the borehole into a Resource Conservation and Recovery Act (RCRA) monitoring well.

QUESTION: Is the technetium actually in the groundwater?

ANSWER: Yes it is. We also took soil samples from the surface down to the groundwater, but technetium even at such high levels is not detectable by our field screening equipment. We'll be examining the soil samples in the lab over the next 30 days. The results should help us determine if the contamination pathway started at SX-115 or from somewhere else.

This whole process is a result of a RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) drafted in cooperation with the Washington State Department of Ecology (Ecology). All in all we're pleased with the outcome. It's good to be seeing results.

QUESTION: Have you done any spectral gamma work?

ANSWER: Not yet. While we were drilling, this hole showed as completely clean. There was no detectable man-made contamination in the hole until we hit groundwater. Even then, the technetium wasn't detectable with the pancake meters we use in the field. Technetium has a very low radiological signature.

QUESTION: Were you surprised to find the technetium?

ANSWER: Technetium was one of the primary contaminants we were looking for at the lab. We thought we might find technetium, just not at this concentration.

QUESTION: Was there any cesium?

ANSWER: No. There were no gamma emitters or chromium found in the groundwater. From the small amount of data we have at this point, we're not able to pinpoint where the contamination originated. Usually, when we find technetium we find chromium too. The ratio helps determine the source, but that's not the case here. That's one reason we feel that the contaminants potentially came from SX-115. SX-115 is a different kind of leak. It's not a reduction/oxidation (REDOX) leak.

QUESTION: Is 34,000 picocuries per liter the highest technetium level detected to date at the Hanford site?

RESPONSE: It's probably close. We haven't found any data that showed higher levels in the past. I imagine that it might have been higher before pump and treat activities began last decade, but there weren't any readings taken then. The work is starting to pay dividends.

QUESTION: You seem hesitant to name SX-115 as the source even though that's the location where you drilled. Why the hesitancy? Do you think it might be from somewhere else?

ANSWER: We don't want to jump the gun. We don't have the data to support saying SX-115 is definitely the source. We might have a pathway established in a couple of weeks once the soil results come back from the lab. SX-105 is close and it has high concentrations of technetium as well.

QUESTION: When you convert the borehole to a monitoring well, how far are you going down below groundwater?

ANSWER: We'll go down about another 20 feet and put in a screen.

COMMENT: That's not far.

RESPONSE: There's no reason to go farther with technetium.

QUESTION: If you convert this to a long-term well, what's the outlook on the water table?

ANSWER: It's dropped slightly through the years, but this screen should last a lot longer than our careers. We're not making the mistake of putting in a shallow screen.

INTEGRATION REQUIREMENTS FOR VADOSE ZONE MODELING (Fred Mann):

The Tank Farms Vadose Zone Program will be doing some modeling this year and next year. The 200 Areas Remedial Action Project and the System Assessment Capability (SAC) will be doing similar activities. It made sense for the three to come together for possible cost sharing and develop criteria for code selection that apply to important data needed by all three efforts. I worked on the modeling done by the Immobilized Low Activity Waste (ILAW) Project last year, so I will be leading this effort. A document has been put together listing the requirements and desirable features for this modeling, based on the ILAW work from last year. It's under review by Science and Technology (S&T), Ecology, and the Environmental Protection Agency (EPA). I've received no comments yet, but I hope to have some by the end of the week. Hopefully, there will be a draft ready for broader review by next week.

It should be useful for key stakeholders to review this document. Gary Jewell will post it on the Integration Project website (<http://www.bhi-erc.com/vadose>) when it's ready for review. I'm not sure when that will be specifically, but I'm hoping for early next week. I'm looking for a short turn around on comments. I'm hoping to have comments back in a week. The document deals with straightforward technical issues like configuration control, availability of the code to the public, retention curves, and the like. Since it is fairly straightforward, I think it could be a quick review. I just want to give interested stakeholders the opportunity to see it before it gets finalized.

COMMENT: From talking to some of the people at Ecology, they're not happy with the process. They don't think it was sent to the correct people for review and they want more time.

RESPONSE: It was sent to Phil Staats at Ecology. He's responsible for Tank Farms Vadose Zone material, so he seemed like the appropriate person.

COMMENT: That's not the right person. It was forwarded to Stan Leja and there are more discussions needed yet. I (Dib Goswami) will send you (Fred Mann) an e-mail about that.

COMMENT: There are a few stakeholders that we know might be interested in reviewing this document. We hope that Dirk Dunning from the Oregon Office of Energy (OOOE) will be able to review it.

COMMENT: The short review time could be a problem for some.

COMMENT: If it is put on the website, then I assume that it could be e-mailed to the key people as well. Additionally, hard copies should be sent to OOOE and the Tribal Nations.

QUESTION: I (Gordon Rogers) don't have a background in vadose zone modeling, but I do have a few questions. Are we talking about a Hanford specific critique? Is there a nationally accepted code that can be adapted for this? Is there a national scientific community standard being applied to this?

ANSWER: This is based on the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement (TPA)) M-29 Milestone document. It's based on Nuclear Regulatory Commission (NRC), EPA, and Department of Energy (DOE) guidance. It's straightforward stuff.

QUESTION: Is there going to be an EPA review?

ANSWER: It's in process.

COMMENT: Each of the three programs involved are required to select code. Rather than work independently, it seemed logical that they would benefit from talking to each other.

QUESTION The Idaho National Engineering and Environmental Laboratory (INEEL) is doing vadose zone work. The Waste Isolation Pilot Plant (WIPP) and Yucca Mountain have also done a fair amount. Will this be in sync with them? Will things match up? Are you taking lessons learned from them?

ANSWER: Yes, we've taken that very much into account, and we are also drawing upon the experience of the entire DOE complex. If you look, you'll see crosswalks and criteria taken from other sources and incorporating lessons learned. As I've said though, it's a fairly straightforward technical description. What we want is buy in from the community-at-large.

COMMENT: I (Michael Graham) would like to acknowledge Fred Mann's leadership throughout this process and making sure we're all on the same page. The thing is that there isn't an off-the-shelf code that the vadose zone community is behind. The code from Idaho is an adaptation of geothermal code. We're trying to get the right people involved and work above board to do something that will become the standard for this type of code. Fred could have just selected a code, but instead decided to integrate the users and make life harder for himself.

COMMENT: The major advantage to involving the DOE complex experience is that it becomes more than just the opinion of an individual scientist.

RESPONSE: No matter what happens, we're not going to get universal concurrence. We just want the bulk of people to say that this is a useful code. We don't want fights down the road over every piece of data. If there are issues about data, we want to be well armed.

COMMENT: However, you may find that one code does not satisfy every feature. It might take two or three codes.

RESPONSE: We're not committing to only one code. What we're committing to are the specific requirements. This is about the requirement sections. Once we reach agreement on that,

then we can build the needed code.

INTEGRATION PROJECT EXPERT PANEL REPORTS (Virginia Rohay):

This is simply to let everyone know that we have received the reports from the Integration Project Expert Panel (IPEP) Subpanels that were held earlier this year. The subpanels were Field Investigations and Data Gathering held in March, Peer Review also in March, and Risk held in April. There is also a report on IPEP Scope, Policies, and Procedures that came out of the IPEP working session held in Chicago in August. All of the reports are available on the Integration Project website. If you would like a hard copy, just let me know (509-372-9098).

NATIONAL LABS RISK SCIENCE AND TECHNOLOGY WORKSHOP (Dru Butler):

An S&T Risk workshop with the National Labs was held on October 5 and 6. There were 37 participants from around the region and the country. All of the presentations and the minutes from the meeting will be posted on the Integration Project website next week. There is a follow-up meeting scheduled for November 9 and 10. We are in the process of building a draft agenda for that meeting and hope to have something available by next week as well. Gordon Bilyard from Pacific Northwest National Laboratories (PNNL) is in charge. If you have comments, please direct them his way (509-372-4219).

COMMENT: There was a discussion at the S&T meeting about communication with the Tribes. It looks like communication is lacking between the projects and everyone else with the Tribes. It's nothing tangible though. Richard Stoffle (University of Arizona, Bureau of Applied Research and Anthropology) delivered a presentation where he made the point that if we hang around for 10-15 years then we should begin to understand what the Tribes are trying to say. The point was that words are not being translated to meaning. How does this affect guidance to the projects? Are we failing to hear what they are saying or not saying?

COMMENT: There are no suggestions on how to approach the issue, but the communication isn't there. I (Gordon Rogers) could point to a presentation that Armand Minthorn from the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) gave a while back. It was extremely poignant, eloquent, and well presented, but I've no idea how to apply what he said.

COMMENT: It's a serious problem that although you make your cleanup decisions now, you don't know if in 15 years they'll say that we didn't get the message and didn't cleanup what was important to them.

COMMENT: He was talking from a sociological standpoint. He was pointing to an example where it took that length of time for him to see what the Tribes really meant on certain issues.

COMMENT: It's complex. We're hoping to get at some of the Tribal issues through the web approach and look at their values. That's part of the risk portion of the SAC. We think that's the path forward. It provides a forum to capture values and relationships that we might otherwise overlook. It's based on location, but what we haven't addressed is the terrestrial pathways at Hanford. The focus has been on the subsurface. We should get good insights to cultural issues through the webs.

QUESTION: That was an issue in the Center for Risk Excellence (CRE) risk report. It dealt with the issue

at some length. Is their approach helpful?

ANSWER: It talked about quality of life. There have been some metrics developed in the last 10 years on that. They thought it would be a good idea to apply those to cultural metrics.

COMMENT: The webs help, but guidance is needed on the impact of metrics.

COMMENT: The S&T needs for risk are not yet defined.

OCTOBER 4 OPEN PROJECT MEETING MINUTES (Dru Butler):

After our last Open Project Meeting on October 4, we had some technical difficulties. We had a computer problem and lost the file containing the notes from the meeting. As a result we will not be able to produce minutes from that meeting. We decided it was best to not try to recreate the notes from scratch. We will post the agenda on the website and just leave it at that.

UPCOMING EVENTS AND OPPORTUNITIES FOR PARTICIPATION (Michael Graham):

I'd like to draw your attention to a couple of the items on the calendar (Attachment 1). On October 28 there is a meeting of the Regulatory Path Forward Work Group scheduled to discuss 100 Area endstate options. The point of contact for this meeting, if you would like to participate, is Moses Jarayssi (509-372-9692).

Also, there is the Health of the Hanford Site Conference occurring on November 2 and 3. The Integration Project is on the agenda for a panel discussion on November 3. Shelley Cimon will be the facilitator. We'll have three presentations where we will talk about the SAC, the way we are working with risk, and how we're handling inventory. Doug Sherwood from EPA will then follow with a discussion on inventory and cleanup. We hope to see you there.

COMMENT: Only if they lower the price.

NOTES:

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

If you have questions or comments please contact Dru Butler (509-375-4669), Gary Jewell (509-372-9192), or Karen Strickland (509-372-9236)

ATTACHMENTS:

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

ATTENDEES:

Marty Bensky – Tri-Cities Caucus
Don Clark – JAI Corp.
Mike Ebbinger - LANL
Dib Goswami – Ecology
Michael Graham – BHI
Mary Harmon – DOE-HQ
R. Doug Hildebrand – DOE-RL

Kathy Huss – SAIC
Gary Jewell – BHI
Tony Knepp – LMHC
Fred Mann – FDNW
David Olson – DOE-RL
Gordon Rogers – HAB
Virginia Rohay – CHI

ATTACHMENT 1

GW/VZ INTEGRATION PROJECT
OCTOBER 28 – DECEMBER 20, 1999
TWO MONTH LOOK AHEAD CALENDAR

October 28	Regulatory Path Forward Work Group BHI Assembly Room – 1-5 p.m. (Contact: Moses Jarayssi) Purpose: To discuss 100 Area endstate options
November 1	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)
November 2-3	Health of the Hanford Site Conference – Sponsored by the University of Washington Doubletree Hanford House – Richland
November 4-5	Hanford Advisory Board Meeting Tower Inn – Richland
November 9-10	Risk S&T National Labs Workshop #2 Doubletree Hanford House – Richland
November 10	HAB-ER Meeting BHI Assembly Room – 9 a.m.-4 p.m.
November 15	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)
December 2-3	HAB Meeting Doubletree Lloyd Center – Portland,
December 6	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)
December 9	HAB-ER Meeting BHI Assembly Room – 9 a.m.-4 p.m.
December 20	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)