
SUBJECT GROUNDWATER/VADOSE ZONE INTEGRATION OPEN PROJECT MEETING -
NOVEMBER 15, 1999

TO Distribution

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

DATE November 18, 1999

ATTENDEES

See Attached List

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Attendees
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NEXT GW/VZ INTEGRATION PROJECT OPEN MEETING:

Next Meeting: Monday, December 6, 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 November 15, 1999 in Richland, Washington, at the Bechtel Hanford, Inc. (BHI) Assembly Room.

ECOLOGY COMMENTS REGARDING INTEGRATION PROJECT EXPERT PANEL (Dib Goswami):

I have to leave early today, so I would like to make a couple of comments at the start of the meeting. The first thing has to do with the upcoming Integration Project Expert Panel (IPEP) meetings in January. We at the Washington State Department of Ecology (Ecology) have looked at the reports released by the IPEP from their recent meetings. We are concerned about some of the content and would like to arrange for some one-on-one time for Ecology and the IPEP to interact. We'd like to talk to them for about one to two hours. The idea is not to criticize the panel, but rather to clarify our positions and expectations. We think that perhaps the IPEP have some misconceptions. We'd just like to clarify things. We see that the panel has broken down to different sub-groups, and we'd like to see the real path forward, mission, and vision from the IPEP. We just have some issues and would like to go over them with the IPEP in a closed meeting. We don't mind a few others being there, just not the 80 people that normally sit in on the IPEP meetings.

RESPONSE There might be an issue in restricting attendance. There has been a policy established that anything done with the IPEP has to be open.

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RESPONSE: I understand that policy and I agree with it, but the thing is that we at Ecology just feel that the discussions would be more productive with a smaller group. We also think that we need more than five or ten minutes of agenda time.

ANSWER: I think we can take care of the time thing without a problem. There would be a problem with a restricted meeting though.

COMMENT: Ecology just feels it would be more productive with a smaller group. We're looking for one to two hours to go through our positions and tell them what we expect. We want to talk about the path forward for more concrete products from the IPEP. Up to now it's been individual groups working on specific issues. We want to hear what they have come up with for the future.

COMMENT: On the list of things you propose, we can certainly request to the IPEP that you get a chunk of time to talk to the panel about how you think they might be misrepresenting Ecology's positions. When it comes to Ecology's expectations of the panel, it would be more appropriate that the Department of Energy Richland Operations Office (DOE-RL) and Ecology talk prior to you talking to the IPEP. The IPEP and DOE-RL have a contractual relationship. We should discuss expectations ahead of time.

RESPONSE: That's no problem. We're not looking for just a one sided discussion. We want input from the IPEP too as to their expectations from Ecology.

QUESTION: Will this be a discussion of technical issues?

ANSWER: It's entirely about technical issues. We would just like a more focused group.

PROPOSED ECOLOGY/STAKEHOLDER MEETINGS (Dib Goswami):

Last week, Ecology management met with Mary Lou Blazek and others from the Oregon Office of Energy (OOOE). Part of the discussion involved feedback from the Health of Hanford Site Conference from stakeholders and others on the Integration Project. I was on the agenda at the OOOE meeting to discuss the findings from Norm Buskee, which aren't really an issue anymore, and to discuss Integration Project public involvement. We also talked about Keith Klein's meeting with the Columbia River Comprehensive Impact Assessment (CRCIA) Team.

Some of the stakeholders have issues about uncertainty, and they feel those issues are not being addressed. In talking with the OOOE, Ecology proposed we initiate a constructive process where we lead small group discussions with the stakeholders and Tribes. We need to develop a path forward to handle issues. The first step would be to decide if issues being raised are truly issues after all. If they are, then we need to decide how to handle them. We'd like to start those meetings in January. We envision holding a total of three or four meetings.

QUESTION: So these are Ecology meetings?

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ANSWER: They're something broader. It's for interaction between stakeholders and Ecology, but DOE and the contractors will definitely be a resource. We'd like to invite you to be in the group, but we want to keep it a small group. We can then come back to the larger Integration Project group and report on what happened.

QUESTION: So Ecology wants to be separate from the Integration Project for this? Is this to help satisfy your own commitment to the public?

ANSWER: It's not really separate, but more of a compliment. We just think that a small group could be more effective. It would let us get more in depth and hammer down the real issues.

RESPONSE: I (Marty Bensky) might not have the time available to participate in small group discussions. Will what you discuss be articulated and documented to distribute to interested parties? I think that some of the stakeholder individuals have failed terribly to articulate what they consider issues. Their issues are nebulous at best. They say, "you're not complying with requirements," but never identify what the "requirements" are.

COMMENT: The idea is simply to assemble a small group to come up with conclusions. Many issues are quite clear. There's a fight over what data is suitable for the model. There are issues about what algorithms are suitable for the models. Some of it ends right there. Those are the kinds of things we want to bring in and hash out.

COMMENT: We keep hearing how requirements aren't being complied with, but what are the requirements in the first place? I don't think we know what those are really, let alone how they aren't being complied with. We've not heard any of that.

RESPONSE: That's one of the ideas behind these meetings.

QUESTION: Are you planning on producing white papers?

RESPONSE: My point is let's make an effort. We'll need Integration Project support in these discussions for them to be productive.

QUESTION: On page two of the agenda package, there is a draft agenda for a System Assessment Capability (SAC) Workgroup meeting to discuss issues arising from the Fiscal Year 1999 (FY99) SAC Workgroup. Is this what you have in mind to discuss?

ANSWER: No. That's something separate.

COMMENT: One of the reasons for this SAC meeting is to take all the issues recorded on the issues submittal forms, discuss them, decide whether these are things that the group needs to tackle, and set up a prioritization.

RESPONSE: That's absolutely the same idea Ecology has. There are differences of opinion that need to be aired. When OOOE and Ecology talked there were differences of opinion, and that's when we proposed the small group discussions. Mary Lou and the others agreed it would be

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a good idea. We're not envisioning long drawn out meetings. Just something where the questions of "What do you want? What do you think? How do you want to proceed?" are discussed. We've already talked to some of the folks we'd like to include, such as the Yakamas and OOOE. We're trying to decided how best to get this all together. We are definitely going to need DOE and contractor help. We want to keep this small if at all possible. A workshop format might work too.

TANK FARMS CHARACTERIZATION (Tony Knepp):

We are in the process of completing the well located south of the SX-115 Tank. It's the borehole that led to the press release about the 34,000 picocuries per liter of technetium-99. We're converting the borehole into a Resource Conservation and Recovery Act (RCRA) compliant monitoring well.

Part of what we were working on was a more detailed analysis of the top few feet of groundwater looking for shallow contaminants. We've drilled three to four feet into the groundwater and sampled for contaminants. The theory behind it is reasonable, but we haven't found anything there yet. The concept is to do a slow, shallow drain and see what contaminants are moving on the top of the aquifer. Pacific Northwest National Labs (PNNL) has looked for a shallow contaminant layer three other times, but they came up with nothing significant. The idea is that if you sample a 15 foot groundwater monitoring well, and there is a concentrated layer only in the top 5 feet, when it mixes with the other 10 feet of the sample it looks like a lower contaminant level. So far there hasn't been enough of a difference between the high and low levels to matter. We didn't find anything significant in the high layers for this well, so we're in the process of extending the well so that it is 15 feet into groundwater.

INTEGRATION REQUIREMENTS FOR VADOSE ZONE MODELING DRAFT DOCUMENT (Tony Knepp):

There is a document titled "Computer Code Selection Criteria for Flow Transport Code(s) to be Used in Vadose Zone Calculations for Environmental Analyses in the Hanford Site's Central Plateau (HNF-5294, Rev. 0d)" currently out for public review. It is available for download from the Integration Project website (<http://www.bhi-erc.com/vadose>). Fred Mann is the contact for this document, and all comments should be directed to him. He can be reached at 509-372-9204. Comments are due this week (November 18).

This is not the first criteria document out there. This is an update that goes back, looks at what's existing, and updates the criteria and list of models. We want to select what makes sense. It's an update of what's been done in the past and what our capabilities are now.

QUESTION: Is this an in-house effort?

RESPONSE: The criteria were selected in cooperation with Ecology per a RCRA facility investigation/corrective measures study (RFI/CMS) process. That handles the major processes. We'll rely on science and technology (S&T) for other less understood work and decide if any of those have potential impacts. We'll look at a variety of conceptualizations to determine if it leads to no impact. We need to identify the code or codes to look at that.

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Since code development has been something very aggressively pursued in the last ten year across the world, we thought we needed to evaluate code criteria based on what's available. Fred put in a lot of work, and this document covers more than we thought we ever had.

QUESTION: How long is the comment period?

ANSWER: It's a 7-day comment period. Comments are due this Thursday (November 18). It's a pretty short turnaround.

COMMENT: It's based on the RFI/CMS framework. The same criteria will be used for the 200 Area Remedial Action Project, the Tank Farms Vadose Zone Project, and the SAC. It'll be used for the same purpose, though different codes may be used by the different projects.

QUESTION: So far as characterization goes, what tells you what's there now and the recharge mechanisms of what's coming?

ANSWER: We use different sources for different information.

COMMENT: You develop a three-dimensional profile of what's there now, but what about barriers later? What about moisture? That stuff needs to be factored in.

RESPONSE: We've been collecting information on the sources of contamination in the vadose zone. Numerical codes will help predict where that contamination will be, where it will go, and how fast it will get there. The characterization data we're collecting will help either calibrate the models or verify the existing conditions. We'll run simulations only for the particularly contaminated areas. We might only do an area of six to nine tanks in the Tank Farm area. The overall focus is Ecology driven, with the idea being to look at the areas where data is needed to help make remediation decisions.

COMMENT: This sounds like a sensitive integration area.

ANSWER: Not really.

COMMENT: It is though. When talking about the regulatory path forward, you know what to do if an area of high contamination poses an impact. But what if a borehole or other characterization turns up something that's borderline acceptable. If something is right on the edge between acceptable and impact, you move over to the next area and see what it looks like there. If it's bad there then you decide what to do with the first area that was borderline.

RESPONSE: It seems that you're stacking up the "ifs."

COMMENT: It's a progression. You might disagree with the comprehensive model. You should look at the bad spots, and if things are bad enough there, then you look at the next bad ones in line.

COMMENT: Estimates of what is under the Tank Farms come from about three different methods right now. The first is known leaks. At the time of a tank leak you knew what was in the tank.

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As a result, you have a pretty good idea of what's in the soil now. Then you take gross gamma data and make an estimate from that. You look for cesium in that farm. Based on that, and what other contaminants are present, you estimate migration. Then there's spectral gamma. When you take all of those, and combine the data, you get a pretty good feeling for what and how much contamination you're looking at. Those are at least the three main methods to determine what in the world leaked into a farm. That's the best effort you're going to get. You could do some drilling and sampling of course, but that can get chancy over the tanks.

COMMENT: You've got to know how it got there.

RESPONSE: It's an estimate. 90 percent is resolved from estimates of what's leaked. The criteria selection is the start. Then you need agreement on the basic algorithms to use. It is all an above board process. We're getting outside help in selecting the code.

NOVEMBER 9-10 RISK S&T NATIONAL LABS WORKSHOP #2 (Amoret Bunn):

We held the second Risk S&T National Labs Workshop last week. It was well attended. The same people from the first workshop were there, and several new faces as well. There was a diverse representation across the four risk areas (ecological, economic, socio-cultural, and human health). At the first workshop, we identified needs and issues associated with the S&T Plan for the four risk areas. This workshop we went back and thought of what we missed and added that to the documentation. We identified linkages between the different areas and added those. For example we looked at possible links between the Risk Technical Element and the River Technical Element, or on a broader level between Hanford programs and DOE complex-wide programs.

The meeting also allowed us an opportunity to hear what other programs in the DOE complex are doing in the way of modeling and building databases for parameters of risk assessment.

Where do we go from here? The leads for the four risk areas are documenting what the needs and issues are, how to resolve those, and what linkages exist. In June, we'll start to roadmap those issues against the SAC and see when risk information will be needed for the assessment.

COMMENT: I (Marty Bensky) have a brief comment. I didn't attend the whole workshop, but I did see presentations from Larry Gadbois from the Environmental Protection Agency and Jaime Zeisloft from DOE-RL and noticed something. [Note: The presentations referred to were not part of the Risk S&T National Labs Workshop #2.] Gadbois threw out data that was different from that used by Zeisloft. There's a lot of data out there, and people have different issues with what's existing. What's the process to get people around the table to talk of what we think exists and to get a coherent picture? We need to all get on the same page. It would help to get an idea of what the problem is and what the numbers are. It seems people are talking in circles.

COMMENT: When you talk about the 100 Area and the Columbia River, you can't only think about the groundwater and well data. You also have to look at the gravels and seeps and get a full conceptual model of what's going on out there. If you only look at the near-river groundwater data, then it looks bad, but if you're presented with the data from gravel and

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seeps, then you get a better handle on what the fish are exposed to. You have to look at all

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of the data and not just one set for a definite purpose. There is so much data out there that you can likely find something that would support any assumption, but when taken as a whole it's a different picture.

COMMENT: It's the classical blind man looking at an elephant. If he starts with the trunk he thinks it's a snake. If he starts with the leg he thinks it's a tree. You just get a different picture depending on where you look.

COMMENT: From an Integration Project standpoint, we intend to use the Features, Events, and Processes (FEPs) system to get the data into the same place, but it's going to be a long and arduous process. As we begin to get everything pulled together, we've got to identify needs and get help with prioritization. The FEPs list could be 500 issues long. There might be only four or five that are identified as the highest priority.

RESPONSE: Risk to the salmon in the river would be near the top. There are a lot of people concerned about that.

RESPONSE: That'll be resolved when we get all the data and issues collected. Once we get the issues prioritized, we'll work the highest priorities first. There are just so many issues on the table. We're getting the protocol in place and deciding how to put everything into the system now, both for issues and FEPs.

QUESTION: Does the protocol include white papers on high visibility issues?

ANSWER: Yes. If the issue is complex, then it becomes a white paper under the FEPs protocol. The problem is that there are different sets of data for different spots collected for different purposes. As was pointed out, you really do need to look at the larger picture. We have multiple groups with valid data needs. Sometimes the data gets taken out of context to serve a certain agenda.

QUESTION: It didn't feel like Gadbois had any sort of agenda, but if he didn't then why was he saying things so different from Zeisloft?

ANSWER: Part of the issue might be the currency of the data. Groundwater monitoring from wells allows data to flow over time, but a look at the river is more of a snapshot in time. That might account for part of it too.

COMMENT Also, the data Zeisloft was quoting is from current research that's not even complete yet.

COMMENT: It's also a matter of perspective. Zeisloft was showing the impacts of salmon by chromium, but Gadbois was showing the effects across the entire ecosystem. His is a much broader look.

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NOVEMBER 16-18 ENVIRONMENTAL MANAGEMENT SCIENCE PROGRAM PRINCIPLE INVESTIGATOR ORIENTATION MEETING (Amoret Bunn):

The Environmental Management Science Program (EMSP) Principle Investigator (PI) Orientation Meeting starts tomorrow and will continue throughout the week. This meeting is to get the EMSP PIs up to speed on Hanford issues and get them thinking about how their research could be applicable to Hanford problems.

REGULATORY PATH FORWARD WORKGROUP (Moses Jarayssi):

The Regulatory Path Forward Workgroup will have a sub-group meeting this week (November 18) involving DOE and regulators about 100 Area endstates. This meeting will give the group a chance to work on specifics and a list of alternatives.

The next Regulatory Path Forward Workgroup meeting will be held on December 15 and the topic will be 100 Area Source Units. We'll be holding that meeting in the afternoon of December 15, with a SAC Workgroup meeting being held that morning. It just made sense to hold both meetings on the same day. That way, folks that have to travel to attend the meetings are using their time effectively.

SYSTEM ASSESSMENT CAPABILITY WORKGROUP (Amoret Bunn):

The next SAC Workgroup meeting will be held the morning of December 15, and we have a draft agenda available (Attachment 1). The purpose of the meeting will be to review technical issues raised during the FY99 SAC Workgroup meetings. We discussed this meeting a little earlier, but I wanted to touch on it again. We'll be using the December 15 meeting to consolidate and prioritize all of those issues and decide what we need to do with them in the upcoming year.

INTEGRATION PROJECT EXPERT PANEL SEPTEMBER MEETING CLOSEOUT REPORT (Tom Wintczak):

In the next day or so we should have the IPEP Closeout Report from the September meeting available for people to look at. We're just waiting for the official transmittal to arrive. (Note: The IPEP September Closeout Report is now available on the Integration Project website at <http://www.bhi-erc.com/vadose> under the Peer Review section of the site. To obtain a hard copy of the report, please contact Gary Jewell at 509-372-9192.)

UPCOMING EVENTS AND OPPORTUNITIES FOR PARTICIPATION:

See attached calendar (Attachment 2).

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) SAC Workgroup December 15 Draft Agenda
- 2) GW/VZ Integration Project Two Month Look Ahead Calendar

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ATTENDEES:

Marty Bensky – Tri-Cities Caucus

Amoret Bunn – PNNL

Dib Goswami – Ecology

Jim Hanson – DOE-RL

Doug Hildebrand – DOE-RL

Kathy Huss – SAIC

Moses Jarayssi – BHI

Gary Jewell – BHI

Tony Knepp – LMHC

Katy Makeig – SMS

Fred Mann – FDNW

Stan Sobczyk – NPT

Mike Thompson – DOE-RL

Tom Wintczak – BHI

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ATTACHMENT 1

~ DRAFT AGENDA ~

**SYSTEM ASSESSMENT CAPABILITY WORK GROUP MEETING
SAC Issues Prioritization**

**December 15, 1999
3350 George Washington Way, Richland Washington**

- OBJECTIVE -

Review technical issues raised during FY 99 SAC Workgroup meetings. Obtain regulator, Tribal Nation and stakeholder comments on prioritization and consolidation of these issues for resolution during FY 2000.

- AGENDA -

Introduction /Purpose of the Meeting	9:00 to 9:10
Ground rules/Group Processes	9:10 to 9:20
Review and discussion of all issues raised by Workgroup	9:20 to 9:50
Break	9:50 to 10:00
Recommended technical issues for resolution	10:00 to 10:45
Discussion and comment	10:45 to 11:45
Closing Discussion, Next Steps	11:45 to 12:00

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ATTACHMENT 2

GW/VZ INTEGRATION PROJECT
DECEMBER 2, 1999 – FEBRUARY 7, 2000
TWO MONTH LOOK AHEAD CALENDAR

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 15	GW/VZ System Assessment Capability Work Group – Review and discussion of issues raised during SAC Workgroup meetings BHI Room 1B40 – 9 a.m.-12 p.m. (Contact: Bob Bryce)
December 15	GW/VZ Regulatory Path Forward Work Group – Review of 100 Area Source Units BHI Room 1B40 – 1-4 p.m. (Contact: Moses Jarayssi)
December 20	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)
January 17	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)
January 26-28	GW/VZ Integration Project Expert Panel (IPEP) Meeting BHI Assembly Room (Contact: Virginia Rohay)
February 7	GW/VZ Open Project Team Meeting BHI Assembly Room – 1-3 p.m. (Contact: Dru Butler)