

FINAL MEETING SUMMARY

**HANFORD ADVISORY BOARD
HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION COMMITTEE**

May 10, 2011

Richland, WA

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This is only a summary of issues and actions in this meeting. It may not represent the fullness of ideas discussed or opinions given, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Welcome and Introductions

Keith Smith, Health Safety and Environmental Protection Committee (HSEP) chair, reviewed the purpose of the meeting. He said HSEP would be hearing a response from the United States Department of Energy-Office of River Protection (DOE-ORP) on an independent review panel’s recommendations for the chemical vapors industrial hygiene strategy at the Hanford Site. The committee would then review committee business, including a debrief of the leadership retreat, discussion of the six month work plan, and assessment of the need for upcoming meetings or calls.

Cathy McCague, EnviroIssues, pointed out that DOE provided a presentation handout at the Hanford Site tour that morning. Cathy said she would send this to the entire committee electronically.

Introductions were made and the committee approved the March meeting summary.

Chemical Vapors Program

Brian Harkins, DOE-ORP, said he had expected to cover the topic of chemical vapors on the tour that morning. He said there had been a slideshow prepared, but due to time constraints he was unable to present the material. Brian said he would speak from his perspective on where the chemical vapors program is heading and what has been occurring on the site.

He said an independent panel made recommendations for the chemical vapors program, which the contractor, Washington River Protection Solutions (WRPS), accepted. WRPS grouped products into two phases: Phase 1 and Phase 2. Phase 1 products have higher priority and will be implemented first. Phase 2 products will also move forward, but not as aggressively as those in Phase 1.

Brian said Rich Urie reviewed contractor activities and feels they are making good progress on Phase 1 products. In August, DOE will look at all the recommendations with Rich leading the effort. Brian said this will be a teamed effort between DOE-ORP and DOE-Headquarters (DOE-HQ) to evaluate the final products. Brian said he understands the bulk of the products will be ready for implementation, but he has not heard anything definitive on the scrubbers. Brian said there is always a chance that WRPS will ask for relief from the deadlines, but he has not heard either way so he does not know whether that will occur.

Brian said the group on that morning's tour saw some impacts from independent panel recommendations, such as specific exposure groups being implemented. He said DOE is also implementing the products in other areas, such as for beryllium and chemicals of potential concern (COPCs). He said the COPC list was expanded and improvements were made to the database. WRPS lowered the monitoring value to ten percent of the occupational exposure limit (OEL). Brian said Rich is content with WRPS's progress and is looking forward to products being fully complete in August, unless he hears a reasonable case that some impact might affect the deadline. Brian said the one known outlier is the scrubber. An independent consultant is completing work on the scrubber and has not provided the results of his analysis.

Committee Discussion

- Keith asked Brian if there were any specifics from the tank vapor recommendations that stood out to him. Brian mentioned the specific exposure groups recommendation. He said it is a common technique that DOE has not used before that provides some ability to recognize and handle monitoring exposures. Brian said he is more familiar with the beryllium application. There are legal limits for beryllium exposure to workers. Brian said when DOE talked about implementing exposure groups, they considered which groups could be exposed to any amount of beryllium and not just who would experience exposure above the trip level. Brian said WRPS has worked extensively to expand the COPC list. The independent panel consists of experts who bring new perspectives and provide new information.
- Tom Carpenter said overall he is very impressed with the array of instruments he saw today that provides a whole new range compared to what was available previously. Tom said the key recommendations of the independent panel were to capture and control vapors and use high-efficiency particulate air (HEPA) filters to contain radioactive materials. He said HEPA filters are expensive and require maintenance without

successfully capturing vapors; filters work on particulates. The independent review panel felt very strongly that DOE should examine scrubbers or another method for capturing vapors as an engineering control. The panel was also open to considering stack extensions, although people working in the tank farms would be safer than people outside the farms. Individuals outside the farms are not being monitored and they may be at risk from vapors blowing out of the stack. Tom said he is sure DOE is examining that, but he is curious to understand how WRPS is handling the issue. Tom said his impression is that WRPS is somewhat dismissive. He would like to see the studies and has asked for them several times over the last few years. Tom said the question is whether the recommendations are important to DOE. He noted that it is expensive to put the system in place and there might be valid reasons to not follow-through, but he would like that to be made clear. DOE should either provide a renunciation with reasons or accept the recommendations and develop a plan for implementation. Tom said the independent panel recommended the chemical vapors program at least be studied.

- Brian said DOE does feel that the recommendation is useful and are interested in the outcome of the study. He said he cannot predict or commit to what the final decision will be on the scrubbers, but DOE does need to do the analysis. A technical analysis will provide insight into whether the program will work. Brian agreed that scrubbers are a common industry approach. DOE has also asked why scrubbers are not being used. He said DOE will examine the contractor's report as well as the independent consultant's recommendations. Brian agrees many problems would be solved if the scrubbers worked. Scrubbers have the potential to reduce emissions instead of simply diluting them. Brian said the stack extenders were the easiest benefit that could be implemented and without those extensions the same concerns would exist for tank farm workers. He said an independent consultant is completing the study and he looking forward to seeing a technical analysis with viable data to help make a decision. Brian said DOE cannot make a commitment when they do not have the analysis base so DOE will provide a decision at a later date after reviewing the report.
- Tom said the independent panel also recommended WRPS add flow measurement devices to measure vent sources. The panel was surprised that there was not a flow measurement on the vent sources, which is very basic and not expensive. Brian said he is unsure where DOE is on that and will have to report back to the committee.
- Tom said one of the most important recommendations to him from the panel is based on discussions with Hanford Site industrial hygienists and industrial hygiene technicians (IHTs). These individuals said that some do not appreciate the potential for overexposure, which can cause an industrial hygienist to overlook important warning signs. He said that Hanford has many sophisticated state-of-the-art instruments in the lab, but there is an attitude that there really is not any harm present at the Hanford Site. Tom said this is part

of the culture. He has heard workers say over the last 12 years that industrial hygienists dismiss worker's concerns.

- Brian said that one issue that came out of the recommendations was a knowledge issue with the IHTs. He said they know how to run the equipment, but are less familiar with why they are conducting the monitoring and what action levels they are seeing. There were some fundamental questions of industrial health that they were not comfortable talking about. Brian said IHTs should increase their knowledge level so they are able to speak beyond how their equipment functions to explain how their actions are protective of worker health. Brian said WRPS is developing additional training for Hazardous Materials Management and Emergency Response (HAMMER) classes to build a common knowledge base. DOE would like the IHTs to be able to either answer questions from the workforce or help them find the answers. Brian said part of the issue is a lack of knowledge. He said when facing unknowns, people are not able to protect themselves or others. The first step is to provide more training on industrial health to the IHTs. Brian said the second aspect is to evaluate the development process for new IHTs and give them additional training and skills that would allow them to understand their role in worker health and safety. Brian said that he is only speaking in generalities and does not want to disparage the work crews, but he does understand that some people do not recognize the role of the IHTs. Workers are not confident enough to speak up on issues. Brian referenced the Industrial Hygiene Sample Plan that was handed out during the morning Hanford Site tour. Brian said he would expect an IHT to provide a pre-briefing that is just as informative as the briefings done by the radiation technicians. He said IHTs need to understand the implications of an off-normal event and be able to explain this in a pre-job meeting. Brian said DOE is trying to correct the issue by using the IH Sample Plans as a pre-job briefing tool that will help workers understand what hazards they face and what the controls are to assist them in maintaining safety. Brian said the focus is on conducting more training and helping to provide better pre-job briefings that will answer questions raised by the work crew.
- Margery Swint said when she was educating radiation workers years ago for contractors they would walk around with an industrial hygienist. Workers would hear explanations on what to expect if they suffered from an exposure and the types of treatment they might receive, similar to the IH Sample Plan presented on the tour. She believes that if workers are educated on the process and are shown the machinery along with how accurate it is, workers would have more confidence in the procedures being conducted.
- Liz Mattson said she read that there is a perception that vapors are only dangerous if they can be smelled. She said it is easy to associate smell with something bad, but added that other dangerous chemicals cannot be smelled. Liz asked how those can be dealt with.
- Becky said she explains that type of information on the Radiation Work Plan (RWP) to everyone as a Radiation Control Technician: dosimetry requirements, what is being

monitored, what the workers need to be wearing, etc. IHTs tend to only read through the paper to workers. Becky said workers appreciate the brevity of their orientation and ask her why she spends some much time explaining things. She added that there can be a difference in monitoring with different IHTs. Brian said Becky is correct. They need to have consistent knowledge level that allows an industrial hygienist to take a briefing and make it practical.

- Sam Dechter said these reports used to be very cursory and terse. The reports are longer today, which he sees as a positive first step. He said the next step is to grow the knowledge level of the person delivering the information.
- Mike Korenko said if a job takes three weeks, they will in some cases only monitor one day of week, which might explain why work plans vary from one day to the next. He recommended DOE look at the big picture.
- Brian said the expectations need to be raised for everybody. The workforce is demanding information and to have their questions answered about what they are being exposed to and how they will be protected. The workforce should demand a Radiological Work Permit and expect to ask questions when they do not understand.
- Keith said one of the instruments described on the morning tour was a proton transfer reaction mass spectrophotometer. He heard a worker at C Tank Farm say they do not have any way to do real time monitoring, which would be helpful. Real time monitoring is especially important in tanks that are not positively ventilated with the potential for clouds of vapor to escape. Keith said he wonders why that equipment cannot be deployed, although he does acknowledge the concern about contaminating the equipment. Keith asked about the potential to develop an instrument with real-time monitoring, especially for chemicals that are hard to detect using the equipment currently available. Brian said the equipment demonstrated during the morning tour does real-time monitoring. He said DOE determined some technology was not ready for deployment after being evaluated. Brian said there were issues with instruments being affected by some contaminants, especially ammonia. Ammonia masks certain chemicals so it is not possible to get an accurate reading. Brian added that not all instruments offer real-time monitoring for the variety of chemicals DOE is interested in. A bagged sample sent to the lab may require hours for analysis. Brian said the technology needs to be further refined and developed.
- Keith said Phases 1 and 2 were successful and were conducted with one instrument. He said DOE spent \$90,000 on an instrument that nobody sees. Brian added that this was not a departmental demand. WRPS embraced the concept to keep chemical exposures as low as reasonably achievable (ALARA), which requires specific types of equipment. Brian said WRPS tested the equipment without direct funding or financing from DOE. When WRPS deployed the technology, they decided it was not ready and WRPS could not

continue funding out of their own budget. Brian said much of the instruments seen on the morning tour came on-line as the other equipment was being tested and the same analysis will be performed. Brian recommended the committee read through the slides he provided as they delve into more detail on why the analysis was conducted. Cathy said she would send the slides to the committee electronically.

- Liz asked how often the instruments are used. She said it would be useful to have a list with the equipment names, what it is used for and how often it is used. Brian said he is unsure how they would be able to tell how often an instrument is taken into the field. Becky Holland said at Radiological Control (RADCON), they have to write a survey whenever using an instrument. The work packages require a Direct Reading Instrument number. Brian said in the RADCON example, there are many activities the equipment is being used for where there is not a logsheet. Becky said she always records instrument use. Brian committed to provide information on the equipment usage.
- Laura Hanses said, looking back ten years, she has seen a great deal of progress from the time when respirators were unavailable for use. She asked Brian to address, from his perspective, what brought about the change – demand from workers, improved technology, increased funding, contractor standards, or other considerations. Laura asked how they could continue to build on current progress. Brian said progress came in part from all those forces mentioned by Laura. He said there were some turning points in the process, such as the 2001 tank farm vapor issue. This was the first time COPCs were discussed, which was one step forward. Brian said the ALARA concept has proven to be a good tweak in the process. Initial concepts focused on not allowing exposures beyond compliance levels, which would lead to physical symptoms. Now DOE is focused on keeping exposures as low as possible instead of focusing on action levels, which has made an impact.
- Laura said years ago there were only three industrial hygiene technicians and today there are 47. She asked if there would be industrial hygiene budget cuts and if that occurred, would there be less funding for the safety program. Laura said she would hate to see success get back-tracked because of funding reductions. Brian said DOE must be able to ensure the safety of all personnel so any budget cuts would have to occur in other work areas if there were cuts in the IH staffing. DOE would still work to improve safety so the expectations should not change even though there likely will be some budget reductions. Paul Harrington, DOE-ORP agreed with Brian. He said DOE will certainly maintain safety standards. In the face of budget reductions the workforce would be reduced proportionally, but DOE would not sacrifice any gains.
- Brian said there is a strong case for safety systems to be cost-effective. The general rule is to either pay for prevention now or to pay later, which will be more expensive monetarily and in terms of health effects. He said that DOE expected to see more

improvements over the coming year with more technology being deployed, especially as technology costs decrease.

- Sam said the mass photospectrometer should be brought in the field to areas of true concern. Mike said the negative proton unit could use 100 foot tubes, which would provide some protection against contaminating the equipment. Brian said DOE has much more controllable exposure inside the fence than outside. Events over the previous six to nine months occurred outside the fence. Weather is now incorporated into the process. Brian said DOE must make sure exposures are low for everyone working at the Hanford Site.
- Keith said it is remarkable how much more concern there is about overall worker safety on the Hanford Site in the last few years, not just for vapors. He said management really grasped the idea that safety does not cost money; safety pays off in the long-run.
- Mike asked about standing water and mosquitoes. There was a case of West Nile virus last year. He said if there was going to be an action to protect workers from mosquitoes it would have to occur that month. Keith said the HSEP committee talked about mosquitoes the previous year, but he does not know what the outcome of that conversation was and would need to follow-up. Pam said she would discuss the issue with Paula Call, DOE-Richland Operations Office and the committee may want to hear an update on the program.
- Tom said he received phone calls regarding some tank farm employees who were terminated in late March. He said workers are afraid to file stop-work orders or problem evaluation requests (PERs). Tom asked if others had heard about this and said he was in the process of investigating. Brian said he did have some perceptions of what was occurring, but he cannot discuss what the cases involve. He said those workers were dismissed for creating a hostile work environment; not because they raised an issue. Tom's main concern is that workers perceive they will be reprimanded for raising issues.
- Keith said he talked to Brian previously and asked if he had noticed a drop in the number of PERs. Brian said he had not noticed a drop, but he does know that there is a perception that the workers were punished. He said the numbers do not matter as much as the willingness of workers to raise issues. This is part of the Integrated Safety Management System (ISMS) process. Tom said he would further examine the issue since he is the issue manager on this topic.
- Laura shared her thoughts as someone who works for WRPS. She is aware of an issue with the culture and worker perspectives. Laura said deciding whether a work environment is hostile is subjective, and anytime an employee is terminated it indicates the system is broken. That in itself sends a huge message to the workforce so no one will bring up an issue.

- Cathy asked if HSEP wanted to track the issue at another committee meeting. Keith said that would depend on the results of the investigation. He said a hostile work environment works both ways so they need to really investigate the underlying issues. Becky said she works where the employees were terminated and the culture of some people not wanting to raise issues does exist.
- Mike said he was not aware of sound hazards and asked about the need for noise monitoring. Brian said there are some very noisy areas on the site making hearing protection required. As soon as an area is identified as needing hearing protection, WRPS will monitor to address potential hearing loss.
- The committee thanked Brian for the exceptional tour that morning.

Committee Business

6 Month Work Plan

The committee moved into a discussion of the six month work plan. Cathy said the Hanford Advisory Board is trying not to meet in July due to being conscientious of budget so the next meeting would be in August. Keith said HSEP would have a call in June to receive an update on the Hanford Site Biological Program and to plan for their next meeting.

Susan Leckband said that in August and September there will be an exodus of people leaving the Hanford Site due to the end of American Recovery and Reinvestment Act (ARRA) funding. Workers will receive notice if they are being laid-off in July or August. She suggested that August would be an excellent time to discuss the successful continuation of ISMS principles with a reduced work force. There will be a great deal of stress not only on the people who are leaving, but also those who are left working at the Hanford Site. Keith agreed with Susan on the time frame for that discussion on how to keep workers focused on safety. Keith noted that during a previous large workforce reduction, people were given paid time to look for another job. He said this reduced safety concerns. Susan said this round of lay-offs would be different because people hired with ARRA funding knew the money was limited and that they would only be working over a certain timeframe.

Tom asked if HSEP could hear perspectives other than from WRPS or DOE-ORP. He wondered if HSEP could hear from a worker's perspective. Keith said safety representatives had spoken to HSEP before and they could ask DOE to bring them in again. Susan said HSEP should send that request through the federal coordinator.

Tom said there had been a safety issue at the Plutonium Finishing Plant between workers and the management over contamination. Keith said he could find out more information. He was surprised to hear that there was an incident and a report out during a safety meeting the previous month. Keith said he would work with Tom to frame questions and then talk to Paula. Sharon

Braswell, Mission Support Alliance (MSA), said when Paula receives specific questions she can direct them to the right level of management or point of contact.

Tom said there will be a Defense Nuclear Facilities Safety Board letter issuing a report on Hanford safety issues. Pamela McCann, DOE-ORP, said she had not heard anything specific about that letter. She recommended that Tom forward her any specific questions he may have from the letter and the committee can determine afterwards if they would like to discuss those issues.

Debrief of Leadership Retreat

Cathy said that the Tri-Party Agencies gave the Board leadership a list of topics in accordance with their priorities. HSEP was not included on the list. Liz said it is relevant that HSEP was not specifically mentioned, although HSEP issues were noted under several priority topics. She understands that HSEP is important to include under other topics. Keith said HSEP priorities for the upcoming year are tank vapors and ISMS so they will move forward on recommending those to the full Board in June. He added that the Beryllium corrective action plan is also an HSEP priority if a good report is available in August.

Cathy asked if there were other priorities for HSEP to examine in the coming year. Keith said he is hopeful beryllium will be completed, but is unsure how close that is. He said there had been a very aggressive agenda in the beginning, although the schedule turned out to be considerably ambitious. He said all parties were on board and happy with the final product.

Cathy said at the leadership retreat they also discussed 2011 committee priorities that had not been addressed. The only outstanding HSEP topic is the Hanford Site Biological Program, which will be discussed in June as part of the committee call.

Cathy said there was a lot of discussion on the Board's budget at the retreat. Board leadership is considering not meeting every month to reduce expenses as well as experimenting with virtual committee meetings. Mike said virtual meetings will have drawbacks, although these types of meetings would be cost effective. He said the only way to know whether it would work would be to try.

Susan said that as the budget decreases the Board must reduce spending while still maintaining the same quality level of work. She said not holding meetings in July or December would help. Keith said the Board never knows when they will receive budget items, which can throw off the month. Susan said the Board tries to set the calendar for the year, but must also remain flexible when there are emerging issues that a committee needs to address.

Attendees

Board Members and Alternates

Tom Carpenter	Steve Hudson (phone)	Keith Smith
Sam Dechter	Mike Korenko	Margery Swint
Laura Hanses	Susan Leckband	
Rebecca Holland	Liz Mattson	

Others

Brian Harkins, DOE-ORP	Erika Holmes, Ecology	Nicole Addington, EnviroIssues
Paul Harrington, DOE-ORP		Cathy McCague, EnviroIssues
Pamela McCann, DOE-ORP		Sharon Braswell, MSA
		John Britton, WRPS