FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD
JOINT TANK WASTE AND HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION COMMITTEES

May 10, 2012
Richland, WA

Topics in this Meeting Summary

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

Susan Leckband, Hanford Advisory Board (Board or HAB) chair welcomed everyone and introductions were made. She thanked everyone for their hard work the previous day. The purpose of this two-day joint meeting between the Health, Safety and Environmental Protection Committee (HSEP) and Tank Waste Committee (TWC) is to identify issues with safety culture, specifically safety culture issues at the Waste Treatment Plan (WTP). The end goal is to develop a series of advice points HSEP and TWC agree on.

Announcements

Dick Smith said he brought copies of a brief paper he wrote about System Plan 6a. There was a window in early March/late February to examine System Plan 6. The U.S. Department of Energy (DOE) was going to examine all the alternatives for supplemental treatment at WTP. Dick and Al Boldt prepared a proposed scenario to consider replacing all borosilicate melters with an iron phosphate system. Dick said they outlined the benefits and shared their information with DOE. DOE's informal response was that they were not going to re-investigate alternatives. Dick said he put together this brief paper with the rationale for using iron phosphate, comparing alternatives on the same basis to determine which would perform better. This topic may be on the agenda during the next TWC meeting. Dick said he wanted to allow the committee time to understand his position before hearing DOE's position and be able to ask questions in an intelligent way. This paper is just information for consideration and does not represent an endorsement of the Board.

Tifany Nguyen, DOE-Richland Operations Office (RL), said she brought copies of the 200 West Pump and Treat Press Release. The facility received Leadership in Energy and Environmental Design (LEED) Gold certification from the U.S. Green Building Council.

Jessica Ruehrwein, EnviroIssues, reviewed the ground rules and expectations for the meeting. She said TWC and HSEP would review the categorization of potential advice she and Susan Hayman organized the previous evening and then break into workgroups to further discuss and refine advice points. After lunch, the group will review work from the morning and hopefully reach consensus on the main advice concepts for WTP safety culture. Lastly, next steps and a future work plan will be developed to prepare the advice for the June Board meeting. At 3:00 there will be a joint HSEP/TWC topic on chemical vapors.

Tank Closure and Waste Management Environmental Impact Statement advice update

Dirk Dunning, TWC chair, asked if the committee would like to move forward with the Tank Closure and Waste Management (TC&WM) Environmental Impact Statement (EIS) advice. He asked if anyone had concerns about the advice or felt something was missing. Dirk also asked if anyone else wanted to be involved as an Issue Manager (IM). This topic is joint between TWC and the River and Plateau Committee (RAP). Dirk suggested the IMs incorporate suggested changes and then send the advice to RAP/TWC for further revision. Consensus could be reached through a call. Suggested changes will be sent to Susan H. The IMs from RAP are Liz Mattson, Pam Larsen, and Gerry Pollet. John Howieson, Dirk and Dick are the TWC IMs.

C: When will the TC&WM EIS be issued?

> *R: The timeline is unclear and DOE is unable to provide an answer because they are unsure. The EIS will likely be issued sometime between June and September. When the EIS is issued there will not be time for public review and comment as there is for a draft EIS. Once a final EIS is completed and released there is a 30 day minimum requirement between the issuance of a final EIS and Record of Decision (ROD) when comments are collected, but the agencies are not required to respond. The Board process can take several months for advice to move through committee and be brought to the entire Board. Once the EIS is issued, there will not be enough time for the Board to offer advice before the comment window closes. Many Board members were interested in commenting on what the EIS contains before it is issued to make sure they have an opportunity to comment.*
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> *DOE clarified that the timeframe would likely be closer to August. The supplement analysis document the Board is discussing analyzed whether a supplemental EIS was needed. The decision was that the supplement was not needed.*

C: The only new element to this advice is the first bullet requesting 90 days for review between issuance of the EIS and issuance of the ROD. The other advice, although specific to the TC&WM EIS, restates Board values. The succinctness and clarity is excellent.

C: The point about the Resource Conservation and Recovery Act (RCRA) Permit was removed yesterday because there was some uncertainty about whether the EIS is influencing the RCRA Permit. If information is found that substantiates that claim, that advice point can be added back into the advice. The Board could also consider adding an advice point requesting DOE to hold a public workshop during the 90 day review period similar to the workshop held on the RCRA Permit.

ECP Advice update

The committee decided the potential Employee Concerns Program (ECP) advice should be stand alone advice brought forward by HSEP. This advice will be brought forward at the June Board meeting. Consensus will be reached during a committee call after the normal process of IM refinement and chance for committee review. Comments should be sent to Jessica who will work with the IMs, Tom Carpenter and Becky Holland, to refine the draft.

Draft Waste Treatment Plant Safety Culture Advice Points*

Jessica reviewed the handouts. The first handout is the updated ECP advice points (Attachment 2). Tom and Becky developed this next revision of the draft advice the previous evening. The second handout includes the 17 questions from the HSEP/TWC meeting yesterday to provide context for where ideas came from (Attachment 3). The third document includes all the concepts that were marked with blue dots as potential background for the safety culture advice (Attachment 4). Jessica said the background would not be reviewed during the meeting. Background will be given to the IMs to synthesize.

Jessica and Susan H. grouped potential advice points to provide a general way to think about major concepts. The headings are not meant to be advice headings; it is simply a way to organize thoughts. Board members were encouraged to move any points into a different category if it did not appear to fit within the category it has been placed.

Mike Korenko, HSEP chair, outlined another way of categorizing the advice. He said it helps to have macro categories that advice can build from. Beginning with the statement "we all want a successful and safe WTP" and then determining how to best accomplish that might be a useful way to frame advice development. Mike said his categories would include the idea that DOE has to influence WTP and DOE capabilities are an issue. Does DOE have enough people with the right training? The contractors are the second level of influence mixed with DOE capabilities. What vehicle does DOE have to influence the contractors? The current vehicle appears to be broken. Current values are a concern because those values appear to be affecting employee willingness to raise concerns. Another element is systems. What is the process to integrate technical issues? Integrated Safety Management (ISM) is a value and a system.

* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

Board members broke into workgroups based on the general categories to discuss and draft potential advice. People were reminded that it is important to focus at a high policy level in order to scale down the plethora of potential advice points identified. Each workgroup drafted potential advice points on a computer and provided those to Susan H. who then compiled each group's contribution. The entire TWC and HSEP committees then reviewed the drafted advice points on-screen. During the lunch break, Jessica and Susan H. printed the draft safety culture advice as developed during the morning session (Attachment 5). The committees began reviewing the advice by identifying similar points and refining questionable points.

Committee Questions and Response

Note: This section reflects individual questions and comments as well as a synthesis where there were similar questions or comments.

C: The fundamental issue is that the WTP was designed without a technical basis and without understanding the waste that would need to be processed. There is still a question on if the waste can be completely treated. DOE should stop spending money on buildings until fully understanding what is needed. The Board could recommend a technical basis should be developed.

C: When Bechtel was given the WTP contract they had to work within the footprint they were given because there was no EIS coverage outside of the already established footprint. The Washington State Department of Ecology (Ecology) agreed to have the facility built and when the design was 5% complete. Usually designs have to be 80% complete before being approved. There is a technical basis that is being continually reviewed, but there is no complete design. One advice point could be that Ecology not issue any permits until the design is complete, at least for the pretreatment facility. There are a number of other technical issues that could go along with this advice point.

C: Another advice point could be that milestone dates and schedule should not dictate everything. New milestone dates can be considered.

C: There were two advice points proposed under the category of staff. Some committee members felt DOE would easily be able to say "we agree with these advice points and are already following the recommendations." There was also a concern that DOE project managers are not properly trained to do what is being requested. The contractors will tell DOE what the agency would like to hear. Even with the best of intentions, contractors will be more likely to shine a positive light on their efforts. It is important to add an element of independence. DOE will claim they conducted a self-assessment and determined everything was fine. The only reason anyone heard about safety culture issues is because people put their careers on the line to raise concerns.

C: The safety culture definition is already referenced in the DOE-Office of River Protection (ORP) Improvement Plan. The Board can agree with DOE-ORP's definition and give them credit for using a definition the Board likes. The Board could also suggest having the definition be applied throughout the DOE complex instead of only within DOE-ORP.

C: The Navy Program is successful because it is a military program. Personal relationships with the contractors are limited. One Board member stated they are uncomfortable with the advice point about limiting DOE relationships with contractors. Other Board members noted the reason for the advice point is because of concerns such as a contractor who was pressured by DOE during a golf outing on how they were being regulated. DOE management bonuses align with the contractors so cost and schedule are incentivized.

C: The Board cannot guarantee protection for employees who risk their jobs to voice concerns. The Board should not be advocating holding people accountable if those people cannot be protected. The advice could focus on rewards or praise for employees that voice concerns instead of punishing those who do not raise concerns.

C: There is an issue with the enforcement mentality where DOE considers itself to be in a customer/client relationship with the contractors instead of in an oversight and enforcement role.

After further reviewing the draft advice, the committee reached general consensus on the advice point concepts. The deadline for final HSEP/TWC consensus is May 25 in order for the advice to go forward at the June Board meeting. The IMs will refine the advice by shortening it and cleaning up the wording. The next draft of advice will be sent to Jessica who will distribute it to the workgroups.

There will be a committee call on May 16 at 2:00 p.m. with GoToMeeting where any concerns about the draft advice can be discussed. The TC&WM EIS advice can also be discussed so the RAP committee will be invited to participate in that part of the discussion. The full committee will be able to review the draft advice between May 17-25.

Chemical Vapors[*]

Issue Manager introduction

Tom, IM for the topic, provided a brief introduction to the concerns about chemical vapors. He said the Board has been focused on tank vapors sporadically for a decade. The most recent issue involved a plan brought forward by Washington River Protection Solutions LLC (WRPS) and reviewed by a group that was appointed by the Hanford Concerns Council (Council). The plan was a result of disagreements over chemical vapors after receiving many employee complaints. The Council, Hanford Challenge, and WRPS all signed off on the improvement plan. One of the centerpieces of that plan was stack extensions to displace vapors out of the tank farms. The Board would like to learn more about how that is working and also understand why the independent panel's recommendation for filters has not been implemented. Tom said there were several recommendations made about how to conduct industrial health studies for exposure groups and better analyze the data.

[*] Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

Tom said another major concern that emerged several months ago is that Industrial Health Technicians (IHTs) are no longer required to be present during waste transfer activities to measure chemical vapors. That was part of the central program design that had been committed to by all parties. Tom said the Board asked the contractor to present information on that question and speak about where the program is, as well as DOE oversight.

Agency presentation

Rich Urie, Industrial Hygiene Program Manager Representative for DOE-ORP, introduced Roby Robinson, WRPS, and Rich Higgins, WRPS. He said they would be providing a brief presentation on chemical vapors.

Rich said DOE-ORP did monitor the end product of the independent review panel and agreed with the findings, as did WRPS. Some of these issues have been a long-term endeavor. Last winter DOE-ORP wanted to conduct oversight of the chemical vapors and decided to involve DOE-Headquarters and DOE-Office of Health Safety and Security (HSS). The first phase of the assessment indicated that there were many positive actions that had been taken. DOE is taking a team approach to address these issues and has made a lot of progress.

Rich said scrubbers were proposed when he first began working on the site. Due to the complexity of the system and the plethora of organic and inorganic chemicals, the scrubber technology would be highly complex and difficult to maintain. There would be some routes of exposure. The decision of whether or not to move forward was not made lightly. The expert panel and DOE-ORP agreed to build more data and then make an informed decision. That process is on-going.

Committee Questions and Response

Note: This section reflects individual questions and comments as well as a synthesis where there were similar questions or comments.

C: The committee has been focused on WTP over the last day and a half from a safety basis. All the waste from the tanks will be transported to WTP and that poses a certain level of risk. Does DOE have ideas on mitigating transport risks given the current knowledge? Future designs should incorporate tank vapors. This is an area the Board should explore further.

> *R: Rich said he has personally examined the WTP design features, including the issues of the ammonia lines relative to the ventilation system. Concerns include the potential for leaking and that ammonia odors could be confused with tank waste odors. Whenever someone smells something of unknown origin, DOE assesses the situation and transports workers for medical evaluation. Rich said he has not examined the transfer lines.*

C: During a previous HSEP meeting, there was discussion about bringing the Industrial Hygiene Technicians (IHT) program to the same level as the Health Physicians Technicians (HPTs), especially for waste disturbing activity. Is that a process currently underway?

R: The Industrial Hygienists (IH) do contribute to pre-job briefings. Workers are advised of sampling plans and related issues. Radiation Control (Rad Con) employees have more structure in their job requirements. An IH and a technician often work together during serious jobs. During simple jobs only one may be present. DOE would like these employees to build on their skills and there has been progress, but there is still a long way to go.

IH professionals ensure all workers have the information they need to understand the hazards faced at each job before beginning the work. There are differences between an IH permit and a Radiological Work Permit (RWP). Workers are generally more familiar with RWPs. More explanation is generally required for IH permits so the workers understand in their terms the risks being faced and methods of protection.

WRPS has been building a procedural infrastructure that provides different mechanisms and tools that can be adapted for different IH sample plans. A corrective action step was instituted the previous month on the training of IHTs. The training will include a checklist of what information DOE requires from this document to be discussed at pre-jobs. The checklist includes the scope of sampling and monitoring during the particular evolution of the work. The system should be fully implemented this summer.

C: HSEP considered asking employees conducting the work the kind of information they would like to have. For many years chemicals were a real enigma on the Hanford Site while there was a much better understanding of the radiation risk. Better understanding of the dangers posed by chemicals began with hazardous material (HAZMAT) training in the early 1990s. It is encouraging to see there is a path forward for addressing the concerns.

Q: Is there any testing for ozone? Ozone should be reexamined along with methyl mercury, bis-chloromethyl ether and methylethylketone peroxide.

R: Ozone needs to be restudied. DOE will look into the other chemicals.

Q: One of the issues that prompted the request for this briefing is the question of whether there was a requirement for an IHT to be present during waste disturbing activities, including sampling.

R: An IHT is required to be present during waste retrievals and transfers. Some combination of monitoring and sampling would be expected, especially during high risk activities. The plans include that and there is some day-to-day judgment as well. DOE would need to investigate why an IHT would not be present, especially during higher risk activities when an intermittent presence should be required and continuous monitoring is expected. DOE will be clarifying the expectations under different situations.

DOE has not witnessed a serious waste disturbing operation that did not include a sample plan and monitoring. DOE is not aware of any changes to regulations that would no longer require an IHT at a waste disturbing activity. The number of IHTs actually seems to be increasing. The relative number of IHTs was decreased, but that was not in proportion to the other types of

workers who were laid off. There were more IHTs kept than would be expected given the number of layoffs.

Q: Can DOE provide more clarification on IHT requirements? Are IHTs no longer required during an active waste transfer zone so there is only the requirement for a HPT? What are the requirements when containment is broken versus not breaking containment?

R: DOE does not believe there was a reduction in the participation of IHTs. IHTs are required to be present in the waste transfer zone. The IHT requirement was separated from the transfer zone and the boundary reduction zone. If Rad Con decides to change the boundary of a waste transfer zone, an IHT can still manage the boundary for vapor control and the vapor reduction zone. The waste transfer zone is defined by Rad Con for waste transfer. DOE defines how to manage boundaries for vapors. If DOE does not have data that would indicate chemicals exceeding the levels, at least DOE will call the boundaries and identify a core vapor reduction zone to ensure there is still heightened awareness and monitoring of personnel that enter the area. Boundaries can be defined from available data. DOE will look into the question further to determine if there have been any changes in requirements for IHT presence.

Q: Is DOE evaluating data before determining whether to continue with stack extensions?

R: DOE did extend the stacks on some extensions and are collecting special monitoring data. This data will be evaluated using comparative analysis and sampling. DOE will be able to get a better understanding of how well the stacks perform under variable weather conditions. The evaluation will likely be complete in February or March.

Q: Do you have information on the numbers of craft lay-offs?

R: DOE has not gotten the numbers from the contractors yet, but will be speaking with them today. Hiring for new IHTs begins next week. There are four potential new IHTs.

Q: How long will IHTs be in the field before they build enough experience to function independently?

R: New IHTs usually require three to six months to become fully trained. Some IHTs that already have experience will be fully operational within one to three months. The buddy system is very important for IHT training.

Q: What are you anticipating in terms of WTP stack emission vapors? Are there risk mitigation controls for the melter exhaust system?

R: There has been input from additional engineers that led to changes several years ago. The scrubbers and sensors in those scrubbers have been sensitized to a greater extent. There has been a lot of scrutiny and an engineer would be best able to answer those questions.

Q: Can DOE describe the operation in more detail, such as how zones are established and where collection equipment is placed? Is equipment placed at zone boundaries, distributed within the zone, or do people wear detection equipment? What types of chemicals are measured?

R: There is a two pronged approach: personal exposure sampling and pumps to draw in air. Information is captured over 15 minute periods for eight or nine hours a day based on what is likely to be present and limitations on what can be captured. Information to capture regulation limits is what DOE uses for long-term statistics to make decisions about the minimally appropriate control measure and how well that control measure works in the field.

C: Workers have said they are frustrated that if they smell something and experience a symptom, they are sent to a medical facility where they will receive basic treatment and then be sent home. The workers are told nothing was found so no one knows what workers have been exposed to. Has DOE made any progress in determining how many exposures people are complaining about?

R: That situation is not greatly improved. There are only a handful of chemicals that can realistically be monitored for in the blood or urine. DOE does not have tangible information that would lead to cause and effect, although some individuals are hearing otherwise. The IHTs who are analyzing samples post-exposure were not there when the exposure occurred. Exposures are transient.

Q: Are there samples taken from known ventilation points?

R: There are a whole series of samples taken from the stacks at different points. These samples are calibrated to give a picture of what is occurring over time. DOE believes many of the vapors are diminishing over time.

Q: What kind of sampling or data does DOE have for the people working in the tanks farms in the days prior to when sampling actually began? What happens to a person who goes into an area prior to when sampling begins?

R: DOE does not have all the information and does not want to make assumptions. There may have been some preemptive exposure, but there may not have been. That issue is being addressed.

C: One concern about the stack extensions is that while they protect workers on the ground, there are now workers on scaffolding ten feet above the ground who are directly in the path of the stack extensions. Elevated work areas may be the next issue to focus on.

Jessica reminded the committees that there are two upcoming committee calls to just focus on committee business. The HSEP call is at 9:00 a.m. on May 15 and the TWC call is at 3:00 p.m. on May 15. A separate joint HSEP/TWC call will be scheduled to discuss WTP advice.

Attachments

Attachment 1: Transcribed flip chart notes
Attachment 2: Employee Concerns Potential Advice Points
Attachment 3: HSEP and TWC Committee Member Responses to the 17 WTP Safety Culture Framing Questions
Attachment 4: WTP Safety Culture Advice: Potential Background Concepts
Attachment 5: Safety Culture Draft Advice

Attendees

Board Members and Alternates

David Bernhard	Rebecca Holland	Maynard Plauta
Tom Carpenter	John Howieson	Dick Smith
Sam Dechter	Mike Korenko	Keith Smith
Dirk Dunning	Susan Leckband	Margery Swint
Laura Hanses	Liz Mattson	Jean Vanni
Harold Heacock	Vince Panesko	

Others

Pamela McCann, DOE-ORP (phone)		Nicole Addington, EnviroIssues
Richard Urie, DOE-ORP		Susan Hayman, EnviroIssues
Tifany Nguyen, DOE-RL		Jessica Ruehrwein, EnviroIssues
		Sharon Braswell, MSA
		Barbara Wise, MSA
		Shannon Cram, Public
		Rich Higgins, WRPS
		Roby J. Robinson, WRPS