

**FINAL MEETING SUMMARY**

**HANFORD ADVISORY BOARD**

**TANK WASTE COMMITTEE (JOINT WITH BUDGETS AND CONTRACTS AND HEALTH,  
SAFETY AND ENVIRONMENTAL PROTECTION COMMITTEES)**

*Thursday, May 13, 2004*

*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**

Doug Huston, committee chair, opened the meeting and reviewed the agenda. The March meeting summary was adopted.

**M-45 Change Package**

Delmar Noyes, Department of Energy-Office of River Protection (DOE-ORP) gave a presentation on the M-45 Change Package, which is currently out for public comment.

The major changes are:

- 1.) A comprehensive regulatory process is established;
- 2.) Waste Management Area (WMA) studies are integrated; and,
- 3.) A focus on retrieval of a WMA-C is added.

The change package outlines milestones and/or requirements for the first tank waste closure (specifically focused on C-Farm) and sets a timeline for the approval of the milestones.

Delmar showed a chart which is part of a new process, Appendix I, added to M-45 as part of the change package. The objective of the chart is to build the regulatory process into the considerations from beginning to end. The chart outlines the processes for tank waste retrieval, decision-making, tank closure, permitting, and public review. In addition to the chart, there are five pages of detailed description of documents and processes in the change package.

The comment period on the M-45 Change Package has been extended to June 7.

### **Regulator Perspectives**

- Laura Cusack, Washington State Department of Ecology (Ecology), said Ecology is pleased with the change package. To begin with, the whole process is highlighted in the diagram found in Appendix I, which sets up a clear process and schedule for retrieving waste from any tank. In previous packages, five or six milestones would be needed for each tank, which created an unwieldy milestone package. Appendix I identifies one milestone to start the process which then drives the process and schedule, providing an opportunity to focus on retrieval with no requirements for closure. Once there is a Tank Closure Environmental Impact Statement (EIS), Ecology will take the next permitting steps and DOE will be in a better position to write the closure package.
- Laura stated that Ecology wanted to be able to provide input above and beyond the C-Farm, which is where the tank-pool idea came from. The 'pool' has a variety of tanks in it so that tanks with various volumes or tanks that are more risky can be targeted, depending on the situation with double-shell tanks (DST). DOE and Ecology will decide which tanks to retrieve.

### **Committee Discussion**

- Doug asked whether there were any public involvement requirements as part of the Appendix I provisions for primary documents. As he understood Appendix I, the number of milestones is being minimized. Items that would have previously been in milestones are now being placed in primary documents and though the documents still undergo internal review, there seems to be no public review. For example, the Waste Management Area Integration Study is a primary document and sometime in the future, it could be decided that it should go away without any public input. Laura responded that previously the public was able to review the schedule. Appendix I is just laying out a process and stating that the process is similar for each tank. The public is still looking at and commenting on that same process. Moses Jarayssi, CH2M Hill Hanford Group (CHG), further clarified that any changes to the milestones must include public review.

- Doug asked if advice is being requested from the board. Delmar responded DOE and Ecology have spent a lot of time on Appendix I in order to create a process that communicates where they are. Since the diagram is a work in progress, feedback on the layout would be most helpful. Leon Swenson commented the diagram does indeed communicate the process.
- Pam Larsen thought the diagram was encouraging and positive, without any obvious potential problems. She did ask if the Idaho judge's opinion creates any challenges. Delmar responded that retrieval actions in the milestones are not affected but closure may be. Roy Schepens, DOE-ORP, added that DOE is following the Tri-Party Agreement (TPA) and moving forward towards 99% retrieval.
- The committee did not see any need for advice on the change package. Pam suggested the Board write a letter congratulating the agencies on a good job.

### **Tank Retrieval Update**

Moses Jarayssi provided the update on tank retrieval and closure. C-106 was the first of seven tanks to be retrieved. Once DOE believed that no more retrieval was possible, two questions were asked: 1.) Have the limits of the technology been met? 2.) Has the volume criteria been achieved? If the answer is 'no' to the first question, then DOE modifies the retrieval system (for example, changing the nozzle). If the technology is changed but the volume does not change, then the Appendix H process is begun. If this process is rejected by Ecology, then DOE has to go back to trying another technology. With C-106, it's believed that the limits of technology have been reached and an Appendix H waiver is needed. The waiver is in it's last internal review process and should be submitted to Ecology by the end of the month. Moses provided a handout with information on the C-106 residual volume estimates and the associated risks. The estimate of residual volume is 370 cubic feet (just over the TPA limit of 360 cubic feet.) The full characterization report is available, should someone wish to see the details. The driving hazardous waste that is left in C-106 is chromium.

Moses also provided a closure update, since one of the milestones was to submit an approved closure plan by April 2004. That plan will now be submitted in June 2004. It is the first time that these packages are being completed, so the schedule change allows for the production of the best products.

### **Regulator Perspectives**

Jeff Lyon, Ecology, commented that DOE and CHG have been open and frank about sharing information as they write reports. Ecology's involvement has been with the closure plan. The process is still in the early stages.

### **Committee Discussion**

- Paige asked what is being done with the report on the risk assessment by the expert panel that CHG convened. Moses responded the panel's report included thirteen or

fourteen major comments. DOE has three or four months to plan and adjust the risk assessment, which will require some technical work to enhance the outcome. Because the panel was very detailed with their comments, there is no plan for any additional reviews.

- Pam Larsen commented that the sampling result was encouraging to her, since it looked like 99% of the remaining curies are from strontium and cesium, which will decay in 300 years.
- Ken Bracken asked whether the number of samples taken gave them confidence in the sampling. Moses responded in the affirmative. Jeff added that Ecology agreed with the Data Quality Objectives (DQO) but have not seen the report. For characterization, nine separate samples were taken from the same riser resulting in a total volume of 250 grams of material.
- Ken asked if the limits of that particular technology had been reached. Moses said that in the exception package, different technologies were reviewed. Roy confirmed that for C-106, other technologies were used. Ken wanted to point out that, since this will be the template for the future, documentation is very important. Moses confirmed that the report will be sent at the end of May and Ecology will have 60 days to respond.
- Howard Gnann, DOE-ORP, commented that going to Appendix H for 10 cubic feet does not set the precedent for the other tanks. Moses stated that he was not worried about going to Appendix H for 10 cubic feet but was worried about having to try a new technology because of this difference.
- Al Boldt asked, if the closure plan is submitted, is it intermittent closure for the tank or for the entire farm and if it is for the farm, how can Ecology act on it? Jeff responded that Ecology cannot act on anything without an EIS and that the tank farm will need to have an additional closure plan.
- Norm referred to the 360 cubic feet limit stated in the TPA for tank residuals. He asked whether negotiations were occurring for putting a range on the number for the TPA. Jeff responded that this was not under discussion currently. Ken also expressed some concerns about the 360 number being absolute.
- Dick suggested that since DOE is building a super-sucker, it could be brought back to this tank at some point. Moses responded that that scenario is being evaluated.
- Howard concluded by stating that they are setting up Nuclear Regulatory Commission (NRC) meetings. A lot was learned on C-106 and DOE looks forward to keeping everyone informed.

### **Discussions with WIPP**

Howard provided an update on the discussions with the Waste Isolation Pilot Plant (WIPP) regarding the transuranic (TRU) waste. Currently, the State of New Mexico is not ready to accept waste. The Resource Conservation and Recovery Act (RCRA) draft permit has not yet been submitted to Ecology since there is not much that can be done until there is a breakthrough with New Mexico.

### **Regulator Perspectives**

Suzanne Dahl, Ecology, commented that New Mexico seems to be concerned with the waste being high level, not TRU, and they are looking at the entire DOE complex, not just Hanford.

### **Committee Discussion**

- Gerry Pollet stated that in earlier briefings to the Hanford Advisory Board (Board), DOE-ORP was reporting TRU in 9-12; yet, the congressional briefing was for 20 tanks. What is the basis and total quantity of waste? Howard responded that DOE now believes there are up to 20 tanks with a total volume of 3,000,000 gallons of TRU.
- Doug commented that he thought there were only 8 tanks that were clearly TRU. Suzanne responded that Ecology is not at all convinced about any tanks beyond the first 8.
- Paige asked if New Mexico would accept the strong case of 8 tanks? Howard responded that right now it seems that they do not want to talk about anything coming out of tanks and into New Mexico.
- Norm asked about the remote handling materials and Howard responded that they are not talking with New Mexico about that.

### **DOE-ORP System-Wide Mass Balance**

John Swailes, DOE-ORP, presented a diagram of a mass balance for the tank farms. Mass balance represents what is known by showing the whole balance of materials in the tank farm and where they end up. It could also be shown by the pounds of materials, or it could be the total curies generated. The various EISs treat mass balance differently.

John handed out a color diagram showing the mass balance for metric tons and mega curies of sodium. Low activity waste (LAW) pre-treatment deals with some of this material. The diagram shows that 90% of the curies go through the high-level waste (HLW) facility. (This represents the picture of 6-8 months ago. There has been some refinement in the Waste Treatment Plant (WTP), which will result in an M-62 milestone change sometime in the next few months.) The diagram represents the percentage of sodium with the radioactive materials shown by curies. Technetium 99 and iodine 129 are long-lived isotopes represented in other diagrams that can be viewed as well.

### **Regulator Perspectives**

Suzanne commented that Ecology is not on board with some things shown in the diagram, such as the lines that leave the tank farm and go to minimal treatment or

supplemental treatment. With the agreement made with NRC, Ecology believes the standard is set with the pre-treatment facility. The blue box, representing low-level waste (LLW), seems to be mis-representative. Ecology understands all the waste in the tanks to be HLW, with some of it being TRU, and they are not currently entertaining the idea of LLW treatment for any tank waste.

### *Committee Discussion*

- Al asked whether the LLW stream has to perform as good as glass. Suzanne responded that it is supposed to, but Ecology has not yet seen where it even exists.
- Leon stated that this diagram was a good start in the direction the committee had hoped to see. John stated that the intent is to understand all the important and less important isotopes on a general basis. This is documented in the system plan, which shows the waste picture from life to death and is available for public view.
- Norm asked which isotopes go through LLW treatment. John responded less than 1% of the activity may be going down this path, which is actually very little. Another point is that, to make it simple, the assumption was that it all goes through the pre-treatment facility. John suggested people focus on the secondary waste forms, since some might not get vitrified.
- Suzanne provided some clarification as to how these mass balances came to be. In March, Ecology went through all the specific sheets, since one of the questions they wanted to answer was how much technetium ends up in glass, how much in scrubber water, and how much elsewhere. The question about iodine is how much ends up in glass and how much in off-gas. It helps with permitting to understand this flow and how it compares to the Solid Waste EIS. The diagrams have highlighted that there needs to be some mitigation on secondary waste that comes out of the Effluent Treatment Facility (ETF). A lot depends on how much is absorbed by the glass. If the retention numbers increase a bit, then iodine will have a better retention. This is why it is still a work in progress. Ecology is trying to determine a path forward to understanding the mass balance, permitting, and the response to the Solid Waste ROD. Input from stakeholders about concerns is always appreciated.
- Gerry commented that there is a proposal and a pending Record of Decision (ROD) for disposal in the soil, yet the mass balance in the Solid Waste EIS is different from what DOE-ORP is showing in this diagram. The facts (and performance) seem totally inconsistent. Gerry commented that there is a tremendous difference in risk with whatever assumptions were made. The quality of the RODs from the Solid Waste EIS and the permitting of the Integrated Disposal Facility (IDF) come into question.
- Leon suggested that they continue to follow the progress of the mass balance, since this is just a start and not all the pieces fit together.
- Pam asked about Hanford soils being considered for use after years of being told how delicate the soil balance is. John responded that Hanford soils may be used in bulk vit, but not in the LAW glass.

## **WTP Construction Update**

John Eschenberg, DOE-ORP, discussed progress on the WTP construction. There has been satisfactory safety performance since March 2001 with almost 16 million hours worked on the project and over 4 million hours of construction. Some of the leading technical challenges include mixing, hydrogen control, and the black cells. Overall, though, the project is still ahead of schedule, the project contingency remains ahead of forecasted spend rate, the out-year funding forecast remains favorable, engineering is 63% complete and construction is 25% complete.

## **Regulator Perspectives**

Ecology has one full-time construction engineer on the site and that they are setting up their own construction group. Each facility also has an engineer who is out on site one day a week to monitor that construction matches the permitted drawings.

## **Committee Discussion**

- Norm asked if a leak developed, would it be known in the black cell? John answered in the affirmative. The cells are coated and are lined with a stainless steel liner (i.e., no bare concrete at lower levels).
- Ken asked whether there have been any impacts to the schedule due to engineering. John responded that the HLW facility is complex and the level of effort required was more than projected. Pulse jet mixers are an example when the tinkering with the final design holds up construction. Engineering performance is still ahead of construction, though it is a tough day-to-day challenge. The end-of-project date remains the same.
- Paige asked about the piping and ductwork in the black boxes and expressed concern about whether comfort ventilation has been installed in rooms with high temperatures. She also asked about using rubber in the duct construction. John responded all the ductwork is welded, with no rubber. Paige then asked whether there is enough oversight. John responded they have five people verifying the design. Since the job is so big, they focus their efforts on the items that are most critical. The Department of Health (DOH), Ecology, and DOE are all watching. Al Conklin, DOH, said that they check by doing line-by-line comparisons with the drawings. The welds are inspected to make sure they are okay before pouring is allowed.
- Al Boldt wanted to know how much it costs to fix the pulse jet issue it. John responded that he did not know how much it will cost, but most likely in the lower range. They only need pulse jet mixers and sparge tubes, not all the other things. The capital equipment costs are not the issue, but the loss in schedule (if it occurs) would be an issue.

## **WTP Permit Modifications**

John Eschenberg discussed the permit modifications. The WTP is permitted as part of the Hanford Facility RCRA permit, which regulates tank systems, miscellaneous treatment systems, containment buildings, and container storage areas. The phased permitting approach supports continued construction. In March 2004, a Class 2 permit modification request was submitted to Ecology. The major changes proposed include reconfiguration of the melter system design, elimination of the technetium ion exchange system from the pretreatment facility, and several other minor modifications. In addition, 50-60% of the design packages have been submitted, which is right on schedule.

## **Regulator Perspectives**

Suzanne commented that design packages are not small and there are a number of sets for each permit modification. The public comment period is open until the end of June.

Al Conklin commented that the design changes are not bad but they do create some interesting challenges, especially with 2x2 melter configuration. Some devices were changed and the design continues to change, however, none of the issues or questions is holding up construction. The biggest challenge has been communication between engineers and health physicists. The phasing approach to permitting is working.

## **Tank Closure EIS**

Steve Wiegman, DOE-ORP, provided an update on the EIS. He emphasized that this is only the beginning of more conversations. Steve provided handout outlining how everything fits with closure. The M-45 agreement and Appendix I provide the specifics on how individual tank farms are closed. The M-45 process is the decision process for the tanks.

Mary Beth Burandt, DOE-ORP, explained that the cheat sheets used by reviewers in August were compiled into a three-page document that describes the differences between the EIS alternatives and highlights key locations and impact areas. In February 2004, DOE-ORP went to DOE headquarters (DOE-HQ) for a review of the preliminary draft EIS. The review was positive and resulted in 19 issues and 340 comments. Some of the major issues in the review were:

- Clean closure options were refined
- Alternative 4 was refined
- TRU tanks (17 before, now 20, at DOE-HQ request)
- Differences from the Solid Waste EIS
- Schedule update – draft for public review by October 7, 2004 with a 60-day public comment period

### Regulator Perspectives

Suzanne pointed out that quite a few of Ecology's issues had been addressed and that the process has been representative of how it should be done. However, there are some inventory differences between this EIS and the Solid Waste EIS. There is also a difference in the assumptions in how the ETF will perform.

### Committee Discussion

- Jeff Luke questioned whether the difference in time frame (143 years vs. 80 years) in the 6A and 6B alternatives was due to construction. Mary Beth responded that when the clean closure is stretched out and when the tanks are dug up, another waste stream is created. There are more DSTs, more storage modules and more cycles. Though the amount of waste does not change, the physical infrastructure does. Jeff pointed out that alternative 6B buys 60 years by doing things simultaneous and faster with the money saved for retrieval. Mary Beth said they were not really looking at costs, but they were looking at DSTs.
- Al asked about the groundwater approaches. Mary Beth responded that they used a different groundwater model for this EIS from the Solid Waste EIS. In the end, it is hoped that the differences in models will be able to be explained and understood. Al suggested that DOE issue a supplemental EIS for the Solid Waste EIS, since there are two offices with two different EISs looking at the same issue.
- Paige asked if any leaks were detected when C-106 was cleaned out and whether they were looking for that. The response was that when the sluicing process was initiated, they looked for leaks. The Tank Closure EIS covers the possibility of leaks from tanks that are being cleaned, since they are using a very conservative assumption.
- Gerry wanted to know whether this EIS included a commitment for leak detection, monitoring, mitigation and best technology (dry wells, etc.). Delmar responded that S-102 is the next tank and does have this. Gerry asked what the mitigation terms were in the EIS and Mary Beth said that they were still being written. The EIS does not engineer the mitigation, but it does highlight what can be influenced and what is being done now. Suzanne commented that there are a whole series of mitigation measures that can be looked at, such as temporary barriers.
- Gerry then began asking about the alternatives. He pointed out that the most relaxed treatment was used instead of the presumptive legal remedy. The only clean closure is linked with alternative 6B, which he thinks is not an alternative that will be seriously considered. Gerry believes this is an indication that DOE has already made the decision to do landfill closure. Mary Beth clarified that, in terms of closure analysis, it has been a challenge to keep certain parameters constant so that not everything is moving at the same time. The variations are in closure and in treatment.
- Ken asked if DOE has a preferred alternative. Mary Beth answered that at the draft stage, there is no requirement.

- Al Boldt commented that none of the alternatives meet 2028 and none have acceptable groundwater performances. Mary Beth pointed out that Alternative 5 does support 2028.
- Doug asked the committee to suggest a path forward based on what they've heard. Gerry suggested bringing something to the Board before the EIS comes out, so that DOE can do some corrections. He thinks the Board should point out that there are some presumptive legal requirements which were not used to build the EIS. Not all of the committee members agreed that Board advice was warranted. Doug asked if Ecology would want the committee to say anything and Suzanne responded that they are interested in input.
- Mary Beth responded that if they are suggesting restructuring an alternative and it changes the mass balance, then it generally would take 3-4 months to re-run the risk assessments and revise the document. Then, the document would still have to go back to DOE-HQ. Maynard reminded the committee that there are activities that would be affected by a delay in the EIS. Suzanne said that Ecology would insist DOE has to meet the 2028 deadline to get the waste treated, no matter what ROD is chosen from the EIS.

### **Tank Closure Design Contracting**

Delmar Noyes told the committee DOE has focused on design work for C-106, C-200 series, S-102 and S-112. The tank isolation design is integrated with retrieval operations. With the tank fill system design, planning and design are key inputs to the preparation of regulatory documentation and permits. The grout and tank fill design has provided data needed to evaluate the environmental impacts of alternatives in the Tank Closure EIS. No contracts have been let for grout activities.

### **Regulator Perspectives**

Suzanne commented that, since it is at a design level and not an implementation level, this work is not a concern for Ecology.

### **Committee Discussion**

- Gerry asked if they can move forward, beyond this level of design, without the EIS. Delmar responded that DOE has said they cannot move forward with any grout placement without an EIS. This applies to C-106 as well. An Environmental Assessment (EA) is not adequate.
- Becky Holland asked if any contracts had been let and to whom. Delmar responded that the design contract had been let to a local engineering firm, but no design-build contracts have been let.
- Gerry suggested that the question of whether the notification list for the EA on C-106 was adequate be forwarded to the Public Involvement Committee.

## **Supplemental Technologies Update**

Billie Mauss, DOE-ORP, provided the update on supplemental technologies. Bulk vitrification pilot plant testing will proceed on site and steam reforming will be tested in conjunction with testing in Idaho. Information is also being gathered regarding what another LAW facility would look like. The purpose of this project is to provide data in support of the decision on which technology can be used to supplement the WTP. A public comment period will begin on June 7 regarding the research, design and development (RD&D) permit for the bulk vit pilot plant and a public meeting is scheduled at the end of June.

Rick Raymond, CHG, mentioned that they have completed negotiations on a 60% design-only contract for the demonstration facility. This project is a sole source in excess of \$25 million, so it will have to be approved by DOE-HQ. The scope will be to design, build and operate the facility at Hanford, just across from the S-farm. Construction starts after the permit is approved. The facility would potentially treat waste from S-109.

## **Regulator Perspectives**

Suzanne commented that the permit is a stand-alone. Permit conditions occur for each subsequent test. When Ecology stops seeing experimental information returning, then the RD&D effort will stop. Permitting looks at the areas that could fail and then the design is built around that. Suzanne added this project would provide more useful information about the mass balance.

Al Conklin commented that DOE's application was returned in two weeks because there were too many questions. The biggest concern was that their off-gas system did not meet the regulatory requirements.

## **Committee Discussion**

- Gerry asked what the capital cost versus the operational costs were. Rick replied that, because this is a research facility, numbers cannot be transferred to call it a production facility. The project has a \$50 million baseline and decommissioning and demolition is beyond the \$50 million.
- Paige inquired as to what will be done with the waste when the facility is demolished. It will be stored at the site and eventually disposed at IDF. Negotiations are occurring with Ecology. The waste form from the demonstration facility will receive the same set of tests as the WTP. In some cases, more testing will be done.
- Becky inquired whether a Request for Proposal (RFP) went out. An RFP went out at the end of 2002. AMEC was chosen and tank farm personnel will be used.
- Gerry asked why this is a \$70 million project for two years, yet the baseline showed \$20 million a year for supplemental technologies. He also wanted to know why there is a \$50 million baseline cost for only one pilot project. Howard responded that it is

\$25 million in 2005. There has been growth, which resulted in a change in the baseline. Howard believes nothing is suffering because of this expense.

- Gerry also expressed concern about National Environmental Policy Act (NEPA) issues because of the large-scale waste disposal. Normally, a permit exception is not given since waste is permanent.
- Bob Parks asked if, since they are not creating any new waste, just changing form, would it be handled differently? Rick responded that it meets the requirements for storage at the Central Waste Complex.

### **\$64 Million Proposed Funding Holdback**

Howard explained that this funding sits in a separate part of the budget. The Fiscal Year (FY) 2005 budget is being marked up right now and will provide more information in a few weeks. There are three separate activities potentially affected: closure of 14 single-shell tanks; design and construction of the supplemental treatment process; and, starting treatment and packaging of contract-handled TRU waste. They are working with DOE-HQ to disconnect the supplemental treatment budget from the scope affected by the “waste incidental to reprocessing” decisions. There has been no word from DOE-HQ regarding slowing down on work.

- Gerry asked if money would be moved from elsewhere, since the contract is signed. Howard responded that the contract has limits on it and FY2004 dollars will be carried forward.

### **Infrastructure Planning**

Howard provided information on the contracts issued to Parsons Hanford Fabricators Inc. The task order contracts cover the full range of fabrication services to support Hanford’s cleanup mission and include three-year guarantees of work orders. The Memorandum of Agreement (MOU) is signed. Howard continued by saying that DOE-ORP needs the infrastructure, as it is especially important as the WTP is ramped up. DOE does not see any issues with having fabrication services offsite and looks forward to future contracts.

### **Committee Discussion**

- Becky explained that from the Hanford Atomic Metals Trade Council’s (HAMTC) perspective, this is positive.
- Gerry asked what would happen if they were fabricating an item that was already contaminated. Howard responded that they cannot do any contaminated work offsite; they would have to fix it there or rip it down and dispose of it.
- Gerry commented that he had concerns that some equipment being moved off site was beryllium contaminated. Howard said he could not comment on that issue, but would get someone to answer it. Gerry also expressed concerns about what happens to workers who are moved off site: do they have access to medical monitoring?.

Becky said that there is a health and safety worker program and monitoring is available. Tim Takaro requested further information.

### **Tank Vapors Update**

Joel Eacker, CHG, provided an update on the efforts to improve vapor exposure protection. Personnel have been sampled, engineering controls created, communications improved, the technical basis improved, the industrial hygiene program has had improvements and a long-term strategy has been created. Respirators have now gone from non-routine to routine use. With nitrous oxide (N<sub>2</sub>O), the data is not as accessible as they would like, but DOE is working on improving it. Some statistical quantification is desired and headspace mechanics is being analyzed. With the engineering controls, a readiness test has to be performed. For SST's, an extension will go up to the 15-foot level. Cameras could potentially be used in the tank farms to minimize potential exposure. Regarding personnel sampling, it is statistically-based. In the past month, ten times the normal amount of sampling has been completed to try and get a baseline of data. Policies will be adjusted based on what is seen from the results. In the industrial hygiene program, upgrades have been completed and there is a 50% addition in staff. There is a long-term strategy of looking at emerging technologies and maintaining open communications.

### **Regulator Perspectives**

- The Attorney General's office asked DOH to investigate the vapors issue, since it was very difficult to determine from the data what the picture was. Ecology was looking at hazardous chemicals. The data received had quality assurance issues, which raised some concern.
- Al Conklin commented that the Attorney General asked about exposure to radioactivity. DOH has no authority but DOE-ORP fully co-operated. More workers were contaminated with a maximum of 100 millirem to skin compared to a 5000 millirem standard. 21 people were contaminated and 3 others were unreported. None of these coincided with the vapor releases. Records were examined and radiation readings were taken off of the breather filters. These breather filters are being challenged, but they are doing their job. Nothing is tied directly to vapor exposures.

### **Committee Perspectives**

- Becky stated that the chemical vapors solution team has made some positive progress. Becky and Bob are both on the team. They tested the N<sub>2</sub>O monitors last Wednesday. A sub-committee will do some research on infrared technology.
- Bob commented that there are assumed risks when working at Hanford. Masks are not very comfortable, but DOE is taking the conservative approach. Many people have wanted protection and now they will have it.

- Keith Smith questioned whether N<sub>2</sub>O was the only vapor being dealt with. Joel responded that ammonia was a sentinel for N<sub>2</sub>O and a conservative approach was taken.
- Tim asked about the WTP vapors. Jim Henschel, Bechtel National Inc. (BNI), responded that workers complained about nosebleeds. BNI routinely checks with hand held meters and nothing has been found radiologically or chemically.

### **Committee Business**

- Gerry will prepare advice on the EIS and Leon will craft a letter about M-45. Doug will look at commenting on the WTP permit mods.
- There will be no committee call next week.
- The Board meeting is June 3<sup>rd</sup> and 4<sup>th</sup>. The committee should brief the HAB about the M45 change package. Doug will do this.

### **Handouts**

- M-45 Change Package, Delmar Noyes, DOE-ORP, May 13, 2004
- Figure I-1 – SST WMA Waste Retrieval and Closure Process, DOE-ORP
- Tank Retrieval and Closure Update, Delmar Noyes, DOE-ORP and Moses Jarayssi, CHG, May 13, 2004
- Discussions with WIPP, Howard Gnann, DOE-ORP, May 13, 2004
- System Wide Mass Balance, John Swailes, DOE-ORP, May 13, 2004
- Waste Treatment and Immobilization Plant Project Update, John Eschenberg, May 13, 2004
- Tank Closure EIS Discussion, Mary Beth Burandt, DOE-ORP, May 13, 2004
- Key Decisions for Implementing RPP Mission Elements
- Table S-1 Summary of Tank Closure EIS Alternatives
- Current Tank Planning and Design Activities, Delmar Noyes, DOE-ORP, May 13, 2004
- Supplemental Treatment Technology Update, Billie Mauss, DOE-ORP, May 13, 2004
- \$64 Million Proposed Funding Hold-Back, Howard Gnann, DOE-ORP, May 13, 2004
- Infrastructure, Howard Gnann, DOE-ORP, May 13, 2004
- Tank Vapor Update, John Swailes, DOE-ORP and Joel Eacker, CHG, May 13, 2004
- Investigations Report, Department of Health, March 8, 2004
- Waste Treatment Plant Project, Bechtel National Inc., May 2004
- Hanford WTP, RPP/WTP, May 2004

## Attendees

### **HAB Members and Alternates**

Allyn Boldt	Paige Knight	Gerry Pollet
Ken Bracken	Pam Larsen	Richard Smith
Norman C. Dyer	Sandra Lilligren	John Stanfill
Rebecca Holland	Bob Parks	Leon D. Swenson
Douglas Huston	Maynard Plahuta	

### **Others**

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