

**FINAL MEETING SUMMARY**  
**HANFORD ADVISORY BOARD**  
**HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION COMMITTEE**  
*March 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, welcomed the committee, introductions were made, and the committee approved the January meeting summary.

**Beryllium**

Mike Korenko, HSEP vice-chair, said the committee has good momentum for their work on beryllium (Be) and he was anxious to complete their efforts.

Pete Garcia, U.S. Department of Energy-Richland Operations Office (DOE-RL), gave a presentation titled “Update on the Hanford Site Chronic Beryllium Disease Prevention Program (CBDPP)”. He said the presentation is both an update of what he previously presented and what is different now in terms of corrective action plan (CAP) implementation.

Pete first went through current CAP activities which include: developing a process for achieving closure on CAP items using a consensus approach and based on Be success factors; working with the Beryllium Awareness Group (BAG), Hanford Atomic Metal Trades Council (HAMTC), and site contractors to re-baseline the CAP to incorporate closure process; conducting all employee Be awareness briefings for DOE-RL, DOE-Office of River Protection (DOE-ORP) and contractor staffs; and scheduling an information meeting on Be for former Hanford Site workers on March 14. Pete said the presentation has been coordinated and given at multiple locations using the same body of material so that everyone receives the same message on the importance of fixing the Be problem and of the voluntary testing program. He said DOE and the contractors were very involved in the upcoming meeting, which will be advertised in the newspapers and on the radio. The individuals scheduled to present and representatives from different organizations in attendance should be able to answer questions people might have.

Pete described the Be success factors. He said DOE had an aggressive schedule last year where they were diligently working to develop products in collaboration with the contractors. Pete said they fell short on deliverables.

Mike said the success factors were good. He suggested framing the Hanford Site CBDPP in terms of integrated safety management systems (ISMS). He said they would be able to integrate Be now, vapors in the future and continually add other concerns. Mike said it is important to remember that ISMS is the overarching policy and items like the CBDPP are a subset. Pete agreed. He said there are several products they are developing as a corrective action for Be that will be applicable site-wide.

Pete reviewed the Be CAP. He said each team will aim for consensus to bring forward information to be presented to a larger team lead by a contractor. There will be facilitated and documented sessions so that any issues coming out of the session can be resolved. DOE-RL and DOE-ORP managers will deal with any issues that cannot be resolved and minor issues will be handled by the team. Pete said DOE wants to ensure the process provides useful products that protect workers. There will be presentations when the product is 60 percent completed and again when it is 90 percent completed. After the issues have been resolved and everyone is on board, the product will be incorporated into CBDPP.

Keith said the perception of what the end product should be is always a problem. There are very frequently differences in visions of what the product should be. If everyone can agree on the product, it will help resolve differences of opinion. Keith said there were vast differences in perception for the ISMS, which led to implementation problems. Pete said DOE was hoping consensus from all parties will lead to successful policy implementation for the Be program.

Pete described the CAP product prioritization. He said there was team consensus in terms of products to be delivered. They considered many items and did not have the resources to focus on everything. He said the team identified the products that would have the greatest impact on worker safety. Those became Phase One Products, which are the ones that will initially be worked on. Phase Two products are also important, but they will lag behind the first group.

Pete used the Beryllium Work Permit (BWP) product as an example of the CAP process. He said they developed clear criteria for what the BWP process requires to obtain an acceptable product. The end point was clear and the attributes needed for the product to be successful were well defined. Pete provided a list of the working team for BWP development.

#### *Committee Discussion*

- Mike brought up the role of the Hanford Advisory Board (Board or HAB). He said the Board is a policy advisory group so they do not want to delve into the technical details. The Board is watching carefully and monitoring the CAP, but Mike said it is not their intent to be involved in all the details. Mike said they receive briefings and have numerous types of information conduits. Pete said he appreciated that. He said they did discuss having some committee members sitting through the 60 or 90 percent product meetings to observe the process.
- Mike asked about financing for the Be program. Mike wondered how people were charging their time and whether there was a specific line item for Be funding. He said many times these efforts fail when funding is eliminated so he wants to ensure there is a funding source from one year to the next. Mark Fisher, BAG, said his employer provides a charge code for all employees involved in CAP. Pete said DOE works with contractors to ensure that BAG members who are current employees are released from their normal duties for the process. He said they are still developing the funding plan and DOE will incur the costs. Finances should not be an issue.
- Brian Harkins, DOE-ORP said the goal is for these programs to become fully implemented site-wide. He said they do not expect line items for Be. They are seeing that right now because the program is being set up, but it will be integrated into other programs in the future.
- Becky Holland, HAMTC, said she spoke with Dave Molnaa at HAMTC about the Be program. She said he told her that he realizes the Board is involved and is interested in the topic, but he expressed a desire that the Board step back and allow HAMTC, DOE and the contractors to put their plan into place and perform their jobs. Becky said Board attendance at meetings and discussing the issue is healthy, but the Board should allow others the opportunity to be successful by taking a back seat. Keith said that is the role of the Board. They receive briefings periodically just to understand what is going on. Keith said he understands it is not the role of the Board to solve problems; they will just continue watching to ensure the work is accomplished.
- Keith said he is impressed with the efforts of DOE. They have realized it is necessary to put pressure on the contractors because contractors often do not do the right thing. He said years ago DOE did not like to tell contractors how to manage, but sometimes it is necessary. Pete said he is impressed with the amount of time, energy and money DOE is putting into the effort.

- Brian said since this has been a consensus process, the successful effort is a credit to the team. He said working by consensus has led to a far better product than they would have developed if DOE was working on their own.
- Harold Heacock said there is not a lot of information or knowledge about Be outside a fairly small circle. He said that is not a criticism of the program, but he would encourage DOE to extend the knowledge beyond Hanford and into the surrounding community. Keith said the Be problem is more prevalent than people realize.
- Mark said nurses are a valuable conduit for information. He said nurses hear first-hand from individuals about their experiences. He believes BAG speaks with nursing students at the community college. Most of these nurses will work in the area after they graduate. He said it is important for them to understand the Be issue and communicate information learned with doctors.

### **Chemical Exposure at 222-S Laboratory**

Tom Carpenter, issue manager for the topic, said there were several workers who complained of exposure exhibited symptoms in January. He noted several Board members heard about this incident so they asked for a briefing from DOE. The Board would like to learn more about the issues around chemical exposures at 222-S Laboratory and findings from the Defense Nuclear Facilities Safety Board (DNFSB) on the incident. He said Brian would offer a briefing on what had occurred.

Brian said he would ask Rich Urie, DOE-ORP, to provide the update because he has the technical background and experience.

Rich passed around a copy of his presentation titled “ORP IH Brief to HC: 222-S Inhalation Incident – 1/5/11. Summation of Facts, Hypothesis and Corrective Actions, 2/24/11”. Rich reviewed the events leading up to the incident. He said the workers were extracting residue off a high-efficiency particle absorber (HEPA) matrix in a hood using methylene chloride (MC). The samples were allowed to dry in the hood and then placed, covered, outside the hood for radiological survey purposes. The workers followed the usual procedures and surveyed with radiological instruments to ensure the samples were free of radioactive material before leaving the restricted area. During the course of that, some of the technicians identified an odor and requested support. They opened a blank planchet without incident. When the HEPA sample planchet was opened there was a strong odor and the three workers experienced immediate physical reactions including light headedness, headaches, throat irritation and eye irritation. They placed the samples back in the hood and reported to their supervisor. Rich said the workers underwent medical examinations at AdvanceMed Hanford (AMH) and there was no question they exhibited physical manifestations.

The following morning a fact-finding session was held to determine what had happened. Rich said several of the workers mentioned they still did not feel right and expressed a variety of symptoms. They returned to AMH for further evaluation. Others who were peripheral to the incident were also sent to AMH. Rich said there was one individual who needed assistance from

Hanford paramedics. He said there was confusion because some of the workers were seen immediately and others remained in the lobby. When one of the individuals exhibited unusual affects, all were given the option of being sent to the emergency room. Four out of the five were transferred to the Kadlec Emergency Room.

Rich said it was still somewhat unknown what had transpired. The affected individuals did not think MC was the cause as they were familiar with the smell, although doctors performed MC tests anyway. There was some inconsistency in who received that test. Industrial Hygienists (IHs) followed-up on the incident by taking samples from the room where the exposure occurred. The IHs did not find anything significant using the instruments they had. Additional research was performed on the HEPA filters to examine possible effects from potential additives. Rich said there were many possibilities for what might have occurred and the general symptoms exhibited by the individuals could have been caused by many things. Rich said DOE will reconstruct the events leading to the incident under very controlled circumstances under a hood. They are planning what instruments and sample media to test, covering a broad range of possibilities.

Rich said AMH has taken several actions after the incident to improve future responses. He said AMH is working to improve communication and provide information to doctors quickly. Doctors should also reciprocate information if there are immediate actions that need to be taken, while being mindful of medical confidentiality. He said improved communication from all involved parties for follow-up investigations is crucial as well.

Rich said that the investigation is still on-going and there have been many improvements related to the incident to increase worker protection and incident response procedures.

#### *Committee Discussion*

- Tom asked for more explanation on the work being performed when the incident occurred. He asked why the filters were being treated with MC. Rich said applying MC is a procedure used to remove soluble materials on the filter so it will not be contaminated when conducting future procedures. Brian said the filters were being characterized to determine how filters could be disposed of after being used. The filters were to provide a baseline sample for a clean filter versus a filter that had been processed.
- Tom asked what happened at the Kadlec emergency room. He asked how the individuals were feeling today. Rich said he can only relay information provided to him by the Washington River Protective Solutions (WRPS) Health and Safety Manager. Rich was told the individuals definitely suffered some adverse effects, but given the confidentiality of medical information Rich said he had not followed closely.
- Tom said there were many tests taken to determine what the workers might have been exposed to. Rich said that was correct, but he was not sure what the exact test procedures were. He said he had not heard feedback from the results, but is aware that some of the individuals are involved in the workers compensation program.

- Tom asked about Rich's statement that there was initial concern because some workers received one test while others did not at AMH. Rich said that is an accurate statement, but he is only privy to what the individuals were willing to divulge through the fact-finding process. He believes only one individual received the test for MC because the technician treating that person had received the Material Safety Data Sheet and chose to test for MC. Others did not receive the test because they were treated by different providers or because of the spontaneity of situation. AMH is aware of the issue. Rich added that another issue is that some of the individuals did not feel they were being taken seriously on their return visit. AMH must acknowledge this and work to improve the process.
- Tom asked if Rich is aware whether or not any document has been placed in the workers' files in case there are future effects even though they do not know the specific cause of the incident. He said he has heard that sometimes exposures are never documented. Rich said he has not requested permission to look at medical files. He said the files do note whether there was an event and any known information. Industrial hygiene reports are added to medical files. Brian said he can find an answer as to whether the incident was incorporated into the files, but he cannot discuss specific individuals. Brian will follow-up on documentation of exposures in workers' files.
- Liz Mattson said she appreciates that the incident is still being taken seriously and being investigated since the cause is unknown. She wondered about the difference between exposures occurring in the lab where there are more controls versus an incident at the tank farms where they may observe symptoms but might be unable to identify a cause. She asked if there was any reflection in the lessons learned about exposures with an unknown cause in a lab environment versus in the open air. Brian said the processes they are talking about are not specific to lab environments. He said WRPS is considering the lessons learned and process improvements for all workers that are sent to AMH or Kadlec.
- Liz said this investigation seems to be unusually thorough for an incident with an unknown cause. She asked if that was because the incident occurred in a controlled environment. Rich said the thorough investigation is a result of the continued emphasis on process improvements for any vapor exposure, this incident just happened to be in a lab. He said they have been doing a stellar job trying to investigate any incidences. Rich noted that this incident occurred almost one year to the day after the C-Farm incident. He said this incident hopefully represents a process improvement from C-Farm and the expected response should not be any less than if the incident had occurred outside a lab.
- Liz said she presumes there are more tools in the lab to recreate conditions that led to the exposure, which might not be available if there was a release in a tank. Rich said he understands the point Liz is making. He said WRPS has relatively new managers that have taken a personal interest in the incident to the point where senior management went to the emergency room. Rich acknowledged that certain circumstances facilitate clear investigation and they do not have all the tools at the tank farm. Rich said there are new tools and processes being deployed in the field that lead to tangible improvements in data gathering and follow-up at the tank farms.

- Liz said she would appreciate future briefings on the investigation process. She asked how not knowing the cause of the exposure would be translated into worker files and how that would impact potential compensation. Rich said he would follow-up on that question with Liz. Brian said he has one hesitation in that he is probably not the person who should be speaking about the compensation side. He said if HSEP has questions about compensation they should have someone who is more involved in that process offer a briefing. Brian said he does not want to misrepresent a very complex area that needs to be communicated correctly.
- Becky asked if there were considerations about how to respond to incidents that involve multiple people. She suggested it might be more appropriate to transfer anyone suffering from a possible exposure to the downtown hospital where there is more equipment and more people available to assist with any exposure incidents. Rich said they believed time was critical when the exposures occurred and bringing the workers downtown would have required an extra half hour of travel time. AMH is now working more closely with the Hanford Fire Department to facilitate communication. Keith said the fire department is required for any type of intervention.
- Becky asked if there were considerations for having more staff in the satellite medical facility. She said the facility is not focused on dealing with emergencies. Rich and Brian said they did not have answers. Keith said they could call on the fire department if there is an emergency situation. Rich said large facilities follow the same process of bringing in doctors for consultation. Becky said she is concerned about the length of time workers spend in the waiting room before being evaluated to determine if an emergency situation exists and whether assistance is warranted.
- Brian said Rich had a great suggestion to bring HSEP to the Hanford Site to observe some of the new systems and actually speak with workers. He said a two hour session in the field would help the committee understand what they are doing now and what they have done in the past. Pamela McCann, DOE-ORP suggested April and incorporating the Tank Waste Committee if they are interested. Brian said the tour would be specific for industrial hygiene. Rich said the tour would provide a moral boost for Hanford workers with the interest of the Board.

### **Corrective Action Plan (CAP) for Radiation Control**

Tom said Brian and Brandon Williamson, DOE-ORP, provided a briefing to him on changes to the Radiation Control (RadCon) program at the same meeting where 222-S was discussed. Tom noted that Brian and Brandon said DOE had indicated earlier they would not accept the CAP being considered. He said more work has been done and the CAP is now on track. Tom said HSEP asked to hear a presentation since the progress sounded promising.

Brandon said the last time he spoke with the Board he was unhappy with the contractor's response to the RadCon assessment because it did not contain some elements he would have liked included. He said DOE did reject the initial plan, but since that time there has been a lot of progress and DOE has ultimately approved the plan. He said DOE rejected the first plan because

required compensatory actions were not addressed in the CAP as to when those actions would be self-sustaining. He said the other major problem was the reliance on components that were not necessarily results oriented or results measurable. Brandon said those changes were made and he is happy with the approved plan.

Brandon provided a presentation titled “Major Changes to RadCon Program in Response to ORP Program Review in 2010”.

Brandon said WRPS underwent a major reorganization in May with the primary objective to drive consistent, compliant practices across the project. There is now a central radiation branch which allows a consistent program where workers and operations management can function at the same level. Many people were involved throughout the process feel responsible for the issues DOE brought up and are taking ownership. Brandon said management is stating that they are not simply following DOE standards, they are stating that the standards are their own. Brandon said that is very important for taking control of the process. He said there have been many organizational changes to align with the functions that drive consistent practices across the process.

Brandon reviewed DOE requirements for CAP approval. He said the work plan was a major issue. Retraining was required for that specific piece. Brandon said they have to work on procedures because various groups interpret those procedures differently. He said the approach was very good because they had support to move ahead with the processes. It was an iterative process that required several cycles and the effort does not end at trainings. Interviews have been conducted with top RadCon level managers and planners as well as first line supervisors. Brandon said he witnessed several versions and observed when the message was received and when it was not.

Brandon next described the major CAP actions. He said drills were not meeting DOE expectations so now more operational drills are being performed. All drills are being cycled through the process. He said implementing the “living” improvement plan was one of the highest levels of concern, which was a pre-set procedure for addressing issues that arise in the program not specifically addressed in the CAP.

Brandon said DOE tracks many measures for assessment efforts in company-level metrics and indicators as opposed to the previous system of tracking only a few items. They are focused on ways to measure if efforts are improving and where they need to expend their energies. He said DOE was conducting management evaluations that focused on specific systems. Brandon said experts from Radiological Oversight and Assistance Committee were brought in, most of whom are not Hanford employees. He said they are respected RadCon professionals that are able to provide thorough evaluations.

Brandon said DOE is at the point where most of the corrective actions have been completed, although they have not all been validated. He said DOE should be contracting with a group at the end of April for the endpoint assessment and to pick up on what they may be missing.

Brian said they are seeing good performance improvements, although that does not mean everything is always functioning correctly in the field. Whenever issues arise, an investigation

must be conducted. He said WRPS has taken important steps forward and he is very happy with the actions that have been taken to date. Brian said the first step is to see process changes become integrated because many of the issues raised regarding RadCon are not RadCon specific. These issues could be re-couched to apply under other programs. Brian added that he does not want to see the institutionalized improvements disappear next year. He said the high standards set by RadCon management should be part of the institutional process regardless of who holds management positions.

Brian asked what the path forward is for the RadCon assessment. He said the contractor is working to close the issues that have been identified using a fairly rigorous process. DOE will verify closure of each of those actions. He said after the actions have been completed and closed, DOE schedules an effectiveness assessment. DOE processes require that the issue identified be followed-up on six months later. Brian said they do not examine each individual corrective action, but they look at whether corrective actions have been effective at actually correcting the identified issues.

Brandon said the system is not perfect. The mechanisms are in place to sustain and achieve performance, but they are not there yet.

#### *Committee Discussion*

- Keith said this discussion illustrates why it is important to institutionalize processes so that the processes are not lost when management changes. He said in the past when good managers have left, they slip back into old practices. Keith said another important point from the discussion is how crucial it is for company management to own the program, removing the onus from DOE. He said he has heard many times management explain processes as “DOE is making us do this” so that by the time the message gets down to the workers, management thinks the process is just a passing trend. Keith said lower level managers and workers need to hear that there is a higher standard. Brandon said management has started saying that the standards are their own and not DOE standards or customer standards.
- Becky said she is unsure about the accuracy of that statement coming from a worker perspective. She said one of the examples mentioned was the access control system. She said the problem is not that the people running the system are incompetent; the problem is that the equipment does not work properly. She said workers continually report the faulty equipment, but they are told to do the best they can with what is available. Brandon said with management presence they should start to see improvement in those areas as workers will be able to actually show management what their concerns are. Keith asked how workers were expected to perform their job if they do not have the right equipment.
- Brandon said he has the advantage of not looking at timelines and milestones. Their focus is always on ensuring the program runs safely, although they do realize there are people focused more on efficiency. He said different projects have different standards since projects operate under different radiological work permits.

- Tom said the presentation was good. He said he met with the new RadCon manager and thought highly of him. Tom said he did hear the work culture mentioned in the presentation. He asked how people feel about the rigors of their work, especially when issues are raised or stop works are required if something goes wrong. He asked what happens to workers who raise concerns and whether management is supportive. Tom said management responses illustrate where they stand on the issues and what their concerns are.
- Keith said this illustrates the integrity of the process. He said there are some areas on the Hanford Site where people are focused on completing the work and are less concerned about following the rules. He added that sometimes the rules do not make sense. Keith asked how much they are paying attention and tracking issues of cultural change. Brandon said that is the toughest thing to fix over the long-term. He said he has heard from workers that they do not feel they receive the best response when voicing concerns. Brandon said he always asks if the worker has written a problem evaluation reporting (PER) and to what level of management. He said DOE has learned to pay extra attention to issues being raised multiple times. DOE has stepped-in to validate issues that are consistently mentioned, but there is still work that needs to be done. One approach used is to send people out in the field in a mentor relationship. The field oversight people observe operations in the field in order to help the process out. Brandon said he was aware of a chilling effect on workers who fill out PERs. He said he has reaffirmed that DOE does want workers to bring up issues and capture concerns. Brandon said workers have the impression that management does not want them to write a PER. He said if workers talked to management, management would tell them to put in a work request rather than write a PER. He said management has now reversed that and will encourage workers to put in a PER as a way to capture problems. Keith said it would be interesting to track and see whether changes are occurring in the process.
- Brian said one thing he has done when working with new management is to evaluate new RadCon performance indicators and look at the PERs. He examines what was identified and how it was handled. He said the system is not perfect because if PERs are not being written, either because workers do not feel it will be supported or they fear retaliation, performance indicators will not be helpful. Once a concern enters the system there is quite a bit of tracking to identify common issues and whether issues are handled appropriately. Brian said sometimes DOE does need to step in.
- Brandon said DOE is trying to sensitize contractors to what is being written in the PERs. He said they will evaluate performance metrics to determine whether they are hearing about more or less issues from workers. There may be a greater number of PERs because people feel hostile and write up everything they can think of or the chilling affect is no longer a problem so people feel freer to voice concerns.
- Keith said workers perceive management interest in safety by observing how effectively and how quickly they deal with issues being brought forward by workers. He said the safety program is meaningless if it is not being acted upon. Keith said there have been too many instances when good intentions fade away so there are no resulting actions.

- Keith said Mike pointed out long ago that if ISMS has been implemented thoroughly across the site, the issues would have been handled incrementally. Keith said he heard comments that the issues are being taken personally, but without emphasis from oversight they will not accomplish goals unless the customer demands contractors operate in that manner. Keith said management is focused on the bottom line.
- Rich said RadCon is not reporting to the line. RadCon is one step removed from the pressure to complete metrics. There is still pressure, but there is not a direct line. He said if employees have a problem that their supervisors are not addressing, they do not need to stop at the first level of management. He said employees need to go through the process. Keith said it is important to have mechanisms that allow even the timid to have their issues addressed.
- Tom said HSEP can acknowledge when things are going right, not just when things are going wrong. He said in this case it is appropriate to say they are doing good work and should maintain the efforts. Keith agrees and commends these efforts. The Board will follow the path forward to see where improvements can be made.

### **River Corridor Baseline Risk Assessment (RCBRA)**

Tony James said the RCBRA has not been discussed among HSEP previously so he prepared a document to review what the risk numbers mean. He said the RCBRA is an impressive document and a CD is available with descriptions of the models and scenarios used. The data DOE used is also available. He said this is the third draft of a process that probably began five years previously. He said the health assessment is one of a number of assessments that enter into cleanup decisions. He said the Board was not asked to provide advice, but the document was shared and the Board was invited to comment. Tony said there probably will be advice, but the current draft will not be ready for consideration at the April Board meeting. He said there was a detailed discussion yesterday at the River and Plateau Committee (RAP) meeting.

Tony provided a handout of his presentation titled “RCBRA Health Risk Assessment: Lifetime Cancer Risk 101”. He described how risk is most commonly expressed as absolute risk, which is the actual numeric chance of developing cancer during a specified time period. Tony talked about cancer mortality rates in relation to lifetime risks. He said the RCBRA uses lifetime risk calculations, which can be calculated using the mortality rates. This number provides the total risk over an entire lifespan of developing cancer that would not otherwise have occurred. Tony said the RCBRA acceptable risk level is  $3 \times 10^{-4}$ . Any higher risk level would require some remedial action to lower that risk. Tony said the risk standard is very protective of public health. He said the U.S. Environmental Protection Agency (EPA) uses more stringent risk levels for radiological contamination. Tony said the regulators determine the calculation procedures that must be used in the RCBRA. The assessors chose, in consultation with others, what assumptions they will consider. Assumptions include how much food will be eaten, how much time is spent in a sweat lodge, how much water people will consume, etc. These assumptions are used for lifetime risk calculations. Tony said the RCBRA is directed to use reasonable maximum exposure for all calculations.

Tony said the majority of the scenarios considered in the RCBRA use data from 156 waste sites that have already been remediated. The initial concentrations of radionuclides have already been removed from excavated pits that are back-filled with clean material. He asked if this is a conservative assumption to make. Tony said if they translate this information into risk, the risks are considered generally acceptable for sites that have been cleaned up. However, there are groups with different lifestyles that have higher risks. Native Americans have higher risks than other groups and there are treaty rights that must be addressed.

Tony said the numbers indicate a large portion of the risk is driven by arsenic followed closely by mercury. He asked where the arsenic comes from and if it is residual from former Hanford processes. He said he understands there was not a lot of arsenic used at the site. Tony said the RCBRA contains a lot of information on background levels of contaminants. Arsenic comes from geological sources, which creates natural background levels that vary substantially. He said one recommendation from issue manager (IM) meetings was to be clear about where arsenic comes from so money is not spent trying to remediate arsenic that is not part of the Hanford Site.

Tony concluded his presentation by discussing environmental beryllium. He said there was a lot of Be in the environment, both throughout Washington State and at the Hanford Site. He said Be problems occur in the workplace when dust blows particles in. Tony said it is interesting to note that Be is quite widespread throughout the environment, but for RCBRA type risk assessments Be is not factored in and is not considered a significant risk. Be becomes a problem through the inhalation of particles and through direct contact.

Tony introduced the draft advice prepared by RAP, which was displayed on screen. He said it will not be ready for April, but DOE did seem amenable to receiving advice in June. Tony said the document being considered was Part 2 of the RCBRA, the Human Health Risk Assessment. He said Part 1 is the Ecological Risk Assessment, which is not available yet. He said the ecological assessment tends to be a driver at Superfund Sites so conclusions from that assessment could trump the health assessment.

Tony said RAP is concerned that they are only able to view one piece at this time. He said it is not a problem in his mind because the health risk assessment is a stand-alone document. One of RAP's advice points will be that DOE should make the ecological assessment available to the public as soon as possible. Tony said the advice is currently returning to the IMs for further refinement.

#### *Committee Discussion*

- Keith suggested HSEP revisit the RCBRA topic in May after RAP finished refining their draft advice.
- Harold said his personal view is that some of RAP members are pushing for very high cleanup standards. He does not think they are necessarily considering some of the issues Tony raised.
- Tony said there are important elements to consider that are missing in the RCBRA, such as groundwater plumes. Keith said those considerations can be found in other

documentation that DOE has not yet provided. Tony said all the documents can be thought of separately; they are all factors that will build the final ROD, but do not need to be considered as a whole.

- Harold said it would be useful for RAP to consider the information provided by Tony which may alter the draft advice. He said there was a discussion yesterday around arsenic. DOE does not view arsenic that was on-site before Hanford was built as a problem. Keith said the arsenic is naturally occurring throughout Washington State.
- Tony said another issue that was brought up in the RAP discussion yesterday was that DOE might need more work on communicating risk to the public.
- Harold said DOE was in lengthy discussions with the tribes. He said the tribes were pushing for higher cleanup standards. Keith said the tribes have their own interface with DOE. Harold said the question is what the Board can do with the information and how they should be considering these issues raised by Tony.
- Cathy McCague asked if there should be another IM update at the next HSEP meeting. Tony said he wanted to hear from HSEP so he can reflect the priorities, values and judgment of this committee in the draft advice. Keith said HSEP will refer the information and Tony's presentation back to RAP for their draft advice scheduled to go to the Board in June.

### **Committee Business**

The committee elected Keith to serve another year as HSEP chair and Mike to serve another year as HSEP vice-chair.

The committee discussed their April work plan. They expressed interest in touring the tank farms instead of holding a meeting. Tom said Kevin Collins provided a briefing that indicated there was a lot of activity around vapor control and protective action that HSEP might want to learn more about. Becky said she works with Kevin and could attempt to coordinate with him so he would be available for the tour. Becky will serve as issue manager for setting up the tour.

Keith said he has an additional item for the committee to consider. He said there has been an effort at Mission Support Alliance (MSA) to develop a uniform safety program, which has been a mantra for workers as long as he can remember. Keith said MSA received an ISMS plan approval, but they were also tasked with helping other contractors develop uniform ISMS. He said he spoke with a few workers at MSA and heard from one that MSA had very successful observation teams made up of management and workers. He said these teams were very effective for observing how ISMS is being conducted in the field and allowed excellent opportunities for continuous improvement. Keith wanted to implement that among other contractors and he suggested the Board might want to provide advice around the topic. Becky said HAMTC is participating in that. Keith said all contractors might have similar programs. He suggested keeping track of that information.

Cathy will update the six-month work plan and distribute to committee leadership. She will also work with Pamela and Becky to arrange the tour for April. Keith will request a three-hour tour on this month's executive issues committee call.

**Handouts**

- Update on the Hanford Site Chronic Beryllium Disease Prevention Program (CBDPP). Pete Garcia, DOE-RL. March 10, 2011.
- ORP IH Brief to HC: 222-S Inhalation Incident – 1/5/11. Summation of Facts, Hypothesis and Corrective Actions, 2/24/11. March 7, 2011.
- Major Changes to RadCon Program in Response to ORP Program Review in 2010. DNFSB Technical Staff Tank Farms Project Review Safety Programs: Feb 16, 2011.
- RCBRA Health Risk Assessment: Lifetime Cancer Risk 101. Anthony James, PhD, CRadP. March 10, 2011.

**Attendees**

Board Members and Alternates

Tom Carpenter (phone)	Rebecca Holland	Liz Mattson (phone)
Harold Heacock	Steve Hudson (phone)	Keith Smith
Mike Korenko	Tony James	

Others

Julie Goeckner, DOE-HQ	Erika Holmes, Ecology	Mark Fisher, BAG
Brian Harkins, DOE-ORP		Nicole Addington, EnviroIssues
Pamela McCann, DOE-ORP		Cathy McCague, EnviroIssues
Marco Moreno, DOE-ORP		Barb Wise, MSA
Rich Urie, DOE-ORP		Michele Gerber, URS Corp
Brandon Williamson, DOE-ORP		John Britton, WRPS
Pete Garcia, DOE-RL		
Cameron Salony, DOE-RL		

**Attachment 1: Health, Safety and Environmental Protection Committee Meeting**  
**Transcribed Flip Chart Notes**

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**222-S Laboratory Exposure**

1. Brian Harkins will follow-up with Tom Carpenter on if documentation of exposure was filed in worker's file (AMH)
2. Follow-up to investigation if DOE cannot determine the cause – what is their process for moving forward in the event of a future similar situation?

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**Beryllium**

3. Funding for workers to attend meetings – where does the funding come from? Is there a specific line item in the budget?
  - a. Want information available at next week's budget meeting

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**Next steps**

4. Tank farm tour (3 hours)
  - a. Review of equipment – what it can and cannot do
    - i. How samples are gathered and analyzed
  - b. Hear from workers
  - c. Hear from IH reps
5. Take Tony's presentation back to RAP and RCBRA issue manager group
  - d. Cathy will talk to Susan H. about RAP hearing Tony's presentation

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