FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD
TANK WASTE COMMITTEE
October 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.

Opening*

Dirk Dunning, Tank Waste Committee (TWC) chair, welcomed the committee and introductions were made. Dirk reviewed the meeting agenda.

Hillary Johnson, EnviroIssues, explained the "Things to Consider" poster that will be brought to all future committee meetings. Among others, the purpose of the poster is to help guide and keep committee discussions focused on issues of priority, as well as reminding members to consider their constituencies.

The committee approved the August meeting summary.

Integration of Tank Farms and Waste Treatment and Immobilization Plant (WTP): One System Team

Introduction

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

Vince Panesko, TWC vice chair, opened the discussion regarding integration between tank farms and WTP. He noted this topic is a high priority for TWC but the committee needs to understand what integration means before they can comment. Right now, it may be unknown if the glass that will be made at WTP will be high quality glass because all of the tanks have not been characterized. A main concern is what to do with bad quality glass. At Savannah River, treating tank waste was less complicated because the waste was uniform. Hanford poses a unique challenge due to the variety of material stored in the tanks. Vince noted the importance of understanding the content of the tanks and ensuring waste being sent to WTP is uniform so the glass produced is high quality.

Pam Logan, U.S. Department of Energy-Office of River Protection (DOE-ORP), noted the committee's concerns are why One System was established. Initially the agencies thought that sending waste from the tanks to WTP would have an on/off switch but that is no longer the case. DOE realized more coordination was needed to address concerns and there is a long list of to-dos to ensure this large project is headed in the right direction. Pam noted that Ben Harp, Startup and Commissioning Integration Manager for DOE-ORP, was talking with the Secretary of Energy to make sure DOE has the resources to sort out issues with WTP and make it work as soon as possible.

Agency briefing

Ray Skwarek, Washington River Protection Services (WRPS), and Rich Kacich, Bechtel National, Inc. (BNI), provided an overview of integration between tank farms and WTP (Attachment 2). Ray and Rich were appointed about one year ago to lead One System. Both have both worked at other facilities including Savannah River and Yucca Mountain, respectively. The presentation covered the One System management approach, team vision, team organization, near-term initiatives undertaken and regulatory strategy.

Ray and Rich noted close collaboration and team building are important aspects to One System. Defining a mission statement was key to integration and helps ensure recommendations made to DOE are unified, mission-based solutions that reflect the values of both contractors.

Rich said the organization was established with no additional funding. DOE is supportive of integration because it promotes efficiencies. DOE-ORP or the U.S. Department of Energy-Richland Operations Office (DOE-RL) can go to their contractors with questions and get a response that has been coordinated and endorsed by both tanks and WTP groups.

An example of implementing the One System approach is the garnet issue at WTP. This issue has implications on both tanks and WTP. The One System team reviewed the issue and made a collective recommendation to DOE to use olivine instead.

Regulator perspective

Jeff Lyon, Washington State Department of Ecology (Ecology), said he is glad to see One System happening. It is a critical part to the success of WTP. Jeff and Dan McDonald, Ecology, have been

tracking waste feed but there are also concerns regarding schedule. DOE has provided a schedule but it was difficult to understand. Jeff noted an integrated schedule will be useful to Ecology.

Committee Questions and Response

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

Q: Who coordinates the waste feed delivery team?

> *R: [BNI] Waste feed delivery projects and strategy are both part of One System. The team is included in the front end design and technical teams.*

Q: Is DOE an active participant in One System meetings?

> *R: [BNI] Yes, DOE participates. Pam Logan is a counterpart for One System and attends weekly meetings and various working groups. It is important for One System to have openness. BNI is glad Ecology is sitting in on meetings related to waste delivery.*

Q: Is Ecology invited to sit in on other meetings?

> *R: [BNI] DOE representatives are invited to meetings and their participation is welcome. The One System team has not offered Ecology an invitation at this point but if DOE requested Ecology to be there the answer would be yes.*

Q: What is the scope of interface documents?

> *R: [WRPS] Interface control documents are related to establishing requirements for interface topics like waste acceptance criteria and secondary waste criteria, and also with Mission Support Alliance (MSA) and infrastructure requirements such as electricity and water. The documents define interface requirements for things going into the WTP facility.*

Q: Contracts have had cooperation functions built in for the last ten to 12 years. What has been going on all that time?

> *R: [DOE] Both contractors had enormous work to do in-house to get in shape for WTP operations. From a federal contract perspective, DOE could weigh costs, risks and benefits of having one contractor on site or splitting them into several contracts. There are positives and negatives associated with both. From a tax stewardship perspective, risk is reduced by having fewer contractors. DOE agrees there are issues that arise with integration but it is taking place at the right time.*

C: Contractors were not open until last year. WTP would design something and tanks would have to take whatever was thrown at them. There was no coordination before. Integration should have happened five to eight years ago and I think the project has suffered because of that.

Q: MSA coordinates on-site infrastructure. In what way are they integrated into the process?

R: [WRPS] MSA is responsible for preparing an integrated site.

[BNI] MSA is a frequent observer of the work One System is doing and their participation is increasing. The only way to be successful is by working together.

[MSA] Scott Boynton, Site Infrastructure & Utilities for MSA and executive liaison for DOE-ORP, explained that his job is to make sure MSA understands the infrastructure needs of One System as they move towards waste treatment service, including roads, electricity, water, etc.

Q: What process was used to determine that olivine is the preferred mineral over garnet (e.g. particle size, corrosion) for cutting tanks?

R: [BNI] The One System project team went back and reviewed previous evaluations and alternatives proposed in the past. They also looked at new information available and brainstormed potential solutions. All of the options were weighed against one another and the team concluded that olivine was the best choice. Two test cuts were performed to prove the effectiveness of olivine and that is the recommendation the team made.

Q: Where are One System people located?

R: [BNI] Currently people are co-located but later this month a number of people will move into the project office to improve communication. There are institutional impediments, such as reconfiguring phone lines, email, etc., that makes this process difficult but people understand the need to be connected to the "mother ship" in order to be meaningful contributors to the team.

Q: How are you dealing with the Nuclear Regulatory Commission (NRC) to remove key nuclides to the maximum extent possible so the waste product meets low-level waste and can be stored?

R: [BNI] Rich and Ray were not familiar with the technical aspects of this topic but agreed to take it back to the team to get an answer.

Q: What type of sampler are you using in Pasco for testing?

R: An Isolok sampler. It is an automated sampler that simulates re-circulated waste going through a loop. It takes a large number of samples and does testing on the samples to ensure they are accurate and representative.

Q: Regarding making higher quality glass, is there a plan to integrate and analyze documents such as waste transaction records, composite campaigns and legacy information?

R: [BNI] The Energy Security Team is actively raising this question. Work is underway to review requirements, with Yucca Mountain being the most obvious driver. Enhancements and resolutions are being done with an eye towards blending and the right technical minds are being engaged to address the committee's concerns.

Q: How are you integrating aspects of safety culture?

R: [BNI] The One System team is mindful of the need to improve the safety culture and always provides opportunities for people to bring up their concerns. The team has a responsibility to review and respond to individuals who raise safety concerns. One System is also working to include the client and contractors in the design process so there is a variety of input.

[DOE] DOE feels strongly that the biggest enemy when it comes to safety is complacency and people doing the same job for too long. It is good to stir the pot and have external oversight.

C: I am strong supporter of making a large opening in the tanks to accommodate the Mobile Arm Retrieval System (MARS). We have learned that cuts have already been made using garnet and I think that is why it was selected; DOE always selects the same method. DOE should look into capturing excess mineral so it does not enter the tank.

R: [DOE] The One System project team is a safety conscious team and they are always looking for improvements.

[Ecology] DOE does look at other methods. Catchment is expensive and there is no certainty it will do much.

C: TWC was tasked by DOE-ORP to look at integration and provide an evaluation by the end of the year. The One System approach seems like a step in the right direction. However, there are technical issues that TWC will want to discuss in greater depth at future meetings, such as sampling and mixing to ensure there is uniform feed supply to WTP.

R: [Ecology] Ecology supports getting TWC up to speed. This is a critical part of WTP success and there is time to do it.

Washington State's Letter to Energy Secretary Chu

Introduction

Vince opened the discussion regarding Washington State's letter to Energy Secretary Chu (Attachment 3). He said the difficulty today for the regulators and agencies is that they are not in a position to "speak for their bosses."

Vince explained the main points of the letter including the Consent Decree, which is a legal issue and therefore potentially outside the committee's purview, and the need for additional collaboration and openness from DOE regarding schedule.

Regulator perspective

Suzanne Dahl, Ecology, agreed that the topic was difficult to discuss as she did not want to speak in front of the Governor. However, a number of articles came out in the Tri-City Herald after the letter was sent and the letter speaks for itself. The Governor and Secretary had a meaningful discussion recently and Governor Gregoire was pleased with the amount of effort Secretary Chu was giving to the issue. US-DOE said their response would be delayed and the State agreed with that. The State determined not to move forward with the consent decree clause; the exchange with Secretary Chu gave the State hope that things were moving in the right direction. Having a WTP facility that works, does its job safely, and is built on schedule is still important to the State. There are a variety of risks associated with waste sitting in the tanks but the facility needs operate right, especially the black cells since they will be sealed up forever.

Committee Questions and Response

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

C: [Discussion] The committee discussed how the HAB should provide input on the letter. Susan L. agreed with Vince that there is a place for the HAB to go on record as supporting openness and transparency. She recognized there are negotiations happening but the Board can be an instrument for getting information to the public.

C: TWC is concerned that the agencies continue to be focused on the WTP schedule more than its performance.

> *R: [Ecology] The message about schedule is inadvertent. All agencies involved know WTP has to work and be safe. It is DOE and their contractors' job to build WTP correctly, and it is Ecology's job as the regulator to permit a facility that is going to work. The State is not interested in letting waste sit in the tanks and they understand the need for a vitirification plant.*

C: A key issue has been with DOE's ability to provide a baseline schedule.

> *R: [Ecology] A baseline schedule was provided to Ecology in two letters from Justice David Kaplan. There are two baselines in discussion – one related to caps on funding and the other related to what the schedule would be. Ecology asked for a non-funding constraint baseline but DOE declined.*

C: Developing baselines is an expensive process and accounting for uncertainties like funding make this process very difficult for DOE.

C: [Discussion] The group discussed the option of a letter versus a piece of advice. It was decided that a response should be simple and address issues related to openness and transparency. Technical issues should be left out of the HAB's response.

C: DOE would like to meet the schedule and milestones but they cannot. The Board does not have a place in the matter because it is ultimately up to DOE and Congress to sort out.

C: A response from the HAB is important to members' constituents. They want to know what the consequences are at Hanford associated with schedule and funding decisions being made.

C: [Discussion] The committee decided that because there is a good working relationship with the Governor and Secretary, advice is not appropriate at this time and may cause more harm than good.

C: Any future letter or advice regarding this topic should be sent not only to DOE but also to the Department of Justice (DOJ) and The Office of Management and Budget (OMB) because DOE does not make all final decisions related to funding. The issues that may be raised are political in nature.

Susan Hayman, EnviroIssues, reminded the committee that the HAB Process Manual would suggest developing a piece of advice because this is a policy level issue. The committee is free to respond however they feel is most appropriate; however, the way the Process Manual is written, a letter should not be seen as a "softer" version of advice.

The group was disappointed that more DOE-ORP staff were not present to discuss this topic. TWC agreed that it will discuss the need for and/or write advice about transparency and openness at its November committee meeting.

Gary Brunson's Memo to DOE-ORP

Committee discussion

The committee discussed the memo Gary Brunson, DOE-WTP Engineering Division Director, wrote to Scott Samuelson, DOE-ORP/Acting Federal Project Director for WTP, raising concerns about BNI's performance as the Design Authority at WTP (Attachment 4). At the time of the meeting, Mr. Brunson had not yet received a response. Mr. Samuelson did not want to address TWC about the letter until he had an opportunity to meet with Mr. Brunson and work through his concerns.

Liz announced that Hanford Challenge is not representing Mr. Brunson, but because they are involved, Tom has decided to step down as issue manager.

Vince said are a lot of technical issues the HAB has acted on, some dating back to 2008 such as the ammonium issue and worker safety, but DOE still has not resolved them. The committee agreed that an increased complexity in contractor design with less reliable components and unproven methods have the potential to add uncertainties and costs that the project cannot afford.

Committee Questions and Response

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

Q: Does DOE have a conflict resolution mechanism in place for dealing with issues with their own contractors? Did these 34 points go through that process?

> *R: [DOE] Yes, there is a Differing Professional Opinions Process. DOE could not respond to whether the 34 points have gone through the formal process or not.*

Q: Is Ecology involved?

> *R: [Ecology] This issue is internal to DOE and its contractors. Ecology shares similar concerns with Mr. Brunson but the letter is outside Ecology's purview.*

C: Bechtel is the Design Authority for their own design and DOE does not have the time or staff to monitor them closely. The Design Authority should be independent of the design team and DOE.

C: The design of WTP needs to be flexible because of all the different types of waste. Bechtel was encouraged to take the original design concept and proceed forward with it, which is why issues arose. BNI and DOE need to put the design on hold until a third party can provide a detailed review of it.

TWC decided to postpone potential advice until after Mr. Samuelson and Mr. Brunson meet. Given the technical nature of the issue, Dirk, Dick, Harold and Vince agreed to sit down with the agencies to discuss and understand the technical issues. The group agreed that potential advice should focus on having an independent review of the WTP design process.

Double-Shell Tank Integrity

Agency presentation

Jeremy Johnson, DOE-ORP Tank Integrity Program Manager, provided an overview of the Double-Shell Tank (DST) Integrity Project; including objectives, inspections, and chemistry control (Attachment 5). He also provided an update on DST AY-102 and fiscal year (FY) 2012 work scope.

Regarding AY-102, visual inspection observed two locations around the tank that have materials on the floor, which DOE did not expect to see. A robot crawler was used to take a small sample, and a separate crawler with an auger-like drill was also used to take a sample from the annulus. The samples were sent off and results are expected in late October. Jeremy said DOE will use the results to determine if the material on the floor is waste and if it came from a leak in the primary sodium pump (PSP).

Committee Questions and Response

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

Q: Is the material hot?

> *R: [DOE] The size of the sample collected was not very big. DOE was hoping to get more with the second sample. The dose reading when it was pulled out of the annulus was 44 mg/h so it was not substantial, but again, it was a small amount of material.*

Q: Was your original assessment of the leaky material not consistent with what is in the tank?

> *R: [DOE] A quick analysis of the material in the annulus was done but DOE could not gain enough information to determine anything.*

Q: Was the material located on the floor of the annulus or the walls?

> *R: [DOE] The first sampling was off the floor but some crystalline material was observed on the upper launch.*

Q: Are the three piles of material all being sampled?

> *R: [DOE] The first sample was taken under riser 83 and the second was taken under riser 90. DOE is trying to get a sample from the third one.*

Q: Is Ultrasonic Testing (UT) testing on a schedule? What is the sensitivity of UT?

R: [DOE] Yes, it is on an eight to ten year cycle. The sensitivity is the thickness of the tank plus or minus 5 millimeters for 15 inch scans. Twelve inches are scanned at a time. It is about 150,000 pixilation for 12 inches.

Q: Are inspections done on all wells or just a percentage of the wells?

R: [DOE] Just a percentage. Not all wells are sampled.

Q: How does water get into the tanks?

R: [DOE] There is concrete on the top of the tanks, but the two tanks, between the secondary liner and the primary tank, are not welded together.

Q: How many risers are in each tank?

R: [DOE] Up to 126 risers but the number varies. At AP Farm there are about 67 risers per tank.

Q: Are visual inspections costly?

R: [DOE] Running a camera for a few days is not expensive but the preparatory work is. DOE determined it would cost an estimated $4 million to inspect all 28 DSTs in one year.

Q: If you are not visually inspecting all of the tanks or not inspecting around an entire tank, how do you account for not finding something? How much assurance do you have of what is all around the tank?

R: [DOE] The tanks are split into four quadrants and what can be seen during a visual inspection is dependent on the size of the riser. It is hard to see 100 percent of the tank. There are tradeoffs with doing visual inspections versus UT inspections. UT inspections survey less area than visual inspections. UT is getting more efficient but before it was very expensive due to all of the preparatory work associated with them. UT takes about six weeks to complete.

Q: What type of testing gives you the biggest bang for your buck? If the HAB offers advice on the DSTs, is there a place of key value with the program that cannot afford to see funding cuts?

R: [DOE] That is difficult to determine. It is important to look at the tanks from all aspects, inside and outside. External work is what identified the leak on the annulus in AY-102 and should be done more frequently.

Q: With regards to tank corrosion, how often do you do sodium hydroxide treatments?

R: [DOE] Three were done this year. Models are used to identify when a tank's specifications are close to being off.

C: I believe DOE should add as much sodium hydroxide to the tanks that is necessary to ensure they are not corroding. They should be less worried about adding too much caustic and more worried about the tanks falling apart.

Q: Do the tanks have a mechanism for stirring?

R: [DOE] Yes, there is a pump that can stir the tanks.

Q: What is the cost to mend a tank? Does that cost include testing?

R: [DOE] Approximately $100,000 per tank for the first time. The cost is a condition of buying the chemicals. Total cost including testing is about $300,000. A new style of probe was designed to be retractable so it is reeled down into the waste instead of having to use cranes, which is more difficult to get things in and out.

Q: What pH level do you shoot for? What is the average temperature of the tanks?

R: [DOE] A pH of 13 or higher. Tank temperatures are between 70 and 170 degrees Fahrenheit. Most are below 90 degrees.

Q: What is DNV?

R: [DOE] It is a testing lab in Columbus, Ohio that does a lot of work on pipeline failure and integrity. There are only two or three labs in the county that do this type of testing. DNV did the report on the drilling equipment that failed in the Gulf.

Q: Is sodium nitrite added to tanks as well?

R: [DOE] It was in the past but nitrite level is not a concern.

Q: Is AY-102 out of spec? When you go through your modeling are the results what you expect?

R: [DOE] Results were just delivered and the report should be ready by next week. Sometimes models will say a tank needs to be sampled and the tank specs are fine. Other times the specs are off. The modeling is conservative.

Regulator presentation

Michelle Hendrickson and Jeff Lyon, Ecology, provided an overview of the dried material in the DST (241) AY-102 annulus (Attachment 6). Ecology's presentation covered tank construction, 241-AY-102 waste transfer operations, waste characteristics, tank chemistry, sampling history, potential sources of intrusion, future implications and future implications.

Committee Questions and Response

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

Q: How does liquid get into the annulus and where are the openings? Are you concerned about this happening with other tanks? It is critical for TWC and the HAB to understand how liquid got into the annulus.

> *R: [Ecology] It is not easily explainable and the agencies are working to determine these "what if" scenarios. Part of DOE's review process is to examine historical records to see if there have been instances in the past that might contribute to an explanation.*

Q: Does the evaporating process change pH? If so, does DOE coordinate caustic additions with the evaporation process?

> *R: [DOE] Yes, this is accounted for in depletion modeling.*

Q: Is there space under the tanks?

> *R: [Ecology] Some tanks have space between the primary and secondary tank. The tanks are tack welded so they are flexible and can move and expand.*

Q: Can the sludge in AY-102 be moved?

> *R: [Ecology] AY-102 is a high level tank so putting the sludge somewhere will be tough because of the heat. Pumping would require a lot of planning.*

Q: Does AY-102 have cyanide?

> *R: [Ecology] It got high cesium loads from B Plant in the 60s and 70s and from C-106.*

Q: What did the Emergency Pumping Guide of a Minor Leak presume? What is the suggested action for a leaking tank?

R: [Ecology] The Pumping Guide came from the TPA process. It explains that some leaks are caused by isolated pockets of corrosion or a trickling leak. The guide states waste would be pumped out, the tank would be fixed, and then the waste would be pumped back into the tank. Ecology does not get to sit in on meetings regarding DOE's plan for emergency pumping. Ecology will receive a document on October 22 that has been reviewed and approved and Ecology will need to respond to it.

Q: What is the difference in emergency pumping for a minor versus a major leak?

R: Minor leaks do not trigger emergency response. However, minor or suspicious leaks into the annulus may trigger a continuous area monitor (CAM) alarm.

Q: Where would the pumped waste go?

R: There is emergency space. In an emergency pumping situation, DOE would have to transfer the waste to a number of tanks. In order to pump waste into another tank, the two wastes need to be compatible so testing would need to be done.

Q: How comfortable is Ecology with the frequency of DST tank monitoring and if enough characterization has been done to send waste to WTP? Should the Board recommend that monitoring is done on every tank regardless of budget?

R: [Ecology] Ecology requires professional engineers to assess the DST Integrity Program and there is a high level of confidence with the right level of compromises. Dance Design, Incorporated (DDI) works with WTP contractors to understand models of products and byproducts, and they can determine transfers of waste. They also sample to adjust models. When retrievals are done, DDI estimates are accurate and adequate enough to plan for WTP treatment.

Q: Why is AY-102 out of specification, regarding its chemistry, and how long has it been this way?

R: [Ecology] This tank is historically out of specification and that can be caused by a variety of things. Samples from the tank showed it does not meet specifications so the tank specs were amended over a period of time. In 2007, corrosion testing of the tank showed no threat of cracking. The tank has a tailored specification allowing it to be up to 177 degrees Fahrenheit. The tank has such a high heat that it mixes itself slowly based on thermal heat current, which changes the pH of the tank.

Q: This is the tank that is supposed to feed waste to WTP?

R: [Ecology] Yes, the current design calls for AY-102 to serve as the feed using mixer pumps (to be installed).

Q: If the waste from the tank needs to be pumped out, where will it go? The requirements say it must be moved within three months of the emergency. Is that really feasible?

> *R: [Ecology] Ecology has been patient with the Tank Integrity Team but they have not shared this information. While Ecology sees the leak in the primary tank as a failure as far as risk to the environment, there is secondary containment. Also, the Resource Conservation and Recovery Act (RCRA) regulations are in place for safety and they do not expect to see contamination to the environment.*

C: Once WTP starts running it cannot be stopped. AY-102 as the waste feed is another weak point in the system. Without a contingency plan, WTP is a house of cards.

C: I am a proponent of contingency planning and getting more tanks. It will be important for the people running the facility to understand it intuitively. Maybe the facility needs to be run like a military project to help ensure the people that work there are there for the long term.

Q: The issue is not corrosion but refractory failure. The tanks are likely sitting on cement at the radium and not supporting themselves. When the tanks get hot it applies shock to the structure.

> *R: [Ecology] There is supposed to be a way to examine the bottom of tanks but these tanks do not have that. AY-102 cannot be pumped and repaired until the leak is proven a leak through testing.*

C: AY-102 is one of the oldest tanks and needs to be eliminated as being the key component for WTP. New tanks should be built. It will cost a lot of money, but it is a matter of spending that money now or later.

Q: Is there a critical timeframe for advice on this topic?

> *R: [Ecology] The sooner the better for Ecology. However, DOE will have more information in a couple weeks once AY-102 sample results are returned.*

C: It will be really hard to get money from the federal government for a new tank. In addition, design will take approximately three to four years with the construction process taking another three to four years.

> *R: [Ecology] Secretary Chu is willing to stick his neck out. He agrees this is an issue that is not easily corrected. If HAB advice is timely enough, Secretary Chu may be able to do something before he leaves office.*

TWC decided to develop advice recommending that AY-102 not be solely relied upon for feeding waste to WTP, and that new DSTs are needed. TWC did not see a need to wait for sampling results because

AY-102 is already out of compliance. A list of potential advice bullets were developed regarding topics such as emergency tanks space and the need for new infrastructure (Attachment 1).

Committee Business*

Potential November meeting topics and 3-Month Work Plan
TWC discussed topics to prioritize for November, the remainder of 2012 and into January 2013. Issue Managers were assigned to key topics.

In November, the group agreed to review the State's response letter regarding the Consent Decree and work towards bringing advice to the February Board meeting. If time allows, a Sounding Board on this topic may take place at the November HAB meeting.

Attachments

Attachment 1: Transcribed Flip Chart Notes
Attachment 2: Integration of Tank Farms and WTP: One System Presentation
Attachment 3: Washington State's letter to Energy Secretary Chu
Attachment 4: Gary Brunson's memo to DOE-ORP
Attachment 5: DST Integrity Project Presentation
Attachment 6: Update from Ecology on AY-102 Presentation

Attendees

HAB Members and Alternates

David Bernhard	Laura Hanses	Liz Mattson
Al Boldt (phone)	Harold Heacock	Melanie Myers
Shelley Cimon	Steve Hudson	Maynard Plahuta
Rob Davis	Pam Larsen	Dave Rowland
Dirk Dunning	Susan Leckband	Mecal Samcow (phone)
Norma Jean Germond	Larry Lockrem	Dick Smith
		Margery Swint

Others

Jeremy Johnson, DOE-ORP	Dieter Bohrmann, Ecology	Chelsey Funis, EnviroIssues

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

Carrie Meyer, DOE-ORP	Robbie Biyani, Ecology	Hillary Johnson, EnviroIssues
Pam Logan, DOE-WTP	Michelle Hendrickson, Ecology	Susan Hayman, EnviroIssues
Tifany Nguyen, DOE-RL	Erika Holmes, Ecology	Rebecca Holland, HAMTC
	Jeff Lyon, Ecology	Sharon Braswell, MSA
	Cheryl Whalen, Ecology	Scott Boynton, MSA
	Ginger Wireman, Ecology	Reed Kaldor, MSA
	Kristi Wolfe, Ecology	Rich Weis, MSA
		John Howieson, PSR
		John Martell, WDOH
		Kayle Boomer, WRPS
		John Britton, WRPS
		Jack Donnelly, WRPS
		Felix Miera, WRPS
		Ray Skwarek, WRPS