Oak Ridge Site Specific Advisory Board Monthly Meeting

Wednesday, January 8, 2014
6 p.m., DOE Information Center
1 Science.gov Way
Oak Ridge, Tennessee

The mission of the Oak Ridge Site Specific Advisory Board (ORSSAB) is to provide informed advice and recommendations concerning site specific issues related to the Department of Energy's (DOE's) Environmental Management (EM) Program at the Oak Ridge Reservation. In order to provide unbiased evaluation and recommendations on the cleanup efforts related to the Oak Ridge site, the Board seeks opportunities for input through collaborative dialogue with the communities surrounding the Oak Ridge Reservation, governmental regulators, and other stakeholders.

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AGENDA

PRESENTATION MATERIALS – Sufficient Waste Disposal Capacity for the Oak Ridge Reservation – *to be distributed at meeting*

CALENDARS
1. January
2. February *(draft)*

BOARD MINUTES/RECOMMENDATIONS & MOTIONS
1. November 13, 2013, draft meeting minutes
2. EM SSAB Recommendation: Recycling of Contaminated Metals
3. EM SSAB Recommendation: Graphic Representation of Waste Disposition Paths
4. EM SSAB Recommendation: Funding for Cleanup Should Remain a Top Priority

REPORTS & MEMOS
1. Recommendation Tracking Chart
2. EM Projects Update
3. Abbreviations/Acronyms for EM Projects Update
4. Travel Opportunities
5. Trip Report: Bruce Hicks – EM SSAB Chairs' meeting
6. Trip Report: Corkie Staley – EM SSAB Chairs' meeting
7. Trip Report: Spencer Gross – EM SSAB Chairs' meeting
8. Trip Report: Dave Hemelright – PermaFix Conference
9. Trip Report: Howard Holmes – PermaFix Conference

Oak Ridge Site Specific Advisory Board
Wednesday, January 8, 2014, 6:00 p.m.
DOE Information Center
1 Science.gov Way, Oak Ridge, Tenn.

AGENDA

I. Welcome and Announcements (D. Hemelright) 6:00–6:05
   A. Next Meeting: Wednesday, February 12. Presentation Topic: FY 2016 Oak Ridge EM Budget and Prioritization

II. Comments from the Deputy Designated Federal Officer, and the DOE, EPA, and TDEC Liaisons (S. Cange, D. Adler, C. Jones, J. Owsley)..... 6:05–6:20

III. Public Comment Period (J. Riley) 6:20–6:30

IV. Presentation: Sufficient Waste Disposal Capacity for the Oak Ridge Reservation (Laura Wilkerson) 6:30–7:05
Question and Answer Period 7:05–7:20

BREAK..... 7:20–7:30

V. Call for Additions/Approval of Agenda 7:30

VI. Motions 7:30–7:35
   A. November 13, 2013, Meeting Minutes (L. Hagy)
   B. SSAB Chairs Recommendations (B. Hicks)
      1. Graphic Representation of Legacy Waste Paths
      2. Funding for Cleanup of DOE Sites
      3. Adoption of International Atomic Energy Agency Standards for Recycling

VII. Responses to Recommendations & Comments (D. Adler)..... 7:35–7:40

VIII. Committee Reports..... 7:40–7:50
   A. Finance & Process (G. Paulus)
   B. Environmental Management/Stewardship (B. Hatcher/C. Staley)
   C. Public Outreach (S. McKinney)
   D. Executive (D. Hemelright)
      1. Center for Oak Ridge Oral History (C. Staley)

IX. Federal Coordinator's Report (M. Noe) 7:50–7:55

X. Additions to Agenda 7:55–8:00

XI. Adjourn 8:00

Oak Ridge Site Specific Advisory Board

January 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 **New Year's Day** **DOE/staff holiday**	2	3	4
5	6	7	8 Monthly SSAB meeting 6 p.m	9	10	11
12	13	14	15 Environmental Management & Stewardship Committee 6 p.m.	16	17	18
19	20 **Martin Luther King, Jr. Holiday** **DOE/staff holiday**	21 Public Outreach Committee 5:30 p.m. teleconference	22 Finance & Process Committee 5 p.m. Executive Committee 5:30 p.m	23	24	25
26	27	28	29	30	31	

All Meetings will be held at the DOE Information Center, Office of Science and Technical Information, 1Science.gov Way, Oak Ridge unless noted otherwise.

ORSSAB Support Office: (865) 241-4583 or 241-4584 **DOE Information Center:** (865) 241-4780

Board meetings on cable TV and YouTube	
Knoxville: Charter Channel 6, Comcast Channel 12	Sundays at 7 p.m.
Lenoir City: Charter Cable Channel 3	Wednesdays, 4 p.m.
Oak Ridge: Channel 12	Monday, January 20, 7 p.m.
Oak Ridge: Channel 15	Monday, Wednesday, Friday, 8 a.m. & noon
YouTube	http://www.youtube.com/user/ORSSAB

Oak Ridge Site Specific Advisory Board

February 2014

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5 .	6	7	8
9	10	11	12 Monthly SSAB meeting 6 p.m	13	14	15
16	17 **Presidents' Day** **DOE/Staff holiday**	18	19 Environmental Management & Stewardship Committee 6 p.m.	20	21	22
23	24	25 Public Outreach Committee 5:30 p.m. teleconference	26 Finance & Process Committee 5 p.m. Executive Committee 5:30 p.m	27	28	

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DRAFT

Many Voices Working for the Community

Oak Ridge Site Specific Advisory Board

Unapproved November 13, 2013 Meeting Minutes

The Oak Ridge Site Specific Advisory Board (ORSSAB) held its monthly meeting on Wednesday, November 13, 2013, at the DOE Information Center, 1 Science.gov Way, Oak Ridge, Tenn., beginning at 6 p.m. A video of the meeting was made and may be viewed by contacting the ORSSAB support offices at (865) 241-4583 or 241-4584. The presentation portion of the video is available on the board's YouTube site at www.youtube.com/user/ORSSAB/videos.

Members Present

Jimmy Bell
Noel Berry
Alfreda Cook
Carmen DeLong
Lisa Hagy, Secretary
Bob Hatcher
Mary Hatcher
David Hemelright, Chair
Bruce Hicks, Vice Chair
Howard Holmes
Jennifer Kasten
Jan Lyons
Fay Martin
Greg Paulus
Belinda Price
Wanda Smith
Scott Stout

Members Absent

Scott McKinney
Donald Mei
Coralie Staley

Liaisons, Deputy Designated Federal Officer, and Federal Coordinator Present

Dave Adler, Department of Energy-Oak Ridge Office (DOE-ORO), Alternate Deputy Designated Federal Officer (DDFO)
Susan Cange, (DOE-ORO) Deputy Manager for Environment Management (EM) and ORSSAB DDFO
Connie Jones, Liaison, Environmental Protection Agency (EPA), Region 4 (via telephone hookup)
John Owsley, Liaison, Tennessee Department of Environment and Conservation (TDEC)
Melyssa Noe, ORSSAB Federal Coordinator, DOE-ORO

Others Present

Dan Goode, U.S. Geological Survey
Spencer Gross, ORSSAB Support Office
Gracie Hall, Student Representative
Dick Ketelle, UCOR
David Martin
Norman Mulvenon
Pete Osborne, ORSSAB Support Office
Julia Riley, Student Representative
Steve Stow
David Watson

Twenty-one members of the public were present.

Liaison Comments

Mr. Adler – Mr. Adler reported there are no outstanding ORSSAB recommendations requiring a DOE response.

Ms. Cange – Ms. Cange reported that demolition of the last six units of the K-25 Building at East Tennessee Technology Park is progressing more quickly than expected. The latest projections have the building being completely demolished in the January-February 2014 timeframe. The entire project, including removal of debris, which was slated for completion later in 2015, is now projected to be complete in the summer of 2014. She reminded the board that the demolition of K-25 has been the largest decontamination and demolition project in the U.S. She said a celebration of the completion of the project will be held next summer.

Mr. Owsley – no comments.

Ms. Jones – Ms. Jones agreed with Ms. Cange's statements on the K-25 demolition and noted that a scoping meeting had been held on the demolition of the K-27 Building, and EPA is looking forward to the start of that project as well.

Public Comment

Mr. Mulvenon said the presentation for the evening on the groundwater strategy for the Oak Ridge Reservation (ORR) is of great importance and asked everyone to listen carefully.

Presentation

Mr. Goode's presentation was on was groundwater strategy for the ORR. The main points of his presentation are in Attachment 1. Mr. Goode acted as a liaison for ORSSAB during a series of workshops on groundwater that included representatives of DOE, EPA, and TDEC to develop a strategy for addressing groundwater issues on and near the reservation.

Mr. Goode described the process for developing a groundwater strategy document (DOE/OR/01-2628&D1) (Attachment 1, page 5). The workshop participants created a charter and agreed on four focus areas and conducted six workshops during FY 2013. The workshop topics were:

- Conceptual site model workshops (3)
- Plume and project ranking workshops (2)
- Groundwater use restriction workshop (1)

Mr. Goode said consensus was reached on key groundwater issues (Attachment 1, page 7) including:

- Additional off-site monitoring is needed to assess potential off-site risks.
- An ongoing ORR Groundwater Program is needed to systematically prioritize and investigate groundwater plumes and data gaps.

Mr. Goode said the resulting groundwater strategy document that was released in September 2013 made several key recommendations (Attachment 1, page 8) that will go to DOE Headquarters for consideration. The recommendations were for:

- Additional funding for an ORR Groundwater Program.
- An off-site groundwater quality assessment program to be undertaken in the FY 2014-2016 timeframe.
- A strategy to address plume rankings for the long term.

Mr. Goode provided more information about the off-site groundwater quality assessment program (Attachment 1, page 11). The details of the program have not been worked out, but he said it would focus on the southwest side of the ORR where there have been questions about off-site migration of contaminants (Attachment 1, pages 12, 13, 15, 16). The project should determine if additional monitoring wells are needed in the area.

Ms. Price asked if the term 'low concentrations" of contaminants meant below drinking water standards. Mr. Goode said there was one instance of a contaminant detected at levels above drinking water standards. Other detections were below standards (Attachment 1, page 20).

Mr. Bell asked if the one detection of technetium on the west side of the Clinch River was of concern. He asked if additional samples had been taken. Mr. Goode said the conditions that existed when the sample was taken no longer exist. Pumping on the west side of the river that could have drawn the technetium has been stopped. The quality assessment project would address this issue in detail. Workshop participants concluded that off-site migration may have occurred and deserves further investigation (Attachment 1, page 21). He said ORSSAB could consider making a recommendation of the quality assessment project.

Mr. Goode talked more about additional funding for the proposed ongoing ORR Groundwater Program. He said it would be part of the current Water Resources Restoration Program (Attachment 1, page 23). This would be in DOE's baseline budget that would be funded for years. He said ORSSAB could consider recommending that DOE secure additional baseline funding for the program that would include modeling to obtain maximum benefit of monitoring data and other information (Attachment 1, page 33).

Mr. Goode said, in his perspective as a liaison, the board could consider recommending that DOE broaden the technical support team beyond site contractors to include academic and government experts (Attachment 1, page 34).

Mr. Goode then discussed plume rankings on the ORR and the process used to determine which plumes were most important (Attachment 1, pages 36-40). He explained that the resulting table on page 39 of Attachment 1 is sorted by the pathway score to emphasize the importance of potential off-site migration, and reflect the first step in the ranking. He also noted that off-site migration was a primary area of interest given to him by the board's EM Committee when this project began. The plumes of the highest priority are noted on page 40 of Attachment 1. They include high pathway and overall plume scores.

He showed a figure of the some of the plume areas (Attachment 1, page 41). The hydrofracture site was had the highest overall plume score, and the highest hazard score. Measurements of strontium in wells above the hydrofracture suggest there may be migration of contaminants away from the site. Mr. Goode said there appears to be basic data and information about the hydrofracture site that is not being adequately archived. There are existing records that are not archived properly and could disappear. Mr. Stow said the records are currently stored in the history room at Oak Ridge National Lab and only a few people know they are there. He said study of those records and collection of information from people who were involved in the hydrofracture process could provide additional information about the characteristics of the hydrofracture site.

Regarding the plume rankings, Mr. Goode said the board could consider a recommendation on the rankings for management of site-wide groundwater remediation (Attachment 1, page 42). He also said the board could consider a recommendation that DOE collect, review, and archive records associated with hydrofracture disposal (Attachment 1, page 43).

After Mr. Goode's presentation additional questions were asked. Following are abridged questions and answers.

Ms. DeLong – Did you develop exposure pathway scenarios? What is your basis for toxicity? How did you validate all of this data? Basically, what was your sampling program? Mr. Goode – I don't have the answer to a lot of that. There is explicit discussion in the report. In the appendices there is a conceptual site model for each watershed where the plumes are discussed and what we know from the monitoring information and from the studies what we've learned about transport in those areas. From that there were specific ways of determining the numbers. As far as toxicity I can't tell the specific process for determining a 7 or a 5. I don't work on that much in terms of rankings, but it's a modified version of a standard hazard ranking procedure that EPA has. Ms. Cange – The purpose of this ranking is not to establish a risk assessment under the CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) guidelines. A risk assessment is normally prepared when making decisions regarding cleanup to help determine if cleanup is warranted and to establish cleanup levels and guidelines. This ranking was a collaborative effort among all the people in the group to try to help to identify which plumes were of the highest concerns regarding all of the various criteria. It is for the purpose of developing a characterization plan and collecting more information. It's not the same as performing a risk assessment to make cleanup decisions. That is a process that will be followed later when we get to those cleanup decisions. Mr. Goode – In the appendices of the groundwater document is a list of questions that DOE asked the three agencies. One of the responses from EPA underscored that off-site detections that have occurred so far do not rise above the level where EPA tells DOE it needs to do something beyond groundwater use controls.

Mr. Hicks – I notice that the focus of the group was on the transport to off-site areas. Suppose the consideration had been on what the hazards are. Would the selection of important plumes been different? Mr. Goode – Yes. The hydrofracture has the highest hazard score. But it is not the plume selected for short-term action. In the charter for the team was the concept of focusing on off-site migration. It was determined early on that was an important factor.

Mr. Paulus – When you were talking about the well samples west of the Clinch River, the one private well with the one bad sample, you used the term 'it could have come from the reservation.' Why do you say that? Mr. Goode – I don't know whether it did or didn't. Mr. Adler – In that instance it was a solvent. Those compounds, volatile organic compounds (VOCs) are used in all types of applications. They are used both on and off the reservation. This area is next to the former Atomic City racetrack. There is a lot of agriculture activities where degreasing of tractors is done which could result in some discharge to the ground and ultimately getting in groundwater. So these VOCs are not unique to Oak Ridge's former industrial operations. We have VOCs underneath the reservation that came from Oak Ridge operations, but that's not necessarily the case where VOCs were observed off the reservation. The technetium that was detected, however, had to have come from Oak Ridge operations. Mr. Ketelle – The VOC detections and the technetium detection were not in a private well. They were in a DOE monitoring well on the east side of the Clinch River. In the first sampling round we conducted after aggressive development of the well, we saw those contaminants there. We have not seen them in about 10 subsequent samples. Our conclusion is we probably drew the contaminants into the well during the development process since they don't persist during any additional samples. We pumped hundreds of gallons of water out of these wells, drawing the water level down hundreds of feet. The wells have been very slow to recover. They don't produce very much water. Two of the wells have not recovered from the summer of 2010. It is a fractured rock system and not a good water resource. The water does not flow at high velocity with great yields. Mr. Adler – (to Mr. Bell) I understand your earlier comment about if you get an unexpected result you repeat it to see if you get it again. In this case, the result was a very high

quality result. While the measured value was well below the drinking water standards it was also well above the detection levels for quantification limits, so we think it was a real measurement well outside the error limits. So we're confident it was a measured presence of technetium in the well.

Ms. Hall – You've said the focus was on pathways because that deals with migration. Are you going to deal with the hazard rankings and all the implications of that or is that someone else's job? Or are you going to do it after migrations are addressed? Mr. Goode – It's something of a two-step procedure. What I've highlighted [on slide 40, Attachment 1] are the plumes that came out of this ranking procedure as the highest priorities. First they looked at plumes that were in the highest category for the pathway score, and that's how the table is sorted. And then the overall plume ranking was considered. Only the high overall plume score was used to select the highest five or six plumes. Keep in mind the overall plume score also has the pathway score in it. It's really weighted twice with the pathway. Out of the highest ranked pathways the projects identified as the most important were the ones that also have high hazards. For future purposes we're hopefully going to work down this list.

Ms. Cange – I would like to re-emphasize that the purpose for this groundwater strategy was to come up with an agreed to path forward for additional investigation to allow for future cleanup decisions. The ranking is not the ranking for cleanup decisions. There was a lot of risk management decision making that went into the process to develop this list. Again, it was to guide us in where we want to collect additional data in order to support future cleanup decisions. It's intended to prioritize where we first want to direct our data collection activities. So all of the plumes that require remediation under CERCLA will be addressed as we go through the cleanup process. We intend this to be something that comprehensively looks at the groundwater across the reservation and develops a strategy that all three agencies can agree to for additional investigation and additional work before making cleanup decisions.

Mr. Hatcher – As a scientist for an impartial agency how do you think this process of looking at groundwater should proceed? Mr. Goode – No one should be alarmed at how it's going now. There is no emergency here. DOE is managing the site. They are protecting the health of the public and the environment from the contamination in Oak Ridge. When I began more than 30 years ago, Oak Ridge was one of the places you went to learn about groundwater monitoring and contaminant transport. This is a very complex process for science. It's still developing, and I think we need to move toward the kind of program that existed here. We can learn a lot during remediation with monitoring and with the activities that we change with our different remediation activities. I think there needs to be strengthening of scientific aspects of moving forward of understanding contaminant transport.

Mr. Bell – (to Ms. Cange) Did you say there would never be remediation of a plume? Ms. Cange – There will be decisions made under the CERCLA process regarding whether plumes will be remediated or not. This ranking system was developed as part of this strategy document was not intended to be the system to decide what may or may not be remediated. Mr. Bell – (to Mr. Goode) Did you say near the end of your talk that there would be no remediation of plumes? Mr. Goode – The point I was trying to make about hydrofracture disposal is that under practically any future scenario that I can envision that waste will be at that spot basically forever. As Ms. Cange said, there will be a program to deal with that to protect the public and the environment from hazards associated with that waste, but that waste is not going to leave that area. Mr. Bell – Do you think based on all the data you have looked at that there is a plume that needs to be remediated? Mr. Goode – I think there is some data suggesting migration of contaminants from the hydrofracture disposal volumes to fresh groundwater nearby. The first project we're talking about is investigating off-site transport in the area of Melton Valley (where the hydrofracture site is located) that will hopefully shed some light on the hydrofracture disposal as well as the other contaminants that have been detected. Mr.

Ketelle – We reported in the 2011 Five-year Review levels of strontium-90 in levels of 600 feet, which is above the hydrofracture injection zone. We've seen levels about 10 times the drinking water limit in saline water; it's still in briny liquids at that depth. There are wells farther away in Melton Valley and then picket wells by the Clinch River that are the last point at which we can sample. There is one of the wells in the north end of that picket line that we occasionally detect strontium-90 at depths of 500 feet at levels typically less than drinking water standards at that location. Mr. Goode – For each of the plumes there is an identification of data gaps and uncertainties that remain. We have data gaps identified for every single plume that we considered. Mr. Bell – I don't see that there is any indication that there is off-site migration of radionuclides. If that is the case why do you talk in terms of off-site migration being the important part of this study? I think the identification of these things on-site should be more mandatory. If you don't have anything in these wells near the river that are above drinking water standards, why would I think there is anything across the river? Mr. Goode – Your point is well taken and when the question was asked was it or was it not from the site I don't know.

Mr. Bell – On the idea of remediation a plume, one needs to understand what a plume is. It's not a channel. It's a broad area that may be acres of property that you're talking about remediating. I will bet that in our lifetimes we will not remediate any plumes. Mr. Goode – The word 'plume' is not a good word for us to use in this case. The plume concept comes from a smokestack where there is a point where everything is generated and it spreads out and disperses and gets less and less concentrated and covers a large area. That's not what's happening at this site in fractured rock. There are very limited, discreet pathways, more like channels and not plumes. Contaminants are migrating into a discreet, high permeability channel or conduit. You can think can think of it as an underground stream. Basically it's a small part of the rock that transmits water. That part is contaminated on-site and contaminants could move off-site, especially if pumping is going on nearby. The cleanup only has to focus on those discreet channels. Ninety-nine percent of the rock in those areas is not contaminated. That water is barely moving.

Mr. Martin – What about land use controls? Did you talk about this for groundwater off the reservation; are we heading in that direction now or are we going to continue on a volunteer type program? Mr. Adler – We did have a session on the potential role of land use controls and other non-engineered measures we might use to protect the public. One of the questions we asked the agencies to answer was if there would be the imposition of any additional groundwater use restrictions based on what we know and they answer was 'no.' But it was recognized that it was the most direct and effective way of preventing exposure. It is a tool we are using in limited areas in that small number of wells across the river where we've had these occasional detections, we've entered into licensed agreements with properties owners where we provide them water and they agree not to pump from their wells.

Mr. Watson – I'm with Oak Ridge National Lab. I want to make a comment along the line of Mr. Stow's as far as capturing corporate knowledge. In the 1990s we established the Field Research Center that studied the S-3 Ponds plume under the Office of Science. There are hundreds of publications from that. I just want to make sure that we don't lose that. We are still working there and doing sampling under another program called Enigma. There is a lot that can be learned from what we've done there in the past.

Committee Reports

Finance & Process – Mr. Paulus reported the committee did not meet in October as a result of the government shutdown. The next meeting will be November 21 at 4:30 p.m. and will be the last meeting until January 2014.

EM & Stewardship – Mr. Hatcher reported that the committee continued its work to merge and will

meet as the combined committee on November 20 at 6 p.m. at the DOEIC when it will discuss the groundwater strategy document and Mr. Goode's presentation on the document at this meeting.

Public Outreach – Ms. Lyons reported the committee has been discussing a number of topics. One is using carryover funds from the previous fiscal year to increase print advertisements in local newspapers and to have the ads have different looks and not rely on a template ad. The committee will work to increase the placement of Advocate newsletters in public places in surrounding counties. She asked board members to think about locations where they could take newsletters and distribute them.

She said the committee has decided to continue participation in the annual Earth Day celebration, but will no longer have exhibits at the Secret City Festival. The committee believes Earth Day is more relevant to the ORSSAB mission and is easier to staff since it is a one-day festival.

The exhibit at the American Museum of Science and Energy has been updated. She asked board members to go see it and invite others to go see it as well.

The Office of Management and Budget has approved ORSSAB's Public Environmental Survey. Ms. Lyons said the new survey will be distributed in 2014.

The committee will meet on Monday, November 18 at the DOEIC at 5:30 p.m.

Executive – Mr. Hemelright reported the committee did not meet in October since there was no ORSSAB meeting as a result of the government shutdown. The committee will meet on Thursday, November 21 at 5:30 p.m. at the DOEIC. He said the committee normally meets on the second Wednesday after board meetings, but this month was a schedule change. The committee will not meet in December and will resume on Wednesday, January 22 at 5:30 p.m.

Announcements and Other Board Business

ORSSAB will have its next meeting on Wednesday, January 8, 2014, at the DOE Information Center.

The minutes of the September 11, 2013, meeting were approved.

Federal Coordinator Report

Ms. Noe said this meeting was an experiment to set up an Internet 'hot spot' in the DOEIC so people who brought notebook computers could log onto the ORSSAB website and access the meeting materials posted on the website. She said each month meeting materials will be posted on the ORSSAB website when meeting packets are mailed. Anyone preferring to access materials via the Internet can ask to be removed from the meeting packet mailing list, which will save materials and postage.

Additions to the Agenda

None.

Motions

11/13/13.1

Mr. Paulus moved to approve the minutes of the September 11, 2013, meeting. Mr. Bell seconded and the motion passed **unanimously.**

The meeting adjourned at 7:55 p.m.

Action items

Open

None.

Closed

1. DOE will provide a link to budget volumes that provide descriptions of cleanup sites, their challenges, and funding profiles. **Complete:** The presentation provided by Terry Tyborowski at the EM SSAB Fall 2013 Chairs' Meeting provides an explanation of sites, challenges, and funding profiles. The presentation can be found at: http://energy.gov/sites/prod/files/2013/11/f4/EM%20Budget%20Update%20by%20Terry%20Tyborowski.pdf

Attachments (1) to these minutes are available on request from the ORSSAB support office.

I certify that these minutes are an accurate account of the November 13, 2013, meeting of the Oak Ridge Site Specific Advisory Board.

Lisa Hagy, Secretary

Dave Hemelright, Chair DATE
Oak Ridge Site Specific Advisory Board
DH/rsg

November 6, 2013

David Huizenga
Senior Advisor for Environmental Management
U.S. Department of Energy, EM-1
1000 Independence Avenue, SW
Washington, DC 20585

Dear Senior Advisor Huizenga:

Background

The Environmental Management Site-Specific Advisory Board (EM SSAB) wishes to thank the U. S. Department of Energy (DOE) for taking action toward lifting the suspension on unrestricted use of non-contaminated metals and equipment from radiological areas. This action, which would preserve metals and materials that would otherwise be treated as waste, demonstrates DOE's commitment to achieving its policies of waste minimization and pollution prevention.

The EM SSAB believes that DOE made the right decision in researching and publishing the *Programmatic Environmental Assessment for the Recycle of Scrap Metals Originating from Radiological Areas (DRAFT)***.** Responsible stewardship of government resources by recycling, reclamation, and reuse will help preserve the precious natural resources of this nation for future generations and our national security. The EM SSAB looks forward to the final decision of the Programmatic Environmental Assessment as the DOE seeks to align itself with Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*.

The EM SSAB has long advocated recycling and reuse of excess metals and materials by the DOE as an environmentally responsible method for the DOE to deal with waste and preserve national assets. The EM SSAB also believes it would benefit DOE and the nation if the Department develops and implements a strategy to educate the general public on benefits and risks of recycling metals from DOE EM sites.

Recently, the DOE implemented a pilot study at the Portsmouth Gaseous Diffusion Plant (GDP) site to study nickel processing. The EM SSAB looks forward to reviewing the results of the year-long trial of the carbonyl process recently authorized at Portsmouth.

The EM SSAB believes that the DOE should make a final decision on standards for free-release of metals and equipment. International standards, long used by other industrialized nations, provide the regulatory framework for determining free-release standards in developed nations. It is probable that materials which have been imported into the United States have been released from their country of origin on the basis of the International Atomic Energy Agency standards. Therefore, it would seem that the United States would also adopt these standards as the criteria by which human health and the environment are protected. While we are not advocating a reduction in protection, we are advocating that uniform standards be established based on those already adopted by other industrialized nations.

There are vast amounts of contaminated, high quality nickel and other metals that should be reclaimed when DOE facilities undergo decontamination and decommissioning (D&D). The Paducah GDP and Portsmouth GDP cascades, for example, are made up of several components such as compressors and converters, along with miles of associated piping. These components are constructed of nickel, monel, copper, nickel-plated steel, aluminum, and other valuable materials. If these components are treated as waste, they will consume volumes of space in disposal cells. In cases where the technology is not currently available for decontamination, high value materials should be stored pending development of innovative technologies.

Another option for disposition of volumetrically contaminated assets could be restricted reuse of the reclaimed assets by DOE-authorized nuclear facilities, the commercial nuclear industry, or Nuclear Regulatory Commission licensees authorized to possess the material. Nickel currently stored at Paducah and Oak Ridge, along with the volumes that will be generated during the D&D of the GDPs could be used in this manner and still be compliant with the moratorium of January 12, 2000, which prohibits free-release of volumetrically contaminated scrap metals.

<u>Recommendation</u>

Besides the DOE making a final decision on release of clean metals originating from radiological areas, the EM SSAB recommends DOE establish a comprehensive and structured recycling program to address volumetrically contaminated metals. This action offers the following benefits:

- Support environmental sustainability goals by recovery of many hundreds of tons of valuable materials and components that are of value to the nation's economy.
- Generate significant revenue to both DOE and host communities.
- Reduce footprint of on-site or off-site disposal cells.
- Minimize disposal costs.
- Reduce site legacy costs.

DOE should develop a strategy to educate the general public on benefits and risks of recycling metals from DOE EM sites.

The EM SSAB recommends DOE adopt International Atomic Energy Agency standards or their equivalence in determining which metals and materials meet the criteria for free-release and provide a report on the impact of this action. As a part of adopting the IAEA standards DOE should develop a public education component.

The EM SSAB recommends that in cases where technology is not currently available for decontamination, high value materials should be stored pending development of innovative technologies.

Steve Hudson, Chair
Hanford Advisory Board

Herb Bohrer, Chair
Idaho National Laboratory Site EM Citizens Advisory Board

Kathleen Bienenstein, Chair
Nevada SSAB

Carlos Valdez, Chair
Northern New Mexico Citizens' Advisory Board

David Hemelright, Chair
Oak Ridge SSAB

Ben Peterson, Chair
Paducah Citizens Advisory Board

William Henderson, Chair
Portsmouth SSAB

Donald Bridges, Chair
Savannah River Site Citizens Advisory Board

cc: Kristen Ellis, EM-3.2
Catherine Alexander, EM-3.2

November 6, 2013

David Huizenga
Senior Advisor for Environmental Management
U.S. Department of Energy, EM-1
1000 Independence Avenue, SW
Washington, DC 20585

Dear Senior Advisor Huizenga:

The Environmental Management Site-Specific Advisory Board (EM SSAB) recommends that the U.S. Department of Energy (DOE) develop and make available to the public graphic representations of the current and planned EM legacy waste disposition paths. Some years ago the DOE created such maps in conjunction with the League of Women Voters and they were presented at two national Waste Disposition workshops. The maps were accompanied by large 3D displays using the map of the U.S. as the base, overlaid by stacks of colored plastic boxes representing types and relative quantities of nuclear waste that were placed in the locations where the waste would be generated or interim stored with an arrow stretched from that location to the final disposal site with dates for disposal inside the arrows. The 3D visuals were profound and easily understood, and paper, color-coded graphics were provided to the participants in the workshop to keep.

The EMSSAB requests that DOE resurrect or re-create these “disposition maps” and make them publicly available online. We realize that for security reasons certain wastes can’t be quantified but that is a small portion of the waste to be disposed. These maps would be incredibly beneficial to the EMSSAB and would increase the public’s ability to understand the waste types, quantities and plans for disposal so they can become more informed as opportunities for public engagement in decisions of waste disposal arise.

The EMSSAB volunteers to work with the DOE-EM on the development and/or updating of the maps and could be the first public reviewers of the graphics to help ensure the maps are easily understood by the public.

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cc: Kristen Ellis, EM-3.2
Catherine Alexander, EM-3.2

November 6, 2013

David Huizenga
Senior Advisor for Environmental Management
U.S. Department of Energy, EM-1
1000 Independence Avenue, SW
Washington, DC 20585

Dear Senior Advisor Huizenga:

Title:
Funding for cleanup U.S. Department of Energy (DOE) sites should be maintained as a top priority.

Background:
Sites across the complex are chartered with cleaning up the waste generated by legacy, Cold War and national defense efforts. Each site has served a specific purpose in developing the nuclear age which the world now lives in. Because of these efforts, contaminated waste resides in each site, which brings considerable health and safety risk to humans and the environment.

Protecting human health and the environment from hazardous waste produced by these sites should be the top priority for all involved. To date, clean-up efforts, as it relates to legacy and Cold War efforts in and around each site, have been jeopardized because of federal funding.

Observations and Comments:
Over the past several years, the federal government has made several budget cuts to programs around the country. In addition, the government also continues to operate under a "continuing resolution" and other "sequestrations" conditions. This has slowed the progress of clean-up efforts around the country, and has put sites at jeopardy of not meeting regulated deadlines. With sites unable to meet statutory deadlines, it opens up the possibility of regulatory agencies having the right to assess excessive fines, which takes away funding from clean-up efforts. Operating under these situations and sequestration conditions does not reduce the risk to human health and safety and to the environment as a whole. It also condones the possibility of using clean-up funds to pay fines. Clean-up funding should have special dispensation from federal budget cuts, sequestrations and continuing resolutions that lower funding levels. EM funding should be held harmless when these conditions are present.

Recommendation:
The Environmental Management Site-Specific Advisory Board (EM-SSAB) recommends that DOE make every effort possible, including addressing Congress with this recommendation, to ensure that EM funding for all sites across the DOE Complex should be maintained as a top priority as it relates to across the board cut-backs in federal funding, operating under continuing resolutions and any other sequestrations. Federal budget cuts should not include funding for remediation or clean-up efforts.

Intent:
It is the intent of the EM-SSAB to make every possible effort to protect the environment and reduce the risk to human health and safety by securing the best possible funding scenario of EM budgets and to ensure clean-up efforts are not slowed or put in jeopardy.

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Hanford Advisory Board

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cc: Kristen Ellis, EM-3.2
Catherine Alexander, EM-3.2

Recommendation Response Tracking Chart
for FY 2013

	Date	To	Recommendation	Originating Committee	Response Date	Response Status	Committee Review of Response
1.	10/10/12	Susan Cange, DOE Oak Ridge Deputy Manager for EM	211: Recommendation on Availability of DOE Environmental Management Documents	EM	1/8/13	**Complete:** DOE is working with information technology to improve search capabilities. The 'search tip' function has been reactivated. On request, training can be provided to access information. DOE Information Center staff is always available to provide documents. DOE is working to ensure documents are available at the information center no later than the date when availability is announced.	**Complete:** EM Committee accepted recommendation response at its January 2013. It asks that DOE notify the board when upgrades to the system are complete.
2.	5/8/13	Susan Cange, DOE Oak Ridge Deputy Manager for EM	215: Recommendation on Remaining Legacy Materials on the Oak Ridge Reservation	EM	7/19/13	**Complete:** DOE Oak Ridge has developed an inventory of all waste/materials stored on the reservation and has prioritized the inventory for disposition. The highest priority is to address hazardous and/or radioactive waste that may pose a threat to the environment.	**Complete.** The accepted the response, but asked that asked that a comprehensive inventory list be presented to the committee periodically so the committee can see what has been worked off.
3.	5/8/13	Mark Whitney, DOE Oak Ridge Manager for EM	216: Recommendations on the Fiscal Year 2015 DOE Oak Ridge Environmental Budget Request	Board Finance & Process	5/22/13	**Complete:** DOE responded that it is sending the recommendation to DOE EM Headquarters along with its FY 2015 budget request.	
4.	6/12/13	Susan Cange, DOE Oak Ridge Deputy Manager for EM	217: Recommendation on Stewardship Point of Contact for the Oak Ridge Reservation	Stewardship	9/12/13	**Complete:** DOE responded that it will add the responsibility of a permanent stewardship contact to the Environmental Management & Stewardship Committee DOE liaison.	**Complete:** EM & Stewardship Committee accepted response on 11/20/13

5.	6/12/13	Letitia O'Conor, DOE HQ Sue Smiley, DOE EM Consolidated Business Center	218: Recommendation to Develop a Fact Sheet on Site Transition at Ongoing Mission Sites	Stewardship	9/20/13	**Complete:** DOE revised the fact sheet to include points requested by the Committee.	

EM Project Update

ETTP	November	December
Zone 1 Final ROD	A project team meeting was held to discuss EPA human health comments on the disputed D2 RI/FS.	A project team meeting was held to discuss EPA ecological comments and concerns on the disputed D2 RI/FS.
Zone 2 ROD	Submitted the PCCR for the EU 35 Sumps to the regulators for review.	Work was initiated on performing a risk evaluation of the K-25 Building footprint to provide the basis for remediation of this historic site.
K-25/K-27 D&D	Demolition of the final six K-25 Building units is 83 percent complete, and disposal of debris is approximately 42 percent complete.	Demolition of the final six units of the K-25 Building was completed, marking the end of five years of demolition that brought down the largest facility in the DOE complex.
	Demolition of the K-1201 Building was completed.	
	Demolition of the K-1102 Building (Air Plant) was 85 percent completed.	
Remaining Facilities	Submitted the PCCR for Decommissioning of the Central Neutralization Facility to the regulators for review.	The PCCR for the 4500 Hot Cells/Duct Stabilization was approved.
ORNL	November	December
Bethel Valley ROD	The PCCR for the Building 1550 Slab Remediation was approved by the regulators.	
	The Non-Significant change for the BV ROD was approved.	
ORNL Small Facilities D&D	Completed the implementation validation review of the safety basis requirements for fogging the Building 3038 hot cells. This is the final planned field activity being performed for stabilization of 3038 for long-term surveillance and maintenance.	The SAP for Characterization PPE, Dry Active Waste & Misc. Debris was approved by the regulators.
	The PCCR for the Building 3026 Hot Cells was approved by the regulators.	The SAP for Analyzing S&M Project Removable Activity in Various ORNL Facilities was approved by the regulators.
MSRE Fuel Salt	Completed pumpdown of the fuel salt tanks at MSRE. The pumpdown is performed periodically to address buildup of fluorine gas in tank headspaces due to radiolytic decay.	Meetings were held with the regulators to discuss the inventory and schedule for the disposal of waste at MSRE. Agreement was reached on the path forward that will be documented in a waste handling plan addendum.
U-233 Disposition	A series of meetings were held in Nevada with various State and local officials and the public on transportation and disposal of Consolidated Edison Uranium Solidification Project material at Nevada National Security Site.	
Off-Site Cleanup/Waste Management	November	December
TRU Waste Processing Center	On November 12th, ORNL transuranic waste storage and transfers project completed shipment of the 1000th transuranic waste container to the TRU Waste Processing Center under the current contract.	The second NDA in-situ object counting system unit has arrived and is being readied for service.

EM Project Update

Off-Site Cleanup/Waste Management	November	December
TRU Waste Processing Center	The project also received and placed in storage 915 containers of newly generated transuranic waste during the same contract period.	Installation of the Perma-Con enclosure began in preparation for processing of the SWSA 5 waste.
	The Central Characterization Project completed the nondestructive assay confirmation for the IQ3 unit and the data is under review.	Completed implementation of revision 28 to Documented Safety Analysis, which primarily included revised Specific Administrative Controls and surveillances.
		The Central Characterization Project initiated Visual Examination of remote-handled waste in the hot cell.
EMDF		Meeting was held with the regulators to discuss the application of volume reduction technology to debris that would be disposed of at the new facility.
Remediation Effectiveness Report	The FY 2013 RER was approved by the regulators.	Work continued on preparing the draft FY 2014 RER.
ORR Groundwater Strategy	There were Data Quality Objective (DQO) meetings held for sampling and design of the offsite ORR Groundwater Assessment Project.	A follow-on DQO meeting was held. Evaluation of locations to be selected for sampling is ongoing.

Abbreviations/Acronyms List for Environmental Management Project Update

AM – action memorandum

ARRA – American Recovery and Reinvestment Act

BCV – Bear Creek Valley

BG – burial grounds

BV- Bethel Valley

CARAR – Capacity Assurance Remedial Action Report

CBFO – Carlsbad Field Office

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CEUSP – Consolidated Edison Uranium Solidification Project

CD – critical decision

CH – contact handled

CNF – Central Neutralization Facility

CS – construction start

CY – calendar year

D&D – decontamination and decommissioning

DOE – Department of Energy

DSA – documented safety analysis

DQO – data quality objective

EE/CA – engineering evaluation/cost analysis

EM – environmental management

EMWMF – Environmental Management Waste Management Facility

EPA – Environmental Protection Agency

ETTP – East Tennessee Technology Park

EU – exposure unit

EV – earned value

FFA – Federal Facility Agreement

FPD – federal project director

FY – fiscal year

GIS – geographical information system

GW – groundwater

GWTS –groundwater treatability study

IROD – Interim Record of Decision

LLW – low-level waste

MLLW – mixed low-level waste

MSRE – Molten Salt Reactor Experiment

MV – Melton Valley

NaF – sodium fluoride

NDA – non-destructive assay

NEPA – National Environmental Policy Act

NPL – National Priorities List

NNSS – Nevada National Security Site (new name of Nevada Test Site)

NTS – Nevada Test Site

ORNL – Oak Ridge National Laboratory

ORO – Oak Ridge Office

ORR – Oak Ridge Reservation

ORRS – operational readiness reviews

PaR – trade name of remote manipulator at the Transuranic Waste Processing Center

PCB - polychlorinated biphenyls

PCCR – Phased Construction Completion Report

PM – project manager

QAPP – Quality Assurance Project Plan

RA – remedial action

RAR – Remedial Action Report

RAWP – Remedial Action Work Plan

RCRA – Resource Conservation Recovery Act

RDR – Remedial Design Report

RER – Remediation Effectiveness Report

RH – remote handled

RI/FS – Remedial Investigation/Feasibility Study

RIWP – Remedial Investigation Work Plan

RmAR – Removal Action Report

RmAWP – Removal Action Work Plan

ROD – Record of Decision

RUBB – trade name of a temporary, fabric covered enclosure

S&M – surveillance and maintenance

SAP – sampling analysis plan

SEC – Safety and Ecology Corp.

SEP – supplemental environmental project

STP – site treatment plan

SW – surface water

SWSA – solid waste storage area

Tc – technetium

TC – time critical

TDEC – Tennessee Department of Environment and Conservation

TRU – transuranic

TSCA – Toxic Substances Control Act

TWPC – Transuranic Waste Processing Center

U – uranium

UEFPC – Upper East Fork Poplar Creek

VOC – volatile organic compound

WAC – waste acceptance criteria

WEMA – West End Mercury Area (at Y-12)

WHP – Waste Handling Plan

WIPP – Waste Isolation Pilot Plant

WRRP – Water Resources Restoration Program

WWSY – White Wing Scrap Yard

Y-12 – Y-12 National Security Complex

ZPR – Zero Power Reactor

Travel Opportunities

Meeting/Event	Dates	Location	Reg. Cost	Website	Deadline to Submit Requests
FY 2014					
Fall Chairs Meeting (Attendees: Hemelright, Hicks, Staley)	Oct. 15-17, 2013	Portsmouth, OH	none	http://www.planetreg.com/E7914355 0250173	Aug. 28, 2013
Intergovernmental Meeting with DOE	Oct. 28-30, 2013	New Orleans	none		Oct. 11, 2013
Perma-Fix Nuclear Waste Management Forum (Requests: Hemelright, Holmes)	Dec. 2-5, 2013	Nashville	$500	https://events.r20.constantcontact.com/register/eventReg?llr=8n5x6qkab&oeidk=a07e84apcpub37c9f6e&oseq=a01lph9iyyhwj	Oct. 23,2013
Waste Management Symposium Attendees: Price)	March 2-6, 2014 (Registration opens 10/15/13. Early registration ends 12/31/13)	Phoenix	$995	www.wmsym.org	Nov. 20, 2013
National Environmental Justice Conference & Training (Pending requests: M. Hatcher)	March 26-28, 2014	Washington, D.C.	none	http://thenejc.org	Jan. 29, 2014
Western Waste Site Tour (Tentative requests: Cook, B. Hatcher, M. Hatcher, Staley, Price, Paulus)	Spring 2014	Waste Isolation Pilot Plant, Nevada Nat'l Security Site	none	none	
Spring Chairs Meeting (Pending requests: Cook, Staley)		Richland, WA	none		
National Brownfields Conference					

Shading indicates closed trips

Oak Ridge Site Specific Advisory Board

TRIP REPORT

I. Name of Traveler: Bruce Hicks

II.

II. Date(s) of Travel: 4 to 7 November, 2013

III. Location of Meeting: Deer Creek State Park, Ohio

IV. Name of Meeting: Environmental Management Site Specific Advisory Board (EM SSAB) National Chairs meeting

V. Purpose of Travel: Participate in EM SSAB National Chairs meeting

VI. Discussion of Meeting:

On the whole, very productive. Not overly confrontational, although there were a few stressful exchanges (primarily involving the competing interests of the old gaseous diffusion plants, Paducah and Portsmouth) and the western sites (Idaho and Nevada). The former pair advocated that the SSAB Chairs should strongly endorse nuclear energy as an answer to the nation's growing energy needs. The latter pointed out that it is not our role to endorse any specific national policy, nor to put EM in the position of either agreeing with or denying our viewpoints on the national nuclear power policy. The related draft position paper was tabled, pending consideration by our individual Boards.

It was obvious that several of the attendees had site-specific agendas that could benefit them at the expense of others. It was therefore as a conscious decision that the Oak Ridge contingent advocated the SSAB should emphasize the successes of the EM program in order to help promote EM within DOE as well as in the various affected communities. I was charged with drafting a recommendation to improve education of the public along these lines, for consideration at the next National Chairs Meeting. It was of special interest to note that Oak Ridge contributed two of the seven documented "success stories" presented by Ms. Williams in her opening address.

In the "Round Robin" segment of the program, the Oak Ridge summary was presented *via* a quick summary of the three major ways by which water despoilment can affect the environment – both onsite and offsite. First, there is the surface flow of contaminated water. The Oak Ridge mercury issue is an example. Second, there is the dispersion of pollutants through the soil. This is well acknowledged and occasions the familiar plume depiction of ground water consequences. Third is the transport of contaminated water through karst or otherwise fractured rock. It is this last issue that is of current concern to the Oak Ridge EM community -- in particular, the transport

of contaminated water through deep subsurface rock beneath the Clinch River. This migration of pollution depends on many factors, but “draw down” is a central consideration. The detection of pollutants attributable to historic Oak Ridge waste management practices has been less frequent since reticulated water has been provided to sensitive communities and hence the withdrawal of water from previously vulnerable wells has been reduced if not eliminated.

Subsequent discussion revealed that several sites are experiencing problems with deep ground water migration from on-site sources. Chromium from old plumbing has affected ground water at Portsmouth, for example.

Several points appeared especially worthy of mention. These arose in general discussion following the presentation by Ms. Williams and later presentations by Christine Gelles and Cate Alexander (a superb summary).

- EM no longer involves itself in the specific scheduling of site activities. This is left up to site management.

- Hanford, in particular, reports that it is less productive to “dumb down” the EM message so that an unsophisticated community can understand than to slowly educate the affected public so that they do eventually understand. In side-discussion, it seemed a general opinion that one way to do this is through education of children, since adults are often stuck with their historic beliefs and seem resistant to logic.

- A key phrase that captured attention in discussion of political (and other) beliefs is that “flexibility remains elusive.” In other words, even EM is being affected by the “I’m right, and you’re stupid” philosophy that seems endemic.

- The matter of metal recycling is presently high on the EM agenda, and they see progress likely. A group decision was made to do nothing that might risk interfering with the process presently in play. However, there was universal agreement that this is a major issue that DOE needs to deal with.

- It appears that International Atomic Energy Agency (IAEA) standards for the recycling of metals are less stringent than those of DOE. Consequently, materials that cannot be recycled under DOE standards are currently being imported into the USA and subsequently used in manufacturing products, or are used elsewhere to make products that are then imported into the USA. This constitutes an illogical bypassing of current DOE regulations. As a step towards converging the national and international systems, a recommendation was proposed by the Portsmouth team, essentially asking DOE to adopt the IAEA standards until there is more evidence available. This passed unanimously and is on its way for Site Board consideration.

- Conflict between EPA’s legal regulatory policy and DOE’s science-based approach to standards and regulations have resulted in discussions among representatives of the two

agencies, with the National Academy of Sciences as a convener/arbiter. No quick solution to this conflict is anticipated.

Opinion – This writer has been heavily involved in discussions related to low-level radiation effects and de minimis. The reality is that there are NO reliable experimental data on which the standards are based. The standards are the results of extrapolations over several orders of magnitude, without any data to support the extrapolations save the belief that when exposure is zero so is the likelihood of unwelcome consequences. The fundamental difference between the approaches of the DOE and EPA is that the former identifies exposures at which effects can be shown, with acceptable certainty, and the other identifies exposures at which adverse consequences do not occur, with acceptable certainty. The two agencies have diametrically opposed missions, and the differences in approaches to regulations reflect this divergence.

- The U-233 issue remains elusive. The problems seem to have originated in an apparent lack of openness at the Nevada DOE local site level. The failure to provide answers to questions from the press and the public resulted in a widespread belief that something critical is being hidden. The Governor is now in a difficult position.

A presentation by Terry Tyborowski elicited considerable discussion. Her summary of the EM financial situation indicates that EM is doing very well, relative to other components of DOE. However, the good fortune is largely due to the political awareness of and sensitivity to the mercury problem at Oak Ridge.

VII. Significance to ORSSAB:

This meeting was said to be among the best yet, with much discussion and with some powerful messages being voiced.

VIII. Names & Telephone Numbers of Significant Contacts:

Nothing other than as elsewhere recorded.

IX. Action Items:

I am expected to draft a recommendation concerning education. Give me a few weeks, please.

X. Traveler's Signature & Date:

Signature: Bruce Hicks Date: 11 November 2013

Oak Ridge Site Specific Advisory Board

TRIP REPORT

I. Name of Traveler: Coralie Staley

II. Date(s) of Travel: November 5-7, 2013

III. Location of Meeting: Deer Creek State Park, Mt. Sterling, Ohio

IV. Name of Meeting: EM SSAB National Chairs' Fall Meeting

V. Purpose of Travel:

The purpose of attending this meeting was to become more aware of the issues, activities and concerns of the EM SSAB groups across the United States.

VI. Discussion of Meeting:

The meeting began on Tuesday, Nov. 5, with opening remarks by Cate Alexander, EM SSAB Designated Federal Officer. Alice Williams, Associate Principal Deputy Assistant Secretary for Environmental Management gave an EM Program Update. The chair, or representative, from each of the EM SSABs gave a report on the most current issue being considered at the local sites. Christine Gelles, Associate Deputy Assistant Secretary for Waste Management, DOE-EM, gave a report on EM HQ updates.

Educational sessions on DOE's National Recycling Policy and on Community Involvement and DOE Decisions were interesting and informative.

Work was done on recommendations from the chairs of the EM SSABs. Networking opportunities were provided and encouraged.

VII. Significance to ORSSAB:

The meeting provided opportunities for discussion with EM officials and with other SSAB chairs and members, concerning common issues among the various sites. The program updates were informative and provided a clearer view of the DOE EM current status and priorities.

VIII. Names & Telephone Numbers of Significant Contacts:

None.

IX. Action Items:
None

X. Traveler's Signature & Date:

Signature: Coralie Staley Date: November 18, 2013

Oak Ridge Site Specific Advisory Board

TRIP REPORT

I. Name of Traveler: Spencer Gross, staff support

II. Date(s) of Travel: November 5-7, 2013

III. Location of Meeting: Deer Creek State Park, Mt. Sterling, Ohio

IV. Name of Meeting: EM SSAB Chairs' Meeting

V. Purpose of Travel:

To provide support for board members and DOE Alternate Deputy Designated Federal Officer attending the meeting.

VI. Discussion of Meeting:

Twice a year the leadership of the eight site specific advisory boards that comprise the national Environmental Management Site Specific Advisory Board (EM SSAB) gather to hear updates from various DOE officials and discuss areas of common interest.

The fall 2013 EM SSAB Chairs' meeting was held at the inn of Deer Creek State Park near Mt. Sterling, Ohio. The location was selected because it was the most viable location near the Portsmouth, Ohio SSAB, which hosted the meeting for the first time.

The meeting opened with an update by Alice Williams, DOE Associate Principal Deputy Assistant Secretary for EM, on the national EM program. After reviewing the status of cleanup at each site, she said the focus areas for the EM program were budget priorities, identifying community expectations with reduced funding, and broadening community participation in EM SSAB meetings and membership.

The next part of the meeting was the round robin among the boards' leadership where they talked about important topics at their respective sites.

Christine Gelles, DOE Associate Deputy Assistant Secretary for Waste Management, reviewed DOE's waste management accomplishments and priorities, the national transuranic waste program, and the status of low-level and mixed low-level waste disposal. She said in budget constrained times it is important for DOE to optimize its waste management system to ensure continued environmental cleanup.

The chairs' meeting had two educational sessions. The first was a discussion of DOE's national recycling policy, led by Ms. Gelles and Richard Meehan of the National Nuclear Security Agency. The session included a discussion of a draft environmental assessment for recycling scrap metals in radiological areas; International Atomic Energy Agency standards versus DOE standards for release of metals; and related potential changes to DOE's policies. The discussion led to a draft recommendation from the chairs to DOE on recycling.

The rest of the first day, the chairs worked on two other draft recommendations to DOE.

Day 2 of the meeting began with 'News and Views' from the EM SSAB Designated Federal Officer Cate Alexander, who announced she was retiring in January 2014.

The next presentation was by Terry Tyborowski, the DOE Deputy Assistant Secretary for Program Planning and Budget. She said the DOE EM budget request to Congress was $5.62 billion; $413 million of that is for Oak Ridge.

The second educational session was on Community Involvement and DOE Decision Making presented by Greg Simonton, the Portsmouth SSAB Federal Coordinator, and Stephanie Howe of the Ohio University School of Leadership. They discussed research that reflected the impact of community input on decision making at Portsmouth.

That discussion led to asking Bruce Hicks, ORSSAB Vice Chair, to draft a recommendation to DOE that it publicize its accomplishments in working with the public. Mr. Hicks will present the draft at the spring meeting.

The chairs ended the meeting by completing work on three recommendations to DOE on:

1. Recycling of contaminated metals,
2. Graphic representation of waste disposition paths,
3. Funding for cleanup should remain a top priority.

The Spring 2014 meeting will be held at the Hanford Washington site.

VII. Significance to ORSSAB:

Provides insight to ORSSAB members of issues other boards face and gives our board an opportunity to talk about its issues, accomplishments, and activities.

VIII. Names & Telephone Numbers of Significant Contacts:

IX. Action Items:

Bruce Hicks will draft a recommendation that DOE publicize its accomplishments in working with the public at the spring meeting. I will transmit the recommendation to

DOE prior to the meeting. **Complete:** recommendation circulated to ORSSAB Chair Dave Hemelright and Alternate Deputy Designated Federal Officer Dave Adler for review and then transmitted to Cate Alexander on December 13.

X. Traveler's Signature & Date:

Signature: Spencer Gross Date: December 16, 2013

Oak Ridge Site Specific Advisory Board

TRIP REPORT

I. Name of Traveler: David Hemelright

II. Date(s) of Travel: 2 – 5 December 2013

III. Location of Meeting: Nashville, TN

IV. Name of Meeting: PermaFix Nuclear Waste Management Forum

V. Purpose of Travel: To become more informed about the progress of nuclear waste clean-up at Oak Ridge and other venues in the nuclear user sites.

VI. Discussion of Meeting:

The three (3) day conference commenced Monday evening with a reception at which State Senator Randy McNally of Oak Ridge and other surrounding communities, like Lenoir City, spoke about how important the legacy waste clean-up at Oak Ridge was, and how important it is to continue on the path to successful clean-up and re-utilization (industrialization) of the properties, etc.

Tuesday opened with a brief video appearance by Senator Lamar Alexander of Tennessee congratulating all the contractors on the success so far. He realized how important current funding will be to complete the missions. He was followed by Jim Blankenhorn, Chief Operating Officer of PermaFix Environmental Services, Inc. Jim spoke of the re-emergence of nuclear power and the natural gas production as a nuclear waste generator. The amount of natural gas produced will ultimately affect the amount of nuclear power required. He talked of the primary nuclear waste generators such as DOE, Department of Defense and commercial. There are about 1,000 sites with miscellaneous waste ("orphan waste") sitting around the various facilities waiting on characterization and disposition paths. PermaFix is now putting more responsibility on their subcontractors for efficient operations and placing the responsibility to perform on their shoulders. This will go as far as placing fault on their mistakes and rewarding them for cost savings. Unlike other areas of the Federal Government, PermaFix has realized that "hope" is not a strategy; "hope" is a highly flawed business plan.

Colin Jones, Chief of Staff of the DOE Environmental Management (EM) Program, then spoke on the priorities of cleanup despite shrinking budgets. DOE EM has a well-defined mission; they know where the waste is, they know the desired outcome, the caveat is the funds available and the regulator's required milestones. Colin continued to speak of the 20,000 contractors working

within the DOE EM programs across the nation. DOE EM has been utilizing their "carryover" funds to keep operating in uncertain times and handling unforeseen events as they occur. He spoke of dysfunctional congress and continuing resolutions (CRs) and how inefficient it is. He spoke of budget cuts and woes. He spoke of great accomplishments at the Savannah River Site (SRS) and Oak Ridge. He did talk of a pending agreement to utilize uranium mine tailings in a productive manner rather them letting them just sit. United States Energy Corporation is expected to be out of the Paducah site sometime in 2014. They are the ones running Paducah. DOE is looking into changing the type of waste streams allowed at the Waste Isolation Pilot Plant (WIPP) to allow more waste to be interred in the salt. Following from recent "newsclips": *CARLSBAD >> Congressman Steve Pearce's proposal to expand the mission of the Waste Isolation Pilot Plant has a date with the Senate.*

Eddy County governments are sending a small delegation to Washington, DC, to drum up support for the bill. Pearce earlier this year introduced an amendment to the 2014 National Defense Authorization Act, which would expand WIPP's mission to allow for non-defense-related transuranic (TRU) waste to be buried at the nuclear waste dump roughly 27 miles east of Carlsbad.

A new Undersecretary of EM is waiting on Senate confirmation, and Dave Huizenga will remain in his present position at DOE EM.

Christine Gelles presented the same talk on budgeting and the path forward as was given to the EM SSAB chairs in Ohio in November. $5.622 has been requested, of which a large portion will go to Hanford and the River Protection sites. Savannah River will get the next chunk of funding, followed by Oak Ridge. She spoke about a "train wreck" of funding colliding with regulator's milestones. Fines and penalties will consume a large portion of the DOE EM budget soon. DOE EM has been surviving on $1 billion in cuts and has dug deeply into "carryover" funds. Challenges for FY 14 appear to be lapse in appropriations, CRs, debt ceiling, and sequestration. An interesting fact is that the Office of Management and Budget (OMB) looks at milestones completed when allocating budgets to DOE EM. TRU waste has been removed from 22 of 30 sites. DOE EM is now looking at the most dangerous. Clive, Utah and Texas can now take low level mixed waste to take some of the "heat" off the Nevada disposal site. Path forward; collaboration with industry to find innovative approaches and opportunities for disposal of decommissioning and demolition (D&D) waste streams.

Christine was followed by a panel on U.S. Waste Management and Organization Priorities and Challenges. Andrew Lombardo, Senior Vice President for PermaFix Nuclear Services, along with Steve O'Connor, Director of DOE EM-30 Packaging & Transportation, spoke on their program highlights. Pat Arnold from the Nevada National Security Site talked about disposal and problems. Martin Schneider, Editor–In-Chief of Exchange Monitor Publications, talked on what's ahead for 2014 in policy funding and leadership.

The afternoon session started out with opportunities in Canada and was followed by a panel on commercial opportunities. Brad McKeehan, Director of Transportation & Waste for Nuclear Fuel Services, Inc., spoke on lesions learned into commercial field of fuel services. Keith Anderson talked of the Westinghouse Hematite, Missouri site D & D and the unforeseen and uncharacterized materials uncovered in the course of cleanup. There was a heck of a lot more

than anticipated or characterized. Pits were dug deeper and waste not anticipated was found. Andrew Lombardo of PermaFix finished the day's events talking about the waste stream from natural gas fracking. NORM waste is Natural Occurring Radioactive Materials found in the bedrock of the earth. TENORM is Technogically Enhanced NORM, better known as "fracking." There is radium in the flowback waste water from fracking that is not federally regulated, but rather left up to the states to regulate. There will be regulations to follow, considering that each natural gas well will have 1 to 2 million gallons of flowback water per well.

Day three of the conference started off with a Contractor Progress in Cleanup Panel. Paul Scott, Transportation Program Manager for URS/CH2M Oak Ridge, LLC, talked about the UCOR cleanup progress made at the Oak Ridge Reservation. The theme was how to overcome the reduction in funding, or "how to do more with less." UCOR has developed paperless shipping documents for waste from K-25 to the Environmental Management Waste Management Facility over the haul road. They are looking into re-useable containers so that the containers are not buried at the disposal sites, able to be re-used, thus saving dollars. IP-1 "super sacks" are also being utilized to ship nuclear waste. An interesting note was made on the demolition of the K-1026 water tower this past fall. After the initial cleanup of the metals, UCOR spent an additional three weeks vacuuming up paint chips and placing them in barrels for disposal. That additional time was not factored in the original estimate to demolish. Paul spoke of some of the "orphan waste" and lack of disposal streams. Some of the challenges ahead are uncovering more legacy waste, suitable containers and waste streams and, of course, funding.

Judith Nielsen from Washington State spoke of the challenges of managing future waste generation. Her talk was primarily about the new Waste Treatment Plant (WTP) being constructed at the Hanford site, and the constraints thrown at them by reduced funding. To cut costs, staging for materials to be treated have been severely reduced, creating a major bottleneck in the disposal stream of the Hanford tank waste. In addition, some of the waste from WTP will have to be treated off site prior to disposal. The actual waste stream at Hanford was, in reality, two to ten times under estimated. Target date for WTP to be fully operational is 2019.

John Gilmour from Savannah River Nuclear Solutions spoke of completing the TRU waste legacy projects at SRS. Most of the TRU waste has been shipped from SRS, and they expect to have their portion of TRU out of the area by the middle of 2015.

Tammy Hobbs, Vice President of Waste Management for CH2M-WG Idaho, LLC, talked of cleanup at the Idaho site. Diane McDonald, Senior Program Manager, Legacy and Environmental Management, B & W Y-12, presented on the progress of cleanup at the Y-12 plant.

Mike Ferrari, D & D Manager, URS/CH2M Oak Ridge, LLC, talked about more successes at the Oak Ridge Reservation. He, too, spoke of innovations and challenges ahead, funding, milestones, and available labor force. He was followed by Martin Clapham who developed a wonderful algebraic matrix for more accurately characterizing contained waste hazards. That was way over my head. I'd rather play dodgeball! He found the correlation of barometric pressure and solar flares in characterizing gamma rays.

Final presenter was Andy Lombardo, PermaFix, on advanced characterization technologies to support D&D. “Budget shrinkage (necessity) is the mother of innovation (invention).”

VII. Significance to ORSSAB:

This is the best conference that an SSAB member could attend. It is local and highly informative. It is second only to the EM SSAB Chair’s meeting. This event gives the board member an idea of what is occurring away from Oak Ridge, problems encountered, successes touted, and a view from DOE EM HQ not readily available. The opportunity to interface with movers and shakers in the nuclear waste disposal industry cannot be equaled.

VIII. Names & Telephone Numbers of Significant Contacts:

Unlike the Vice Chair, I was able to obtain numbers from several of the Forum participants and guests both male and female. There are too many to enumerate here, but contact info can be made available upon request.

I did have the opportunity to talk with Gerald Boyd a few times during the course of the conference. Thank you, Dr. Martin, for making the introduction last February.

Robert Bishop from TDEC and I spoke at length, mostly about our shared experiences in the Marine Corps.

IX. Action Items:

Attend the event in 2014. It is the most useful conference available to SSAB members.

X. Traveler’s Signature & Date:

David Hemelright 7 December 2013

Oak Ridge Site Specific Advisory Board

TRIP REPORT

I.	**Name of Traveler:**	Howard G. Holmes, M.D.
II.	**Date(s) of Travel:**	12/01/2013, 12/02/2013, 12/03/2013
III.	**Location of Meeting:**	Nashville, TN
IV.	**Name of Meeting:**	Permafix Work Forum
V.	**Purpose of Travel:**	To hear the National plans for waste clean up This is the latest update on the subject.

VI. Discussion of Meeting:

Randy McNally and I talked informally after his opening address. He supports D O E and ORSSAB strongly and is interested in limiting any waste in water and soil products. I noticed the forum was smaller this year. The vendors were fewer. The spirits of the group were still high and optimistic, but cutting of funding for certain projects was underscored.

Various energy sources were discussed. Nuclear power plants were discussed as a real prospect for the future. Much was delineated in respect to sites and the various problems of waste disposal in the Western states. The scientific aspects of energy were well applied to the discussions. Most people I talked to were concerned about the state of the National economy.

VII. Significance to ORSSAB:

This is important to ORSSAB in that this is a very informative meeting for the National impact of waste cleanup. It gives perspective as to our importance in the whole process, which is huge. It also gives us a feel this industry is trending.

VIII. Names & Telephone Numbers of Significant Contacts:

Randy Mcnally - phone and address are available upon request. I spoke with many different vendors whose cards can be made available.

IX. Action Items:

This was to inform our members to seriously consider attending next year. I will.

X. Traveler's Signature & Date:

Howard G. Holmes, M.D. _____ Date 12/19/13