

Former Wurtsmith AFB
Virtual Restoration Advisory Board (RAB) Meeting
20 January 2021
GoTo Webinar
5:00 – 8:00 pm Eastern Daylight Time

Draft Meeting Minutes

Member	Authority/Affiliation	Attendance
RAB Co-Chairs		
David Gibson	Air Force Co-Chair	Present
Mark Henry	Community Co-Chair	Present
Government RAB Members		
Tim Cummings	Oscoda Township	Present
Jeffrey Moss or Leisa Sutton	Au Sable Township	Not Present
Beth Place	Michigan Department of Environment, Great Lakes, and Energy (EGLE)	Present
Mike Munson	Oscoda-Wurtsmith Airport Authority (OWAA)	Present
Denise Bryan	District Health Department 2 (DHD2)	Present
Puneet Vij	Michigan Department of Health and Human Services (MDHHS)	Present
Jessica Stuntebeck	U.S. Forest Service (USFS)	Present
Primary Community RAB Members		
Daniel Stock	Primary Community RAB Member	Present
Arnie Leriche	Primary Community RAB Member	Present
Joe Maxwell	Primary Community RAB Member	Present
William Gaines	Primary Community RAB Member	Present
Cathy Wusterbarth	Primary Community RAB Member	Present
Ryan Mertz	Primary Community RAB Member	Not Present
Jerry Schmidt	Primary Community RAB Member	Present
David Winn	Primary Community RAB Member	Present
Alternate Community RAB Members		
Rex Vaughn	Alternate Community RAB Member	Present
Greg Schulz	Alternate Community RAB Member	Not Present
Scott Lingo	Alternate Community RAB Member	Not Present
RAB Support		
Tim Sueltenfuss	Galen Driscoll, RAB Facilitator	
Gina Jones	Aerostar SES LLC, RAB Technical Coordinator	
Other Participants		
Dr. Catharine Varley	AFCEC Technical Support	
Dan Medina	AFCEC BRAC Chief, Central Execution Branch	
Sharon Vriesenga	AFCEC Senior Attorney, Restoration Branch	
Paula Bond	Aerostar SES LLC, Project Manager	
Dirk Pohlmann	Bay West Project Manager	

Randy Mattzela	FPM Remediations, Inc. Project Manager
Jake Bennett	Office of Representative Kildee
Eric Keller	Office of Senator Gary Peters
Bill Palmer	Oscoda Township
Anthony Spaniola	NOW, Public Commenter
Bob Delaney	NOW, Public Commenter

The full attendee list can be found in Attachment 1.

Meeting Video Link: <https://www.afcec.af.mil/Home/BRAC/Wurtsmith/RAB.aspx>

Attachment 1: Attendee List

Attachment 2: Agenda

Attachment 3: Presentation

Attachment 4: Action Item Tracker

RAB Documents: <https://www.afcec.af.mil/Home/BRAC/Wurtsmith/RAB.aspx>

Welcome and Introductions

(0h:10m:38s)

The facilitator, Mr. Tim Sueltenfuss, began the Wurtsmith Restoration Advisory Board (RAB) meeting at 5:00 EDT, welcomed everyone to the meeting, and introduced RAB members, and asked Co-Chairs for opening remarks.

Mr. David “Dave” Gibson, Air Force RAB Co-Chair and Project Manager with the Air Force Civil Engineer Center, introduced by Tim Sueltenfuss, opened the meeting with hopes of sharing information, good dialog, and a productive meeting for everyone.

Mr. Mark Henry, the RAB community Co-Chair, opened, echoing Dave’s sentiments and expressing hopes that the presentations sparks discussion amongst those that are participating.

Tim Sueltenfuss held the RAB member roster:

William “Bill” Gaines – Yes

Mark Henry – Primary RAB Member (RAB Co-Chair) – Yes

Arnie Leriche – Primary RAB Member – Yes

Joe Maxwell – Primary RAB Member – Yes

Ryan Mertz – Primary RAB Member – No answer

Jerry Schmidt – Primary RAB Member – No answer (was present)

Daniel Stock – Primary RAB Member – No answer (was present)

David Winn – Primary RAB Member – Yes

Cathy Wusterbarth – Primary RAB Member – Yes

Rex Vaughn – Yes (Tim acknowledged that in Joe Maxwell’s absence, Rex will be alternate for Joe.)

Dave Gibson – Air Force (RAB Co-Chair) – Yes

Leisa Sutton – Au Sable Township Trustee – No answer

Denise Bryan – Health Officer with DHD2 – No answer (was present)

Puneet Vij – Toxicologist with DHD2 – Yes

Beth Place – EGLE RRD – Yes

Tim Cummings – Oscoda Township – No answer (present) – Bill Palmer answered for Oscoda Township

Michael Munson – Oscoda-Wurtsmith Airport Authority (OWAA) – Yes

Jessie Stuntebeck – USDA Forest Service – Yes

Tim Sueltenfuss acknowledged that there are more than 51% of the Community RAB members and more than 51% of the government RAB members present, and we have both Co-Chairs, so per Section 3.10 of the operating procedures, we do have a quorum.

Tim Sueltenfuss reviewed the meeting ground rules (slide 4) for the RAB having Air Force Co-Chair Dave Gibson read the first through fourth, and Community Co-Chair Mark Henry read the fifth through the seventh, and there was agreement that they work for both as representatives.

Tim inquired about the updated status of minutes for the 21 October 2020 meeting – Tim Sueltenfuss noted Dave Gibson disseminated the final minutes on the 29th of December. Dave acknowledged that he received input on the minutes from EGLE only.

Stakeholder Updates

U.S. Air Force (USAF) Update

(0h:20m:20s)

Dave Gibson provided the USAF update as detailed below (Slide 7)

- Fourth 5-Year Review under review at AFCEC
 - We are working to get this done as quickly as possible, hopefully before the next RAB.
- Soil vapor study (VI) underway
 - Third quarterly samples collected November 2020; results pending
 - Report will be prepared after 4 quarters of data are collected (April 2021)
 - Results will determine if further evaluation is required

Stakeholder Updates

(0h:21m:50s)

Tim Sueltenfuss Okay. Great. Thank you, Dave. Appreciate that. Let's now hear any stakeholder updates from our community RAB members. Mark Henry, would you mind starting us off, and then I'll turn to the other community members?

Mark Henry Sure. The community RAB hasn't done a lot since the last RAB meeting. We – there haven't been any documents to review or anything like that. I have been carrying through with a pledge with our local RAB members to involve our legislators in trying to get some additional transparency and input from the RAB at the frontend of the discussion process for the remediation of sites and investigation of sites. I've sent that off to Senator Peters, Senator Stabenow, and Representative Kildee and have talked with their offices about this. Outside of that and bringing – yes. That's about it. Thank you.

Tim Sueltenfuss Okay. Thank you, Mark. Appreciate that. I see that a couple of community RAB members have their hands up. So, Arnie, do you have a stakeholder update that you would like to provide?

Arnie Leriche Yes. It relates to the 5-Year Review. Over the last couple of months, the Air Force has told us the status of it, and then Dave just gave us an update. And in looking at the 5-Year Review, we've seen that a very key component, which is the protection statement and in this case for PFAS, it's very critical for us to have before the public and the RAB can review the RI scoping document, which is going to come to us before the next RAB, at least the schedule that we have been briefed. So, at some point in the meeting, if the Air Force could help us understand how that's going to

play through and give us the ability to comment and review that document before we have to comment on the RI scoping. Thank you.

Tim Sueltenfuss Great. And then, Arnie, I apologize. Hearing you just reminded me that you had brought up a question right before we started that I think you had asked if the video of this meeting would be available shortly after the meeting. Any feedback on that question at the moment?

Arnie Leriche Feedback from me, is – you’re asking?

Tim Sueltenfuss No. From the Co-chairs, I would presume.

David Gibson Yeah. We will make that recording available as quickly as possible after this RAB.

Tim Sueltenfuss Okay. Thank you, Dave.

Arnie Leriche Tim, could I just say that the previous two RAB virtuals in April and in July... we received it within a couple of days. Just from the past experience.

Tim Sueltenfuss Great. Thank you, Arnie. I see that Cathy Wusterbarth has her hand up too. Cathy, do you have a stakeholder update that you would like to provide?

Cathy Wusterbarth (0h:25m:15s)

I do, Tim. Thanks so much. I just want to remind everyone that we are, you know, years into the remediation and the Restoration Advisory Board, and I just don’t want that to be forgotten. We continue to deal with this as a community considering this environmental injustice from the U.S. Air Force, but our community members continue to meet, and our numbers are growing every day. We have extended and solidified additional scientific, legal, and other resources to effectively deal with the Air Force in this situation. We, of course, have to deal with the change of administration both locally and federally, so we are actively doing that, and, of course, we have the town hall meetings that the State of Michigan held with our community last night virtually. There’s new questions and concerns; we have new identified areas of PFAS in Oscoda, which is certainly concerning that we are continuing to find other areas. So, this is – We are well into this, and we are trying to be patient with the Air Force and with the State, but our patience is waning. So, we would really appreciate every effort be made to acknowledge our priorities. One of them is the Van Etten Lake plume that we have asked the Air Force to address in its entirety, and we sent a letter mid-October asking to extend the proposed line of extraction wells by approximately 1500 to 2000 feet to the north, and we request that the Air Force make that adjustment. We did receive a response on that, although the response was not definite. So, it was noticed that in the report last night and in the BTC minutes that it looks like the conceptual model for that or plans for that plume is 90% done. I’m hoping the Air Force can address that during our meeting today. So, thanks so much for holding this board meeting for us, and I look forward to more information.

Tim Sueltenfuss Thank you, Cathy. It’s helpful to just keep that long perspective in mind as we go through this work... not just focusing on the immediate but looking at the course—some of the government RAB members with their hands up electronically. Let me just turn to see if there are any other community RAB members who have stakeholder updates that they’d like to share first. Any other community RAB members that would like to share a stakeholder update at the moment?

Mark Henry (0h:28m:45s)

This is Mark Henry. I am not sure this is exactly the place to talk about this but let me just mention it. I have gone over the BCT meeting minutes from October, November, and December, and I wanted to point out a point of correction for you. During, I think it was, the November meeting minutes, there was a mention of a SERDP and ESTCP demonstration that was going to be going on at the base, and it was in the minutes that that study of injecting a flocculant was being done by the University of Michigan. I actually went to the web page – the SERDP web page – where that project was described, and it was not U of M Michigan. It was U of M Minnesota. I had hoped it was U of M Michigan because that was where I graduated and was hoping that some of my professors were involved in that, but it seems to be that the University of Minnesota is doing that SERDP demonstration.

Tim Sueltenfuss Great. Ok. Well, thank you for that clarification, Mark. Appreciate that. Any other stakeholder updates from community RAB members?

Arnie Leriche (0h:30m:12s)

Tim, this is Arnie again. Okay. At the last RAB meeting, I asked about – from Dave – about whether or not the Wurtsmith team – his team – was involved or knowledgeable about a foam study being done – surface water foam – by SERDP and he responded to me a week later asking questions for clarity, and he told me that there was no scoping for that study. Two weeks after the RAB meeting in October, one-third of that project... a report came out, and it basically talked about the surface water foam and natural foam. And we expect and have been told that April – no later than April – that there's going to be additional data on the microlayer. And I'm wondering... I don't know, Dave, who gave you the answer but I'm wondering if you can talk to us at some point about that study and so you can inform us before – within the next month.

Dave Gibson Well, I thought I had a good source of information. So, I need to go back and check up on that.

Government RAB Members Updates

(0h:31m:40s)

Tim Sueltenfuss [Provided a reminder to everyone to mute unless they are speaking, as background noise was noticed on the call]. Now, let me go on to our government RAB members. Let's turn to Jessie Stuntebeck with Forest Service for a stakeholder update. Do we have Jessie?

Forest Service, Jessie Stuntebeck (0h:32m:00s)

Hi. Thank you. I actually don't have any updates for the Forest Service. Thanks.

Tim Sueltenfuss And Beth Place with EGLE. Any stakeholder update?

EGLE, Beth Place (0h:32m:15s)

Yesterday EGLE, along with our other state partners through MPART, held a virtual town hall meeting on the Oscoda area sites on the former Wurtsmith AFB. The slides from that meeting, as well as the recording, will be posted shortly on the Wurtsmith MPART page, which you can access at the Michigan.gov/Wurtsmith. In addition to that meeting in January, EGLE also briefed/updated on the Former Wurtsmith AFB at EGLE quarterly Bay City District meeting with Saginaw Chippewa Indian tribe. And then, as far as report reviews, I like to give an update on what EGLE has recently reviewed for the Air Force. We have reviewed the draft proposed plan for Clark's Marsh Interim Remedial Action and submitted comments to the Air Force on

[the] 6th, and this month we also reviewed the remedial action work plan addendum for FT02, and that's associated with the volatile contamination there. And also, a UST removal work plan associated with FT02. Thank you.

Tim Sueltenfuss Thank you, Beth. Appreciate that update. Let's see, Mike Munson. Any stakeholder update from the Airport Authority standpoint?

OWAA, Mike Munson (0h:33m:51s)

Yes. I do. I have two of them. The Airport Authority is working on making the airport a viable contributor to the community from a financial standpoint. One of the activities that we are pursuing now is spaceport licensing, we are working with the Michigan aerospace manufacturers association to get the airport licensed for horizontal launch activity, and the bottom line is the licensing process is a fairly long one; it's progressing slowly. We've the feasibility study in a draft form, and soon the environmental impact studies will be implemented. Another activity of the airport is also doing is – one of our businesses on-site is doing well and, as a matter of fact, they want to build a new hangar. We got through with the land lease approval and will probably see a new hangar. We are going to call it Hangar 10. It's substantially larger than the other two hangars and probably will start building in early or mid-2021. But that's the update for the Airport Authority.

Tim Sueltenfuss Okay. Thank you, Mike. I appreciate that. Let me see if anyone from Au Sable Township has joined us yet...

Charter Township of Au Sable - Leisa Sutton

Not present.

Tim Sueltenfuss As you all remember, Jeff Moss was the representative from Au Sable, and he indicated to us that Leisa Sutton would be taking his place, although she may not have been able to join us tonight. At any rate, we would like to see if Puneet would like to speak to us about any update from the Department of Health and Human Services.

Michigan Department of Health Human Services Update, Puneet Vij (0h:35m:48s)

For the resampling update, we finished the first-round resampling, and our plan is to start another round of resampling sometime this spring. For round one, we have collected samples from 277 wells out of 427 wells in the Oscoda area that were previously tested by EGLE. Out of those, we have 136 non-detects and 141 detections. Out of the 141 detections, there are 20 detections that exceed MDHHS comparison values, and MDHHS comparison values is the lowest of the two – that is, MDHHS screening levels and approved MCLs. By now, residents should have received their well results, as well as their recommendations in the mail and if for some reason you have not received it, please contact me, and I'll be able to help.

Regarding deer results, there are a few updates. MDHHS received the deer tissue data from our lab in October 2020. In this data, the only PFAS levels in the tissues that is muscle and liver. We are working on a deer testing report that is going to be similar to the 2018 deer testing report that was released in January 2019. The January 2019 report contains results from four PFAS investigation sites in Michigan: Oscoda, Alpena, Rockford, and Grayling. Please go to the MPART PFAS and deer web page and look for the January 2018 PFAS Deer Technical Report. The report that is currently being done will only focus on the Oscoda area; it will compile the data from 2018 APHIS sample collection, 2019 hunter-harvested samples, and 2020 APHIS collected samples. The 2018 deer testing report encompasses the complete data range that will be discussed in the

2021 report. For example, the PFOS data range is from non-detect to 547ppb. The work on the report is still in progress, and we do not have a final date yet; we are working with the DNR biologists to answer some of our remaining questions on deer behavior. The “do not eat” advisory from 2018 was based on PFOS sample results of 547ppb in deer muscle tissue, and the five-mile radius around the marsh is still in effect.

Tim Sueltenfuss Okay. Well, thank you very much. Just as a reminder again for those who are not speaking, to please go on mute. That would help us out a bit. I see that Tim Cummings is listed on the GoTo Meeting here for the Oscoda Township. Tim, have you joined?

Oscoda Township Update, Tim Cummings (0h:39m:15s)

Yes. I have. Thank you for giving me a moment here, and thank you for having this. I want first to concur and support a statement made earlier by Cathy Wusterbarth during her opening remarks regarding the question of the length of the wall that we are going to build here at the edge of the base to the west of Van Etten Lake. And I would like to just ask, you know, what the Air Force’s plans are with regard to extending that wall. And also, to follow up on a question with you, last spring, congressional representative Dan Kildee attended our RAB meeting and asked specifically about the use of the 13.5 million dollars that had been allocated for cleanup efforts, and I’m wondering if any of that money is being used towards the wall whether or not it could be used to extend that wall. Thank you.

Tim Sueltenfuss Thank you very much, Mr. Cummings. I have jotted down something to prompt that for our questions, but maybe in the question-and-answer portion, we can focus in on that one a bit more. I don’t know if that works for you. Ok. And is a representative from the district health department present?

DHD2, Denise Bryan (0h:41m:10s)

Not present.

Tim Sueltenfuss Ok. Well, we’ve moved through our stakeholder updates portion. And I appreciate your help with that. We wanted to move now into the first of our Air Force technical presentations, which will focus on current PFAS sites. Paula Bond with Aerostar will be providing that update. And, Paula, I believe your intention is to brief each slide and then and then see if there are questions as we move through that, is that right?

Paula Bond Yeah. I can do it that way, or if you’d rather, we can do questions at the end of this session.

Tim Sueltenfuss Dave, do you have any preference there?

David Gibson I guess I might prefer holding questions until the end of the section or conversation, but if Paula wants to do it the other way, that works as well.

Tim Sueltenfuss Let me just interject if there are crucial/critical questions that come up as Paula is running through this, you can raise your hand electronically, and we will try to capture those and call on you. But then, Paula will pause at the end of her presentation to address questions. So, Paula, let’s go.

Technical Presentation

(0h:41m:27s)

USAF Remedial Investigation and Interim Remedial Action Update:

Paula Bond began the RI and IRA presentation below.

RI Process/IRA Process – (slide 12)

BCT Scoping Meeting – (slide 13)

- Initial scoping meeting held with EGLE on 20 Aug 20
- Interim Remedial Actions meeting held with EGLE on 7 Oct 20
- Data Quality Objectives meeting held with EGLE on 15 Oct 20
- Risk Assessment meeting held with EGLE on 4 Nov 20
- Follow-up data quality objectives (DQOs) and conceptual site model (CSM) meeting with EGLE is scheduled for 25 Jan 21

RI Planning – (slide 14)

- RI Work Plan (Uniform Federal Policy- Quality Assurance Project Plan)
 - Working Draft is currently under AFCEC review
 - Scoping meeting with EGLE is scheduled for 25 January 2021 to discuss the DQOs and CSM
- Begin preparation for field activities
 - Building subcontracts
 - Site access

Interim Remedial Action (IRA) – (slide 15)

- Van Etten Lake IRA at Ken Ratliff Memorial Park
 - 90% design is currently under AFCEC review
- Clark's Marsh IRA
 - 90% design is currently being prepared by Aerostar
- Remedial Action Work Plan
 - Under development
 - Will include the designs for Van Etten Lake and Clark's Marsh
 - Will be reviewed by EGLE and US Forest Service

IRA – Proposed Plan – (slide 16)

- Proposed Plans
 - Clark's Marsh Proposed Plan has been reviewed by EGLE, and comments are being addressed by AFCEC
 - Van Etten Lake Proposed Plan is currently under AFCEC review
 - US Forest Service will also review the Proposed Plans
 - 30-day public comment period and a virtual public meeting will be held for each Proposed Plan (if requested)

IRA – Interim Record of Decision – (slide 17)

- Clark's Marsh Interim ROD will be developed following the public comment period on the Proposed Plan

- Van Etten Lake Interim ROD will be developed following the public comment period on the Proposed Plan

IRA – Interim Record of Decision – (slide 18)

- Finalize Project Requirements
 - Location of new extraction wells
 - New piping runs and utility connections
 - Treatment building infrastructure
 - Treatment system equipment
- Proposed Plan and Interim ROD review periods
- Remedial Action Work Plan review period
- Access to non-Air Force property
- Weather
- COVID-19?

Project Timeline – (slide 19)

- Remedial Investigation
 - Complete UFP-QAPP: May 2021
 - Start of fieldwork: May 2021
 - Target completion of RI report: June 2022
- Interim Remedial Actions
 - Start of designs: September 2020
 - Start of installation: June 2021
 - Complete installations: February 2022

Questions

(0h:49m:15s)

- Mark Henry** You had mentioned about comment periods. But there seems to be a disconnect between a couple of slides. Is there, in fact, a comment period for the Interim Remedial Action RODs?
- Paula Bond** Yes, there is a comment period for the proposed plan, and that will be the first thing that is coming up. We just don't have exact dates on those yet. So, we will keep you guys informed on when that is going to occur, but there is a comment period.
- Mark Henry** For the Interim Remedial Action Record of Decision?
- Paula Bond** Oh, sorry, yes, for the ROD.
- Sharon Vriesenga** That's not accurate. The proposed plan goes out for public comment, and that is what the 30-day period is for, and the ROD is put out when it is final; that's why it is called the Record of Decision. The proposed plan goes out for the public comments.
- Paula Bond** Sharon you are absolutely right; I'm sorry.

Tim Sueltenfuss Okay. Thank you, Sharon. I see that Bob Delaney has his hand up. Bob, did you have a question?

Bob Delaney Yes, I did. Will you be briefing the public on the CSM that you decide on?

Paula Bond Yes, by the next RAB meeting, we will have gone through our scoping process, and that should be complete with EGLE. So, at the next RAB meeting, we should have additional information that we will present as far as the CSM for the RI and additional technical information at that point.

Bob Delaney Okay. Will, there be maps, and can we get those maps ahead of time?

Paula Bond There will be maps. I will defer to Dave for the schedule of when you guys can receive those maps. I'll let Dave answer that.

Dave Gibson **(Action Item [AI]) We will put together a package for the briefing on the CSM to make it easier for the public to follow.**

Bob Delaney Okay.

Tim Sueltenfuss Great. And I see Cathy Wusterbarth has her hand up as well. Cathy, did you have a question?

Cathy Wusterbarth
Can you clarify how the official request is made for public comment on the Clarks Marsh and the other IRA's?

Paula Bond Cathy, are you asking how to request to have a public meeting or how you comment on the proposed plans?

Cathy Wusterbarth
How we comment.

Paula Bond Once the plans are published for public review, there will be information contained in the back of the proposed plan that tells you how you can submit comments: either by email or write them in. But that will be in the proposed plan. It will be in the admin record when it's published for public comment.

Cathy Wusterbarth
Thank you.

Mark Henry Cathy, the RAB can provide comments as a group if you would like; also, if you submit them to me and if other RAB members provide comments, I will provide them to the stakeholders in mass.

Cathy Wusterbarth
Okay, thanks.

Bob Delaney On the CSM, are you basing that on the State of Michigan's criteria for PFAS, or is that the 70 part per trillion – that number that the Air Force has been using?

Paula Bond The CSM includes all of the PFAS information. So, all of the plumes that are included in the CSM, all of the information is based on all concentrations of PFAS. So, it's not the 70 that was being looked at before. It's all of the information. So, a lot of the figures and a lot of the maps actually are delineated down to the new groundwater values for Michigan for PFOS and PFOA of 8 and 16, so that's generally what that maps are based on. So, the CSM is site-wide, and it includes

PFOS and PFOA, with the concentrations basically down to non-detect as far as what the model looks like.

Bob Delaney How about for perfluorohexane sulfonate? You are looking at that as well?

Paula Bond We are delineating all of the PFAS compounds that Michigan has established new groundwater criteria for.

Bob Delaney Okay. Thank you.

Mark Henry (AI) I have a request, please. **If the CSM has been agreed to between the agencies in advance of the next RAB meeting, could you please provide that to the RAB as soon as it is available?** So that we can start digesting it and coming up with questions at the next meeting.

Dave Winn I have a couple of questions. On your presentation, you showed the Interim Remedial Action installation complete now by February 2022. On your last presentation in October, you showed it being completed by December 2021. Can you explain, number one, why the flip of two months?

Paula Bond Sure. As we work through our scoping and planning phase, as we get more information with our documents working through the proposed plan and the design documents, as those reviews go through the Air Force and go through EGLE, we have had a little bit of a schedule slip in that. We are still on track to be finished with the Interim Remedial Action in 2022, which is the overall goal. So, as we move forward and as we pick up in the schedule, we can always move that back. As we move through this process, the schedule will be updated for every RAB meeting, so at the next RAB meeting, it could possibly be moved back to December if we can pick up some time and there is some float in the schedule because we anticipate these kinds of shifts, short-term shifts.

Dave Winn Okay. So, you guys are considering recovery plans as you move on further through the process.

Paula Bond Oh, sure. Yes.

Dave Winn Second question I have, in the last RAB meeting in October, it was discussed about in the RI, including areas on the east side of Van Etten Lake. I am wondering what has transpired from that and if that is going to be part of the RI process going forward?

Paula Bond We are currently are not anticipating any RI activities on the east side of Van Etten Lake.

Tim Sueltenfuss Great; I wanted to circle back around to Mark Henry's question about if the CSM was agreed among the agencies before the next RAB if that be provided to the RAB as soon as possible to review that, is that accurate, Mark?

Mark Henry Yes, it is.

Tim Sueltenfuss Dave, any thoughts on that one?

Dave Gibson Anything new I have to brief the RAB on the CSM is going to have all the information there so that community understands what's going on.

David Winn I still have a comment I want to make. I guess I'd like to address this to Dave Gibson. So, that fact there is going to be no RI work involved on the east side of the lake... Dave, was that reviewed with the Air Force, as well as EGLE, and why was that decision made not to do it?

Dave Gibson We will have to postpone the discussion about that to the end of this RAB. But if the CSM demonstrates that there is any reason to suspect that the east side of the lake was exposed and the CSM would show that/provide that information.

Tim Sueltenfuss So, we just have a few minutes left – allocated in the agenda that we’ve all reviewed with this topic. Any other questions for Paula on this?

Arnie Leriche All of these questions, suggestions, and the request by Mark, these should be action items and coded as such. My question on this topic is: in the CSM development that the Air Force has completed and is going to be providing and has been discussing with EGLE, did your team use an analysis of the hydrologic core sampling that’s called hydrologic sequencing and a model of that to look at off base plume transport? It’s a tool that EPA sanctioned and recommended to CERCLA teams back in 2016, and actually, in 2015, your contractor, Mr. Gillespie, published a report that said that that modeling and tool was conducted for Wurtsmith, Peterson, and two others. And I’ve looked at the Peterson report on their ESI, and it’s a very impressive CSM that looks at off property, off base plume movement.

Paula Bond Arnie, we have used environmental sequence stratigraphy in development of the CSM. So, all of that information will be in there; there is a great deal of technical information that is included in that document, and once we go through that review process with EGLE and that is actually in the UFP-QAPP. So, that information will be provided in that document.

Arnie Leriche **(AI) May I request as an action item the 2015 study that Mr. Gillespie was referring to – that I was referring to – that that be provided at this time?**

Paula Bond Tim, can you put that down as an action item? To provide that document?

Tim Sueltenfuss Yes. I have that down as an action item. So, what I will be doing is any questions/topics that remain; I will work with colleagues here to submit to the Co-chairs what we hear as items – that sound like action items – so that they can then discuss those. So, that will be the process.

Arnie Leriche Okay. Just a quick thing. Were there alternatives options presented by the Air Force to EGLE that were then discussed and prioritized that what you are presenting in the 90% design is the option that you are choosing? One example that I will give you is, a year and a half ago or two years ago, Matt Marrs said on FT02 that they were going to look at a horizontal well field to augment the current one because it has been used at other places to increase the capture.

Paula Bond The information that is in the design document is a preferred alternative for the alternative outlined in the proposed plan. So, there are a couple of alternatives in there, and as we all know with the treatment of PFAS, there are only a couple of alternatives we are talking about with the situation that we have with pump and treat. That information is in the proposed plan that will be issued for public review.

Arnie Leriche Thank you.

Tim Sueltenfuss Great. I know that there are questions that are still out there; that’s one of the reasons we devoted a full 45 minutes for that question-answer session. So, if you do still have any questions, let me ask that you just hold those until that Q&A session. I don’t want to get us off the schedule, and the agenda that we have all looked at and agreed to. So, let me turn now, if I could, to Randy Mattzela with FPM Remediations, Inc. He is going to address Landfills 30/31 Feasibility Study. So, over to you, Randy.

(1h:04m:30s)

Installation Restoration Program Landfill Sites LF030 and LF031 – (slide 20)

Randy Mattzela gave the presentation below.

LF030/031 Overview – (Slide 22)

- FPM Remediations, Inc. (FPM), An Olgoonik Development LLC Company, has been contracted by the Air Force Civil Engineer Center under contract FA8903-18-F-0277 to evaluate alternatives to enhance the current remedy at Installation Restoration Program Landfill Sites LF030 and LF031 at former Wurtsmith Air Force Base (AFB), Michigan. FPM is tasked with preparing the following:
 - Preliminary Design for diversion of surface water runoff at Site LF031 (Final 05/2020)
 - Feasibility Study for light, non-aqueous phase liquid (LNAPL) treatment at Site LF030/031 (Final 12/2020)
 - Explanation of Significant Differences to the Sites LF030/031 Record of Decision (ROD) (Draft under review)

LF030/031 Overview – (Slide 23)

- Site Background
 - Landfills LF030/031 are located at the northern extent of Former Wurtsmith AFB and operated from 1960 to 1973 and 1973 to 1979, respectively. The landfills received domestic, municipal, and industrial waste as well as construction and demolition debris generated on the Former Wurtsmith AFB.
- Preliminary Design for diversion of surface water runoff at Site LF031
 - Submitted 30% design for a drainage ditch to divert surface water to cross gradient locations, away from buried landfill waste. This would reduce the degree of mounding and groundwater contact with buried waste and reduce leachate generation, which exacerbate the iron staining on the Young Men's Christian Association's (YMCA) beach.

Site Location map – (Slide 24)

LF031 Proposed Drainage Ditch Layout – (Slide 25)

LF030/031 Feasibility Study – (Slide 26)

- Feasibility Study for LNAPL treatment at Site LF030/031
 - The Feasibility Study identified, evaluated, and screened remedy enhancement options at Installation Restoration Program (IRP) Landfill Sites LF030/031 at former Wurtsmith Air Force Base (AFB), Iosco County, Michigan.
 - Four alternatives were evaluated for the LNAPL Area as described in this section. These alternatives include no action, bioventing, air sparging (AS) with soil vapor extraction (SVE), and SVE as a standalone technology.
 - Based on the results of the comparative analysis, bioventing is recommended as the preferred alternative. This would remediate the dissolved contaminants through aerobic biodegradation processes enhanced by introduction of air (oxygen) into the subsurface.

LF030/031 Feasibility Study – (Slide 27 Map and slide 28)

- Explanation of Significant Differences to the Sites LF030/031 ROD
- AF expects to submit a draft ESD to EGLE for review in early 2021

Questions

(1h:10m:04s)

- Mark Henry** Could you, please go back several slides to the landfill 30/31 slide? Okay. EGLE, used to be DEQ, did an investigation on this landfill up in the northeast corner of the landfill. We found that somewhere under the cap... I can't zoom into this, so I can't give you a reference point... but if you look where that rectangle is and look at that upper right-hand corner (on my screen about a quarter-inch down from the top), there's a very strong TCE source that is leaking out of that landfill and into the groundwater. It's the one that the Air Force has been dealing with for decades now. It appears that you are going to be taking surface water diversion, rainfall diversion that is going to be putting water right through that source. I am wondering if any precautions have been made to not introduce water right where the contamination is?
- Randy Mattzela** If you're talking about is where the landfill 31 is designated?
- Mark Henry** Okay. In the upper right-hand corner of the yellow polygons surround the landfill contents, there's a curved arrow that goes from the 3 o'clock position to the 10 o'clock position. Right about where that arrow is, there is a source underneath that landfill cap that has been leaking TCE for several decades. And the State of Michigan – I personally – installed wells there, and they are still there that are able to be monitoring that plume, and it looks from your diagram that you're going to be putting in surface water runoff right across a discharge area from your landfill, which may disperse that contamination in ways that are not accounted for in your extraction system.
- Randy Mattzela** This water currently drains this way. This is just a flow map showing how the water drains currently. You can see the flow in the upper left corner is going parallel with the yellow box. If that TCE area is under that part of the landfill, is that what you're saying?
- Mark Henry** Well, yes, that dark blue arrow that you have right there? From where that is, if you go into the landfill contents by about 30 feet, you have a source area. The state made the Air Force aware of this in about 2007/2008, and the state still has monitoring wells on the eastern side of that landfill. A little network monitors that; I don't know if they're doing any monitoring there anymore, but there is a strong source of TCE release right there, and it appears where that blue arrow is on the northern part of the landfill boundary that you're going to be putting water in right at that source area on the edge of the cap. We can have this discussion offline if you need some clarification, but I think that you are going to be exacerbating a long-term problem. It's been going on for 30 years, and you may just make it worse.
- Matt Mattzela** It's not a final design, by any stretch.
- Tim Sueltenfuss** Let me jump in and turn to Dave. Dave?
- Dave Gibson** Mark, we will take that into account proceeding on with the project.
- Mark Henry** Well, you need to know where the location is, and you go back to the documents that I provided the Air Force during that time period, you will find a map that shows exactly where things are. And I highly recommend that you don't exacerbate a problem.
- Dave Gibson** Thank you. Understand.
- Tim Sueltenfuss** Okay; so, I know we have a lot of material to cover; I do want to move to Mr. Dirk Pohlmann with Bay West, who is going to address the status of the legacy installation

and restoration program activities and SS057 enhanced bioremediation. So, over to you, Dirk.

(1h:15m:20s)

Performance-Based Remediation Wurtsmith AFB PBR Overview:

Dirk Pohlmann presented Performance-Based Remediation presentation below:

Performance-Based Remediation – (slide 31)

- Bay West LLC & Wood
- 5-Year PBR Contract (June 2016 to June 2021)
- The work under this General Services Administration (GSA) task order includes a full range of environmental remediation activities necessary for Remedial Action Operation (RA-O), Long-Term Management (LTM), remedial actions, optimization, and other activities supporting progress to Site Closeout (SC).

Performance-Based Remediation – (slide 32)

- 21 Installation Restoration Program (IRP) sites that are being addressed under CERCLA
 - Bay West-Lead Sites
FT002, SS005, SS006, OT016, SS017, SS021, LF023, OT024, LF026, LF027, LF030/LF031, SS047, SS051, SS057, ST068, ST069, WP070, SS071, SS072
 - Wood-Lead Sites
WP004, SS008, Base Wide, Vapor Intrusion (VI) Study

Remedial Action Operation (RA-O) – (slide 33, 34)

- RA-O of Active Groundwater Remediation Systems:
 - Central Treatment System (CTS) captures groundwater from SS006, SS017, SS021, SS047, and SS057 (Arrow Street and Benzene Plant purge wells);
 - Mission Pump and Treatment System (MPTS) captures groundwater from OT024 (Mission Drive purge wells);
 - FT002 PTS captures groundwater from: FT002 & OT016;
 - LF030/031 PTS captures groundwater from LF030 & LF031.
 - RA-O of In Situ Groundwater Remediation Systems:
 - SS057 source area biobarrier in support of in situ anaerobic bioremediation (IAB) and downgradient biosparge system;
 - FT002 air sparging system;
 - Construction of an IAB remedy at FT002 will occur in the spring of 2021.

Long-Term Management (LTM) – (slide 35)

- LTM Activities
 - Annual groundwater sampling of all IRP sites in accordance with approved plans;
 - Annual groundwater gauging of > 400 monitoring wells;
 - Data compilation and reporting.

Military Munitions Response Program (MMRP) – (slide 36)

- Four MMRP sites which require Land Use Controls (LUCs)
 - SR408 - Bombing and Strafing Area
 - XE404 - Weapons Storage Area,
 - XU402 - Former Grenade Range
 - OT049 - EOD Range
- LUC Technical Approach
 - Perform annual LUC inspections/reporting
 - Provide biennial training to stakeholders, with the next training in 2021

Questions

(1h:21m:00s)

Rex Vaughn Tim, this is Rex Vaughn.

Tim Sueltenfuss Go ahead, Rex.

Rex Vaughn A question on all the monitoring that was just mentioned in the report, are they doing water sample testing in those areas?

Dirk Pohlmann Yes. Of those 21 sites there, we collected about 350, I think, is the range of samples that we collect.

Rex Vaughn What compounds are you testing for?

Dirk Pohlmann Well, that would be site-specific. So, there's a range of solvents such as TCE, as was mentioned for LF30/31, or fuels at some sites as well. So –

Rex Vaughn Are you testing for PFAS in any of the samples that you collect?

Dirk Pohlmann We are under contract to test for PFAS at FT02, as well as part of the treatment monitoring. So, the systems in monitoring –

Rex Vaughn How about up at those two landfills?

Dirk Pohlmann That would not be done under our contract that would be under the Wood contract, the SI, and now the RI contract that Aerostar is doing.

Rex Vaughn Okay. Do you know if they have been pulling any PFAS samples up around those two landfills up there? Does anybody know that?

Dave Gibson Well, we can let Aerostar address that question about where PFAS samples are collected, but right now, we are about the Bay West PBR.

Rex Vaughn I just... It's just a quick question are you looking at PFAS at those two landfills in addition to the areas we are talking about now.

Dave Gibson As explained, the RI for PFAS is wall to wall, site boundary to site boundary, delineate down to those MCLs wherever the plume goes. So, that would include those landfills.

Rex Vaughn Ok. Good. I want to make sure.

Bob Delaney I just wondered... if following up on that 30/31 question, is PFAS being monitored on the influent to the engineered wetlands?

Dave Gibson Mr. Delaney, if I could, at this point, go back to Tim. Is this the public comment period, Tim?

Tim Sueltenfuss No Dave, we were still on the technical presentation here. So, I think maybe what we can do is hold that to the later part of the agenda, if that works?

[multiple voices] [agreement]

Tim Sueltenfuss I know there's a lot of material to get through and Dirk has quite a bit of material pulled together for SS057 too. So, how about we move through those elements here, Dirk?

SS057 In Situ Anaerobic Bioremediation (IAB) – (slide 37)

- Remedy Implementation and Performance Monitoring

SS057 Old Apron Hydrant Fuel System Site Location – (slide 38)

SS057 IAB Remedy – (slide 39)

- Purpose
 - Supplemental remedy constructed to achieve the Remedial Action Objectives (RAOs) as specified in the Site's Decision Document (DD).
 - Remedy constructed as described in the September 2020 Explanation of Significant Differences (ESD) to the Site's DD.

SS057 IAB Remedy – (slide 40)

- Approach
 - Supply nitrate to subsurface to stimulate anaerobic biodegradation of fuel constituents adsorbed to subsurface soil and/or dissolved in shallow groundwater
 - Deliver amendment (nitrate/phosphate) to subsurface via 3 infiltration trenches at 3 historical source areas up gradient from biosparge and bio vent systems footprint
 - Performance Monitoring conducted to assess effectiveness and guide frequency and duration of IAB remedy applications

SS057 IAB Site Layout – (slide 40)

SS057 IAB Remedy Status – (slide 41)

- September 2019 - IAB Remedy Infrastructure Installed
- 9 October 2019 - Baseline sampling
- IAB Application Events Completed to Date:
 - 1st - October 2019
 - 2nd - June 2020
 - 3rd - November 2020
- Performance Monitoring Events Completed to Date
 - 1st Qtr.– Jan 2020
 - 2nd Qtr. –April 2020
 - 3rd Qtr. – July 2020
 - 4th Qtr. – Oct 2020

2021 SS057 IAB Project Schedule – (slide 42)

- In Year Two of IAB Treatment, 1st semi-annual groundwater performance monitoring event scheduled for spring 2021.
- IAB application event #4: Spring 2021
 - Date and IAB application program may be adjusted based on Spring 2021 semi-annual performance monitoring results
- Per the ESD, estimated timeframe to treat the soil: 6 – 7 years after remedy construction.
- Per the ESD, estimated timeframe to meet GW cleanup criteria is an additional 28 years after soil treatment period.

Questions

(1h:29m:30s)

- Mark Henry** I have two questions, please. Is the vadose soil above your treatment areas very low in the contaminants that you are looking at?
- Dirk Pohlmann** That is correct. The let's see what it's called... not biosparge down below, but bioventing system that was constructed above has met its course, and they have determined that in the vadose zone, there's no more concentrations that are of concern for the underlying groundwater; so, leaching to groundwater...
- Mark Henry** Okay. Thank you and my second question is: that portion of the base has a significant amount of DEHP contamination bis-(2-ethylhexyl) phthalate, and it is probably at your site as well. I am wondering if you have been doing SVOC analysis and if your nitrate respiration process has been reducing the concentrations of DEHP?
- Dirk Pohlmann** We have seen DEHP at the site. It's sporadic, so there's not really enough of it to track trends, but it has been detected at this site. I couldn't tell you whether it has shown up in any of the current or more recent samples.
- Mark Henry** It would be really nice if that type of bio stimulation could attack that contaminant as well.
- Dirk Pohlmann** Of course, the current system is not focused on it, but if there's any kind of Co-metabolism there, it's possible that we would see that.
- Tim Sueltenfuss** So, I do want to just in to keep us to the agreed schedule here. I know there are other questions, but certainly, the RAB members can address those in the Q&A session, which is for the RAB members. Or the members of the public can provide those questions in the comment session after we do a break. But, before we move to a break, Dave Gibson if you would you like to summarize the follow-on contract for us.
- Dave Gibson** Yes. It's not even a summary, but just to let everyone know that Bay West's fieldwork will end this June, and we have awarded a contract, the Base Realignment and Closure, Environmental Construction and Optimization Services contract (ECOS, we call it). The firm that has that for our region at Wurtsmith is LCES? LATA-CTI Environmental Services LLC and their short acronym is LCES. So, they'll be taking over the fieldwork in June. All the things you've heard from Dirk regarding Bay West work, that's what they will be taking over. It's the legacy IRP work. We do have the ability to pull in PFAS work if there's something that's somehow out of cycle or new, but in general, their scope is to work out those legacy sites that are still open and haven't gotten site closure yet, where there's long term

maintenance and management, RAO, etc. Just an FYI that all the work is going to continue, just under a new contract or two.

BREAK

(1h:33m:20s)

Tim Sueltenfuss One thing that is a challenge with virtual meetings is not seeing everyone sitting in front of you, of course. So, let me just help everyone imagine the room as if we were in a typical RAB meeting in person, and I'll list those who are sitting up at the table representing, therefore, representing their organizations or themselves on the RAB. So, from the community RAB members we have; Bill Gaines, Mark Henry, Arnie Leriche, Joe Maxwell, Ryan Merch is not with us, Jerry Schmidt, Dan Stock is with us, Dave Winn and Cathy Wusterbarth. Rex Vaughn is with us; he is an alternate, but because Arnie Leriche and Joe Maxwell are here, we appreciate Rex's involvement; he is not at the table, he would be sitting there attentively ready to join in another meeting if we were in person. On the government RAB member portion of the table, we have Dave Gibson from the Air Force, Au Sable Township is not represented tonight or District Health Department 2, Puneet Vij with Michigan Department of Health and Human Services, Beth Place as Michigan Department of Environment Great Lakes and Energy and Tim Cummings is representing Oscoda Township, Mike Munson the Oscoda Wurtsmith Airport Authority and Jessie Stuntebeck representing USDA Forest Service. So, just to give kind of a glance around the table, these next two portions of the agenda are really for those RAB members sitting there at that head table... I guess that circular RAB table in your mind. We will talk RAB business update, and then we will talk RAB member questions; So, so that would be questions for the RAB members themselves. Now, others in your organization may have questions or input, but, really, we are hoping to hear from the primary representative of each of those organizations. And then, the public comment period, toward the end of our agenda, is other members of the organization who may have something they would like to share or certainly and specifically for members of the public who have joined and would like to make a comment. So, let me just tuck RAB business update here, and we can advance that slide.

RAB Business

(1h:42m:23s)

Tim Sueltenfuss So, the Co-chairs, after the October meeting, worked to review the list of action items that came out from that meeting and were in place before then. Dave Gibson sent the Action Item tracker to the RAB members on the 28th of December and asked for input by the 15th of January, if possible. Dave, did you have any update on the status of those action items?

Dave Gibson I'll have to go back and see. I don't recall getting input except for EGLE on their one action item. But that was all.

Tim Sueltenfuss Okay; so, is that something that you would then follow up with Mark Henry on then after the meeting, or how would you like to address that?

Dave Gibson As far as finalizing what was the draft status of the action items; you mean? Then yes, we can do that after this RAB.

Tim Sueltenfuss Okay, great, thank you. I have also been trying to record what I believe to be action items or questions. So, I'll keep a running list of those, and some of those may be addressed in the forthcoming sessions of the agenda, and if there are others that don't get addressed, then I'll pass those on to the Co-chairs as well. Any other RAB

business that we need to discuss at the moment? Okay, without further ado, let's jump into that question-and-answer session, and these are for the RAB members, those representing their organization. So, what question/discussion should we have here?

Cathy Wusterbarth

I think this goes back to the RAB business, we had an enormous amount of information given to us, and actually, that is typical for these meetings, and I am wondering, which I have not discussed with Mark, but I am wondering we want to reconsider having meetings every other month instead of every quarter in the future?

Tim Sueltenfuss Okay; any thought on that Mark or Dave as Co-chairs?

Dave Gibson We can take that question and look at it.

Mark Henry Cathy, we should probably discuss that and maybe request that as a group.

Cathy Wusterbarth

Okay, very good, thank you.

Arnie Leriche I would throw into the mix as an alternative would be to schedule a technical meeting of the RAB members only. We've done that in the past for highly technical stuff, and it could be done more easily in the in-between the quarterly—just a thought.

Tim Sueltenfuss Great; okay, thank you. Appreciate that. It sounds like from your response, Mark, that maybe something that the community RAB members might discuss and then you would engage with Dave on, is that right?

Mark Henry Yes, indeed and personally, I'm all in favor of having some technical meetings to go over some of this stuff so that the rest of the audience isn't bored out of their skulls.

Arnie Leriche I can also add that at the Pease site, the Air Force team had two technical meetings, one before the ESI and one after the RI meeting last month. It was very helpful.

Tim Sueltenfuss Okay; excellent. Thank you. Is there any other RAB business that we need to discuss? So, for the RAB members sitting around that table, do you have questions that you would like to discuss as a RAB?

RAB Member Questions

(1h:46m:50s)

Arnie Leriche (AI) Regarding the presentation that was done with the IRP's and basically, I believe that's a response to the question I asked at the last meeting for the specific crosswalk of the IRP's and other contamination areas between the time of the preliminary assessment and the ESI because there was a significant shifting as was presented tonight. **I requested a map of all of the sites so we can visually see it... so the public and the community RAB can understand where you are talking, at every one of our meetings, in addition to the list.** So, that's number 1. Number 2 is in that crosswalk that was done for the ESI, the Air Force took the drying bed part of the wastewater treatment plant that was a separate IRP in the preliminary assessment, and they combined it with the lagoons and the FT02, and my question is, **has there ever been a hydrologic groundwater review and proof that that drying bed groundwater plume actually flows east to Clark's Marsh or does it flow directly to the Au Sable River?**

Dave Gibson That will be a good action item to record.

Tim Sueltenfuss Okay. Arnie, do you mind listing that out in the question function of this meeting format so that I can get it accurately, or I can just follow up with you via email after the meeting as well? You can email me if you prefer. Let me just work our way through again of those RAB members at that head table; please just raise your hand if you have a question. And, going down that list, I see Cathy Wusterbarth raise her hand.

Cathy Wusterbarth

I actually have a few questions, so maybe we need to take these one by one. The first one was, as I had indicated during my update, that we had a letter in October that was requesting the extension of the proposed line of extraction wells, and we're wanting clarification in this meeting whether that proposal will be considered. If the Air Force can answer that now?

Dave Gibson The letter, I believe, said it would be considered, and you will be seeing a proposed plan and the design for the IRA with what we end up doing.

Cathy Wusterbarth

So, it's 90% complete, is that my understanding? That we were presented today?

Dave Gibson I believe that's what Paula said, yeah.

Cathy Wusterbarth

So, it was considered and will be included?

Dave Gibson It was considered, and we are still working on the final answer.

Cathy Wusterbarth

Okay; so, the next question I have is: Dave Winn had asked about considering the east side lake, and your answer broke up, and I think when you were trying to address that and if you could clarify why is the Air Force not considering the east side in terms of remedial work?

Dave Gibson What would be best is for the CSM to continue with EGLE reviewing all the information that is there and once they get through that information be able to share in details with the RAB on what we are or are not doing.

Tim Sueltenfuss Dave, it sounds like your thought is to have continued interaction between the Air Force and EGLE and then share the CSM or discuss the CSM after that's complete, is that right?

Dave Gibson Correct.

Tim Sueltenfuss Okay, great, and Cathy, do you mind if we just go through one question at a time just to make sure that everyone has a chance to pose some questions?

Cathy Wusterbarth

Sure, okay, so rotate out? I still do have two more questions.

Tim Sueltenfuss Okay, great, thank you. If you don't mind and I'll just see if anyone else on the list here of primary RAB members. I see Mark Henry with his hand up. So, go ahead, Mark.

Mark Henry Hello. I have a question that is kind of a follow up of a comment that I made to the Expanded Site Investigation about specifically in the area of the fire training area. I had pointed out that one of the vertical aquifer sampling locations, BAS12005 had 1100 parts per trillion of PFOS that was found during the vertical aquifer sampling,

and it doesn't appear that that area of the facility is being addressed by the Interim Remedial Action and it's a significant concentration, and I'm just wondering if that fell through the cracks?

Paula Bond Hey Mark, can you repeat that? Where were you talking about the vertical aquifer profile sampling?

Mark Henry Okay; there was a vertical aquifer sampling location that would have been down gradient of OT16, it was called VAS12005, and in my comments to the Expanded Site Investigation report, I pointed out that this location had about 1100 parts per trillion of PFOS and it doesn't appear that that location, as high as it is, is being addressed by the expansion of the Interim Remedial Action pumping line and I'm wondering if this has fallen through the cracks?

Paula Bond Okay. I'm not exactly sure where that location is, but I think you are talking about the IRA at FT02, that's closer to that area, right?

Mark Henry There were three vertical aquifer sampling locations that were along the base boundary.

Paula Bond I got you; okay, those three vas locations, we did/have looked at those, and while that area is not really being addressed by the IRA, we are looking at that the RI. One of the things we looked at, those three samples are right in a row, like you said, very close together but only the one in the middle had the high concentrations. So, that area is being looked at in the RI to confirm and don't hold me to this, but I believe we have a monitoring well in the area to confirm those vas locations because that was a little suspect that all three of those are right there in a row and only one had the high concentration. So, you're right, that area is not included in the influence of the expanded IRA, but it is being address in the RI.

Mark Henry Okay, that's good, just remember that plumes at Wurtsmith are narrow and long.

Tim Sueltenfuss Okay. Well, thank you, Mark. You may have some other questions there, but if you don't mind, I'll just see if others have their hand up if that works with other primary RAB members.

Bill Gaines Yeah. In the discussion about the SS57 site and what I basically what comes to my farm boy idea is fertilizer injections to water that is going to go into our streams. I wondered what specifically – chemicals – were being inserted? You just called it nitrogen. What's the composition and specific gravity of that, and why we are essentially putting fertilizer into the environmental remediation? And it's my understanding that that's not very friendly to lakes, which is where all this is going to end up, as I see the water flow.

Tim Sueltenfuss Thank you, Bill. Okay, Dirk Pohlmann or Dave, do you have any response there?

David Gibson Dirk, are you on the line?

Dirk Pohlmann Yes, I was just waiting to see if you wanted for me to take it. You are correct that nitrate is a concern in surface water, and that is something that is taken into account in our applications. For instance, just outside of the treatment zones, the green areas that were on the map, we're trying to minimize the concentration below the allowable surface water regulations. So, below 10mg per liter, and that's one of the things we're evaluating between injections. You know, how far are we exceeding the nitrate concentrations, and is it getting beyond our control? Secondly, the majority of SS57 is under hydraulic control from the CTS groundwater extraction system. So, we can

monitor that as well. It is not something that is anticipated or could reach Van Etten Lake on its own.

Bill Gaines I will say that hydraulic control through the central treatment system is because you are taking water out of it, and you are right that water doesn't go into the Van Etten Lake; it goes into Van Etten Creek, which goes into Lake Huron. So, which lake it goes into is not really a material excuse for saying that – oh yeah, that doesn't make a difference.

Dirk Pohlmann No, I didn't mean to suggest that it's ever going to get to the extraction wells; I'm just saying that's the ultimate background. If it got to the extraction wells, you would also have a large O&M problem with the treatment system as well because the nitrate would foul up the granular activated carbon. So, by all means, we do not want it to be captured. That is just another component of that remedial system. The amount of nitrate that we are putting in is just designed to maintain itself there in the treatment zone.

Tim Sueltenfuss Great. Well, good. Bill, thank you for and if you don't mind, I'm going to continue on to some other questions from those at this head table – the primary RAB members – right now, if that works for you? I see another hand up, Arnie, do you have a question?

Arnie Leriche Okay. Thank you. Shift gears for a quick second here. Regarding the budget that your team has requested for this fiscal year and I was wondering is Dan Medina or any of our Congressionalist on the line right now?

Jacob Bennett Yes. Jake in Kildee's office is here.

Dan Medina Dan Medina is on. Arnie, this is Dan.

Arnie Leriche (AI) Okay. Thank you. This connects with Tim's statement when he asked about Congressman Kildee's 13.5 million and where is that and how much and so forth. But I want to add on, now we are in fiscal year 21, and the DoD budget was passed about four weeks ago, and in there it's my understanding, correct me, Jake, if I'm wrong, that there was a significant add-on for PFOS for BRAC and in my estimation, it's three times or maybe four times the total budget you have had in the past fiscal years for authorize. So, my question is, **how much did your team request for consideration for this site for this fiscal year, which we are already four months into?**

Dan Medina So, across the board for BRAC, we are looking at approximately 30-35 million-plus-up this fiscal year, and so part of our challenge this past year was the funding. We did get a plus-up last year that we put quickly towards PFAS work to deal with implementing the Remedial Investigation and the two Interim Remedial Actions for Van Etten Lake and Clark's Marsh. So, we are moving forward on that. We are right in the middle of looking at FY21 plus-up and looking at where else we can put that money towards all of our installations where PFAS is an issue, to include Wurtsmith. So, we are looking at that, Arnie, right now. We haven't come up with a final number yet on how much specifically for Wurtsmith, but as I said, the team has that challenge right now, we are going through that right now, but we are looking to address that.

Arnie Leriche Well that is good to hear but - black and white - if you could possibly communicate that with us and the congressman in the near future because in the past years... two years ago, there was diverting of money, and actually a million dollars was taken away from Wurtsmith landfill to pay for increase GAC swap out (carbon) at the central system and it was because of blinding, and we are concerned because there

was 200 million dollars that was added I think to the budget, so we want to make sure we get our fair share.

Catharine Varley Arnie that would be for the active bases; I just moved from the active side to BRAC side. Active bases got 200 million and 35 million for BRAC, sir.

Arnie Leriche That's that add-on to the 50 million that you had as a President's budget?

Dan Medina For FY21, Arnie? Are you talking about FY21? Catharine and I were just talking about it, and we are talking about 35 million plus-up for BRAC only. The other additional 200 million that was mentioned was for the active installations, not associated with BRAC. So, there's a separation because, you know, BRAC, as some may know or some may not know, we fence that for BRAC installations, and that's done throughout the Department of Defense, not just for Air Force.

Arnie Leriche An AI that Dan – you, and the congressman office staff, Jake and myself - we get together and put this on black and white so we can understand it correctly? So that we don't run into a situation like we did last April?

Dan Medina Sure, absolutely and we we'll look to that for future RABs as well, maybe not even for just the next RAB but future RABs, you know, if we do have any plus-ups in the program, we'll talk more specifics. We have to be a little bit careful, just a little bit of caution just when we talk numbers because we obviously have to work through the acquisition process to put that funding under contract. So, we don't want to you know necessary tip our hand on exactly how much is out there for contract purposes, but we can certainly talk about that and where we are applying the plus-ups within the different installations and specifically for Wurtsmith. Oh, and by the way, Arnie, if I could just take this opportunity again, and wanted to introduce Catharine Varley. Dr. Varley is joining the Wurtsmith team for the Air Force. So, I just wanted to introduce her to everyone, and I was going to do it a little bit later, but I appreciate Catharine jumping in there to help me and just to help out Dave, and me, and the Wurtsmith team. So, we've got another great person joining the team. Thanks.

Arnie Leriche Yeah, terminology like plus-up nobody understands. So, we've got to work on that. Thank you.

Tim Sueltenfuss Okay. Well, thank you very much, Mr. Medina, for addressing that as well. And, Arnie, you may have other questions, but let me just move on, and I'll come back to you if we have time in the next session here. So, again, we'll continue around the table – this head table – with the primary RAB members to see what questions they have. Alright, Cathy, I see Cathy Wusterbarth. What question may be on your mind?

Cathy Wusterbarth

I do, yeah. One of my other two questions. In regards to that question that Bob Delaney started to ask, is the Air Force sampling the influent from LF30/31 for PFAS?

Paula Bond Hey Cathy, yes. We are looking at that, and we are sampling. We have a sampling schedule for the landfill as part of the RI. I believe during the SI, they actually sampled the effluent before it was discharged to groundwater and, if I recall those numbers, I know they were below the HA, I can't remember the exact number, but I know they were fairly low in the SI.

Cathy Wusterbarth

Okay; So, I understand that the well field was not stopping the entire plume from reaching the YMCA beach. Has this been fixed?

Paula Bond Are you talking about the expansion of the IRA?

Cathy Wusterbarth
In relation to the landfill 30/31.

Paula Bond Yeah. I'm not sure the well field is stopping the plume from going... Oh, you're talking about the treatment system there; I'm not as familiar with that. That's probably a question for FPM, who's working on that.

Dave Gibson (AI) Cathy, what I would like to do is have an action item of "**what are the concentrations of the L30/31 discharge**" and get back to you on that.

Cathy Wusterbarth
Yes, please.

Bill Gaines They also need to add what portion of the plume is being captured.

Dave Gibson We'll do that.

Arnie Leriche Also, can you add to that not just the plume capture but what is the percent of the plume that's being captured, and it's sometimes called flux, PFAS flux.

Dave Gibson So, remember LF30/31, right now that is to address non-PFAS compounds, okay. What you're asking the Air Force to do is go in and whatever data you have been collecting for PFAS at L30/31 tell us about it. Is that correct, or are you saying for the non-PFAS constituents tell us how LF30/31 is performing?

Arnie Leriche I think we want both.

Dave Gibson Okay, and so it may be that until we get to the RI data, we may not be able to tell you what's going on with PFAS.

Mark Henry Okay. Is the landfill 30/31 blocking system – the extraction wells along 41 – is that being evaluated for effectiveness in treating the PFOS and non-PFOS contaminants during the RI?

Dave Gibson It would not be evaluated during the RI for non-PFAS because the RI is the PFAS – PFOS/PFOA.

Mark Henry Okay, but I would think that if you're evaluating the effectiveness of the breakthrough of that line of wells right there that you would have the opportunity to evaluate the non-PFOS chemicals as well if they are breaking through your extraction system.

Dave Gibson Those are two different topics. So, the RI will be addressing PFAS (PFOS/PFOA) and the performance of the system at L30/31 for the contaminants of concern that were identified in the decision document. That is being evaluated. Yes.

Mark Henry Thank you.

Tim Sueltenfuss Okay. I see that Mr. Bill Gaines has his hand up.

Bill Gaines (AI) Something that I've not heard talked about in the RAB, and I thought about a day or so ago. The hangars in buildings that the Air Force turned over had fire suppression systems in them; I presume that those fire suppression systems had PFAS in them. **What's been done, if anything, with removal and cleanup of those systems to prevent them adding to the problem in the future?**

Dave Gibson Bill, I don't have an answer for you at this point. I know we are going back to the records and try to get that answer. So, we are going to track it.

Bill Gaines That will be an action item then.

Dave Gibson Yes.

Tim Sueltenfuss Yes, I'll capture it. Yes sir. Okay. Well, thank you very much, Bill. Let me go back up to the top of the list and just work our way around this head table again. Cathy Wusterbarth, questions from your standpoint?

Cathy Wusterbarth
Yes. I just wanted to clarify, so the PFAS is being is being discharged to the groundwater through the wetland that we are talking about here?

Dave Gibson Which wetland are you talking about?

Cathy Wusterbarth
Near the landfills.

Catharine Varley Are you talking about treated water?

Cathy Wusterbarth
Yes.

Catharine Varley Or clean water being discharged?

Paula Bond Hey Cathy, the discharge, before it enters the groundwater – the sample that was taken there during the SI – the PFOA concentration (I'm just pulling the figure) was 13 nanograms per liter, and PFOS was also 13 nanograms per liter. So, that is what is being discharged through the system to the groundwater right now.

Cathy Wusterbarth
What is the goal for?

Paula Bond The Michigan number for PFOA is 8, and the number for PFOS is 16.

Bill Gaines I think the screening level for both is 8.

Paula Bond I'll let Beth answer that.

Beth Place Sorry about that. Yep. So, we have 8 for PFOA, 16 for PFOS, and those are the new MCLs that are now part of the Part 201 criteria, and then we also have 12 for PFOS GSI criteria.

Cathy Wusterbarth
So, it isn't being totally treated as a non-detect?

Beth Place Based on that sample, it's 1 nanogram per liter over our GSI criteria, and it's below the PFOS MCL that is now our Part 201 criteria.

Cathy Wusterbarth
Thank you.

Jerry Schmidt I think you answered my question, but this landfill 30/31, I guess I'm not exactly – I know there's monitoring wells along, I thought – are those are extraction wells? What are we doing there with the ones along F41? What are those wells for? Mark showed me those one day, and I think there's quite a few but are those the ones, the wells, that are actually taking the water out of the ground to be treated?

David Gibson Dirk, if you're on, can you answer?

Dirk Pohlmann Can you repeat that again?

Jerry Schmidt The wells near 30/31, along F41, I assume those are –

Dirk Pohlmann They're extraction wells.

Jerry Schmidt Are we – Where is that water going from there, and is it being treated there? I assume it is.

Dirk Pohlmann Yeah. The primary constituent that is being extracted there is iron. Earlier, someone referred to the YMCA Beach. So, that's what we are trying to protect is the iron going to the beach. And then, that iron is treated through the wetlands treatment system.

Jerry Schmidt Okay. So, I know that's – I know that they had an iron problem at that beach, and what about are we checking that for PFAS materials or not? I'm just totally confused by the conversation that we had about 30/31.

Dirk Pohlmann Well, keep in mind that the wetland treatment system's focus is VOCs and iron and not PFAS. It was constructed before PFAS was an emerging contaminant. So, that is not a focus of the wetlands.

Jerry Schmidt Okay. That's what I understood. So, we are not worrying about PFAS there, then?

Dave Gibson Well, let me jump in. So, the legacy IRP work is not worrying about PFAS. The RI for PFAS is looking at all sites across the base. So, if there's PFAS at 30/31, we will be identifying that, and then as you progress on through the feasibility study, we will be looking at what are the options for PFAS, what does the risk assessment show us. So, right now, the RI is identifying the magnitude, scope, direction of PFAS throughout the base. But the work to comply with the decision document for 30/31, the original did not have PFOS and PFOA on the list of chemicals of concern.

Jerry Schmidt Okay, alright. But didn't I just hear that there was 16 parts per trillion of PFOS in something related to 30/31, or was I –?

Dave Gibson No, what happened during the ESI is the contractor went out and collected samples in various locations on the base, and they did collect samples there for PFOS and PFOA. That was for the ESI. And now, we're in the RI.

Jerry Schmidt Okay. Thank you. Thank you very much. I appreciate it. Sorry to take up so much time with this.

Cathy Wusterbarth
Well, this is Cathy again, this is Cathy Wusterbarth again. If I could continue that, please. So, the results were above the criteria of 13, right?

Jerry Schmidt That's what I heard, Cathy.

Cathy Wusterbarth
And then, there was only the one testing that occurred with those results?

Paula Bond Yes. Yes, Cathy. They sampled just once in the SI.

Cathy Wusterbarth
And then wasn't the Air Force warned about the PFAS in that situation?

Dave Gibson Well, Cathy, what do you mean were we warned about that?

Cathy Wusterbarth
You were warned about the PFAS going into the wetlands from that?

Dave Gibson I don't know that we received something from EGLE, no, if that's what you mean. But that was the SI, and now we are in the RI, and we are going to delineate.

Cathy Wusterbarth

And then another question is it permitted discharge?

Dave Gibson Are you saying does 30/31 have a permit to discharge from the system?

Cathy Wusterbarth

Yes.

Dave Gibson I don't think there are any permits on base. There is criteria to meet, but it's not a NPDES permit unless Dirk you want to expound upon that.

Dirk Pohlmann Dave, I believe you're correct.

Tim Sueltenfuss Cathy, did you have an addition question? Or an additional item on that same question?

Cathy Wusterbarth

Um, no. That's it. Thank you.

Tim Sueltenfuss Ok. Thank you. I appreciate it. We are continuing to walk around the table here, and we are to Arnie Leriche. Question from you, Arnie?

Arnie Leriche Okay. Another shift on topic, ecological human health risk assessment: this team and this site, we have never really talked about criteria... how the Air Force does one... what data do they use, and it would be really helpful, there's a big-time crunch from the schedule that you've given us on the RI scoping then the RI and so forth. So, this could be a technical meeting discussion, and predominately, we don't know what data the Air Force has been looking at or discussing with the state we assume that the state has given you all the data and hopefully soon or actually including the new deer sampling data that Puneet discussed. However, the issue and the action item that I would like to throw out is that we would like to know what the involvement of the Air Force and EGLE are with other stakeholder agencies such as the forest service, fish, and wildlife. This is their land and their responsibility – Fish and Wildlife – under CERCLA, and we got the public. So, can you give us a quick discussion, and then maybe we can have a more in-depth? What does this look like, and how much time are we going to have to understand it before you finalize the data gaps and your scoping?

Dave Gibson Arnie, you keep expanding the question, you went – what are we complying with as far as to do the ecological in house and then you tagged on how long is this going to take... So, I can give a short answer that we are complying with CERCLA and the schedule that we sent out provides the timeframe for development of the work plan, the risk assessment, and then that risk assessment is done in parallel with the RI work plan. Catharine, did you want to add anything to that?

Catharine Varley Correct. So, the RI provides the source strength and the delineation, and the risk assessment will be using all the rest of the data combined as well to determine what the potential is for risk, whether it be human health or ecological.

Arnie Leriche Okay, but, as Dan might remember, we are at a disadvantage on this site because we because there was an opportunity two years ago for this site and team to do some screening sampling like they did at Pease, New Hampshire, just to get their feet wet and to use some EPA criteria just so the public would know what is this animal, a

risk assessment for food consumption, wildlife and so forth and now we are going to be really crunched and we are asking for a lot of help to catch up since there was no screening done by the Air Force that we know of.

Catharine Varley So Pease only included an ecological screening. We are actually doing a risk assessment, which is beyond the screening point.

Arnie Leriche I know, but it would have been nice if the Air Force had used the state data from 2012 for fish and 2018/19 for deer; we would have known that we blew all kinds of screening criteria for the fish in the Au Sable River and Clark's Marsh. So, I mean that should have informed and, hopefully, it did inform the Air Force, and they could have shared that with the public; what does that mean for data gaps, and what are you going to protect?

Catharine Varley So, the information continues to be collected, and that information that is collected continues to be analyzed and has helped with the compilation of data from all over the United States into the Argonne National Laboratory's ecological risk data source that is then coming up with risk assessment values that our proposed values are currently being compared to and for our risk assessment work plan that is making its way through the technical teams right now. But yes. All the data that you are talking about, yes, we have had a chance to collect data, and yes, there has been data collected, and that data is being analyzed as we speak.

Arnie Leriche Can you share with us an example of risk assessment ecological that have been done at another Air Force or another DoD? You know that are ahead of schedule than we are so that we can at least see it in the public so we can educate ourselves?

Catharine Varley We are leading the way with Wurtsmith; that's part of what I like about being brought onto this team. So, the upper Midwest bases that I was supporting Ellsworth, Peterson, Schriever, Minot, there are 15 of them, all of those we had started the process of analyzing PFOS/PFOA. The Wurtsmith RI and IRAs, you guys, are far in advance; however, the other bases I did put in place several removal actions and demonstration/validation projects that we will be watching and seeing if we can actually use those at the BRAC bases.

Arnie Leriche Okay. Can I just add one quick thing, and that is the five-year review? I held earlier to say this, the five-year review is 18 months later than schedule, and I'm guessing that it's because of the protection for PFOS analysis and what can you share with us quickly so that we have some information in a presentation, if not some reports or analyses so that we know what the protection level is for Clark's Marsh, at least from the FT02 performance and so forth? Dave, I think that's yours.

Dave Gibson I don't know if anyone else with the Air Force wants to take a stab at that, but I can't speak to that Arnie. I can't say that protection is holding up the 5-year review specifically.

Tim Sueltenfuss Okay. So, I've have captured that as a question to look into. We have just about seven more minutes or so for this Q&A session. And, I see that Jerry Schmidt has patiently held up his electronic hand. So, let's turn to Jerry Schmidt.

Jerry Schmidt Well, thank you. I just wanted to ask when are we going to have this analysis that - is it Cathy (?) - the doctor was talking about?

Catharine Varley Which analysis are you talking about the risk assessment work plan that will follow the RI?

Jerry Schmidt Yes.

Catharine Varley So, Paula, did you want to speak to the schedule?

Paula Bond Yeah. I can speak to that. Where we are with the risk assessment work plan right now, that has been developed in draft, and it's with the Air Force for review. We expect that to follow behind the UFP-QAPP work plan. So, it will be later spring before that is potentially available for review and even in the summer.

Jerry Schmidt So, we are going to have this by the summer? Is that what you are saying?

Paula Bond Yes, the work plan.

Jerry Schmidt Thank you.

Tim Sueltenfuss Okay. Let me just run through and see if we have other hands raised. Mark Henry, go ahead.

Mark Henry (AI) Thank you. This is a follow-through of a question that was asked about Landfill 30/31 that wasn't really answered to my satisfaction. I believe that the State of Michigan generally requires groundwater discharge permits for the discharge of an effluent. I understand that the Air Force is reluctant to get permits and that they used substantive requirement documents. **Is there an SRD for Landfill 30/31? Are PFOS looked for as far as compliance with that permit, and if not, I would ask the state to require the Air Force to monitor for PFOS in the SRD as they would if it were an actual permit.**

Beth Place Hey Mark, I'm talking to our water resources department right now to see if we have that SRD on file. I don't think it's a fact that the Air Force is reluctant to get permits; it's just the process when you are dealing with the federal government to do the Substantive Requirements Document instead. So, we can get back to you guys on if there is an SRD in place for Landfill 30/31, but if there is one there, to my knowledge, it would be based on the older remedy for the historical contamination, and the PFAS would not be a part of it at this point.

Mark Henry Well, it gets reviewed periodically it seems like you would update it to include known information.

Beth Place Sure, and we can get back to you on the status of that if there is one in place and if there is a review status for it.

Sharon Vreisenga If I could add to that, keep in mind that under CERCLA, permits are not required for on-base remediation or on-site remediation. So, for some of the sites at Wurtsmith, we don't have permits, but we have Substantive Requirement Documents. That's a different thing under the law, so where we don't have a permit for the central treatment system, for Mission Street is under the same SRD with the central treatment system, and then there is a separate SRD for FT02. I am not aware of one for 30 or 31, and that's an on-site discharge. Another thing, an NPDES permit is only surface water discharges. So, a groundwater on-site discharge would not require a permit from the state.

Mark Henry I understand that, but an SRD should probably, because normally under state law, these things are permitted and because that area of discharge is not within the capture zone of Landfill 30/31 and that discharge goes directly to Van Etten Lake, it should probably be considered.

Tim Sueltenfuss Okay. Well, we have an action item that's in its infancy, but I'll work it through and then communicate it on to the Co-chairs. But Beth, I think you mentioned that you would look into the status of that. So, we will follow up on that. Let me just get one more question here in the Q&A session before we move to the public comment

session; Mr. Bill Gaines had his hand up. So, Mr. Gaines, what is your question, please?

Bill Gaines The biological/ecological question brought the point that Allen Lake, which is approximately half a mile south of the northwest end of the runway, has “do not eat” for fish for PFOS/PFOA, and I have not seen anything in the SI that would indicate what the source of that PFOS/PFOA that is in there might be. I was told that anything that was on the former base would be tracked as part of the ESI. I don’t see anything there. I don’t know how anything could get into Allen Lake – PFOS/PFOA wise – but was it sourced from Wurtsmith? So, there’s a hole there that doesn’t fit my understanding, and I question how that hole was filled and where that would be on the conceptual site model because I haven’t seen anything on it in any of our discussions.

Paula Bond I can answer that. We are looking at Allen Lake as far as the RI. So, that area will be investigated; we are planning on collecting some samples from that lake and the groundwater surrounding the lake.

Bill Gaines Thank you.

Tim Sueltenfuss Okay. I appreciate your patience with kind of a tweak on our agenda. I think it was helpful just to have that Q&A session among the RAB members. Our next portion of the agenda is the public comment period. So, this is meant for those members of the public who are participating in our meeting and, again, sticking with our visual of if this were an in-person meeting, that this would be the opportunity to come up to the podium and you would have three minutes to provide verbal comments. And so, what I’ll be doing is tracking the three-minute time limit. So, I’ll let you know when that is passed by, and the way you sign up is by raising your hand electronically.

Public Comments

(2h:35m:35s)

Tim Sueltenfuss I did have Mr. Spaniola. Mr. Spaniola entered a question in the question format of our online meeting that he would like to make a comment. So, Mr. Spaniola, we’ll start with you sir.

Anthony Spaniola Thank you. My comment is actually a question that goes to the F41 posed extraction well line, and I want to thank Mr. Gibson for responding promptly to my letter in October; and I just wanted a clarification because as I understand what was said earlier in the meeting tonight. My understanding is that the extension of the extraction well line along the lines posed by now is being considered for the IRA. That’s what I understood to be said, and I just want to make sure that I clearly understand that because the letter seems to indicate that it’s not going to be considered until the RI stage. So, Mr. Gibson, could you clarify that for me?

Dave Gibson Let me try to do that.

Catharine Varley So, David, that is something that we should be considering when we get into the feasibility study. So, the biggest thing that the IRA’s are trying to do is to ensure capture. At least that’s what I’ve read.

Anthony Spaniola That’s the whole point of our comment is that you are not capturing the whole plume. So, I don’t understand that.

Dave Gibson Well, that goes back to an Interim Action to capture the hot spots, and then there is going to be an IRA that fully delineates PFOS/PFOA and the risks and the Feasibility Study developing the long-term solution.

Anthony Spaniola So, what you are saying is that the request to have this be part of the IRA has been turned down?

Dave Gibson I would like to finish the proposed plan before answering that question.

Anthony Spaniola Well, it sounds like from the comment and from the letter that was sent to me that that decision has already been made. Is that true?

Dave Gibson I would like to defer to the proposed plan after review with EGLE. Is that acceptable?

Anthony Spaniola Okay. I would just ask then, and I want to reiterate that it's important to the community that this extension be done now. There was a reference in the letter to the fact that temporary VAS monitoring data was not going to be considered, and in speaking with our technical people, that is not an appropriate way to deal with a situation like this. And, again, I would just ask on behalf of the NOW group because it our number one priority that this be done now. This is the time to do it because it is economically feasible, and it would be a mismanagement, I think, of funds to put it off to a later date. Thank you.

Dave Gibson That's a great comment.

Tim Sueltenfuss Okay. Thank you very much, Mr. Spaniola. Let's see. Do we have other members of the public that would like to make comments? Just by raising the hands electronically. I'm just going through the list here to see. Arnie, I see that you have your hand up but let me go to Mr. Robert Delaney, and then I'll come back to you, Arnie, if I could? So, Bob Delaney, go ahead, sir.

Bob Delaney Hey, I just wanted to say to the Air Force that although it is plausible that your plumes have not gone under the lake, it is hard to imagine another source explaining the large source on the east side of the lake and that I believe really is your responsibility to fully characterize that plume on the east side of Wurtsmith Air Force Base. The assumption that is all discharges into the lake is not proven, and it can be proven if you put the effort into it and one of the things I want to point out is that you have access to the current Army Corps of Engineers who can drill stuff under lakes really easy. They're really good at stuff like that, so there's really no reason not to other than a concern to what you might find; I don't know; I don't want to say that, I guess but anyway you can do it if you want to.

Catharine Varley So, first, with the RI data, once we have initial data, we can determine if step-outs are needed, but until we have the initial data, it's hard to say that we are actually drilling under a large body of water. Paula, would you like to say anything else towards that?

Paula Bond Yeah. In our CSM, we have evaluated all of the data that we can put our hands on that is out there regarding the lake, regarding the river, and we have compiled all that information using the environmental sequence stratigraphy format and looked at that, and our technical team feels strongly that there isn't movement of the plumes under the lake. So that information will be presented in the CSM, and it will be in the UFP-QAPP when that comes out, but all of that information is in there, and we just don't believe at this time based on the information that we have. Catharine is right if we find something else during the RI but based on all of the data collected to date and the data that EGLE has collected to date and everyone else that has been out there. We feel strongly that there is no movement and that it is not necessary at this point.

Tim Sueltenfuss Okay. Mr. Delaney, I appreciate your comment, sir. Thank you very much. Let's see. Moving down the line here real quick to see what other hands are up in our virtual realm... Mr. William Gaines, go ahead. Bill Gaines?

Bill Gaines I'm sorry. I was just typing in a comment. I can say that the members of the Oscoda community feel quite strongly that there is no other plausible explanation for the level and extent of the PFAS contamination on the east side of Van Etten Lake and that there is nothing that I have seen from either the Air Force or from any Air Force contractors or from the EGLE study and I have looked at them all with the best geological eye that I have, and Mark Henry has made some suggestions about how it is plausible and probable, and there certainly needs to be more investigation.

Catharine Varley Let's see what the initial data says, and then let's move forward.

Tim Sueltenfuss Okay. Thank you, Bill. I appreciate your comment. Let's see. Let's go to William Palmer, please, sir.

William Palmer My question relates to the IRA for the capture zone for the Oscoda beach – Air Force beach – Lake Van Etten, that is going to be serviced by the central plant, which is functioning now, and I remember when that plant was built, it was stated by the Air Force that they were building a larger building than what was currently needed so they could add capacity in terms of additional pumps and filters. I am wondering, well, if you gotten far enough along in the IRA plan to know whether you will be putting an additional pump and filtration system in there to handle that alone. My concern is that it is currently pumping and treating groundwater. I would hate to see that lost and not have enough capacity to handle the entire plume that's flowing to Van Etten Lake. I am just wondering if we are far enough in the plan to know if that will be a part of the plan.

Paula Bond Have you taken the tour of the Central Treatment System? Have you been in that building? I know a lot of the RAB members have.

William Palmer Yeah.

Paula Bond If you recall when you walk in on the left side, that whole side was open, and all the treatment train that's currently there are on the right side. So, we are going to build out that left side of the system that looks almost identical to the one on the right side. It will be a completely separate treatment train, and we are also looking at a small addition to that building for some additional pretreatment equipment. But it will be a completely separate treatment train on the other side. So, what is pumping now is continuing to pump on the other side.

William Palmer Okay. So, the new pump and filter systems will be devoted to the Van Etten Lake extraction field?

Paula Bond Yes.

William Palmer Okay, very good. One other quick question, if I might. There was some discussion earlier, and I just want to make sure that I have the right understanding about the extraction wells that are along F41, relating to the Landfill 30 and 31. My understanding was that those originally were put in to extract the VOC chemicals, and my understanding was that those were done years and years ago before there was any knowledge of PFAS and that they have been effective, and so now the only thing flowing through there now is iron, am I correct in that?

Tim Sueltenfuss I think we have Randy Mattzela to address that.

Randy Mattzela Sure. I don't believe that's the case. The plumes still exist out there for the BTEX and the TCE that flow through the treatment wall. This isn't my project, but that's part of the reason for the FS is to treat the BTEX plume from the LNAPL portion that's on a portion of the former Wurtsmith property.

William Palmer Okay, thank you.

Tim Sueltenfuss Okay. Well, thank you very much. Let me continue down the list. Again, if you would like to make you'll have three minutes. Just raise your hand electronically. Mr. Spaniola, did you intend to make an additional comment?

Anthony Spaniola I'll let others go first.

Tim Sueltenfuss Okay. Great. We'll go to Arnie Leriche then.

Arnie Leriche I would like to add on to Tony's question and the answer that he got on the extent of the capture well field for the IRA on the Air Force beach. And the technology is the same as you have been using since 2015, so that's not an issue in an IRA determination. Therefore, a lot of the determination of how wide and how much capture you have is more budget to put the wells in and to treat with a GAC unit. And so, I would like to add this component of budget to the conversation that Dan Medina committed to have because it is money that is driving the decisions. Always will be, always has been. So, I would like to make that recommendation.

Catharine Varley What is the recommendation? I didn't quite understand where you are going with that.

Arnie Leriche Where I'm going is that Dan has committed on the action item that I asked earlier that we have a discussion about what the budget request was by this team for FY21 and beyond and what money is available and the IRA's dependent. My point is that the IRA and the well field is dependent on the budget that you ask for and what you will receive for this fiscal year and the next one. So, this well field question that Tony and others of the group have raised should be added into the whole budget question.

Catharine Varley That is not necessary a RAB discussion.

Dan Medina I understand what you are saying in terms of looking at this for current efforts and future efforts. So, we will take that back as an action item and discuss it further and look at that. But I understand what you are doing here – asking for – so, we will take a look at that. Yeah. Definitely.

Arnie Leriche Thanks.

Tim Sueltenfuss Alright. Well, thank you very much. Let's continue on down the list to see who has hands raised to make a three-minute comment. We have Eric Keller here. Would you like to make a comment, sir?

Eric Keller I appreciate everyone's time this evening. There were a couple of things that were inaudible during the Q&A. One of them was when Paula stated something about having to look at the RI data, and I was wondering when that would be available and somewhat time-barred to that is when will the CSM mapping be provided to the RAB?

Paula Bond Sure. Yes, I think you asked about the RI data. So, again, if you look at the schedule, we are not going to be in the field collecting the RI data until later this spring and summer. So, we will be collecting data pretty much all through 2021. So, that data will then be evaluated and analyzed in the RI report until later in 2022. The CSM, as we collect data, we update our CSM. So, the CSM that we currently have is based on all of the data that has been collected to date. That will be included in the UFP-QAPP, which is scheduled to be issued later this spring or early summer. So, that will be in there and available at that time. As we collect additional data for the RI, it will be updated, and a new CSM will be included in the final RI report that comes out in 2022.

Eric Keller Thank you for that. What I heard is that folks in the community were wanting that information before it was finalized, and I would agree with them in being able to know that as soon as possible. So, thank you for that, and just in terms of a comment for the RAB: obviously, Senator Peters is committed to expedited federal response and commitment to transparency related to PFAS contamination. As of this afternoon, he is now ranking member, no longer ranking member, and now chair of the U.S. Senate. So, in that committee, he has been pleased to hear some of the legislative and appropriations related to PFAS provisions even recently in the December omnibus. But you know at the end of the day, he's already looking to introduce bills that will help with the federal response and has been speaking with the Biden administration on what is and isn't happening in Oscoda and definitely hears the concerns and frustrations from the community. Actually, just yesterday, Senator Peters brought up Oscoda and the concerns from the community with the SEC DEF nominee hearing with General Austin to secure a commitment from General Austin, and if he was confirmed, to further expedite DoD response efforts on that front, so those are my comments. Thank you.

Tim Sueltenfuss Alright. Well, thank you very much, sir. We appreciate your comments there. Moving on down the line, we have about ten minutes or more left in the public comment period/portion of this agenda. Bob Delaney?

Bob Delaney Oh. My hand is still up. Sorry. I would just like to say that I am encouraged by some of the things I'm hearing from the Air Force – that there are some things that are much more positive than they used to be.

Tim Sueltenfuss Great. Alright. Thank you, Bob. And to see other hands that might be raised for comments... Bill Gaines?

Bill Gaines Sorry. I got my comment in.

Tim Sueltenfuss No problem at all. Okay. Let me see if others might have comments. I see that Anthony Spaniola has his hand up. Anthony, did you have a comment that you would like to make?

Anthony Spaniola Sure. I just wanted to follow on the transparency discussion. Just to put it in the context of some other things here, and that's that there have been some troubling statements tonight about particularly the east side of Van Etten Lake and a very restricted view of what the Air Force's, I think, responsibility is. We have concerns about things being left off of the site maps, and I think, as Eric Keller mentioned, Senator Peters brought up Oscoda in the confirmation hearing yesterday for the Secretary of Defense Designate Austin. This is all happening because there has been a change in part, a change in the way this RAB is operated from the one that was operated previously for the now PFAS constituents. Another thing that has undermined credibility, and I think unnecessarily, I think that it's not that difficult to share draft documents with the RAB. It's not going to be the end of the world if that happens; in fact, it will help engage this community. This community is very engaged, and it will produce work product that is far better than is being done in secret now. So, I would encourage the Air Force to review its current position on the whole transparency thing; the meeting in secret, the kicking out of the township, the refusal to provide draft documents; I'd ask that you reconsider that and if it's not a decision that you can make here then take it to your superiors. This community has been through a lot to lead it on the outside in the dark is just the wrong thing to do, and I'm confident that our champions in Washington D.C. are not going to stand for that, and certainly, those of us in the community are going to continue to push to make this a better process for everybody involved. Thank you.

- Tim Sueltenfuss** Okay. Mr. Spaniola. Appreciate your comments there. Let's see if anyone else might have comments to make. Arnie, I see that your hand is up. Arnie, would you like to make a comment?
- Arnie Leriche** Okay. Well, Tony's statement I totally agree with, and I think the technical sessions that we talked about could be a great first step to communicate technical things early and not wait for the RAB. I think that sharing the BCT minutes, the Air Force could send us the final at the same time they send it to the state. So, that we have them then. One thing, that before Matt Marrs was assigned was the previous man... Mark, help me out... Paul O'Connors from Chinook and he was in for three months, and this was a time when the township and the RAB, myself, were kicked out of the BCT and no longer allowed to go. I don't see why we could not talk over the next six months because there is so much going on that you could fix the transparency issue and not have to give us all draft documents. But after the BCT, within a few days, give us – what Paul suggested he was going to look at – and that was give the RAB members a technical session immediately after... to just brief us on what you briefed. Not your conclusions and recommendations so much as what are you looking at, what is possible, and what the timing of making decisions is so that we are comfortable and we understand. So, that is a suggestion that I'd like for you to think about and get back to us because there is low-hanging fruit to fix some of the transparency and timeliness issue. We need it immediately.
- Tim Sueltenfuss** Okay. Thank you, Arnie. I appreciate your comment there. Any initial response to that or comments that would like to be shared?
- Dan Medina** You know, we are always... we appreciate everyone's suggestions, and we take a look at that, and we will certainly look at providing the information that we can when we can, you know, especially during the RAB meetings per the comments tonight you know some of this information would be helpful kind of like the discussion on the Conceptual Site Model to hear some of this or see some of the information before the next RAB so at least you have a chance to take a look at it. We will go back and take a look at that and discuss options for us and see where we can continue tweaking what we provide. We do have a very aggressive schedule for both Interim Actions and the Remedial Investigation. So, there will be a lot more information coming out here in the next few months, and understand folk's concern at the pace of which that it comes out. But we do see more and more information coming out as we work through some of the issues, especially with EGLE. We appreciate the comments from the RAB members on that, so thanks.
- Tim Sueltenfuss** Thank you, Mr. Medina; I appreciate that. We have just four minutes left in our public comment session. So, time for one last comment. So, David Winn, I see that you had indicated in the questions format that you had a comment that you would like to share. So, we'll turn to you, sir.
- David Winn** Yes. It was discussed about five or ten minutes ago that based on the east side of Van Etten Lake, the data would be evaluated, and then they would make a determination. Can you give me an idea of when that data evaluation will be complete, and will it be before something can be done, or is this going to be at the completion of the RI phase?
- Catharine Varley** So, the goal is the same as with any RI is to make data-driven decisions and determine if we have to step out. If that data suggests we need to step out, then we need to step out, and we will go through the hurdles at that point to do that.
- David Winn** Step out of what?

Catharine Varley Step out, meaning... so, following the triad approach, you continue to move out your boundaries until you have full delineations of your plume.

David Winn Okay. So, then would there be a secondary RI study done?

Catharine Varley Correct. We would be doing a supplemental, or we would be adding to where we are currently at before finalizing.

David Winn That will be complete by the time the 2022 period comes about?

Catharine Varley No, if the data suggests that we do not have delineation and source strength, then we have not completed the RI.

David Winn Okay. That's what I needed to know. Thank you.

Arnie Leriche So can I ask Tim, terminologies? We need to step back and start working on that again. Step out I look at from what I understand is the same thing as the data gap and whether or not you have filled it in the process of the RI?

Catharine Varley Correct. Do we have enough information to move on to a feasibility study and start looking at ways to address the plume, or do we not, and if we don't, then we need to address those data gaps first?

Arnie Leriche Okay, and this is not to you but in general, terminologies and the public and the RAB, triad I don't even know what that means so maybe a little bit of help on maps, terminologies, that we work on that again. Tim, that maybe you could look at what we did three years ago. Tim, maybe you could look at what we did three ago, it's very important.

(3h:04m:30s)

Tim Sueltenfuss Alright. Well, so, we are coming to the conclusion of our time here. I appreciate everyone's participation, and I wanted to make sure and provide some time to the Co-chairs for closing remarks. So, let me turn to Dave Gibson for any closing remarks that you might have.

Dave Gibson Thank you all for attending, your great participation, and good questions. And we'll be meeting again soon.

Tim Sueltenfuss Excellent. Well, thank you and over to you, Mark Henry... from your standpoint.

Mark Henry Well, thank you, it was a good meeting. I'm probably the only one here who wishes we could have more discussion, but this was good. I hope it will lead to additional discussions, and I really hope that we have the opportunity to have some technical meetings with the regulators.

Tim Sueltenfuss Great. Alright. Thank you, Co-chairs. Thank you, RAB members, and thank you, staff, of the agencies who are involved and especially to members of the public who participated tonight as well. I appreciate your time and attention, and we are adjourned for the WurtSmith RAB meeting tonight. Thank you.

(3h:05m:46s) Meeting adjourned.

Attachment 1
Attendee List

Last Name	First Name
armbruster	amanda
Auriemmo	Leslie
Baltusis(EGLE)	Matt
Bauer	Charles
Bennett	Jacob
bond	paula
Boris	Connie
Bradley	John
Brewer	Cheryl
Cole	Gregory
Corsi	Dale
Cummings	Tim
de la Fuente	Val
Delaney	Robert
Fuentez	Stela
Gaines	William
Henry	Mark
Hill	Jennifer
Keatley	Andrea
Keller	Eric
Kerr	Robert
Kline	David
Leriche	Arnie
Major	Lee
Manente	Susan
Maxwell	Joe
Medina	Daniel
Morrish	Ryan

Last Name	First Name
Morse	Jeremiah
Munson (OWAA)	Mike
Nandula	Mounica
Nelkie	Tess
Neller	Mike
Newcomb	Tammy
Overholt	Marilyn
Palmer	William
Place	Beth
Pohlmann	Dirk
Riffe	Sarah
Roddy	Chloe
Schmidt	Jerry
Schulz	Greg
Sliver	Steve
Spaniola	Anthony
Stock	Daniel
Stuntebeck	Jessica
Sueltenfuss	Tim
Techlin	Troy
TerMaath	Stephen
Vaughn	Rex
Vij	Puneet
Walz	Paul
Wiese	Ben
Winn	David
Wusterbarth	Cathy
Wynn-Stelt	Sandy