

Subject	Meeting #1 - Barnes Air National Guard Base (ANGB) Restoration Advisory Board (RAB)		
Prepared by	Johannah Phelan /Jacobs		
Location	WebEx Meeting	Date/Time	February 23, 2022, 6:00 p.m.
RAB Members	Additional Meeting Participants		
Col David Halasikun/Barnes ANGB, Base Co-chair	Bill Myer/National Guard Bureau (NGB)		
Kathleen Hillman, Community Co-chair	John Richardson/Barnes ANGB		
Eric Oulette, Community Co-chair	JayneAnne Bond/Air Force Civil Engineer Center (AFCEC)		
Chris Clark	Amy Brand/Jacobs		
Nabil Hannoush	Johannah Phelan/Jacobs		
Kristen Mello			
Rachael Morin			
Kelly Pease			
John Velis	A list of meeting attendees is provided in Attachment A.		

The February 23, 2022, WebEx meeting was the first public meeting of the Barnes ANGB RAB. In 2021, membership for the RAB was solicited and members were selected. RAB members were trained over three meetings in August and September 2021. The purpose of the February 23, 2022, meeting was to introduce the RAB members to the public, present the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, provide a technical overview of site status, and review the Relative Risk Site Evaluation (RRSE) for Barnes ANGB. The following notes provide a summary of discussions during and after the presentation and are not intended to serve as a transcript or further explain information provided during the meeting. A copy of the presentation is attached in **Attachment B**.

- 1 The meeting began at 6:00 p.m. with the RAB facilitator, Amy Brand/Jacobs, welcoming participants. Amy presented the agenda, provided an overview of how to use the WebEx meeting platform, and then invited the Base Co-chair and Community Co-chairs to introduce themselves.
- 2 Col Halasikun, Base Co-Chair and representative of Barnes ANGB, welcomed participants and read the letter indicating Barnes ANGB had been made eligible for Defense Environmental Restoration Program (DERP) funding as of February 17, 2022. DERP funding allows the RAB to apply for a grant through the Technical Assistance for Public Participation (TAPP). He agreed to share a copy of the letter with the community RAB members.
- 3 Kathleen (Kathy) Hillman and Eric Oulette are the Community Co-chairs for the RAB. Kathy thanked community members for joining the meeting, saying she was as much a public participant as those who joined and hopes to solve problems as a community. Eric thanked participants and said he was looking forward to a productive meeting. Kathy and Eric are the liaisons between the city, community, and the Base and will help facilitate answering questions.

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- 4 Amy introduced the RAB members as well as the additional participants and their respective roles.
- 5 Amy provided an overview of a RAB and reviewed the Barnes RAB mission statement and membership. Barnes ANGB plans to host RAB meetings about two times per year and additional meetings will be scheduled as needed. RAB meetings are open to the public and in-person meetings will resume when it is safe to do so as agreed to by the RAB members.
- 6 Amy announced that the meeting minutes from RAB Training Meeting #3 held in September 2021 were approved and will be posted to the Barnes ANGB 104 FW website <https://www.104fw.ang.af.mil/About/Restoration-Advisory-Board/>. Meeting minutes from RAB Training Meetings #1 and #2 held in August 2021 are posted at the same location. Amy requested that RAB members return the signature page of the operating procedures by March 2, 2022, so that the operating procedures can be finalized.
- 7 John Richardson, the Base Environmental Manager (EM), provided an overview of the Environmental Restoration Program at Barnes ANGB, which is included in the attached presentation on Slides 16 through 27.
- 8 John discussed where Barnes ANGB is in the current investigation of per- and polyfluoroalkyl substances (PFAS). After perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) were identified on base during the site inspection, an expanded site inspection was performed in 2020 to sample for these compounds off base. John indicated that PFOS/PFOA concentrations were detected above the U.S. Environmental Protection Agency (EPA) lifetime health advisory of 70 parts per trillion (ppt) in groundwater.
- 9 John also reviewed the results of off-base private well sampling conducted by the Massachusetts Department of Environmental Protection (MassDEP), indicating that MassDEP provided point-of-entry treatment systems for eight residences affected by PFAS at concentrations above the Massachusetts maximum contaminant level of 20 ppt in drinking water.
- 10 John indicated that the next step in the environmental investigation of PFAS is to complete the remedial investigation (RI) once it has been funded. Funding has not yet been allocated for the RI.
- 11 RAB member Kristen Mello asked for more information on the two munitions response sites mentioned on Slide 20 because munitions can contain PFAS. John provided the following information:
- A practice grenade was found at one site, but contamination was not detected during the investigation.
 - The second site was a former small arms range. The investigation indicated lead contamination in soil, which was remediated by excavation.
- 12 Kristen asked, "What is unclear about the pathway from the Base to wells 7 and 8?" John said that the pathway is inconclusive, and that the RI should provide an answer to this question.
- 13 Amy Brand then introduced Dr. JayneAnne Bond, a toxicologist and risk assessor from AFCEC. Dr. Bond described the RRSE (refer to Slides 29 through 38 of the presentation). The RRSE is a methodology used by the Department of Defense (DoD) to sequence environmental restoration work with the premise of "worst first," but it is not the sole factor

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- in determining funding. Regulators and the public are invited to provide feedback on the RRSE.
- 14 Dr. Bond reviewed how the RRSE is determined for a base, using the highest concentrations of PFAS found, the potential movement of PFAS, and the potential for receptors to come in contact with PFAS-affected media (that is, soil, groundwater, sediment, or surface water). She presented a generic sample worksheet to demonstrate how these factors are used to assess the relative risk. The highest specific relative risk rating for any media becomes the overall site rating.
- 15 According to Dr. Bond, the RRSE for each installation is evaluated annually as new data and new screening values can affect the evaluation.
- 16 Bill Myer with the NGB introduced himself after the RRSE presentation and provided a summary of his background. Bill said the RRSE for Barnes ANGB is open for public comment and that all comments received will be addressed and added as an appendix to the RRSE. The final RRSE will be posted to the Administrative Record.
- 17 Bill shared that Barnes ANGB will be sequenced for work with fiscal year 2023 (FY23) funding.
- 18 Bill indicated that MassDEP will start receiving funding under the Department of Defense and State Memorandum of Agreement (DSMOA) program. This program is funded under Defense Environmental Restoration Program (DERP).
- 19 Bill stated that because Barnes ANGB is now DERP eligible, the RAB can apply for a grant through the DoD Technical Assistance for Public Participation (TAPP) program. This will involve working with Col Halasikun to write a grant proposal for a specific need.
- 20 RAB member Kelly Pease asked for clarification on what funding has been approved. Bill responded that Barnes ANGB is eligible for DERP funding but funds for the RI (which includes installing new monitoring wells) have not been awarded yet. The funding to complete the RI still needs to be integrated into the U.S. Air Force (USAF) budget.
- 21 RAB member Chris Clark asked about the choice of including perfluorobutanesulfonic acid (PFBS) in the three chemicals used for the RRSE. Dr. Bond replied that PFBS was included because the DoD published a memo in 2021 recognizing EPA had established a reference dose (screening value) for PFBS. As a follow-up question, Chris asked, how the "correction value" was determined for PFOA and PFOS. Dr. Bond stated that while the USAF policy uses concentrations greater than 70 ppt as the indicator for a removal action, the RRSE uses a screening value based on the EPA screening value calculator for a maximum detected concentration, therefore the 40 ppt value was derived from the EPA screening value calculator.
- 22 RAB member John Velis said that being eligible for DERP funding is great news and a good win. He asked where Barnes ANGB is prioritized, using a worst-first scenario, compared to other sites. What is the likelihood that Barnes ANGB is close to the top of the list? Bill Myer said he did not know how Barnes ANGB ranked compared to other sites. The ranking decision comes from USAF headquarters. Bill should know more once the RRSE score is finalized. As a follow-up question, John asked if there is anything on a community level they can do to help move the process forward. Col Halasikun said Barnes ANGB started the PFAS investigation process early and should be at the forefront of this issue. This is a national-level cleanup with about 12 RIs awarded to date. He stressed that political pressure is key in getting the U.S. Congress to appropriate funding for investigation and cleanup.

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- 23 Kristen Mello posed the following questions and requests:
- Please send an email, preferably tonight, on why Barnes ANGB does not have RI funds yet. Bill Myer stated that Barnes ANGB was just approved for DERP eligibility a few days before the RAB meeting, so they are now working on program funding, which will need to be integrated into the larger USAF budget. Funding involves a process of planning and programming. Once that is complete, they will know when they can move forward. Contracting actions can take 6 to 8 months and funding must be in place prior to contracting. For reference, the Air National Guard (ANG) has 75 locations, in addition to many active USAF and USAF reserve locations. Col Halasikun said that RAB funding is separate from RI funding.
 - EPA recently drafted new values, and Massachusetts used one-quarter of the EPA reference dose. Does this affect the RRSE? Dr. Bond said that if EPA publishes new values, then, yes, they will affect the RRSE. As mentioned in the presentation, the RRSE will be re-evaluated annually or when new data or values are available.
 - Does the RAB need to wait 6 months to review the TAPP process at the next meeting? Col Halasikun said the RAB can have a meeting sooner than 6 months to go over the TAPP application process and prepare for when funding is available.
- 24 Kelly Pease asked if operations and maintenance (O&M) funds could be used to install new wells to get started until additional funding becomes available. Bill Myer said O&M funds are limited and not sufficient. Col Halasikun added that if the base starts using O&M funding, it would be restricted to that specific source of funding until it completed that phase. Bill stressed that this is not a process to be put together piecemeal and a little patience would go a long way toward achieving the intended result.
- 25 Kristen Mello brought up the following questions and comment:
- What other factors go into sequencing sites for funding? Bill Myer answered that sites with an immediate need, such as impacted drinking water or other complete exposure pathways, get priority. Other factors that affect priority could include a regulatory action, such as a Safe Drinking Water Act Administrative Order for the USAF or U.S. Navy.
 - While we work to get funding, can we pursue TAPP funds? Bill replied yes, the RAB needs to agree on what they want to do with the grant money. Col Halasikun will put together the grant with the RAB support and Bill will work to acquire that money. One grant purpose could be to hire a third-party technical contractor to help RAB members review technical documents.
 - ANG is asking for participation and comments on the RRSE but the public does not have a full understanding of the available data. Dr. Bond said that the data presented in reports must be validated and publicly available. It is ANG's job to ensure that the data are of high quality, meet established criteria, and are defensible. Kristen stated that her concern is that the general public needs to understand the data and that is what the RAB needs help with. Bill reminded participants that not every base has the advantage of having an RRSE subject matter expert explain the process in a presentation during the public comment period.
- 26 John Velis said he appreciated the nuances and complexity of funding sources. One of the functions of the RAB is to serve as a liaison to the community. Would it be helpful for

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- the RAB and the people of Westfield to have a document in lay terms about funding sources and how they're allocated? The community sentiment is: "This happened to Westfield, why can't it be fixed?" Is there a document to explain the process to constituents? Col Halasikun explained that the funding process exists for the purpose of protecting tax-payer dollars.
- 27 Kathy Hillman asked who represents Barnes ANGB at budget meetings for funding. Bill Myer replied that the funding process starts with the NGB identifying the needs and requirements for each ANGB. This is passed to the AFCEC and then to the Assistant Secretary of the Air Force Installation, Environment, and Energy (IE&E). Col Halasikun said the Base advocates to the Adjunct General (TAG), and from TAG to legislative liaisons to congressmen and senators. The Base can apply pressure, as can the community. The community can directly pressure their elected senators and congressmen.
- 28 Kristen Mello asked if the Agency for Toxic Substances and Disease Registry (ATSDR) study on PFAS exposure at Barnes ANGB was not used to inform the RRSE. Dr. Bond reviewed how the maximum concentrations from drinking water wells and receptors were used in the RRSE.
- 29 Contact information is provided in the final slides of the presentation. Bill Myer is the contact for RRSE comments.
- 30 The City of Westfield Mayor, Mike McCabe, said the City has an ongoing relationship with Barnes ANGB and if there is anything the City can do, to please reach out. He thanked the RAB members and is trusting the process.
- 31 Kathy Hillman and Eric Oulette thanked the RAB members and other meeting participants and said to please reach out if questions arise. They are looking forward to the next meeting and working with everyone. Their contact information is provided on slide 42 of the presentation.
- 32 Col Halasikun thanked Bill Myer for his advocacy and support and acknowledged this is a difficult political course to navigate. He then thanked RAB members and meeting participants for attending, and the virtual RAB meeting was adjourned.
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Action Items

- 1 Col Halasikun will email a copy of the DERP funding letter to the RAB members.

ATTACHMENT A

Attendance List

Barnes Air National Guard Restoration Advisory Board Meeting #1 February 23, 2022

Name	Email
Amy Brand	amy.brand@jacobs.com
David Halasi-Kun	david.halasikun.2@us.af.mil
Johannah Phelan	johannah.phelan@jacobs.com
john richardson	jalcors11@charter.net
Lindsey Watson	lynziewk@gmail.com
Bill Myer ANG HQ	william.myer.2@us.af.mil
JayneAnne Bond	jayne-anne.bond@us.af.mil*
Chris Ruscio	christopher.ruscio.1@us.af.mil
Eric Oulette	eric@westfieldbiz.org
Nabil Hannoush	nabil@hannoush.com*
Kristen Mello she/her	klm.wraft@gmail.com
elaine magdinec	elaine.magdinec@us.af.mil
Keith Freihofer, ANG	keith.freihofer.1@us.af.mil
Rachael Morin	rmaex43@gmail.com
Jane	jokscin@comcast.net
Lt. Leonard	(unavailable)
Jim Colmer	jcolmer@bbande.com
John Velis	John.Velis@masenate.gov*
Kathy	khillman179@gmail.com
Nicole	nperry@smith.edu
Peter Currier	pcurrier@thereminder.com
Leti Solaun	leticia.solaun@jacobs.com
Rep Kelly Pease	kelly.pease@mahouse.gov
Christopher W Clark	cwc.wraft@gmail.com*
Mary O'Connell	moconnell25@comcast.net
Sal Johannsen	globaljilly@me.com
Laura Olah	info@cswab.org
Paige	poarsenault@umass.edu
Katie Verra	katie.verra@masenate.gov
Kate Lynnes	kathryn.lynnes@us.af.mil
Marissa Otero SEN Velis	marissa.otero@masenate.gov
Mike McCabe	mayor@cityofwestfield.org*
Jen Baker	jmbaker922@gmail.com

* Email addresses were changed from the original personal login address to a work address or the email address previously provided by a RAB member.



Barnes Air National Guard (ANG) Base Restoration Advisory Board Meeting #1 February 23, 2022

The meeting will begin soon.

FINAL



Agenda



- 6:00 PM Agenda Review and Virtual Meeting Logistics
- 6:10 PM Welcome and Introductions
- 6:20 PM RAB Overview
- 6:25 PM RAB Business Follow-Up
- 6:30 PM Environmental Restoration Program Overview
- 6:45 PM RAB Member Discussion
- 6:55 PM Relative Risk Site Evaluation
- 7:15 PM RAB Member Discussion
- 7:45 PM Public Questions and Comments
- 7:55 PM Closing Remarks
- 8:00 PM Adjourn



Virtual Meeting Logistics

Amy Brand

Jacobs

RAB Facilitator



Webex Basics – Computer Participants



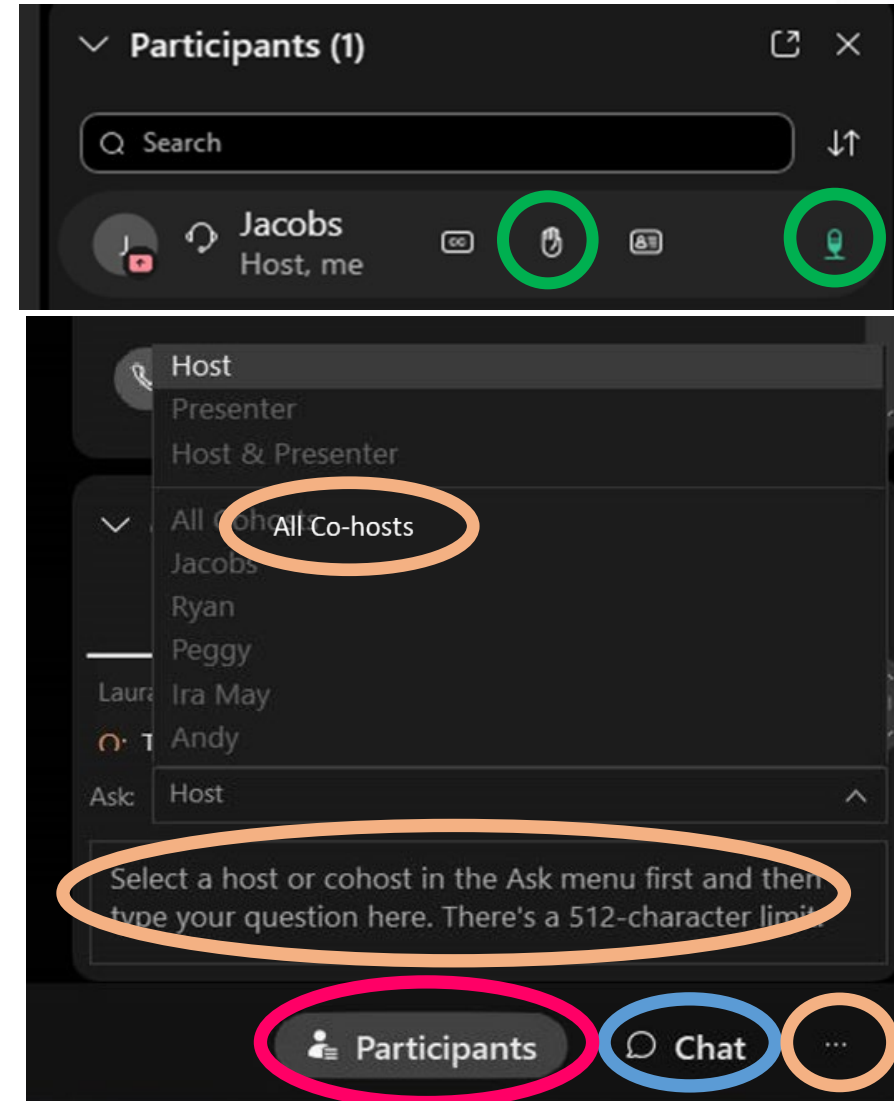
- Video – OFF except for presenters
- Open participants list to view all participants
- Questions during Q&A

Verbal (for RAB members):

- Scroll over your name in the participant list and click on hand symbol to raise your hand, then unmute yourself to speak

Written:

- Click on 3 dots in lower right corner, choose Q&A
- Select “all co-hosts” and type question
- Click Chat to send message to host for help
- Call/text 352-246-5246





Webex Basics – Telephone Participants



- Follow along on slide presentation (emailed or download from 104th Fighter Wing website at <https://www.104fw.ang.af.mil/About/Restoration-Advisory-Board/>)
- Use your phone mute button when not speaking.
- Dial *3 to raise hand to be called on to speak after the presentation
 - Host will unmute you after seeing the raised hand
 - You will then receive a prompt to dial *6 on the phone to unmute yourself
 - Unmute and identify yourself when asking a question or making a comment.
- Trouble? Call or text 352-246-5246.



Meeting Guidelines



- During RAB Member Discussion, RAB members may raise their hands to be called on to make a comment or ask a question.
 - Please observe a 2-minute limit to enable other RAB members to participate.
- Public questions should be submitted in the question module addressed to “all co-hosts.” Questions will be read and addressed in the order they are received at the end of the meeting.
 - Public questions by phone may be asked verbally at the end of the meeting by pressing *3 to raise your hand.



Welcome and Introductions

Col. David Halasikun

Kathleen Hillman

Eric Oulette



Welcome and Introductions



Air National Guard Team

Col. David Halasikun (Base Co-Chair)

Bill Myer, National Guard Bureau

John Richardson, 104th FW Environmental Coordinator

Lt. Col. Chris Ruscio, 104th FW Staff Judge Advocate

Contractors: BB&E, Jacobs (Amy Brand, RAB facilitator)

Community RAB Members

Kathleen Hillman, Community Co-Chair

Eric Oulette, Community Co-Chair

Chris Clark

Nabil Hannoush

Kristen Mello

Rachael Morin

Representative Kelly Pease

Senator John Velis

Regulatory Contact

Saadi Motamedi, Massachusetts Department of
Environmental Protection (MassDEP)

Air Force Civil Engineer Center (AFCEC)

Dr. JayneAnne Bond



RAB Overview

Amy Brand

Jacobs

RAB Facilitator



What is a Restoration Advisory Board?



- A stakeholder group that meets on a regular basis to discuss **environmental restoration** at a specific property owned by the Department of Defense (DoD) where DoD oversees the environmental restoration process.

Environmental Restoration:

- Investigation and cleanup of potential contamination caused by past use, storage, or disposal of hazardous materials

The RAB only addresses issues associated with environmental restoration.



Purpose of the Barnes ANGB RAB



Mission: *To provide a forum for the exchange of information and ideas in an open and interactive dialogue concerning the Barnes ANG Base's ERP, specifically for per- and polyfluoroalkyl substances (PFAS).*

RAB members:

- Learn about and discuss the environmental restoration program at the Base.
- Act as liaisons with the community; bringing community interests to the meeting and sharing information about the program with community members.
- Provide input for consideration by project managers and regulatory agencies involved in decision-making.

Goal is for the cleanup and management decisions to reflect and address community issues and concerns.





RAB Membership and Schedule



- Eight RAB members were chosen by a selection panel to represent a cross-section of the local community.
- Internal training meetings were held in August/September 2021 to establish a baseline understanding of the Environmental Restoration Program, to develop operating procedures, and to elect community co-chairs.
- Additional community members may be added at the discretion and approval of existing members.
- RAB meetings will be held 2 times per year. Additional meetings and/or site tours may be scheduled as needed.
- Meetings are open to the public. Meetings will be held virtually or in-person.



RAB Business Follow-Up

Amy Brand
Jacobs
RAB Facilitator



Approve Draft Meeting Summary

- Meeting summaries from Training Meetings #1 and #2 are posted on the 104th FW website:
<https://www.104fw.ang.af.mil/About/Restoration-Advisory-Board/>
- Draft meeting summary from Training Meeting #3 sent Dec 10; no comments were received.
- Approval



Finalizing Operating Procedures



- Final changes to operating procedures sent December 10, 2021; no additional comments.
- Final .pdf sent for electronic signature February 11, 2022.
- Please sign and return by March 2, 2022.



Environmental Restoration Program Overview

John Richardson

104th Fighter Wing (104 FW)

Base Environmental Coordinator



What is the Environmental Restoration Program (ERP)?



- Nationwide program to identify possible environmental contamination that may have resulted from **past** practices, accidents, or incidents at Department of Defense (DoD), including ANG bases.
- Designed to identify and clean up past contamination from chemical and radiological contaminants, hazardous substances, and pollutants to protect human health and safety, and the environment



Overview of the Investigation and Cleanup Process

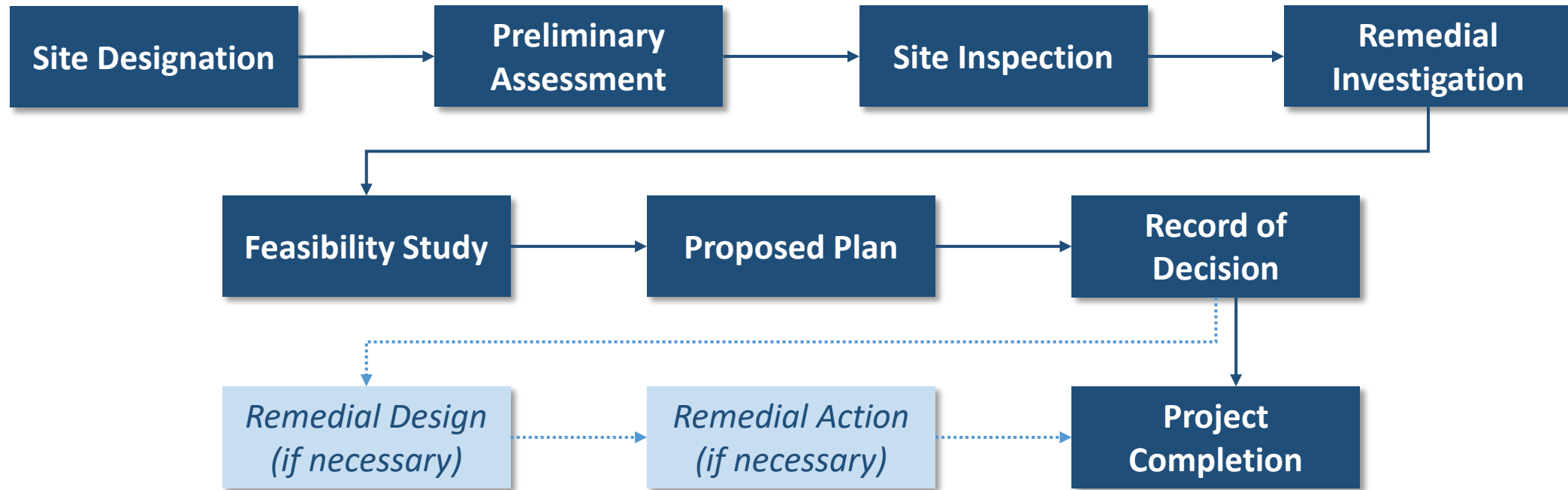


- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) created the legal mechanism for cleaning up abandoned or uncontrolled hazardous waste sites
- DoD follows the CERCLA process for environmental cleanup
- CERCLA process includes a series of activities that involve regulators and the public in the decision-making process
- <https://www.epa.gov/superfund/superfund-cercla-overview>



CERCLA Process

Comprehensive Environmental Response, Compensation, and Liability Act



A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.



Environmental Restoration Program



- Environmental investigation has been ongoing at Barnes since 1987
 - Six sites were cleaned up/closed by 2015
 - ERP Site 2 undergoing long-term monitoring
 - Two munitions response sites closed in 2012
 - Two additional Former Underground Storage Tank (FUST) sites investigated and closed
- Investigation of PFAS began in 2016
- Coordination with regulatory agencies and stakeholders
 - Massachusetts Department of Environmental Protection (MassDEP)
 - National Guard Bureau





What are Per- and Polyfluoroalkyl Substances (PFAS)?



- Group of manufactured chemicals
- Used in firefighting foam; used by the military and others since 1970
- In 2016, the U.S. Environmental Protection Agency set a Lifetime Health Advisory for drinking water for two PFAS compounds: perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA)
- PFOS and PFOA are called emerging chemicals of concern due to the evolving regulatory standards



Information about the Air Force and ANG response to PFOS/PFOA can be found at:
<https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/>



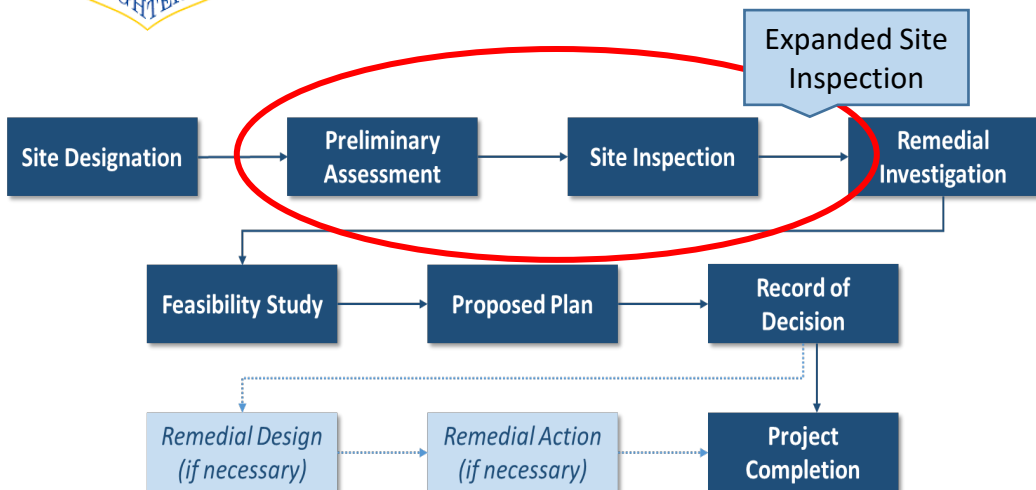
Action and Screening Values for PFAS



- U.S. Environmental Protection Agency (EPA) has not set cleanup standards for PFAS under CERCLA.
- However, EPA has established Lifetime Health Advisories (LHA) of 70 parts per trillion (ppt) for PFOS and/or PFOA in drinking water under the Safe Drinking Water Act.
- The Department of Defense (DoD) uses screening levels for three PFAS:
 - PFOS
 - PFOA
 - Perfluorobutanesulfonic acid (PFBS)



Completed PFOS/PFOA Investigations



A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.

- **Preliminary Assessment (PA)**

- Completed in 2016
- Identified areas to investigate further

Reviewed historical data and records to identify firefighting foam release locations and potential for drinking water impacts.

- 8 areas identified, 7 recommended for next step

- **Site Inspection (SI)**

- Performed in 2018

Sampled soil, sediment, groundwater, stormwater, and surface water to determine if PFOS or PFOA are present in the environment

- **Expanded Site Inspection (ESI)**

- Performed in 2020

- Present on base, especially in groundwater
- Recommended ESI to sample off-base



Expanded Site Inspection – Off-Base



- Collected additional samples to further investigate the extent of PFOS/PFOA
- Fieldwork May-Nov 2019
- Analyzed for 24 PFAS compounds in accordance with EPA Method 537
- Two compounds (PFOS and PFOA) are associated with AFFF in fire-fighting foam
- PFOS/PFOA detected above the EPA LHA of 70 ppt in groundwater



Off-Base Private Well Sampling



- In response to the PFAS detections off-base, MassDEP has sampled 75 residential drinking water wells for PFAS and is currently maintaining State-installed Point of Entry Treatment (POET) systems at eight (8) residences with private wells affected by PFAS concentrations greater than the MMCL of 20 ppt.
 - Ivy Lane
 - Hopkins Road
 - Schumann Drive
 - Lewis Road
 - Buck Pond Road
 - Lower Sandy Hill Road (3)



Next Steps



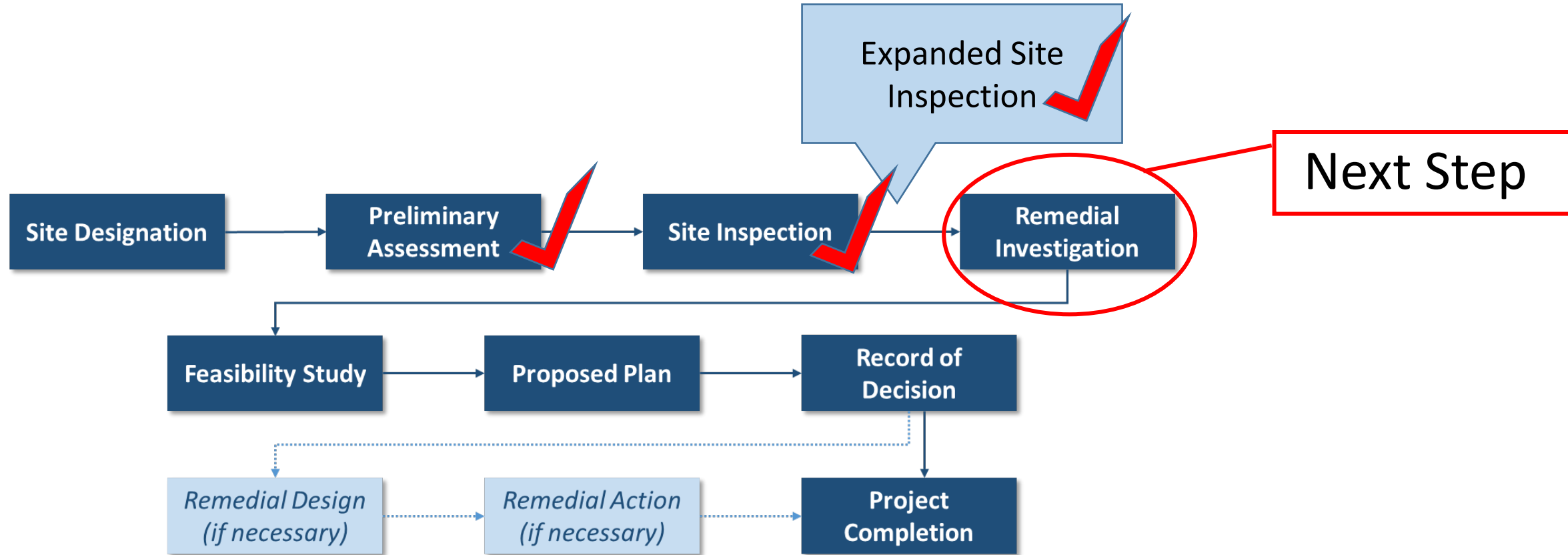
- ESI Report completed in October 2020
- Results to date are inconclusive on direct path to Westfield public and private wells
- Next step is the Remedial Investigation
 - RI will determine nature and extent of PFOS/PFOA migration
 - Funding of the RI is dependent (in part) on results of the Relative Risk Site Evaluation and sequencing
- 104 FW will continue to collaborate with the MassDEP and the City of Westfield





CERCLA Process

Comprehensive Environmental Response, Compensation, and Liability Act



A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.



RAB Member Discussion



- Please raise your hands and unmute yourself when recognized.
- Introduce yourself at the beginning of your question or comment.
- Please limit questions to 2 minutes to give other RAB members an opportunity to participate.



Relative Risk Site Evaluation Process

JayneAnne Bond, PhD.

Toxicologist/Risk Assessor

Air Force Civil Engineer Center (AFCEC)

Restoration Technical Support Branch (CZTE)



Goals and Agenda



- Purpose - Communicate the RRSE purpose and process
- Agenda
 - What is RRSE?
 - What is the RRSE Framework?
 - Why is RRSE important?
 - What are the details?
- End Goal - Answer questions and capture concerns



What is the RRSE?

- RRSE Stands for Relative Risk Site Evaluation
- Described in:
 - Defense Environmental Restoration Program Management Manual – 4715.20
 - Relative Risk Site Evaluation Primer, Summer 1997 Revised Edition
- DoD-wide methodology to sequence environmental restoration work
- Used to evaluate the relative risks posed by one installation in relation to other installations
- Considered important in the sequencing process but not the sole factor

Goal of RRSE is sequencing of environmental restoration activities with the premise of “worst first”

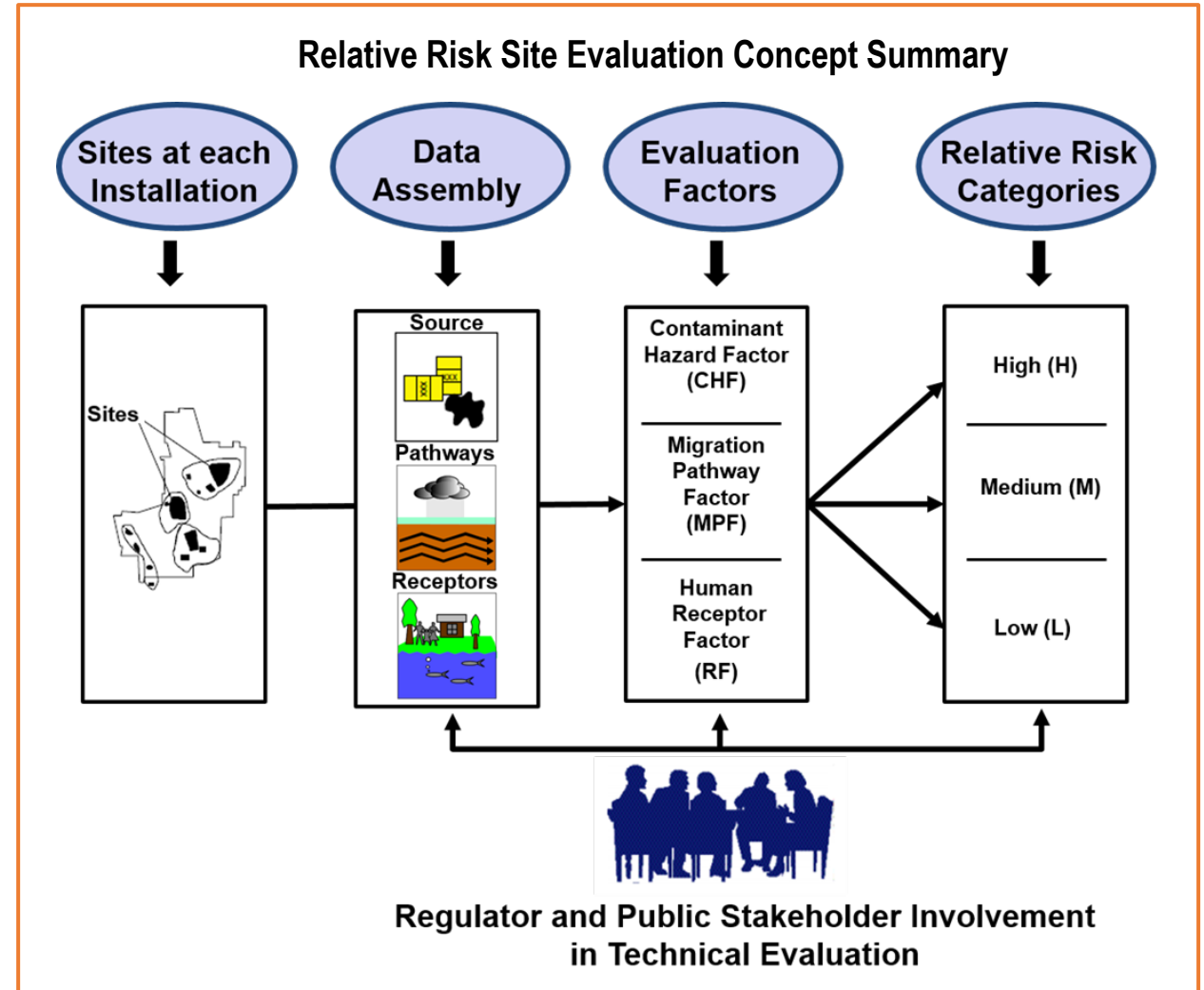
DoDM 4715.20, Defense Environmental Restoration Program (DERP), 9 Mar 2012, Incorporating Change 1, August 31, 2018;

DoD, Relative Risk Site Evaluation Primer, Summer 1997 Revised Edition https://www.denix.osd.mil/references/dod/policy-guidance/relative-risk-site-evaluation-primer/RRSE_Primer_Summer1997.pdf



What is the RRSE Framework?

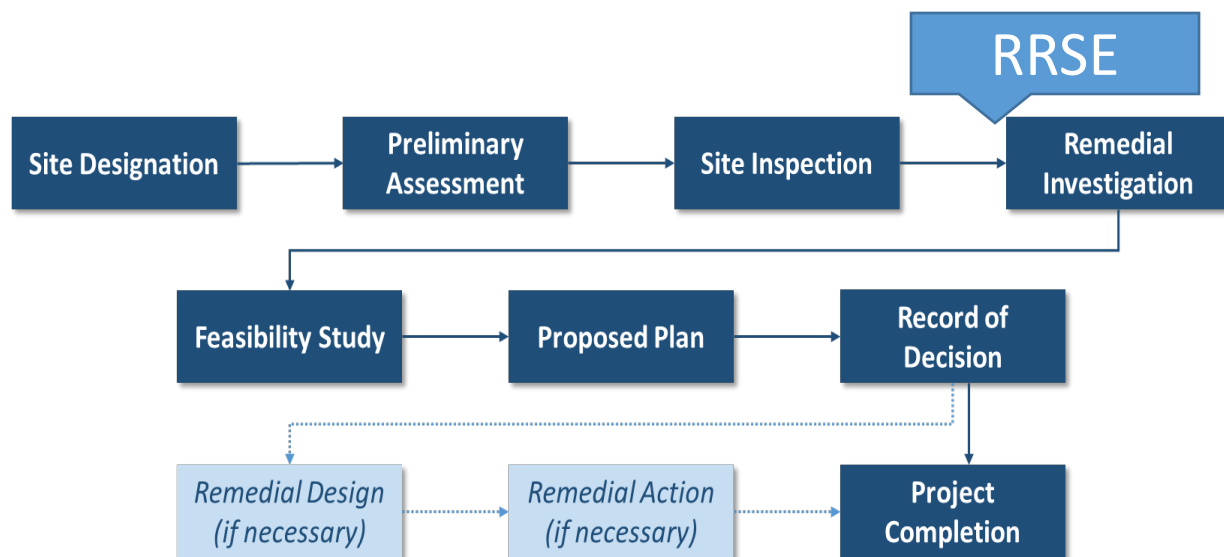
- DoD-wide approach for evaluating the relative risk to human health and the environment
- Based on information fundamental to risk assessment
- RRSE is **NOT** a CERCLA risk assessment



DoD, Relative Risk Site Evaluation Primer, Summer 1997 Revised Edition, CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act



RRSE and the CERCLA Process



A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.

- Required for restoration sites in CERCLA phases prior to remedy-in-place
- AF/ANG is using data collected during the SI/ESI
- Installations entering the RI/FS phase of CERCLA



How Does it Work?



- We use
 - The highest concentrations of PFAS found (CHF)
 - Potential movement of PFAS (MPF), and
 - Receptor's potential to come in contact with PFAS-impacted media (RF).
- The data and information are then used to determine the relative risk categories
- RRSEs are reviewed and updated as needed
 - New site-specific data
 - New toxicity/screening values



How Do We Use the Data?

Groundwater Worksheet

Contaminant Hazard Factor			
Contaminant	Max. Concentration (ug/l)	Comparison Value (ug/l)	Ratio
PFOS	8.86	0.04	221.5
PFOA	2.26	0.04	56.5
PFBS	0.349	.600	0.58
Total Ratio			278.6

Select Rating based on Total	
Significant (total > 100) High – H	H
Moderate (total 2-100) – Medium – M	
Minimal (total <2) – Low – L	

Migration Pathway Factor (MPF)	Select Rating	Receptor Factor (RF)	Select Rating
Evident – High - H Analytical data or direct observation indicates that contamination in the groundwater has moved to a point of exposure (e.g., well)	H	Identified – High – H Impacted drinking water well above comparison value* or existing downgradient drinking water well within 4 miles per SI guidance	H
Potential – Medium - M Contamination in the groundwater has moved beyond the source or Insufficient information available to make a determination of Evident or Confined		Potential – Medium - M No known drinking water wells downgradient and groundwater is currently or potentially usable for drinking water or source of water for other beneficial use	
Confined – Low - L Analytical data or direct observation indicates that the potential for contaminant migration from the source via groundwater is limited		Limited – Low - L No known drinking water wells downgradient; and groundwater is not considered to be potential source of drinking water and groundwater is of limited beneficial use	
Groundwater Category (High, Medium, Low)			High



How Do We Determine the Overall Site Rating?



- The highest *media-specific* relative risk rating becomes the overall site rating
- For example, “AFFF #1” has a:
 - Groundwater relative risk rating of high, and
 - Soil relative risk rating of low
 - The overall site rating for AFFF #1 is High.



What's Next in the Process?



- RRSE worksheets will provide the inputs to the sequencing list.
- The output helps determine the sequence of environmental restoration activities.
- Sequencing is based on “worst-first” to determine which installations receive funding first.
- The RRSE review process is completed yearly from February to September.



To Review and Comment on Barnes' RRSE



- RRSE is available for review on 104th FW website:
https://www.104fw.ang.af.mil/Portals/5/Barnes_RRSE%20Fact%20Sheet%20and%20Scoring%20Summaries_211215.pdf
- Originally released for 30-day public comment period on December 16
- Public comment period extended – will end **March 9**
- **Submit Comments to:** Mr. Bill Myer NGB/A4VR
(240) 612-8473
william.myer.2@us.af.mil



Next Steps for Barnes



- Memorandum for responses to comments on RRSE and final RRSE will be prepared and placed in the Administrative Record.
- The final RRSE will be used for sequencing to determine RI funding.
- With approval of RI funding for Barnes:
 - ANG will select a contractor to conduct the RI.
 - ANG will work with the MassDEP to develop initial plans under the MCP.
- Defense Environmental Restoration Program (DERP)
 - Barnes became eligible for DERP funding on February 17, 2022.
 - The RAB is now eligible to apply for a Technical Assistance for Public Participation (TAPP).



RAB Member Discussion



- Please raise your hands and unmute yourself when recognized.
- Introduce yourself at the beginning of your question or comment.
- Please limit questions to 2 minutes to give other RAB members an opportunity to participate.



Public Questions and Comments



Questions submitted in writing during the meeting will be addressed.



Contact Information



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Websites for More Information



Environmental Restoration Program at 104th Fighter Wing

- General and Links to PFOS/PFOA Information: <https://www.104fw.ang.af.mil/About/Environmental/>
- Restoration Advisory Board: <https://www.104fw.ang.af.mil/About/Restoration-Advisory-Board/>

Relative Risk Site Evaluation (RRSE)

- Barnes RRSE: https://www.104fw.ang.af.mil/Portals/5/Barnes_RRSE%20Fact%20Sheet%20and%20Scoring%20Summaries_211215.pdf
- RRSE Primer: https://www.denix.osd.mil/references/dod/policy-guidance/relative-risk-site-evaluation-primer/RRSE_Primer_Summer1997.pdf

104th Fighter Wing Environmental Administrative Record

- <https://ar.afcec-cloud.af.mil/Search.aspx> (Select ANG radio button, select Barnes, and click on search)

MassDEP PFAS Information

- <https://www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas>

Westfield Water Department PFAS Information

- <https://www.cityofwestfield.org/672/PFCs-Information-Updates>

RAB Rule Handbook and Information on Technical Assistance for Public Participation

- <https://www.denix.osd.mil/rab/home/>

Air Force Response to PFOS and PFOA

- <https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/>



Closing Remarks

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Eric Oulette

Col. David Halasikun