

**Joint Base Cape Cod Cleanup Team
Microsoft TEAMS Virtual Meeting
Joint Base Cape Cod, MA
24 March 2021
6:00 – 8:00 p.m.**

Meeting Minutes

Member:	Organization:	Telephone:	E-mail:
Shawn Cody	IAGWSP	508-968-5834	shawn.c.cody.mil@mail.mil
Rose Forbes	AFCEC/JBCC	508-968-4670x5613	rose.forbes@us.af.mil
Phil Goddard	JBCC CT/Bourne	508-759-3043	Pag456@comcast.net
Ben Gregson	IAGWSP	508-968-5821	benjamin.p.gregson.nfg@mail.mil
Steve Hurley	MassWildlife		Steve.hurley@state.ma.us
Bob Lim	USEPA	617-918-1210	Lim.robert@epa.gov
Douglas Karson	AFCEC/JBCC	508-968-4678	douglas.karson@us.af.mil
Len Pinaud	MassDEP	508-946-2871	leonard.pinaud@state.ma.us
Tim Pasakarnis	Cape Cod Commission		Tim.pasakarnis@capecodcommission.org
Tom Cambareri		508-364-2644	tomcambareri@gmail.com
Facilitator:	Organization:	Telephone:	E-mail:
Ellie Donovan	MassDEP	508-946-2866	ellie.donovan@state.ma.us
Attendees:	Organization:	Telephone:	E-mail:
Pamela Richardson	IAGWSP	508-566-6390	Pamela.j.richardson.nfg@mail.mil
Lori Boghdan	IAGWSP	508-509-2869	lori.p.boghdan2.nfg@mail.mil
Jennifer DeAngelis	BB&E	508-968-4670	jennifer.deangelis.ctr@us.af.mil
Nikki Wagner	EA	508-968-4754	nwagner@eaest.com
Elliot Jacobs	MassDEP	508-946-2786	elliott.jacobs@state.ma.us
Kendall Walker	MassDEP	508-946-2846	kendall.walker@state.ma.us
Michael Cusack	Resident of Mashpee		mike.cusack@comcast.net
David Dow	Sierra Club		ddow420@comcast.net
Darriel Swatts	USEPA		Darriel.swatts@epa.gov

Handouts Distributed at Meeting:

Available online at the AFCEC webpage and IAGWSP website or by email, upon request.

.....

Agenda Item #1. Introductions, Late-Breaking News, Approval of 28 Oct 2020 JBCCCT Cleanup Team Meeting Minutes

Mr. Karson announced sad news that Charles LoGuidice of North Falmouth, MA passed away on 12 March 2021. Charles served many years on the cleanup team as a citizen volunteer. He was 88 years old.

Mr. Karson reviewed the agenda.

Mr. Karson asked for comments on minutes from the 28 Oct 2020 JBCCCT meeting. No comments.

Mr. Karson reviewed the agenda and pointed out two Air Force presentations on documents which are out for public comment period from 12 March 2021 to 10 April 2021. Comments can be submitted in writing

or email on both during the public comment period. Comments will be included and addressed in their respective Decision Documents to be issued at a later date. Both documents are on the massnationalguard.org/JBCC/afcec.html and jbcc-iagwsp.org.

After the discussion and questions for the Mock Village Proposed Plan presentation, Mr. Karson will initiate a formal hearing which is an opportunity to speak on the record. Every comment that is given during that time period will be transcribed verbatim along with the other comments received and will be considered and responded to in the Final Decision Documents.

Rose Forbes reported that the MassDEP issued a Massachusetts Maximum Contaminant Level (MMCL) in September 2020 for the PFAS6 compounds (PFHxS, PFHpA, PFOS, PFOA, PFNA, and PFDA) of 0.02 ug/L effective 02 Oct 2020. MassDEP sent a letter to the AFCEC requesting that the Air Force accept the PFAS6 MMCL as an applicable or relevant and appropriate requirement (ARAR) at JBCC. The AF responded that they would evaluate the PFAS6 MMCL in the site-specific ARAR evaluation as part of the Feasibility Study [FS]. The AF will continue to provide response actions (bottled water, filter systems, etc) for drinking water impacted by PFOS/PFOA above the EPA Lifetime Health Advisory (LHA) level of 0.07 ug/L until the FS and Record of Decision (ROD) is completed and then will refer to the PFAS6 MMCL.

Michael Cusak asked Ms. Forbes if the Air Force is saying that they are going to stick with the EPA standard for now and will incorporate the state's standard when we can and that decision is not made during the remedial process but during the Feasibility Study process – is that a step two process? Ms. Forbes responded that that is basically correct and that the MMCL is evaluated as part of the Feasibility Study and not during the Remedial Investigation. Mr. Cusak asked if the Air Force is duplicating efforts if they don't agree – would you have to go back and map for both standards? Ms. Forbes responded the AF is mapping the plumes based on the PFAS6 MMCL which would also cover the LHA because the MMCL is more stringent and results in a larger plume that encompasses LHA exceedances.

Agenda Item #2. LF-7 Engineering Evaluation/Cost Analysis (EE/CA) Update/Public Comment Period (AFCEC) – Mr. Timothy Leahy, APTIM

Mr. Leahy began his presentation with the background, history, setting, and land use for LF-7 Radar Tube Burial Site. The public comment period runs from March 12 – April 10, 2021.

The site is enclosed within a 20 feet by 20 feet fenced area on JBCC. The site is a former gravel pit on the southern edge of a training area/soil stockpile and sanitary landfill. It is a heavily wooded area. The site was used for disposal of electron tubes used in EC-121 Warning Star Radar sets which was an American Airborne early warning and control surveillance aircraft. Approximately 200 tubes per year were disposed of between 1955-1970 in rectangular boxes 2" x 4" x 6". The concrete monolith is located 2-3 feet below the surface.

Previous investigations were documented in a 1993 Decision Document (DD). The DD conclusion stated, "Based on the level of radioactive materials contained in these tubes, the potential hazard from the disposed radar tubes is negligible. Radiological studies at similar disposal study areas have not indicated contamination or human health impact." The remedy included annual inspections, radiological surveys, and land-use controls including signage and fencing.

In July 2012, the Air Force performed a Scoping Survey to establish background levels, conduct land surface scans and soil sampling, and form the basis for future remediation. A Walkover Survey, in-situ scan, and soil and vegetation sampling were performed. The results were that no levels of radioactive material were found that indicated widespread high levels of contamination or contamination that poses an immediate threat to the environment and personnel.

This has led to the current Non-Time-Critical Removal Action (NTCRA). The Air Force decided to dig up and remove and dispose of the monolith following the NTCRA process under the Superfund Accelerated Cleanup Model. This will eliminate the annual inspections and reporting.

Mr. Leahy continued with the EE/CA goals which will eliminate any long-term risks and the need for continued restrictions, and long-term monitoring. The EE/CA demonstrates compliance with the EPA's annual risk level and Massachusetts radiological standard.

Responding to a question in chat, Mr. Leahy confirmed that all the presentations would be available on massnationalguard.org/JBCC/afcec.html and jbcc-iagwsp.org.

The EE/CA alternatives are (1) No Action; (2) Long Term Management and Land Use Controls; or, (3) Excavation, Removal, Off-Site Disposal (which is the selected remedy).

Mr. Leahy described the proposed removal process. Soil will be removed from the top and sides of the monolith. A backhoe with rigging will be used to remove the monolith and stage it on a truck for transport. A survey which demonstrates no residual contamination (radiation) will then be completed followed by backfilling the excavation and restoration of the site. The final disposition of the monolith will be in a Texas landfill permitted by the EPA to accept Low Level Radioactive waste.

Mr. Cusack asked Mr. Leahy what the difference is between EPA and Air Force standards for RA226 as the Air Force agrees with all other EPA standards. Mr. Leahy replied that background levels of radium are typically higher so it is regulated separately. Mr. Cusack asked why not take the dirt and dispose of that also? Mr. Leahy replied that the conceptual site model shows there is no indication that the soil was contaminated but they will confirm that when removing the monolith and will remove soil if needed.

Lisa Brandon asked if there would be a final status report which will be shared publicly. Mr. Leahy replied, yes.

Agenda Item #3. Mock Village Munitions Response Site (MRS) Proposed Plan Presentation and Public Hearing - Ms. Nicole Wagner, EA Engineering, Science, and Technology, Inc.

Ms. Wagner reviewed the CERCLA process and presented the preferred remedy for the Mock Village MRS. The Air Force with concurrence from the EPA has selected remedy #2: LUCs with UXO construction support for munitions and explosives of concern (MEC) which will include LUCs to limit access to the site and annual inspections. Annual inspections will include geophysical surface sweeps. Five-year reviews will be conducted to ensure that the remedy continues to remain protective to human health and the environment

The Mock Village MRS is located in the northeast portion of JBCC. The MRS was used to simulate a mock German village as an urban training complex from 1943 – 1950. No MEC or munitions constituents (MC) have been found at the MRS. Munitions permitted for use at the MRS included: TNT (non-MEC), pyrotechnics (non-MEC), fragmentation and practice hand grenades, and machine guns with blank ammunition.

Former buildings were demolished prior to 1966. Remnants of the timber-reinforced and earthen dugouts remain onsite. The MRS has become non-operational, has not been developed, and is currently forested with dense trees and underbrush.

Several investigations have been conducted at this site. The Phase IIB investigation included visual reconnaissance of the MRS and soil sampling at three locations for explosives, semivolatile organic compounds (SVOCs), metals, and dyes. The findings included several earthen structures and pits/tunnels, no ordnance, pyrotechnics or TNT use, three shallow pits presumed to be remnants of pyrotechnic pits,

rusted 5-gallon containers thought to be remnants of smoke pots, and no explosives or dyes. SVOCs were detected in soil samples but did not exceed site-specific background concentrations or site screening values. Metals were detected above background concentrations in soil samples but did not exceed screening values, regional soil screening levels, or MassDEP soil standards. Arsenic was the exception; however, it is naturally occurring in soils, and is not considered an MC of concern. No further action was recommended.

A Comprehensive Site Evaluation (CSE) was conducted in two phases. Phase I is equivalent to CERCLA Preliminary Assessment and indicated potentially impacted surface and subsurface material and recommended a CSE Phase II be conducted. Phase II is equivalent to CERCLA Site Inspection and was conducted to determine the presence or absence of MEC and MC. The CSE Phase II findings identified two additional observation pits. No MC were detected above reporting limits in soil samples. It was concluded that based on the historical use of the MRS, further assessment and/or action should be conducted to evaluate potential residual MEC.

A Remedial Investigation/Feasibility Study (RI/FS) was completed in January 2021 to define the nature and extent of MEC hazards and potential MC risks associated with historical military munitions use as a target area for urban training. The RI concluded that there is no evidence of MEC at the MRS; however, since 100% of the site was not investigated with digital geophysical methods, there is a small possibility that MEC could be present. If MEC is found at a future time, an investigation will determine if MC is a source. The FS developed the following objectives: reduce the risk of direct contact by current and anticipated future human receptors to potential MEC in the surface and subsurface soil and to prevent the release of contamination from the detonation of any MEC that would result in a total excess lifetime cancer risk greater than the target risk range and/or a non-cancer Hazard Index greater than 1.0.

The FS alternatives are No Action and LUCs with Unexploded Ordnance Control Construction Support. These alternatives were evaluated and compared using 7 of the 9 criteria developed by the EPA with the remaining criteria to be evaluated during and after the public comment period of the Proposed Plan.

EPA concurs with selection of Alternative #2 - LUCs with Unexploded Ordnance Control Construction Support. The public comment period is 12 March 2021 – 10 April 2021. The Proposed Plan and RI/FS is available on the JBCC website and the Air Force's Administrative Record.

Bill Winters stated that he was struck by the number of acronyms in the presentation and advised Ms. Wagner to make a table available that the public can refer to. Mr. Winters referred to the cost analysis and asked what the break-even point is in terms of cost for cleaning up the site? Ms. Wagner replied that there are no plans for development of the site in the future so the cost of UXO Construction Support and LUC is very minimal in comparison to doing a full removal which is very expensive. Mr. Winters asked if there would be signs and/or fence around the site. Ms. Wagner replied that signs are being put up referring to slide 15. Mr. Winters suggested that there be more than 4 signs as shown in figure to cover the area. Ms. Wagner agreed.

Ms. Brandon asked about the cost of the LUCs. Ms. Forbes and Ms. Wagner responded that removal was not evaluated as an alternative because it was not appropriate for the site.

Mr. Cusack asked about "low probability" in Alternative 2 – would 4 signs in what is essentially a no trespass zone going to do the trick? Ms. Wagner responded that the site is not used for anything, they are minimizing exposure by including UXO Construction Support, and annual upkeep and inspections, and the LUCs will be confirmed annually and they will ensure that the DigSafe® process is being followed.

Mike Mazzotta asked Ms. Wagner what the average concentration of arsenic is on this site and on the base. Also, when you do these measurements do you measure for antimony as well? Ms. Wagner responded that she would get back to Mr. Mazzotta regarding the arsenic. She responded that there is no reason to suspect that antimony would be there and that the primary constituent with the use of the site is explosives. Mr.

Mazzotta asked if fire suppressants were used at a site like this to which Ms. Wagner responded no, fire suppressants were not used. Ms. Forbes added that this site predated Aqueous Film Forming Foam (AFFF) so there are no PFAS issues.

David Dow stated that even though it is unlikely that JBCC will be closed in the future, was there any consideration with the decision that the area may be open to the public in the future? Ms. Wagner responded that there are no plans to open to the public in the future, but that the annual inspections will ensure the site is safe in the future. Ms. Forbes replied that if the land use changes in the future, there would be a re-evaluation on the decisions of these sites. The site is such a small footprint surrounded by a much larger area that it doesn't make sense to spend the money to close the site. Ms. Forbes referred to the upcoming MMRP presentation which refers to the Old K Range which is a similar site but MEC and rockets were found at that site. But, at this time, it doesn't make sense to consider a removal action and close this Mock Village site at this time.

Ms. Brandon asked Ms. Forbes if she is saying there is a much larger MEC/UXO area that is not being addressed and that in essence is why this isn't being addressed? Ms. Forbes replied that it is being addressed and it will be covered in the next presentation. Ms. Forbes continued that it is unknown if there are other MEC surrounding the Mock Village. Ms. Brandon replied, "So, fundamentally, should this not be brought into that other site so it is not just treated as an anomaly?" Ms. Forbes replied that the Mock Village is a separate site from the Old K Range.

Bob Lim, USEPA, answered Mr. Mazzotta's question on arsenic stating 3 soil samples were taken which resulted in 5.4 mg/kg, 6.1 mg/kg, and 5.5 mg/kg of arsenic and background level of arsenic of 5.5 mg/kg at JBCC.

Mr. Karson asked if there was any more discussion. With no response he opened up the Public Hearing for the Mock Village Proposed Plan. Once he opens the Public Hearing, no questions will be answered unless clarification is needed. All oral comments submitted during the Public Hearing will be transcribed verbatim and become part of the official Record of Decision in the Responsiveness Summary to be issued at a later date.

The Public Hearing is open. No comments were provided. Mr. Karson added that comments can formally be submitted in writing by the end of the public comment period. No comments were submitted during the Public Hearing. Mr. Karson closed the Public Hearing.

Agenda Item #4. Military Munitions Response Program (MMRP) Status Update - Ms. Nicole Wagner, EA Engineering, Science, and Technology, Inc.

Ms. Wagner began her presentation with the background of MMRP at JBCC. Under MMRP, AFCEC has been conducting investigation/remediation at 10 munitions response areas (MRAs), two of which are closed and referred to a figure showing the sites. She reviewed the MMRP process.

The Skeet Range is currently in the Remedial Investigation (RI) phase for lead. The field work is complete and the report is in progress. The Otis Gun Club is currently in the RI/Feasibility Study (FS) phase. Ordnance Area 1 is in an Expanded CSE Phase II Investigation and field investigation is in progress and the goal is site closure. The Old Grenade Courts are also in an Expanded CSE Phase II Investigation with site closure as the goal. The Mock Village is currently in a Streamlined RI/FS with the Proposed Plan out for public comment until 10 April 2021. The Old K Range is in the FS phase. The Former Ammunition Supply Point (FASP) East and West were a part of the CSE Phase II with a No Further Action recommendation but that decision was rescinded and the path forward is being determined with Regulators. The Otis Target Butt and Former Otis Bomb Storage Magazines sites have been closed.

Ms. Wagner asked for questions/comments. Mr. Cusack asked Ms. Wagner to explain the process. Ms. Wagner referred to the CERCLA process slide which explains the process. Mr. Cusack asked if the process is used beyond JBCC to which Ms. Wagner responded that all CERCLA sites use this process.

Sue Walker asked why the EPA rescinded the No Further Action Decision. Bob Lim, EPA, responded that at the FASP there was a plan to install a solar panel farm which would have occupied a majority of the site and would have prevented any further access of the site. The solar farm did not come through, and EPA asked for additional investigation if No Further Action was desired at the site. EPA was concerned that the investigation done to date did not cover the entirety of the site. EPA is in discussions with the AF to determine whether additional investigation will be done or if the site will go through a process similar to Mock Village where LUC would be put in place.

Mr. Dow asked if the MMRP process is similar to environmental impact statements where other agencies besides the EPA, that might have concerns beyond toxic chemicals, comment on the Proposed Plan before it is released to the public. Ms. Forbes replied under CERCLA no other review is required except through EPA. She said if construction or removal was done on the site that the AF would consult with the federally-recognized tribes and US Fish and Wildlife Service (USFWS) regarding endangered species. In the case of the Mock Village site, the area is not being disturbed at all so no consultation was needed.

Agenda Item #5. Remediation Action Completion for Former Groundwater Plumes (Site Closures)
- Ms. Rose Forbes, AFCEC

Ms. Forbes presentation included 4 sites: Fuel Spill-29 (FS-29), Chemical Spill-20 (CS-20), Chemical Spill-23 (CS-23), and Fuel Spill-1 (FS-1). She presented a slide with the CERCLA/IRP Process which differs slightly from MMRP Process. For example, the MMRP CSE Phase I is equivalent to the CERCLA Preliminary Assessment.

The FS-29 plume has ethylene dibromide (EDB) and carbon tetrachloride as the COCs. Ms. Forbes referred to a figure which shows the progress of the cleanup of the plume from 2003 – 2018. The source of the FS-29 plume is unknown. The ROD was signed in 2000 with the selected remedy of active treatment with monitored natural attenuation (MNA) and land use controls. In 2006 two extraction wells began operation. In 2010 the last extraction well was shut down while monitoring continued. In 2015 the Three Step Process toward site closure was initiated and documented in 2020 in the Remedial Action Completion Report (RACR) and letters were sent to Town agencies and residents lifting groundwater restrictions. In 2021 the Final RACR was issued with EPA/AF signatures and MassDEP concurrence.

A figure of the progress of cleanup for the CS-20 plume was presented. The source of the plume is unknown. The COC for CS-20 is PCE. In 1997 investigations and sampling were conducted as part of FS-28 and the Southwest Operable Unit (SWOU) RI. In 2000 the ROD was signed with the selected remedy of active treatment with MNA and LUCs. In 2006 two extraction wells began operation. In 2015 the last extraction well was shut down while monitoring continued. In 2018 the Three Step Process toward site closure was initiated. In 2020 a Fact Sheet was issued on 1,4-Dioxane Supplemental Investigation Findings indicating 1,4-dioxane was not a risk and was therefore not considered a COC. In 2021 the Three Step Process was documented in a Draft RACR which is currently under review by AFCEC legal followed by EPA/MassDEP. The same process will be followed as with FS-29 once approved.

A figure of the progress of cleanup for the CS-23 plume was presented. The source of the plume is unknown. The COCs for CS-23 are carbon tetrachloride and trichloroethene. In 2000 the plume was identified during the SWOU investigation. In 2007 the ROD was signed with the selected remedy of active treatment with MNA and LUCs. In 2006 two extraction wells began operation. In 2019 the last extraction well was shut down while monitoring continued. In 2020 the Three Step Process toward site closure was

initiated. In 2021 the Three Step Process will be documented in a Draft RACR currently in preparation. The same review process will be followed as for CS-20 and notifications will be made as with FS-29.

Ms. Forbes presented a figure of the progress of cleanup for the FS-1 plume from 2001 to 2019. PFOS/PFOA compounds in the area will be addressed as a part of the larger flight line investigation. The FS-1 plume originated from a valve test area on a ramp near the flight line. The main COC is EDB; and, thallium, toluene, and lead were closer to the source area. In 1997 investigations/sampling was conducted and one extraction well and 195 shallow well points began operation. In 2000 the ROD was signed with the remedy of plume capture and containment via active treatment with MNA and LUCs. In 2002 the system burned down. In 2003 four extraction wells began operation with carbon treatment. In 2019 the system was shut down while monitoring continued. In 2021 the Three Step Process toward site closure was initiated and documented in a Draft RACR which will follow the same review and notification processes as previously stated for other plumes.

Ms. Walker commented to Ms. Forbes that it is nice to see the progress being made.

Agenda Item #6. Community Involvement Update on the Plume Book and Community Involvement Plan (AFCEC) - Mr. Douglas Karson, AFCEC

Mr. Karson stated that revisions are being done on the Plume Book and Community Involvement Plan (CIP) from 2010. Draft revisions were sent for review by regulators who submitted their comments. A meeting was held to discuss those comments. The comments will be addressed in a revised Draft for regulator review and then sent to team members once comments are resolved. The Plume Book is 44 pages and the CIP will include the lessons learned for historical purposes. The CIP requires a public comment period which will be held.

Mr. Karson also stated that he and Pam Richardson revised a document, "Understanding the Link Between Exposure and Risk". It is available on massnationalguard.org/JBCC/afcec.html and jbcc-iagwsp.org.

There were no questions or comments.

Agenda Item #7. Central Impact Area Update (IAGWSP) – Ben Gregson, IAGWSP

Mr. Ben Gregson, with the Army National Guard's Impact Area Groundwater Study Program, introduced himself. He noted that the program has been doing unexploded ordinance (UXO) removal work in the impact area for over 20 years and is currently conducting source removal at the Central Impact Area (CIA) operable unit. The groundwater plumes are defined and the remedies are in place, with three extraction wells operating at 750 gallons per minute. To date, 23.8 billion gallons of groundwater have been treated. The two primary contaminants of concern are related to the use of explosives containing artillery and mortar shells in the Impact Area. The explosive of concern is RDX and also of concern is perchlorate, which is an oxidizer in the groundwater plume.

Mr. Gregson explained that ~10 years ago, EPA issued a Decision Document (DD) that required removal of UXO as it constitutes a potential future source to the groundwater from the explosive contaminants of concern. A specific metric in the DD was to remove 75 to 95% of the UXO in the areas where removal was being conducted.

A map of the 330-acre Central Impact Area (CIA) was shown. The different working areas were highlighted on the map. At this time, clearance has been completed at 93 acres, focusing primarily on areas with the highest concentration of UXO.

Mr. Gregson pointed out two areas, indicated by small triangles on the map, which represent targets used for artillery and mortar training in the past. The removal areas have been conducted in different phases, represented by different colors on the figure. The investigative transects extend out from the CIA boundary to the impact area, and are meant to help assess the drop off of UXO density away from the center, where all of the targets are located, to the edges of the CIA target area.

Mr. Gregson explained that in 2020 crews conducted geophysical investigation and UXO removal for a 10-acre area, using “metal mapper” (a picture was shown). This is a geophysical instrument that induces a magnetic signal into the ground and then measures the returning signal in three dimensions, providing information on the shape of the object. It tries to detect underground munitions, like artillery shells and mortars, which have a unique shape because they're long in one dimension and the other two dimensions are the same because of the cylindrical shape. Conversely, pieces of scrap metal are random shapes and not necessarily cylindrical. By identifying the cylinders using the geophysical technique and then removing them, it is likely UXO is removed. Mr. Gregson pointed out on the figure the areas with high concentration of metal where metal mapper was used.

Since 2013, Mr. Gregson explained, the IAGWSP has been using the advanced geophysical technique in three phases. The first phase involved three removal areas at 30 acres total and resulted in the removal of 1,828 lbs. of explosives.

From 2014 -2017, crews conducted Phase Two at an additional 28 acres, resulting in removal of 2,116 lbs. of explosives.

IAGWSP is currently been working in Phase 3 for a total of 35 acres. To date they have removed 1,369 lbs. of explosives. In total, metal mapper was used on 181,247 anomalies and 70,000 were excavated. Therefore, the technology eliminated the need to dig about 110,000 holes. A total of 2,000 UXO and 5,313 lbs. of explosives were removed in the three phases so that brings the program total to 8,120 lbs. of explosives removed since 2000, removing the potential source to the groundwater. Current estimates indicate that is about 38% of the total UXO in the entire impact area.

Mr. Gregson displayed slides showing the area with removal progress and the area with the most UXO (aka “heat maps”). He pointed to a couple of “hotspots” in the middle of the CIA. In some of those areas, the program did 100% removal with bulldozers but that was later determined to be a little extreme. Mr. Gregson explained that the current method with Metal Mapper is just as effective, while also saving the vegetation and soil so that the surface vegetation can recover more quickly.

Mr. Gregson pointed out on the figure that the color changes (intensity lessens) as you move out from the center of the CIA towards the edges, showing less explosives concentrations. Mr. Gregson explained that numbers of UXO doesn't really account for size; when removing some of the bigger UXO, that represents about 15 lbs. of explosives with each one, whereas some of the smaller UXO could have less than one lb. of explosives. This is an important metric to look at when you're deciding about where to where to dig

Currently an annual report for tracking the progress of the removal actions is under review by EPA and MassDEP. The current contractor, Parsons has completed their work and will close out their contract in April with demobilization and scrap removal, which ends up weighing thousands of pounds. Parsons will also destroy UXO currently in a storage bunker in the impact area and what they found on site. A detonation in place might be required if items are unstable. A community notification will be made if that has to happen.

The new contractor, IE Weston, will begin on April 12. They will start with some of the investigative digs that Parsons was unable to get to. They will then start Phase 4, which will be between 10 and 15 acres with the same Scope of Work. Mr. Gregson pointed out the Phase 4 areas that include an area in the north called the “Eastern Test Site” and the “Sub-caliber Aircraft Rocket” area where removal actions have been done before, but it is believed there's still some residual UXO from earlier firing at the targets in those areas. He pointed out two additional areas

with higher concentrations of UXO. Those three areas together total 10 acres. Mr. Gregson explained there is funding available to do five additional acres this year. If the contractor can go beyond the 10 acres a year into those additional five acres, it'll be further expanding on the east side to get an idea of the UXO density there and expanding around a series of mortar targets that existed in that location.

Mr. Gregson said that continuing work on the former E Range (a World War II era anti-tank rocket range) will continue with a geophysical survey and removal of all the anomalies to remove any munitions or explosives of concern.

Mr. Gregson then moved on to a program-wide groundwater update. He noted that the Demonstration of Compliance Report for the Northwest Corner is under review by the agencies. PFAS sampling is continuing downgradient at open burn/open detonation disposal sites. To date, most of the results are below the state MCL. Additional sampling at these sites, as well as at the J-3 Range, where there were two sampling results above the Massachusetts drinking water MMCL for six PFAS compounds but below the EPA standards. A compound known as PFHxS was found and contributed to the exceedance. Additional investigation is ongoing in the vicinity of those two wells.

IAGWSP long term monitoring and sampling is continuing. Operations and maintenance at the Demo 1 has been successful and one of the mobile treatment units that's located in the middle of where the plume (Pew Road Treatment System) can be shut down. The remaining cleanup will continue.

The IAGWPS is also doing a website update to remove some of the old material. The program has been posting information on the website for the last 20 years and now needs to archive some of the data to make the site easier to navigate. New information about recent program activities and publications will be added, such as the "Risk" fact sheet that was previously mentioned.

Mr. Gregson concluded his presentation and asked if there were any questions. Mr. Cusack asked for further explanation about the 8,000 lbs. of explosives removed versus 50 pounds that were in the groundwater. Mr. Gregson clarified that there is concentration information and size information for the plume so the mass of explosives within that can be estimated (~50 lbs).

Mr. Cusack asked if all 320 acres of the CIA would be investigated. Mr. Gregson replied that that would take a long time at 10 acres a year. He explained that we are looking for drop off in density of the UXO and at UXO types, anticipating that the smaller UXO is not a threat to groundwater. The program is using the information from the phased investigations to try to optimize the areas for removal with the goal of removing the most explosives and having the biggest impact on reducing future potential for groundwater contamination.

Mr. Cusack then asked why there was a change in contractors. Mr. Gregson explained that the contracts have a "period of performance" and that period had expired for the Parsons contract. There is a competitive bidding process and a number of different firms bid on the contract. IE Weston was selected for the next phase of work for a new period of performance of five years.

Final Discussion(s), Adjourn

Mr. Karson asked if there were any additional comments or topics to be discussed. Seeing none, the meeting was adjourned. Next meeting date is TBD.