

Joint Base McGuire-Dix-Lakehurst (JB MDL)
Restoration Advisory Board (RAB) Draft Meeting Minutes
Meeting No. 66 – 3 December 2020

SUBJECT: Restoration Advisory Board (RAB) Meeting No. 66 – Meeting Minutes

1) Place: Virtual Meeting via MS Teams

2) Date/Time: Thursday, 3 December 2020; 6:30 PM

3) Co-Chairs: Mr. Christopher Archer, Deputy Base Civil Engineer, JB MDL
Mr. Michael Tamn, Resident, Southampton Township, New Jersey

4) Attendees:

Mr. Frank Storm	RAB Community Member
Ms. Branwen Ellis	NJ Pinelands Commission, RAB Member
Mr. Andrew Gold	Pinelands Preservation Alliance, RAB Member
Mr. Alex Carnivale	Community Member
Mr. Bill Gruss	Community Member
Ms. Carla Struble	US Environmental Protection Agency, Region II (EPA)
Mr. Doug Pocze	US Environmental Protection Agency, Region II (EPA)
Mr. Bill Friedmann	US Environmental Protection Agency, Region II (EPA)
Mr. Haiyesh Shah	NJ Department of Environmental Protection (NJDEP)
Ms. Kristine Iazzetta	NJ Department of Environmental Protection (NJDEP)
Mr. Michael Figura	JB MDL, AFCEC/CZO, Environmental Restoration Program
Mr. King Mak	JB MDL, AFCEC/CZO, Environmental Restoration Program
Mr. Jim Richman	JB MDL, AFCEC/CZO, Environmental Restoration Program
Ms. Jalise Wright	JB MDL, AFCEC/CZO, Environmental Restoration Program
Mr. John Montgomery	JB MDL, AFCEC/CZO, Environmental Restoration Program
Mr. Michael Wierman	JB MDL, AFCEC/CZO, Environmental Restoration Program
Mr. Matt Greenberg	Hanscom AFB, Environmental Restoration Program
Mr. Tim Llewellyn	Arcadis
Mr. Eric Panhorst	Arcadis
Mr. Dave Heuer	Arcadis
Mr. Nathan Mullens	Seres
Mr. John Chulick	Parsons
Mr. Ian Temchin	Parsons
Ms. Katrina Harris	Bridge Consulting Corp./Arcadis

5) Handouts

- JB MDL Restoration Advisory Board, Meeting No. 66, 3 December 2020, Agenda
- JB MDL Restoration Advisory Board, Meeting No. 66, 3 December 2020, Presentation Slides

6) Call to Order:

The meeting was called to order by Mr. Christopher Archer, Deputy Base Civil Engineer, JB MDL. He welcomed everyone and thanked everyone for attending the second virtual meeting of the RAB.

7) Minutes of Previous Meeting and Review of Agenda Items:

Mr. Michael Tamn, RAB Community Co-Chair, asked for any comments on the minutes from the August 20, 2020 meeting. Ms. Carla Struble from EPA said on page 6 of the minutes, the fourth bullet towards the bottom of the page stated EPA comments on the draft final OU2 FS had been received, and this statement is not correct; she suggested this statement be deleted. Mr. Bill Friedmann from EPA said on page 3 of the minutes, paragraph 5, Mr. Jim Richman discussed receiving money to perform the PFOS work and indicated JBMDL was prioritized in the top 30. Mr. Friedmann suggested clarifying whether this means top 30 bases or top 30 percent. Mr. Richman stated it means top 30 bases, and Mr. Friedmann suggested the word “bases” be added. Mr. Friedmann said the next sentence referenced a document being available for public review and suggested clarifying the name of the document. Mr. Richman advised the document is the Relative Risk Site Evaluation, and Mr. Friedmann suggested this title be substituted for the word “document.” Mr. Friedman noted there was a spelling error on page 7 where “powered” should be “powdered.”

A motion was made, seconded, and passed to approve the minutes with the changes discussed.

Mr. Jim Richman noted the meeting was being recorded for purposes of preparing the minutes.

Mr. Richman reviewed two action items from the last meeting.

Mr. Richman said Mr. Tamn had asking about sampling of Hanover Lake for Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA). Mr. Richman advised Hanover Lake is not hydraulically connected based on surface water and groundwater flow, and no PFOS/PFOA sampling is currently planned during the initial Remedial Investigation (RI). Mr. Richman said if RI data provides new information indicating a PFOS/PFOA plume has migrated to Hanover Lake, sampling would then occur. Mr. Richman showed a map of Hanover Lake with arrows indicating surface water flow direction (east to west), and the surface water flow around the base’s PFOS sites being to the south. Mr. Richman showed a map of the groundwater flow direction (to the southeast).

Mr. Richman asked Mr. Tim Llewellyn of Arcadis to address the second action item. Mr. Llewellyn said Mr. Tamn asked for more specific details on the composition of the groundwater injections being used at Lakehurst and their potential impact on the groundwater, particularly any long-term impacts. Mr. Llewellyn advised there are no long-term detrimental effects to groundwater from the amendments, including no long-term impacts to groundwater pH. Mr. Eric Panhorst of Arcadis provided details on each of the four amendments: PlumeSTOP®, powdered activated carbon similar to what is used in water filtration systems; S-MicroZVI® Colloidal, suspension of zero valent iron in glycerol with glycerol (glycerol is used in many food products) to produce a localized, temporary increase in dissolved iron concentrations; Hydrogen Release Compound, releases lactic acid as a food source for microorganisms in the sub-surface; and, Bio-Dechlor Inoculum®, introduces additional bacteria to the subsurface to supplement existing microorganisms. Mr. Panhorst explained the effects of the amendments on improving groundwater quality and removing contaminants. He noted the pH of the amendments was near or at neutral when injected into the groundwater.

Ms. Branwen Ellis noted most of the Pinelands waters are acidic and asked the approximate timing for the water to return to background conditions. Mr. Panhorst responded the volume being injected is small enough that it will not overcome the natural acidic conditions for very long--a few months to about a year. Mr. Panhorst said additional injections are not planned as the contaminant levels are very low at these Lakehurst sites.

8) Update on PFOS/PFOA Investigation:

Mr. Richman next gave an update to the PFOS/PFOA investigation. He noted his slides show new activities/information marked with a red star. He first discussed on-base projects, noting the base has been working with the Army Corps of Engineers to award a contract for an Expanded Site Inspection. He advised the construction of a new treatment system and installation of a new deep potable well to replace two shallow back-up wells at Lakehurst is underway; the well has been installed, and well development and a 24-hour pump test is being planned in order to receive the allocation permit from the State. Mr. Richman said construction of the system will begin in 2021.

Mr. Richman stated a five-year contract has been awarded for a PFOS/PFOA Phase I Remedial Investigation (RI) which will include characterizing the nature and extent of contamination in all media on-base, as well as any off-base Air Force contamination. He explained a follow-on Phase II RI contract will include a risk assessment. He said the contract calls for a draft Remedial Investigation Report to be submitted to the regulators within 48 months of award which would be in 2024. He noted 34 AFFF release areas had been identified in 2015 which were combined into 21 sites; all these areas were evaluated by the Air Force and 28 of the 34 AFFF release areas were validated and funded for further investigation. He explained more information needs to be provided regarding the areas not yet validated at McGuire and Dix so they become eligible for funding; the Air Force hopes to get the sites validated within the next six months and added to the Phase I RI. He said the 21 sites consist of 14 sites at McGuire, 1 at Dix, and 6 at Lakehurst.

Mr. Tamm advised there had been a plane crash in 1972 of a C-130 at McGuire; the plane crashed on approach to the runway during a nighttime storm. Mr. Tamm added that Mr. King Mak had checked into a newspaper clipping about the crash some time ago. [After the meeting, the following information was found in the March 2015 minutes: *Mr. Frye addressed an action item from the September 2014 meeting where Mr. Tamm had inquired about a plane crash in the early 1970s at the end of the McGuire runway. Mr. Mak distributed an article he found from the Burlington County Times dated 12 October 1970 with details of an incident fitting Mr. Tamm's description. Mr. Tamm confirmed this was the incident he remembered.*]

Mr. Andrew Gold asked if it is possible to obtain a copy of the contract awarded for the RI so the scope of the investigation could be reviewed. Mr. Richman said he would check with the Corps of Engineers to see if it could be released, however, what may be a better option would be the work plans that will be put together prior to the work beginning which will detail the activities to be conducted and provide more specifics than the contract. Mr. Richman said the work plan will be available for review by the regulators, and the final work plan will be available to the public in the Administrative Record. In response to a question from Mr. Haiyesh Shah, Mr. Richman said the unvalidated sites will be included in the work plan, but the sampling plan for these sites will not be included as the sites have not yet been funded to be part of the RI work.

9) Military Munitions Response Program Update:

Mr. Michael Figura said he would provide a brief status update of the Military Munitions Response

Program (MMRP) sites, which are closed munition range sites.

Mr. Figura displayed a map showing the location of the sites—two sites at McGuire, two sites at Dix, and six sites at Lakehurst.

Mr. Figura first discussed the McGuire Sites. He advised a Removal Action Report for lead-impacted soil at the off-base portion of the site and a Feasibility Study are under regulatory review for the Skeet Range (Site TS875). He noted after the Feasibility Study is finalized, a Proposed Plan and Record of Decision will be prepared to address lead-impacted soil on the on-base portion of the site. Mr. Figura said a Feasibility Study is under regulatory review for the Ordnance Storage Area (Site XU874) and will be followed by a Proposed Plan and Record of Decision.

Mr. Figura next discussed the two Dix Sites, noting a Proposed Plan recommending no further action is under regulatory review for the Small Arms Range (Site SR002); he noted a removal action had been completed at the site. He stated a Proposed Plan is being prepared for the Practice Mortar Range (Site FR004).

Mr. Figura gave an update on the six Lakehurst Sites. He advised at the Submarine Bombing Target (Site ZZ001) a Proposed Plan is under regulatory review which proposes a surface clearance every five years along with land use controls. He said a no further action Proposed Plan is being prepared for the Military Aircraft Launch and Recovery Equipment (Site ZZ002). Mr. Figura advised at the Lakehurst Proving Grounds (Site ZZ003) a Removal Action and a Remedial Investigation are underway (a more detailed presentation is part of this meeting). He noted the Small Arms Range (Site ZZ004) falls within a current operational range, so it cannot be addressed under the Military Munitions Response Program; the site will be administratively closed. He explained if the range were to close in the future, it could be addressed at that time. Mr. Figura said Remedial Investigation Reports are under regulatory review for the Trap Range (Site ZZ005) and the Rifle, Pistol, and Skeet Ranges (Site ZZ006).

Mr. Figura advised there will be public meetings on the final Proposed Plans, and the meetings likely will be held prior to a RAB meeting.

10) Munitions Response Site Priority Protocol:

Mr. Figura explained the Munitions Response Site Priority Protocol (MRSPP) is used to prioritize MMRP sites for response actions, and is the Department of Defense's method for allocating funding to the highest priority sites first. He continued explaining that it is updated when new data becomes available such as the new data available from the removal actions and remedial investigations recently conducted at JBMDL.

Mr. Figura said there are three modules used in the calculation of the score, with the first being an Explosives Hazard Evaluation module which evaluates hazards posed by Munitions and Explosives of Concern; the scores range from 2 (high) to 8 (low). He stated the second is the Chemical Warfare Materials Hazard Evaluation (CHE) module which evaluates hazards, if any, posed by Chemical Warfare Material, and the scores range from 1 (high) to 7 (low). Mr. Figura advised the third module is the Human Health Evaluation (HHE) module which evaluates risks posed by munitions constituents in the soil or groundwater, and the scores range from 2 (high) to 8 (low).

Mr. Figura said the next step is looking at the hazards or contaminants, the exposure pathways and the receptors. He explained other factors also are considered such as legal (whether a site is on the National Priorities List), mission impacts and delays when determining priority and funding.

Mr. Figura displayed and reviewed the charts showing the updated scores for the JBMDL sites. He noted there will continue to be updates as work and reports are completed. He advised the scoring tables have also been placed in the Burlington County and Ocean County libraries, as well as in the online Administrative Record. Mr. Figura said newspaper notices were placed the previous weekend to advise the public the scores are available for public review, and a public comment period extends through December 30. He stated comments should be sent to Mr. Jim Richman, james.richman.1@us.af.mil.

11) Lakehurst Proving Ground Update:

Mr. John Chulick of Parsons stated he would be presenting an update on a time-critical removal action for two locations within the Lakehurst Proving Grounds, Parachute Jump Circle. He noted the purpose of the action is to address immediate hazards not to do a full investigation or cleanup. He explained the action will excavate and clear two disposal pit/anomalies of munitions and explosives of concern (MEC), material potentially presenting an explosive hazard (MPPEH), and potential chemical warfare materiel (CWM). He noted if any explosive munitions are encountered, they will be detonated on site, and chemical warfare materiel will be stored in an on-site holding facility. Mr. Chulick stated the work also includes preparing a final report.

Mr. Chulick advised the contract also provides for a Remedial Investigation to be conducted for eight sites, as well as preparing a GIS data product that identifies the locations of historic munitions found at the Lakehurst Proving Grounds.

Mr. Chulick displayed a map showing the location of the eight sites included in the Remedial Investigation, as well as the sites where the removal action will be occurring.

Mr. Chulick stated the two disposal pits were discovered during the 2017 Remedial Investigation. He said one location had one 75mm projectile (50% filled with mustard agent) and two empty 75mm projectiles. He noted these items were addressed during the Remedial Investigation, but the Remedial Investigation was not designed to do further munitions removal, so the remaining metal items will be cleared during the upcoming removal action. He explained the other location had pieces of Stokes mortars, along with other metal pieces which will be addressed during the removal action.

Mr. Chulick displayed a map showing the two locations, as well as a location where anomalies will be stored until they can be destroyed.

Mr. Chulick showed a list of the various organization comprising the field team including the U.S. Army Engineering and Support Center, Huntsville; U.S. Army Combat Capabilities Development Command (CCDC), Chemical Biological Center; Chemical, Biological, Radiological, Nuclear and Explosives (CBRNE) Analytical and Remediation Activity (CARA); and, Parsons as the Prime Contractor, with some subcontractors.

Mr. Chulick discussed the various phases of the removal action, including site set-up and training of personnel, equipment and decontamination station set-up, practice scenarios and exercises, and obtaining final Department of the Army approval. He displayed a photo showing the Engineering Control Structure placed over the first area; he noted a filtration system will be added to put the structure under negative pressure to contain any accidental releases. He showed a photograph of the interim holding facility which is on-site. He also showed an aerial photograph with the operations layout.

Mr. Chulick reviewed the activities that will occur after the excavation to dispose of any waste generated and restore the site.

Mr. Chulick advised that the next step in the project will be to collect and analyze additional soil samples to fill data gaps and complete a comprehensive Remedial Investigation Report for the eight former target areas within the ZZ003 site. He noted a Human Health Risk Assessment and Ecological Risk Assessment for each target area as a separate exposure area will also be developed.

Mr. Chulick reviewed the project schedule noting mobilization is anticipated on January 4, with intrusive operations scheduled for February and March, and all activities being completed by May. He stated these dates are tentative and dependent on what is found in the pits.

12) Performance-Based Remediation Contract Update:

Mr. Tim Llewellyn, Project Manager for Arcadis, reviewed a list of topics he will be discussing.

Mr. Llewellyn first discussed the progress at Site TU003, a State-led site at McGuire, and a former gas station with residual contamination. He noted the contamination is fairly shallow, but it is a very low permeability environment. Mr. Llewellyn noted both soil and groundwater have been impacted. He advised some excavations have been performed, and a pilot study was done which showed air sparge/soil vapor extraction was not likely to be effective at this site.

Mr. Llewellyn stated he had discussed the thermal in-situ remediation (TISR) technology at a previous meeting which accelerates the natural biodegradation of petroleum compounds through slight increases in the temperature of the sub-surface. He showed several photographs of the technology being installed, including solar panels. Mr. Llewellyn said the system has been functioning for several months, and the initial results are promising.

Mr. Llewellyn next discussed Site NW042 (0900 Area), a State-led site at Dix, where pesticide impacted soils were found at the 40-acre former Kennedy housing complex. Mr. Llewellyn reminded the RAB a soil-mixing remediation was chosen for this site following a public meeting and public comment period. He showed several photographs of the soil mixing operation which was successful in reducing site-wide weighted averages to below the NJDEP standard. Mr. Llewellyn said a Remedial Action Completion Report will be submitted to NJDEP, and the site will be closed out in 2021.

Mr. Llewellyn gave an update on the time-critical removal action at LF019. He noted the removal action at this site is to remove recoilless rifle rounds found during activities to design a remedy for several landfills at Operable Unit 3. He advised required documents have been completed, and the removal action is scheduled to take place in January 2021 and last about two weeks. He explained after a report is completed, a Record of Decision will be signed for LF019 for capping the landfill simultaneous with the capping of the other Operable Unit 3 landfills.

Mr. Llewellyn reviewed planned additional injections at McGuire/Dix State-Led Sites. He stated three McGuire Sites (CF011, TU020, and TU027) and two Dix Sites (SS005B, TU578) have all had remedial actions in the past and are now on a monitored natural attenuation path; however, each site has low but persistent concentrations of contaminants in one or two wells above the cleanup criteria. Mr. Llewellyn advised injections, similar to those discussed earlier in the meeting, are planned to move these sites to response complete. He gave an example of the remediation and monitoring history at one of the sites as an example of the current status of these sites. He stated a workplan will be submitted to NJDEP early in 2021 with injections occurring in early spring 2021; the goal is to be able to close out these sites in early 2022 or sooner.

Mr. Llewellyn reviewed the status of the remediation underway at the Boeing Michigan Aeronautical

Research Center (BOMARC). He advised construction is complete, and the air sparge system to treat the TCE in groundwater began operating in October; it has been running well since. Mr. Llewellyn showed photographs of the construction. He advised that sampling of the groundwater and collection of operational data will begin to ensure the system is operating as designed. Mr. Llewellyn reminded the RAB that this is a long-term remedy with off-site impacts addressed within 10 years, and with the contaminants sequestered in clays on-site taking more than 50 year to dissipate but will be contained in a small area on JBMDL during that time.

Mr. Llewellyn provided a summary of the overall progress at the NPL Operable Units (OUs) at McGuire:

- OU1 Record of Decision (ROD) under final review ahead of signature which is anticipated by the end of 2020. The remedy is enhanced soil covers over the landfills and expected to start implementation in the summer of 2021.
- OU2 draft final Feasibility Study (FS) is under EPA review.
- OU3 Remedial Design (RD) is under Air Force review with action planned for the summer of 2021.
- OU4 Proposed Plan (PP) has been reviewed by EPA/NJDEP, and a public meeting is planned for the first quarter of 2021.
- OU5 draft final FS is being revised to address regulator comments; a PP and ROD are planned for FY21.
- OU6 draft FS is under EPA review; NJDEP comments have been received.
- OU7 and OU8 FSs are in progress and being reviewed by the Air Force; the documents are planned for submittal to EPA/NJDEP in early 2021.

Mr. Llewellyn displayed a list of site closures achieved through the performance based remediation contract and the total of sites closed to date, noting that 33 sites have been closed at McGuire, 50 at Dix, and 35 at Lakehurst.

Mr. Archer noted that Arcadis and the JBMDL are nearing the start of year seven of a 10 year contract, and while great progress has been made, he was concerned about finalizing all the needed Records of Decision in a timely manner to achieve site completion by the end of the 10 year contract. He stated there is no ability to extend the 10 year contract. Mr. Archer asked Mr. Llewellyn if the lack of signed Records of Decision at this point is a concern. Mr. Llewellyn agreed it is a concern, and there are quarterly discussions with the regulators and the Air Force team on schedules and allocation of staff resources. Mr. Archer suggested perhaps it is time to elevate the discussions within the Air Force and EPA while there is still the potential to make adjustments in order to reach site closure, and Mr. Llewellyn agreed. Mr. Archer recognized all the efforts to date by the Air Force, EPA and NJDEP teams to get the sites to their current stages; he noted he will begin elevating discussions within the Air Force. Mr. Doug Pocze of EPA agreed with the idea and said what is helpful is the Air Force prioritizing all the documents needing review, and if the Records of Decision are the top priority, EPA will prioritize their review. Mr. Pocze said he is open to having further discussions in the next month or so. Mr. Archer suggested a meeting in January to discuss priorities and resources, and Mr. Pocze agreed.

Mr. Dave Heuer of Arcadis gave an update on the Former Pump House C (TU021). He displayed a map showing its location on McGuire. He explained it was a former fueling operation consisting of a pump-house (Building 1701), seven 25,000-gallon and one 5,000-gallon jet fuel underground storage tanks (USTs), and a network of fuel lines; all fueling structures were removed in 2005. He noted the soil and groundwater have been impacted with fuel-related compounds at concentrations exceeding applicable New Jersey standards.

Mr. Heuer discussed the remediation plan for the site which for soil includes excavation at former UST locations to remove the continuing source to groundwater and compliance averaging (in accordance with the NJDEP technical guidance) to address residual soil impacts following the excavation to achieve compliance with the applicable New Jersey soil standards. Mr. Heuer noted an air sparge/soil vapor extraction pilot test is planned in the downgradient plume area to confirm implementability of this technology and to determine future full-scale design. He noted the site would transition to monitored natural attenuation of groundwater following excavation and operation of the air sparge/soil vapor extraction system.

Mr. Heuer advised the pilot test wells need to be installed in a very busy, mission critical area so the work has been re-scheduled from December 2020 to January 2021 and will take about a week. He stated the waste characterization borings were completed this week ahead of the excavation work which will be done in early 2021 and take about two months.

13) RAB and Public Comments:

Mr. Tamn asked for additional questions from RAB members and then from members of the public observing the meeting. No other comments were offered. Mr. Tamn asked for any topics for the next meeting and none were offered.

14) Meeting Adjourned:

Mr. Tamn asked for a motion to adjourn the meeting. A motion was made, seconded and unanimously passed to adjourn the meeting at 8:42 PM.

The tentative date for the next meeting is February/March 2021 in conjunction with a public meeting and will be a virtual MS Teams meeting due to COVID-19 pandemic concerns.