

Joint Base McGuire-Dix-Lakehurst (JB MDL)  
Restoration Advisory Board (RAB) Final Meeting Minutes  
Meeting No. 63 – 12 September 2019

SUBJECT: Restoration Advisory Board (RAB) Meeting No. 63 – Meeting Minutes

- 1) Place: Edward Holloway Senior Citizen Community Center, 5 Cookstown Browns Mills Road, Cookstown, New Jersey
- 2) Date/Time: Thursday, 12 September 2019; 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. Tom Besselman	RAB Community Member
Mr. Rich Bizub	RAB Community Member, Pinelands Preservation Alliance
Mr. Frank Storm	RAB Community Member
Ms. Branwen Ellis	NJ Pinelands Commission
Ms. Carla Struble	US Environmental Protection Agency, Region II (EPA)
Ms. Donna Gaffigan	NJ Department of Environmental Protection (NJDEP)
Mr. Haiyesh Shah	NJ Department of Environmental Protection (NJDEP)
Ms. Colleen Lane	NJ Department of Environmental Protection (NJDEP)
Mr. Michael Figura	JB MDL, AFCEC/CZO, Environmental Restoration Program
Mr. Curt Frye	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. Tom Crone	Arcadis
Ms. Katrina Harris	Bridge Consulting Corp./Arcadis

5) Handouts

- JB MDL Restoration Advisory Board, Meeting No. 63, 12 September 2019, Agenda
- JB MDL Restoration Advisory Board, Meeting No. 63, 12 September 2019, Presentation Slides
- JB MDL, List of Documents Provided to Mr. Tamn as of 11 September 2019

6) Call to Order:

The meeting was called to order by Mr. Christopher Archer, Deputy Base Civil Engineer, JB MDL. He said he expected Col. Tiffany Warnke (87<sup>th</sup> Civil Engineer Group Commander) to attend a future meeting. He welcomed everyone and thanked everyone for attending.

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

Mr. Tamn, RAB Community Co-Chair, asked for any comments on the minutes from the March 14, 2019 meeting. A motion was made, seconded, and passed to approve the minutes.

Mr. Curt Frye noted the meeting was being recorded for purposes of preparing the minutes.

Mr. Frye announced Mr. Jim Richman will be moving into Mr. Frye's position as Restoration Lead, and he will be moving on to assume his recently retired boss' position as Environmental Installation Support Section Chief, which includes responsibilities for Air Force installations throughout the Northeast. The Board members congratulated Mr. Frye on his promotion.

Mr. Frye introduced and welcomed Ms. Colleen Lane of NJDEP, a geologist, who has recently joined NJDEP.

Mr. Frye reviewed action items from the last meeting. He noted the first three action items would be addressed in a later presentation by Mr. Tom Crone of Arcadis.

Mr. Frye first addressed a question raised by Mr. Tamn about an old incinerator building at Dix. He advised it was looked at in the Preliminary Assessment/Site Investigation conducted at Dix in the late 1980s. Mr. Frye said the building was inspected and recommended for no further investigation or sampling.

Mr. Frye displayed a list of environmental sites which have been closed at each of the three bases, including those closed prior to the performance based remediation contract, as had been requested at the previous meeting. He advised 28 sites at McGuire, 48 sites at Dix, and 35 sites at Lakehurst had been closed. He noted the list includes the date the site was closed. He explained "closed" means no further action is needed, including no further management of land use controls.

Mr. Frye next discussed an update to the PFOS/PFOA investigation. Mr. Frye advised the Basewide Site Inspection report was finalized in January 2019. He stated the Off-Base Expanded Site Inspection is ongoing with a focus on off-site properties where drinking water is potentially impacted and are above EPA's Lifetime Health Advisory standard of 70 parts per trillion (ppt). He noted two properties have been provided bottled water, granular activated carbon systems have been installed at two properties, and a reverse osmosis system has been installed at one property. He explained that as a long-term solution, five properties in Manchester Township are being connected to the municipal water system.

Mr. Frye advised the Air Force continues to conduct routine (approximately quarterly) monitoring at 26 off-site properties where there have been any detections of PFOS/PFOA, not just exceedances. Mr. Frye said once a property is connected to municipal water, the goal would be to decommission the private well and discontinue monitoring or re-permit the well with the state as a non-potable well. Mr. Shah asked if the properties being provided bottled water will be transitioned to a treatment system. Mr. Frye said the bottled water is offered immediately, and then a treatment system is offered as the next interim or permanent solution. Mr. Shah asked if the Air Force plans to change the standard being used to a more stringent standard in the future. Mr. Frye said the Joint Base will use the standard as approved and directed by the Secretary of Defense.

Mr. Frye showed a table summarizing the off-base drinking water sampling status, including the total number of information packets distributed, the number of samples collected, and the number of detections where the properties continue to be monitored.

Mr. Frye displayed several maps showing the locations of the areas off-base that were investigated based on direction of groundwater flow, on-base concentrations, and distance to the base boundary. He discussed the sites on-base which may be sources of PFOS/PFOA.

Mr. Frye reviewed actions being taken on-base including installation of an ion exchange resin treatment system for two shallow (about 80 feet deep) back-up wells at Lakehurst as an interim action, while a new deep well is being designed. Mr. Frye said the new deep well installation is planned for next year. He advised at that time the two shallow wells will be closed, and the ion exchange resin treatment system will be decommissioned. Mr. Frye reviewed the base/regional conceptual site model update project, which is a multi-year project extending to 2020 with both a contractor and USGS involved in the modeling and synoptic groundwater measurements of over 680 wells, along with stream gauging. Ms. Donna Gaffigan asked if the synoptic water level measurements are in addition to monitoring efforts, and Mr. Frye said they are in addition to the monitoring efforts. Ms. Gaffigan asked if they would be making recommendations on additional wells that might be needed, and Mr. Frye responded that there are more than 2,000 monitoring wells so additional wells are not needed; USGS selected a sub-set of wells to monitor. Mr. Rich Bizub asked if the effort included industry and private off-base wells, and Mr. Frye stated the USGS has right-of-entry agreements with off-site owners to gauge their wells, in addition to USGS wells, so USGS believes they have good coverage. Mr. Bizub asked how far off-base is included in the study, and Mr. Frye said the area was not specifically defined, but it is understood that the goal is to identify any potentially impacted areas.

Mr. Frye said the base does not yet have remedial investigations programmed, but the next opportunity for programmatic discussions will be the fall/winter of 2020 for FY21 projects. Mr. Shah asked if the issue is money or is the military waiting for standards to be promulgated, and Mr. Frye stated he could not speculate on the rationale being used to make programming decisions Air Force wide.

Mr. Figura provided an update on two Military Munitions Response Program (MMRP) project schedules as requested at the previous meeting. He stated the first project is the Lakehurst Proving Grounds Jump Circle. He reminded the Board that in the fall of 2015 two chemical munitions were discovered, as well as two potential disposal pits. He stated the chemical munitions were safely removed, but the disposal pits were not removed as they were not part of the contract's scope of work. Mr. Figura said a separate contract was put in place to perform a surface sweep of all the Proving Ground and to remove the two pits. He advised that the surface sweep was completed, but the removal action for the two pits was de-scoped from that contract due to funding and contractual issues. He advised a contract for the removal of the pits is being re-awarded by the end of the month. Mr. Figura said the schedule is to update the work plan and start fieldwork prior to the bird nesting season which begins in April. He noted there would be a pre-operational survey in May 2020, and then disposal pit excavations would begin in June and continue through August 2020. Mr. Figura stated there would be a containment structure with a filtration system in place during the work; he said the structure is already set up over the first pit.

Ms. Brawen Ellis asked about ecological surveys, and Mr. Figura said surveys will be done again for snakes and nesting birds.

Mr. Figura next discussed the McGuire Skeet Range which extends to an off-base private property. He said the contract has been awarded for the removal of lead-impacted soils, and work has started. He summarized work and documents completed to date, noting the Action Memo was concurred on by the regulators in April and its availability in the Administrative Record was advertised in local newspapers on July 25 with the comment period extending through August 26. Mr. Figura said erosion and sediment controls were installed at the end of July, and grubbing and chipping was completed in early August. He stated pre-excavation sampling is being conducted now to delineate what needs to be removed; soil will be removed and backfilled so the excavation does not have to remain open pending sampling results. Mr. Figura noted the soil removal will be conducted October through December, with a report issued in the spring of 2020. He advised re-planting and re-forestation of wetlands areas would take place in the spring of 2020.

8) Performance-Based Remediation Contract Update:

Mr. Tom Crone, Deputy Project Manager for Arcadis, stated he would be providing a summary of progress on the National Priorities List (NPL) sites at McGuire, State-led sites at McGuire and Dix, and NPL Sites at Lakehurst, along with discussing sites where active remedies are in place.

Mr. Crone began with highlights of all the sites. He noted the NPL sites at McGuire, Operable Units 1 through 8, involve large, complex documents, but good progress is being made with all Operable Units. He advised the Record of Decision for OU3 was approved by the regulators and is with the Air Force for signature. Mr. Crone said the next operable unit to be reaching the Record of Decision stage will be OU1, with the Feasibility Study close to being final and the Proposed Plan release and public meeting occurring sometime in the next couple months. He stated several additional State-led sites are moving towards closure, and active remediation sites are being optimized to improve performance. Mr. Crone advised 7 more sites have been closed since the last meeting.

Mr. Crone next discussed each of the McGuire Operable Units.

- OU-1: Operable Unit 1 consists of two former landfills and a former recycling yard located in the northern portion of the base, outside the secure area. A Proposed Plan and public meeting are targeted for the fall or winter of 2019, followed by a Record of Decision in 2020 and remedy implementation in 2020. Field work was conducted this summer to help with the remedial design process, including determining the thickness of the existing covers, analyzing the soil cover, and delineating where waste is likely to be present through a geophysical investigation. The soil analysis results had just been received, and a preliminary review indicates the soil is at or below industrial standards and in some cases below residential standards.
- OU-2: Operable Unit 2 consists of 10 sites which range in complexity from former aircraft maintenance facilities with significant contamination to sites of former oil/water separators with partial contamination. The draft final Feasibility Study is being developed along with responses to regulatory comments.
- OU-3: Operable Unit 3 consists of three former landfill sites and one sludge disposal site. The Record of Decision is with the Air Force for signature. A time-critical removal action is being planned to remove some expended 106mm cartridges found in a limited area (60 feet by 40 feet) at LF019. Once the removal action is complete, LF019 will be addressed in a second Record of Decision and has been removed from the Record of Decision addressing the other three sites. Work on the Remedial Design will proceed while the removal action takes place with the objective of including LF019 in the Remedial Action with the other three sites in 2020. Phase II of a Preliminary Design Investigation will begin soon to assess the thickness of soil at the landfills.
- OU-4: Operable Unit 4 is the bulk fuel storage area. Comments on the draft Feasibility Study have been received from the regulators and are being addressed in a draft final Feasibility Study. A Proposed Plan is under development with a goal of having a Record of Decision in 2020. Installation of wells within the secondary containment area was completed this summer which will provide data on groundwater directly beneath the tanks.
- OU-5: Operable Unit 5 consists of one former aircraft maintenance facility and two former pesticide handling areas. The Feasibility Study is being reviewed by the regulators, and internal draft Proposed Plan will be submitted to the Air Force soon.

- OU-6: Operable Unit 6 addresses historical fuel releases under the aircraft apron. The final Remedial Investigation Report is with EPA for their approval. The draft Feasibility Study is with the regulators for review.
- OU-7: Operable Unit 7 consists of four former industrial sites. The internal draft of the Feasibility Study has been reviewed by the Air Force, and comments are being addressed. A pilot study is being conducted to provide information for potential remedial alternatives.
- OU-8: Operable Unit 8 consist of five sites in the Triangle Area (Former Fire Training Areas/Aircraft Loading Areas). The internal draft of the Feasibility Study will be submitted to the Air Force this fall. A pilot study is being conducted to provide information for potential remedial alternatives.

Mr. Crone displayed a table showing anticipated dates for when the regulators will see draft Records of Decision, as well as the fiscal year when the Records of Decision are anticipated to be signed.

Mr. Crone next discussed the petroleum sites at McGuire where NJDEP is the lead regulatory agency. He displayed a chart showing the sites and their status. He advised there are 30 compliance sites included in Arcadis' contract, with 20 of those sites already having met the contractual endpoint of either Site Closeout (unlimited use/unrestricted exposure requirements) or Response Complete. He noted of the remaining 10 sites, several are ready for close out pending the completion of some paperwork. Mr. Crone discussed recent work completed on documents and ongoing remediation.

Mr. Crone discussed Site TU003 where a pilot test was conducted using air sparge/soil vapor extraction; the pilot test did not support this approach so focused excavation and monitoring was implemented. He advised that even with the excavation completed, additional action is required and will include a thermal in-situ sustainable remediation technology. He explained this technology helps accelerate the biological remediation process, similar to how a compost works better in the summer when temperatures are warmer. He continued explaining that solar panels would be used, and food grade heat exchange fluids would be circulated in a closed system to warm up the soils (by approximately 10 degrees). Mr. Crone noted that Arcadis has had success using this technology at another DoD site.

Ms. Gaffigan asked if the remediation would include vapor extraction or just enhanced biological. Mr. Jim Richman stated options are being built into the remediation process, including skimming if free product is generated. Mr. Shah asked if vapor extraction was required at the other DoD site Mr. Crone referenced as a permit equivalent may be needed, and Mr. Crone advised he would check. Mr. Crone said the remedial timeframe estimate is about four years to complete remediation.

Mr. Crone next discussed the Lakehurst sites—AT016, LF042, TT013, and TT017. He advised three air sparge/soil vapor extraction and biosparge systems continue to operate. He noted the three systems continue to operate well and mass recovery continues. He stated the pump and treat system at Area H was shut down in March for a two-year plume stability study. Mr. Crone noted semi-annual and annual groundwater monitoring continues.

Mr. Crone displayed a chart showing the status for the Dix State-Led Sites. He advised of the 20 sites, ten have met the contractual endpoint of Site Close-out, Response Complete or Long-Term Monitoring. Several more sites are close to the contractual endpoints, pending completion of paperwork.

Mr. Crone stated optimization of groundwater remedies is underway at Sites NW044, TU019a and TU023. He showed a graphic of the air sparge/soil vapor extraction process and explained optimization included installing additional wells to inject air and connecting the wells to the current system through trenching and piping. He continued explaining that controls are part of the system to determine which wells to turn on and off as part of the optimization process.

Mr. Crone next discussed the BOMARC Site. He noted the Record of Decision has been signed for BOMARC; the signing announcement was part of the public notice for tonight's meeting, and a copy of the document has been placed in the libraries. He advised an air sparge system was the selected remedy and construction is planned for late 2019/2020.

Mr. Crone reviewed the BOMARC conceptual site model, noting groundwater discharges to Success Branch and ultimately feed into Union Branch and Toms River. He discussed the historical surface water sampling locations and results from the 1990s through 2014. Mr. Crone stated the highest TCE detection was at SW-11 in 2009 at 186 parts per billion. He noted upstream sampling confirmed no significant impacts, and concentrations have continued to decline further downstream and in recent sampling events.

Mr. Crone next discussed MAG-1, SS007, located at Dix. He stated a decision document was finalized in 2002 with a selected remedy of groundwater in-situ bioremediation and monitored natural attenuation. He noted the remedy was optimized from 2011 to 2015 to biostimulation/bioaugmentation with groundwater circulation technology. He advised the treatments were successful at breaking down trichloroethene (TCE) to cis-1,2-dichloroethene (DCE), but then further remediation and breakdown stalled. Mr. Crone said a monitored natural attenuation study was done from 2015 to 2017, and the study showed additional remediation is needed to achieve remedial goals.

Mr. Crone addressed the request for information on pH levels. He stated baseline conditions before initiation of bioremediation ranged between 3 and 5, and during active remediation ranged between 5.5 and 12. He noted sodium hydroxide was used as a pH buffer, with pH increasing to a high of 12 (14 is the top of the pH scale). Mr. Crone said buffering stopped in 2013, and 2018 sampling showed the levels were back to a range of 3 to 5 pH.

Mr. Crone explained future remediation at MAG-1 will use a groundwater recirculation remedy, with wells being installed in the fall of 2019 and system construction and start-up in the spring of 2020. Mr. Bizub asked if hydraulic gradients would be monitored so contaminants would not be pulled into the lower aquifer, and Mr. Shah advised this issue was being considered in the remedial design.

Mr. Crone displayed a list of site closures achieved through the performance based remediation contract, noting that 27 sites have been closed.

9) RAB and Public Comments:

Mr. Tamn asked for questions from RAB members and then from members of the public observing the meeting.

Mr. Frank Storm suggested notices of the meetings be published in the Pineland Tribune. Ms. Harris will obtain information about placing notices in this publication.

Mr. Tamn noted that significant progress has been made in the last five years, and he is impressed about how much work has been accomplished. Mr. Archer agreed the performance based contract has been successful in moving forward with site remediation and closure.

10) 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 8:24 PM.

The tentative date for the next meeting is December 2019.