

Joint Base McGuire-Dix-Lakehurst (JB MDL)  
Restoration Advisory Board (RAB) Final Meeting Minutes  
Meeting No. 64 – 13 February 2020

SUBJECT: Restoration Advisory Board (RAB) Meeting No. 64 – Meeting Minutes

- 1) Place: Edward Holloway Senior Citizen Community Center, 5 Cookstown Browns Mills Road, Cookstown, New Jersey
- 2) Date/Time: Thursday, 13 February 2020; 6:45 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. Frank Storm	RAB Community Member
Ms. Branwen Ellis	NJ Pinelands Commission
Mr. Rick Prickett	NJ Pinelands Commission
Mr. Alex Carnivale	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)
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. Randy Lupin	NJ Department of Environmental Protection (NJDEP)
Mr. Jim Kealy	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. John Montgomery	JB MDL, AFCEC/CZO, Environmental Restoration Program
Mr. Tim Llewellyn	Arcadis
Mr. Bob White	Arcadis
Ms. Julie Straus	Arcadis
Mr. Kevin Jago	Leidos
Mr. Barry Blanton	Leidos
Mr. Niels van Hoesel	FPM
Ms. Katrina Harris	Bridge Consulting Corp./Arcadis

5) Handouts

- JB MDL Restoration Advisory Board, Meeting No. 64, 13 February 2020, Agenda
- JB MDL Restoration Advisory Board, Meeting No. 64, 13 February 2020, Presentation Slides
- JB MDL, List of Documents Provided to Mr. Tamn as of 13 February 2020

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. Mr. Archer stated he was excited about the continued great progress being made. Mr. Archer recognized Ms. Donna Gaffigan of NJDEP for her involvement with the base's environmental projects for almost 30 years. He advised Ms. Gaffigan would be moving on to other projects, and Mr. Randy Lupin would be taking her place on the RAB. Mr. Jim Richman introduced Mr. Bill Friedmann from EPA, who is a new Remedial Project Manager overseeing some of the work at JB MDL. Mr. Friedmann will also be a RAB member.

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 September 12, 2019 meeting. A motion was made, seconded, and passed to approve the minutes.

Mr. 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 first addressed a question raised by NJDEP as to whether vapor extraction was required at other thermal in-situ sustainable remediation systems in New Jersey. He stated Arcadis had responded that vapor extraction is not required or a part of the systems at the other two sites in New Jersey where Arcadis has implemented this remediation system, nor at any of the other sites across the country where Arcadis is deploying the technology.

Mr. Richman discussed the suggestion made by Mr. Storm to publish notice of the RAB meetings in the Pineland Tribune. Mr. Richman said JB MDL considered this suggestion, but as this publication does not cover areas north of JB MDL, it was decided the current newspapers (Asbury Park Press and Burlington County Times) are the appropriate ones to use. Mr. Storm requested this suggestion be re-considered as the cost is likely minimal, the Pineland Tribune is a free newspaper, it would reach a portion of the community surrounding the JB MDL, and provide good exposure. Mr. Storm said more people are taking advantage of free newspapers versus paid newspaper. Mr. Archer agreed to re-consider the suggestion.

8) Update on PFOS/PFOA Investigation:

Mr. Richman next gave an update to the PFOS/PFOA investigation. He first discussed on-base projects, noting the Engineering Evaluation/Cost Analysis had been finalized in November 2019 and the Major Modification Permit for construction of a new treatment system and installation of a new deep well to replace two shallow back-up wells at Lakehurst was submitted in December 2019 to NJDEP. Mr. Richman advised the Air Force has begun programming for Remedial Investigations for fiscal year 2021 and is prioritizing the order in which bases will receive funding. He stated JB MDL will find out soon if it will be receiving funding for fiscal year 2021.

Mr. Richman next discussed off-base projects and advised nothing has changed with respect to the five areas where PFOS/PFOA is migrating off-base; sampling and monitoring continue. Mr. Richman showed the five areas—McGuire Area 4, Dix Area 14 on the southside of Dix near Pemberton, Lakehurst Areas 16 (Jackson Township) and 17 (Manchester Township) on the northeast corner of Lakehurst, and Lakehurst Area 18 on the southeast corner of Lakehurst. Mr. Richman displayed a chart showing the off-base drinking water sampling status, noting a few more properties have been added. He stated six detections have been confirmed off-base, and one property has been connected

to municipal water. He said if off-base detections are identified in drinking water sources, even if they are less than EPA's Lifetime Health Advisory standard of 70 parts per trillion (ppt), the Air Force will continue to sample quarterly and monitor.

Mr. Richman noted three off-base properties have been provided bottled water, granular activated carbon systems have been installed at one property, and a reverse osmosis system has been installed at one property. He explained that as a long-term solution, these five properties in Manchester Township are being connected to the municipal water system. Mr. Richman explained that where sampling shows detection below EPA's standard but higher than NJDEP's proposed standard, NJDEP is providing mitigation; to date four such properties have been identified.

Mr. Richman advised the existing NJDEP well database is not complete, and the depth of private wells is unknown by a majority of owners. He stated an off-base sampling contract was put in place in fiscal year 2018 to look at the five areas off-base to confirm the PFOS/PFOA locations and concentrations. He said a limited number of monitoring wells will be installed in each of the five areas in the surficial aquifer at different depth intervals. Mr. Richman said if sampling of the new monitoring wells show concentrations which exceed the proposed NJDEP standard, the area(s) will be expanded to look at other potential receptors; however, it does not mean the Air Force will mitigate at the proposed NJDEP standard.

Mr. Richman stated NJDEP had sampled a number of lakes and fish tissue in 2018 and issued a report. He advised JB MDL is teaming with U.S. Geological Survey to do a hydrologic study of Pine Lake in Manchester Township and Little Pine Lake in Pemberton Township; the study will look at groundwater and surface water concentrations, identify if there is leakage from the surface water into the groundwater, identify any private drinking water receptors near the body of water, and offer sampling and mitigation as appropriate.

Mr. Tamn asked if any PFOS/PFOA has been found in landfills. Mr. Richman responded that landfills have not been looked at, as the Air Force is focusing on drinking water sources. He further explained that the current Air Force policy is to identify where the fire fighting foam was used, not where it was disposed of; he said the Air Force policy may change in the future and investigations expanded. Mr. Archer requested Mr. Curt Frye reach out to Air Force management and relay Mr. Tamn's question and concern. Mr. Frye agreed and added that the issue is rapidly evolving across the country, and the Air Force is being proactive and is ahead of other agencies. Mr. Archer said more information will be provided at the next RAB meeting.

Mr. Haiyesh Shah asked if the Air Force will comply with new standards once they are promulgated. Mr. Archer said they will take this question back to Air Force management and provide information at the next meeting. Ms. Gaffigan said the timing of NJDEP's regulation promulgation is expected to be April.

9) Performance-Based Remediation Contract Update:

Mr. Tim Llewellyn, 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. Llewellyn began a summary of the overall progress. 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 noted the Proposed Plan meeting for OU1 had been held earlier in the evening, and the next step will be a Record of Decision. Mr. Llewellyn advised the Record of Decision for OU3 was signed at the end of 2019, and the Remedial Design will be submitted by the

end of the month to the Air Force with action planned for the fall of 2020. He noted the next site moving towards a final Feasibility Study and Proposed Plan is OU4, with final documents targeted by the end of 2020. He stated 10 additional State-led sites are moving towards closure in 2020; 30 have been closed to date under Arcadis' contract, bringing the total for JB MDL to 111 closed sites. Mr. Llewellyn advised the air sparge/soil vapor extraction system installed at sites across JB MDL are working well in the sandy environment. He stated TU013 at McGuire is in a rebound study, some minor rebound was seen, so the system was turned back on; TU023 at McGuire has achieved remedial goals and is moving towards closure this year. Mr. Llewellyn said Dix Sites NW044 and TU019 are both in optimization phases, and TU970 has achieved remedial goals and is moving towards closure. Mr. Llewellyn noted the systems at Lakehurst A/B/C are running well, and enhancements have been deployed.

Mr. Llewellyn 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 completed, a Record of Decision is targeted for FY2020, and remedy implementation targeted for 2020/2021.
- 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 minimal contamination. The draft final Feasibility Study is being developed along with responses to regulatory comments. A Proposed Plan and Record of Decision are targeted for next year.
- OU-3: Operable Unit 3 consists of three former landfill sites and one sludge disposal site. The Record of Decision has been signed, except for Site LF019. 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. Arcadis has been awarded a contract to perform the removal action; a project management plan has been under development. The Air Force is reviewing the Explosives Safety Submittal and the Action Memorandum. The field work will take about two weeks. Once the removal action is complete, LF019 will be addressed in a second Record of Decision. 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.
- 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.
- OU-5: Operable Unit 5 consists of one former aircraft maintenance facility and two former pesticide handling areas. The revised draft final Feasibility Study is being reviewed by the regulators, and the 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 Addendum 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 in March. A pilot study is being conducted to provide information for potential remedial alternatives.

Mr. Llewellyn displayed a table showing anticipated dates for Records of Decision. Mr. Archer asked for confirmation that Arcadis' contract extends through 2024, and Mr. Llewellyn agreed.

Mr. Llewellyn 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. Llewellyn displayed a map showing the location of the active McGuire sites and gave a brief update on the plans for closing each of the sites.

Mr. Llewellyn discussed Site TU003, a former gasoline station where the tanks have been removed, but contaminated groundwater and floating product remain despite several remediation actions including excavations. He advised additional action is required and will include a thermal in-situ sustainable remediation technology which is effective in low permeability environments. He explained this newer technology helps accelerate the biological remediation process. 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 F). Mr. Llewellyn noted that Arcadis has had success using this technology at another DoD site, Fort Drum. He said the system installation has begun and should be operational in March 2020; remediation may not be complete prior to Arcadis' contract ending in 2024.

Mr. Llewellyn next displayed a chart showing the status for the Dix State-Led Sites. He advised of the 23 sites, 10 have met the contractual endpoint of Site Close-out, Response Complete or Long-Term Monitoring. Mr. Llewellyn showed the location of the active sites and gave a brief update on their status.

Mr. Llewellyn discussed Site TU011, Golf Course Leaking Underground Storage Tank, and noted Arcadis is under contract to take this site to closure in 2021. He advised Arcadis initially planned on monitored natural attenuation, but data indicated the groundwater needs more active remediation. He explained that the data indicates samples collected following heavy rains indicated flushing of residual contamination of soils into the groundwater; excavation of the soil has been determined to be the best course of action. He showed photographs of the excavation of approximately 750 cubic yards of soil which was disposed of off-site. He stated Oxygen Release Material was placed at the bottom of the excavation to enhance further biodegradation. Mr. Llewellyn explained quarterly sampling will continue, and sampling will also be conducted following rainfall events.

Mr. Llewellyn next discussed Site SS007, the MAG-1 Area, a former rifle handling area, where TCE and some breakdown products are in the groundwater. He explained directed groundwater recirculation was selected as the best alternative to address site contaminants. Mr. Llewellyn said the system construction will start in the spring of 2020, and remedial goals are anticipated to be met in 2035. Mr. Llewellyn showed several photographs of the recirculation well installation.

Mr. Tamn asked if there has been any further movement of the groundwater plume at MAG-1. Mr. Llewellyn responded a slight increase up to 16 to 20 ppb of TCE was seen at a sentinel well, but it is believed to be attributed to the bioremediation activity that mobilized some of the TCE. He noted more recent sampling of that well shows the levels have declined. He added that another sentinel well further downgradient has not shown any exceedances above the standard of 1 ppb. Mr. Tamn asked how often sampling is conducted, and Mr. Llewellyn responded that some wells are sampled quarterly and some are sampled semi-annually. Mr. Shah asked about the potential for leaching, and Mr. Llewellyn responded that he would look into this issue.

Mr. Llewellyn next discussed the Boeing Michigan Aeronautical Research Center (BOMARC) Site which there are two groundwater plumes containing TCE and DCE. He advised an air sparge system was the selected remedy for both plumes and is anticipated to take 50 years for remediation on-site; however, off-site impacts are expected to be addressed within 10 years. Mr. Llewellyn said vegetation removal has been completed, and drilling was begun in mid-February. He noted construction will continue until about October 2020, and then the system will begin operation. Mr. Llewellyn showed photographs of the vegetation clearing.

Mr. Llewellyn briefly discussed the Lakehurst sites noting a detailed update had been given at the last RAB meeting. He advised the air sparge/soil vapor extraction at Area A/B/C continues to operate well with ongoing optimizations. Mr. Llewellyn noted semi-annual and annual groundwater monitoring continues.

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 28 sites have been closed at McGuire, 48 at Dix, and 35 at Lakehurst.

10) RAB and Public Comments:

Mr. Tamn asked for questions from RAB members and then from members of the public observing the meeting. None were offered.

Mr. Archer mentioned there would be an air show at the base on May 16 and 17, including the Blue Angels.

11) 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 7:51 PM.

The tentative date for the next meeting is June/July 2020, subject to the COVID-19 restrictions.