

Joint Base McGuire-Dix-Lakehurst (JB MDL)
Restoration Advisory Board (RAB) Final Meeting Minutes
Meeting No. 60 – 16 August 2018

SUBJECT: Restoration Advisory Board (RAB) Meeting No. 60 – Meeting Minutes

- 1) Place: Edward Holloway Senior Citizen Community Center, 5 Cookstown Browns Mills Road, Cookstown, New Jersey
- 2) Date/Time: Thursday, 16 August 2018; 6:30 PM
- 3) Co-Chairs: Mr. Christopher Archer, Deputy Base Civil Engineer, JB MDL
Mr. Michael Tamm, Resident, Southampton Township, New Jersey

4) Attendees:

Mr. Tom Besselman	RAB Community Member
Mr. Rich Bizub	RAB Community Member, Pinelands Alliance
Ms. Branwen Ellis	Pinelands Commission
Mr. Frank Storm	RAB Community Member
Mr. Alex Carnivale	Community Resident
Ms. Robyn Henderek	US Environmental Protection Agency, Region II (EPA)
Ms. Carla Struble	US Environmental Protection Agency, Region II (EPA)
Mr. Doug Pocze	US Environmental Protection Agency, Region II (EPA)
Ms. Donna Gaffigan	NJ Department of Environmental Protection (NJDEP)
Mr. Ralph Rodrigues	NJ Department of Environmental Protection (NJDEP)
Mr. Carl Champion	JB MDL, 787 CES/CEI, Environmental Element
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
Mr. Ryan Steigerwalt	Weston
Mr. Tim Llewellyn	Arcadis

Ms. Katrina Harris Bridge Consulting Corp./Arcadis

5) Handouts

- JB MDL Restoration Advisory Board, Meeting No. 60, 16 August 2018, Agenda
- JB MDL Restoration Advisory Board, Meeting No. 60, 16 August 2018, Presentation Slides
- JB MDL, List of Documents Provided to Mr. Tamm as of 16 August 2018
- Air Force PFOS/PFOA Snapshot, 23 July 2018

6) Call to Order:

The meeting was called to order by Mr. Christopher Archer, Deputy Base Civil Engineer, JB MDL. He advised Col. Altwies was traveling and not able to attend the meeting. He welcomed everyone and thanked everyone for attending. Mr. Archer stated there was a full agenda for the meeting which is

reflective of the progress the team is making in moving forward with investigations and remedial actions. He thanked Arcadis, Mr. Curt Frye and his staff, EPA and DEP for their contributions.

Mr. Archer noted Ms. Robyn Henderek will be moving on to a new career. Ms. Henderek stated she would be transferring to the National Park Service and working at the Zion National Park. Mr. Archer congratulated Ms. Henderek on her new position and thanked her for her contributions.

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 22 February 2018 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 a new Board member, Ms. June Sernak who is associated with Rowan College at Burlington County. He noted she could not attend this evening's meeting but will hopefully be at future meetings and will be advised of the October tour.

Mr. Frye reviewed the status of action items from the previous meeting:

- Status of Dix Basewide Five-Year Review: Mr. Frye advised the review of seven sites at Dix with remedies in place under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the final version of the document was completed. He stated newspaper notices were placed advising the document is available in the Administrative Record. Mr. Frye noted some of the Board members may have been interviewed as part of the review process. He advised EPA and NJDEP concurred with the protectiveness of the remedies in place. Mr. Frye displayed a map showing the sites included in the review outlined in green.
- RAB Member Site Tour: Mr. Frye advised a tour was held on 7 June 2018. He noted a bus left the Community Center and took the RAB members to tour several sites at Lakehurst and then to the BOMARC Missile Accident Site. Mr. Frye noted Mr. Tamn had suggested another tour be held in October of sites at Dix. Mr. Frye said JB MDL will send an email to find out which RAB members would be interested and their availability.
- Tour of Lakehurst Jump Circle Removal Action: Mr. Figura advised the equipment would be set up in the October/November timeframe so any tours would be during that time period. Mr. Frye said JB MDL will be in touch with RAB members regarding their interest and availability.
- McGuire Former Skeet Range: Mr. Frye noted plans are moving forward for a time-critical removal action to excavate lead-impacted soil on off-base property located north of this former skeet range. Mr. Frye showed a figure of the area with the location of the impacted soil shown in purple. He said a more detailed presentation will be included at a future meeting.

8) Perfluorinated Chemicals (PFCs) Update:

Mr. Frye referenced several recent newspaper articles. He stated NJDEP conducted a state-wide assessment as part of its annual data gathering effort related to fish advisories; in addition to the chemicals typically included in NJDEP's sampling and analysis, per- and polyfluorinated alkyl substances (PFAS) were added for 11 waterways across the state. He explained these waterways were targeted for sampling based on the potential for finding PFAS releases. Mr. Frye said four of the waterways were off-base near JB MDL. Mr. Frye said NJDEP published its study in mid-July, and

PFAS were detected at all four of the waterways around JB MDL in the sediment, surface water and fish tissue. He stated a limited number of samples were collected in each waterbody, perhaps one sample of the surface water and a few fish tissue samples. He explained NJDEP sampled for about a dozen of the PFAS compounds, but PFOS is the key one as it bioaccumulates in fish, compared to PFOA which does not bioaccumulate nearly as much in fish. Mr. Frye stated NJDEP's report can be found at <http://www.nj.gov/dep/dsr/>. He noted that based on the report, NJDEP updated its freshwater fish advisories and those advisories can be viewed at <https://www.nj.gov/dep/dsr/fishadvisories/freshwater-advisories.htm>.

Mr. Frye displayed and discussed aerial photographs showing the off-base waterbodies and the ones sampled by NJDEP. He stated at McGuire and Dix, NJDEP sampled Little Pine Lake and Mirror Lake. He also pointed out four on-base waterbodies which are the main fishing areas on these bases. Mr. Frye said based on the State's advisories, JB MDL also issued advisories across the base, even though the Air Force did not have sampling data for the on-post lakes. He stated JB MDL wanted to be as proactive as possible and exercise an abundance of caution. He explained that while NJDEP's advisories are specific, the JB MDL advisories are general catch and release for all species except trout which is stocked and caught quickly. Mr. Frye displayed an aerial photograph of Lakehurst and stated the two off-base waterbodies sampled by NJDEP were Horicon Lake and Pine Lake. He explained the base-wide fish advisory applies to the on-base Lakehurst lakes also. Mr. Frye said the base-wide advisory was communicated through permit holders' emails, as well as signage at the lakes and clubs or check-in points.

Mr. Rich Bizub said he had read the report, and of the 11 sites sampled, the highest concentrations were in the waterbodies around JB MDL. He noted that the report heightened his awareness of the importance of reducing the source of the contamination in the soils. He asked what the status is of the Site Inspection Report and for confirmation that finalizing the report is the first step before moving to the Remedial Investigation phase. Mr. Frye and Ms. Robyn Henderek concurred that the EPA and the Air Force are working on resolving some comments on the report prior to it being finalized, but it should be finished soon. Mr. Frye agreed it is an important concern; however, PFAS are not regulated compounds yet so there are limitations on the spending of Federal dollars and the systematic process needs to be followed. He said the Air Force is focusing on exposure through drinking water since EPA has issued health advisory levels for drinking water while awaiting further information on the many unknowns. Mr. Frye said the work at JB MDL is proceeding while the Site Inspection Report is being finalized; a contract has been awarded for continuation of the expanded Site Inspection, which is focused on finding any areas of actual exposure to impacted drinking water well (such as someone with an impacted private drinking water well) and mitigate those exposures. Mr. Frye explained that much of the environmental cleanup program work focuses on hypothetical exposure, for example, if someone was to drill a well in a certain area in the future, and cleanup is done for these hypothetical future exposures; however, in this case, the focus is on actual exposures and protecting human health. He mentioned the Site Inspection Report summarizes the data that was released in 2016 so the data has already been seen by the RAB.

Ms. Donna Gaffigan asked if the on-base lakes will be sampled. Mr. Frye said this sampling would be part of the Remedial Investigation, as there is no reason to sample the lakes for any relation to drinking water sources.

Mr. Frye discussed a chart showing the status of communications with off-base private well owners and sampling off-base private drinking water wells. He noted the Site Inspection identified five areas off-base with the potential for drinking water impact to private wells. He explained that Area 4 is on the northeast side of McGuire, Area 14 is on the south side of Dix, Area 16 is on the north side of Lakehurst (Jackson Township), Area 17 is also on the north side of Lakehurst (Manchester Township), and Area 18 is on the southeast side of Lakehurst (Manchester Township). He continued

explaining that 261 packets of information were hand-delivered requesting permission to sample, and 189 responses or 72% have been received. Mr. Frye noted some properties are vacant. He discussed the sampling results and said five exceedances of the EPA health advisory level have been detected, with 29 or 30 detections below the advisory level. He explained if there is an exceedance of the EPA health advisory level, mitigation is provided so the five properties are being provided treatment systems or bottled water. Mr. Frye advised the Air Force is working with Manchester Township to install water lines as permanent solutions. He noted a quarterly monitoring program has been implemented for the properties where there has been a detection below the EPA health advisory level; sampling will continue for at least another year. Mr. Frye stated New Jersey has proposed regulatory levels, and if they are promulgated, they will become regulatory requirements for JB MDL.

Mr. Bizub asked if mobile home communities were included in the consideration of those who might be potentially impacted, and Mr. Frye responded they were looked at, and the mobile home parks in the potentially impacted areas all have deeper wells below the potentially impacted groundwater. Mr. Bizub asked if schools were also considered, and Mr. Frye said there are no schools in the potentially impacted areas.

Mr. Tom Besselman asked for confirmation that the five exceedances are in the Lakehurst area. Mr. Frye confirmed the five exceedances are in the Lakehurst area.

Mr. Frye said there is a handout on the back table which gives an update on the Air Force's work on the PFAS issue.

9) Military Munitions Response Program, Former Lakehurst Proving Ground and Bombing Targets:

Mr. Ryan Steigerwalt gave an update on the upcoming time-critical removal action at the Former Lakehurst Proving Ground and Bombing Targets.

Mr. Steigerwalt explained the project has two main phases. He said the first phase is an initial surface clearance of seven target areas over about 370 acres to remove military munitions on the ground surface or breaching the ground surface. He said the second phase is the sub-surface intrusive work at two trenches identified as potential chemical warfare materiel disposal areas and 10 individual anomalies or sub-surface metal locations that may be related to chemical warfare materiel.

Mr. Steigerwalt showed an aerial photograph of Lakehurst and noted the work is primarily in the Parachute Jump Circle, with a few sites towards the west at the test tracks areas.

Mr. Steigerwalt advised the sites go back to about 1918 and the work conducted included firing trials. He said work ceased in 1942. He noted a variety of military munitions are expected to be found from 37mm to 75mm projectiles.

Mr. Steigerwalt summarized previous studies, including a Remedial Investigation completed in 2017. He noted two chemical warfare materiel items were recovered and destroyed last year, one containing mustard and one containing phosgene.

Mr. Steigerwalt stated there is an extensive amount of planning that occurs prior to starting the field work, including the preparation of a number of documents and site preparation.

Mr. Steigerwalt noted site preparation is underway with surveys being done and equipment starting to be moved in, along with select vegetation thinning and geophysical mapping to delineate the trench boundaries. He advised training and exercises are also part of the planning phase to ensure there is good communication and coordination. He stated the Army Corps of Engineers, Huntsville District,

as well as the Department of Army, conduct inspections to determine if the project is ready to begin intrusive activities.

Mr. Steigerwalt advised surface clearance and sub-surface removal work will be conducted by unexploded ordnance technicians. He said if there is a need for any detonations, they will be followed by munitions constituent sampling.

Mr. Steigerwalt explained all the work will be conducted in a containment structure to reduce any unintentional release as well as reduce the exclusion zones which might impact operations.

Mr. Steigerwalt reviewed the project schedule and noted the surface clearance is scheduled for September and the sub-surface work is scheduled for October. He noted the schedule may be impacted by fiscal year funding which may delay the work.

10) Dix Site TU011 Golf Course Update:

Mr. Tim Llewellyn gave an update on the leaking underground storage tank at Dix Site TU011. Mr. Llewellyn said this project was a good example of the use of the contingency planning that was included in Arcadis' contract to have a Plan A and a Plan B to make sure the objectives are reached.

Mr. Llewellyn displayed an aerial photograph showing the location of the site on the golf course. He noted there was a leaking underground gasoline storage tank that was removed in the 1980s. He advised Arcadis' contract calls for achieving site closeout of soil and groundwater impacts by 2021, with Plan A being monitored natural attenuation. Mr. Llewellyn explained the current data shows the needs for a more active remedy. He continued explaining three of the four wells are clean, while one well showed declining concentrations in 2016 but is showing some spikes more recently. He showed a chart showing concentrations compared to precipitation data which shows a correlation of spikes in concentrations when there is heavy rain indicating there is residual mass in the sub-surface. Mr. Llewellyn said the data indicates there is a smear zone of residual fuel in the soil just above the water table with the rain causing the water to move up, impact groundwater, and resulting in higher concentrations when sampled.

Mr. Llewellyn showed a photograph of the site. He advised two vacuum extraction events were performed, and while mass was removed, there was not much change in groundwater concentrations. He said the revised plan is soil excavation and off-site disposal. He noted a work plan is being developed with the excavation planned for later this year or early 2019.

Mr. Archer asked what is the depth to groundwater, and Mr. Llewellyn responded that it is eight or nine feet in this area.

11) Performance-Based Contract Update:

Mr. Llewellyn stated he would be giving a brief, high-level summary of progress made on Arcadis' performance-based contract projects. He noted good progress is being made on the various McGuire Area Operable Unit documents, as well as remedy selection and remedy operation at State-led sites at McGuire and Dix. He also noted significant work has been completed at Lakehurst to install the air sparge/soil vapor extraction systems.

Mr. Llewellyn began his presentation with a discussion of the CERCLA NPL sites at McGuire where EPA is the lead regulatory agency:

- 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. The Feasibility Study has been developed for two landfills with proposed remedies of soil covers, and comments from EPA are being addressed; NJDEP is still reviewing. A Proposed Plan comment period and public meeting is anticipated in the spring of 2019, followed by a Record of Decision in the fall of 2019, and implementation of remedial action in 2020.

- 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 Feasibility Study is being reviewed by EPA and NJDEP, with comments just received from EPA. A Proposed Plan and public meeting are anticipated in the summer of 2019, followed by implementation of remedial action in 2020/2021.
- OU-3: Operable Unit 3 consists of three former landfill sites and one sludge disposal site. The Proposed Plan was finalized, a public meeting held, and a Record of Decision drafted. Some expended 106mm cartridges were found in a limited area (60 feet by 40 feet) at LF019. No impact on the proposed soil cover remedy is anticipated, and the Air Force is putting together a contract for a time-critical removal action. Once a removal action is completed, the Record of Decision will be signed, with remedial action planned for 2020. Remedial Design work is proceeding.
- OU-4: Operable Unit 4 is the bulk fuel storage area. The Feasibility Study is under review by EPA and NJDEP. There is a window of opportunity to install some wells in the secondary containment area for sampling and possible conversion for use in the final remedy; the wells will be installed in September/October 2018. A Proposed Plan and public meeting are anticipated in the summer of 2019, followed by implementation of remedial action in 2020.
- OU-5: Operable Unit 5 consists of one former aircraft maintenance facility and two former pesticide handling areas. Comments on the internal draft Feasibility Study have been received from the Air Force and addressed; the draft will be sent to EPA and NJDEP in September or October 2018. A Proposed Plan and public meeting are anticipated in the winter of 2019, followed by implementation of remedial action in 2020.
- OU-6: Operable Unit 6 addresses historical fuel releases under the aircraft apron. Comments have been received from the Air Force on the internal draft Feasibility Study. Responses to EPA's comments on the draft final Remedial Investigation Report are being prepared. A Proposed Plan and public meeting are anticipated in 2019, followed by implementation of remedial action in 2020.
- OU-7 and OU-8: The Operable Unit 7 Remedial Investigation Report has been approved by EPA. Feasibility Studies are scheduled for the winter of 2018/2019, followed by Proposed Plans and public meetings. Remedial action implementation is scheduled for 2021/2022. Pilot studies are being conducted at both OUs to gather additional data on potential groundwater cleanup technologies, including bench-scale studies to look at bioremediation as a possible remedy. The studies will take about two years.
- Mr. Llewellyn displayed a chart showing the status of the Operable Units against the CERCLA process.

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 15 of those sites already having met site close-out requirements. He noted of the remaining 15 sites, two are oil/water separators, and the remaining

sites are all in the remedial action stage. He advised a few sites are very close to moving to the site close-out stage. Mr. Llewellyn discussed a planned additional excavation at TU003 to remove soil contaminated from underground storage tanks.

Mr. Llewellyn displayed a similar chart for the Dix State-Led Sites. He advised of the 20 sites, two have moved into the site close-out phase. He said of the nine petroleum release sites, most are in the remedial action phase. He noted there are also some sites just awaiting the completion of paperwork to move into the site close-out phase.

Mr. Llewellyn next discussed the three air sparge/soil vapor extraction systems which have been operating at Dix since 2016. He advised two have been shut down for about three months as there is minimal mass left to recover, the active area has met the remedial standard, and downgradient areas are at or near the remedial goals and can reach the goals through monitored natural attenuation. He explained once the aquifer returns to ambient conditions, a rebound study will start where sampling will be performed over two seasons. He said if there is no rebound, the sites will move towards site close-out; if there is rebound, the systems can be turned back on or other action can be taken. Mr. Llewellyn added the third system will continue to operate until the contaminant levels are slightly lower.

Mr. Llewellyn gave an update on the four sites at Lakehurst. He advised installation of air sparge/soil vapor extraction systems continue at LF042, TT013, and TT017. He showed photographs of the systems being installed.

Mr. Llewellyn showed an updated list of sites where site closure has been achieved. He advised site closure means remedial goals have been achieved, site restoration infrastructure has been removed, and the site is released for unrestricted use. He noted 17 sites have moved to site closure to date, with two sites anticipated in 2018 to move to site closure, and 15 sites anticipated in 2019 to move to site closure.

Mr. Tamn asked if there has been any change with respect to South Run. Mr. Llewellyn said there was no issues identified during the last sampling event. [After the meeting, Mr. Llewellyn advised that there have been no additional sampling events at South Run since 2016. The 2016 data was discussed at a previous RAB meeting, and there are no impacts to surface water that result from contamination associated with OU4. Sampling of South Run will recommence at the remedial action stage.]

12) EPA's Response to Hurricanes Irma and Maria:

Ms. Robyn Henderek said she would be giving a presentation on her two deployments to St. Croix as part of EPA's response to Hurricanes Irma and Maria. She showed several photographs of conditions after the hurricanes, including the extensive structural damage and damage to boats.

Ms. Henderek noted the pre-hurricane population of St. Croix was about 50,000, about the same number for St. Thomas, and St. John had about 4,000. She noted Burlington County, New Jersey has about 400,000 residents.

Ms. Henderek noted Hurricane Irma struck just north of St. Thomas and St. John on September 6; it was a Category 5 hurricane with winds of 185 mile per hour. She noted for comparison Hurricane Sandy was a Category 1 when it hit the New York area with winds around 80 miles per hour. Ms. Henderek said a second Category 5 hurricane, Maria, hit two weeks later, slightly to the south.

Ms. Henderek explained the Incident Command System was activated where FEMA and other

Federal, State and local agencies work together to standardize communications and assign tasks that need to be completed. She advised EPA's tasks included working with the Coast Guard in identifying different hazardous chemicals in boats, preventing any oil from leaking into the water, and collecting batteries and household hazardous waste from the boats. She stated EPA also operated household hazardous waste collection pads that collected used oil from generators, paints, batteries, bleach and electronic waste. Ms. Henderek said EPA also extracted freon from air conditioners and refrigerators before they were demolished. She explained EPA also screened medical waste for radiation and ensured it was properly packaged and shipped off the island for proper disposal. Ms. Henderek said EPA also provided air monitoring support. She noted community involvement was an important component of the response, and EPA was involved in a number of community efforts including handing out flyers about waste disposal, pop up events at local restaurants, and radio announcements.

Ms. Henderek advised hurricane season is underway and encouraged all to check FEMA's web site for readiness help at www.ready.gov/hurricanes.

13) 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 asked if there were any restrictions on the lakes discussed by Mr. Frye as far as recreational usage. Mr. Frye said the main routes of exposure are ingestion so dermal contact is not the major concern. Mr. Archer suggested more information be provided at the next meeting.

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 8:02 PM.

The tentative date for the next meeting is November 2018.