

Joint Base McGuire-Dix-Lakehurst (JB MDL)
Restoration Advisory Board (RAB) Draft Meeting Minutes
Meeting No. 42 – 9 May 2013

SUBJECT: Restoration Advisory Board (RAB) Meeting No. 42 – Meeting Minutes

- 1) Place: Edward Holloway Senior Citizen Community Center, 5 Cookstown Browns Mills Road, Cookstown, New Jersey
- 2) Date/Time: Thursday, 9 May 2013; 6:30 PM
- 3) Co-Chairs: COL Charles E. Coursey, Deputy Joint Base Commander, JB MDL
Mr. Michael Tamn, Resident, Pemberton Township, New Jersey

4) Attendees:

Ms. Theresa Lettman	Pinelands Preservation Alliance, RAB Member
Mr. Thomas Besselman	Pemberton Township, RAB Member
Mr. Frank Storm	Resident, Burlington County, RAB Member
Mr. Doug Pocze	US Environmental Protection Agency, Region II
Mr. Phil Cole	New Jersey Department of Environmental Protection
Mr. Chris Archer	JB MDL, 87 CES, Deputy Civil Engineer
Mr. Ken Smith	JB MDL, 87 CES/CEAN, Chief, Environmental Division
Mr. Curtis Frye	JB MDL, 87 CES/CEAN, Chief, Environmental Restoration Program
Mr. Michael Figura	JB MDL, 87 CES/CEAN, Environmental Restoration Program
Mr. King Mak	JB MDL, 87 CES/CEAN, Environmental Restoration Program
Mr. G. Michael Brown	JB MDL, 87 CES/CEAN, Environmental Restoration Program (BB&E)
Ms. Nicole Brestle	JB MDL, 87 CES/CEAN, Environmental Restoration Program (BB&E)
Mr. Michael Wierman	JB MDL, 87 CES/CEAN, Environmental Restoration Program (BB&E)
Mr. John Potosnak	JB MDL, 87 CES/CEAN, Environmental Restoration Program (BB&E)
Mr. Greg Kendall	ECC
Mr. Constantine Tsentas	PARS Environmental
Mr. Hunter Blair	PARS Environmental
Mr. Ola Awosika	Parsons
Mr. Ali Sadrieh	Plexus Scientific
Mr. Michael Brewin	Plexus Scientific
Mr. James Richman	CB&I (formerly Shaw Environmental & Infrastructure)
Mr. Peter Naumoff	URS
Mr. Van Ekambaram	URS
Mr. Robert Benedict	
Mr. Paul Ferroni	CAPE
Mr. Gordy Porter	EA
Ms. Amy Sponaugle	EA
Mr. Mark Jaworski	Weston
Mr. Jeff Parks	AMEC

5) Handouts

- JB MDL Restoration Advisory Board, Meeting No. 41, 21 February 2013, Draft Meeting Minutes
- JB MDL Restoration Advisory Board, Meeting No. 42, 9 May 2013, Agenda
- JB MDL Restoration Advisory Board, Meeting No. 42, 9 May 2013, Presentation Slides
- JB MDL Restoration Advisory Board, Document Availability List, May 2013

6) Call to Order:

Mr. Frye introduced the new JB MDL Co-Chair, COL Charles E. Coursey. The meeting was then called to order by COL Coursey, who welcomed everyone to the meeting who gave a brief overview of his background and the importance of community relations activities such as the Restoration Advisory Board (RAB).

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

Mr. Tamm asked for a motion to approve the minutes from the 21 February 2013 RAB meeting. Mr. Phil Cole made the motion which was seconded by Mr. Doug Pocze; the minutes were approved.

8) Review of Action Items from the February 2013 RAB:

Mr. Curtis Frye, Chief, JB MDL Environmental Restoration Program, announced that this would be Mr. Ken Smith's last RAB as he is retiring at the end of the month. Mr. Archer addressed the phenomenal job that Mr. Smith has done as the first JB MDL Environmental Chief, integrating the various aspects of the Basewide environmental and natural resources programs.

Mr. Frye welcomed a new RAB member, Mr. Tom Besselman of Browns Mills, NJ. Mr. Besselman is the Chair of the Pemberton Township Environmental Commission and his experience and insight will be an asset to the RAB.

The requested revision of the Restoration Advisory Board notice in the local newspaper

- Mr. Frye explained that the size of the notice has been upgraded from 3x4" to 3x6.5".

Update for McGuire Operable Units (OUs) 1 through 5

- Mr. Frye stated that an update has been included as part of the evening's agenda.

Community Involvement Plan Update

- No comments have been received from Community members. JB MDL is currently addressing comments provided by the EPA and the tentative date for the Final version is September 2013.

Restoration Advisory Board Charter Update

- Mr. Frye announced that the RAB charter will be updated since the current RAB charter was only McGuire specific. A copy of the current Charter was provided to the RAB members. The JB MDL ERP will be updating this Charter and a draft will be provided to RAB members for review and comment.

9) Update on the Fence to Fence Air Force Performance Based Remediation (PBR) Contract:

Mr. Curtis Frye explained that JB MDL is planning a 10 year, fixed-price PBR contract for approximately 100 sites. 10 years is the maximum timeframe permitted by regulation.

- This PBR contract will be a standalone contract that includes both CERCLA and petroleum UST sites. military munitions response program (MMRP) sites will not be included in the PBR contract.
- The contract will detail the Minimum Performance Objective (MPO) required for each site. The milestones for each site will vary between:
 - Remedy in Place (RIP)
 - Response Complete (RC)
 - Site Closure (SC)

- Optimized Exit Strategy (OES)
- The contract is planned for a June 2014 award. This will be through the Army Corps of Engineers, Tulsa District. Information will be posted on the Fed Biz Ops website in the near future.

10) McGuire Operable Units (OUs) 1 through 5 and BOMARC Update:

Mr. James Richman, CB&I Project Manager, provided a comprehensive update on the environmental work that has been completed to date and projected path forward for sites located within OU's 1 through 5 and BOMARC. Key points included:

- Operable Unit 1 (Sites LF-03, LF-04 and ST-07):
 - The Remedial Investigation (RI) fieldwork was completed in April 2012. The Draft RI report was submitted in December 2012 and the Draft Final RI report is scheduled for a July 2013 submittal.
 - The Feasibility Study (FS) is underway with a Draft FS expected in August 2013 and a Final FS expected in December 2013.
 - The remaining work on OU-1 will be awarded as part of the new JB MDL PBR in June 2014.
- Operable Unit 2 (Sites LF-23, SS-18, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-41 and SS-42):
 - The RI was completed in April 2013.
 - The Draft FS is expected in July 2013 and the Final FS is planned for December 2013.
 - The remaining work on OU-2 will be awarded as part of the JB MDL PBR in June 2014.
- Operable Unit 3 (LF-02, LF-19, LF-20 and WP-21):
 - The RI fieldwork was completed in March 2011 and the Final RI report was submitted in January 2013.
 - The Final Time Critical Removal Action (TCRA) Workplan for Sites LF-19 and LF-20 was submitted in November 2012 and fieldwork was conducted between November 2012 and January 2013. The Draft TCRA report is planned for a May 2013 submittal.
 - The Draft FS is expected in June 2013 and the Final FS should be completed by November 2013.
 - The remaining work on OU-3 will be awarded as part of the JB MDL PBR in June 2014.
- Operable Unit 4 (ST-09 and FT-13):
 - The Remedial Investigation was completed in January 2013.
 - The Draft FS is expected in June 2013 and Final FS should be completed by November 2013.
 - The remaining work on OU-4 will be awarded as part of the JB MDL PBR in June 2014.
- Operable Unit 5 (SS-24, SS-25, and SS-26):
 - The Draft RI was completed in July 2012 and the Final RI is expected to be completed by July 2013.
 - The Draft FS is expected in August 2013.
 - The Non Time Critical Removal Action (NTCRA) at Site SS-26 is currently underway with a Draft NTCRA Report expected in June 2013.
 - The remaining work on OU-5 will be awarded as part of the JB MDL PBR in June 2014.
- BOMARC Site OT-16:
 - The Final Pilot Test Remedial Action Work Plan was completed and initial pre-injection activities began in April 2013.
 - Site mobilization and injections are scheduled for May 2013.
 - A follow-on task order is planned for a September 2013 award. This will cover the timeframe leading up to the JB MDL PBR award in June 2014.

11) Dix Underground Storage Tank (UST) Investigation Update:

Mr. Connie Tsentas, Senior Vice President, PARS Environmental, provided an overview presentation of the recently awarded Dix UST project. This project will include the following:

- Remedial Investigations (RIs) at Dix Building 3164 (Site TU578), Building 4201 (Site TU579) and Dix 5100 Area (Site TU937).
- UST and Anomaly Removals are scheduled for the Colonial Cottage Area (Site TU580), a former barracks housing area (Site TU581) and the McGuire 3500 area.
- Quarterly groundwater sampling will be conducted at Dix Building 4304 (Site NW043), Building 5339 (Site NW045), Building 0199 (Site TU924) and Building 5348 (TU968).


12) Public Comments:

- Mr. Tamn inquired about previous clean-up efforts at the bulk fuels area site (OU-4, Site ST-09) approximately five years ago.
 - Mr. King Mak, of JB MDL, explained that several labor intensive pilot studies have been tested at this site but they were not effective.
- Mr. Storm asked if JB MDL was cleaning up to Pineland's Standards in the BOMARC area.
 - Mr. Cole replied that the base would be using Pinelands clean-up standards, and Mr. Frye added that an access agreement was in place to permit JB MDL to perform the work in the Colliers Mills Wildlife Management Area.

13) Meeting Adjourned:


- Mr. Michael Tamn, RAB Co-Chair, made a motion to adjourn the meeting which was approved by Mr. Frank Storm, RAB member, and seconded by Mr. Phil Cole, New Jersey Department of Environmental Protection. The meeting was adjourned at 8:20 PM.
- The tentative date for the next RAB is August 8, 2013.

87th Air Base Wing




**Outstanding Action Items/Questions
from Previous RAB Meeting**

Mr. Curtis Frye
Chief, Environmental Restoration Program
87 CES/CEAN




Outstanding Action Items




- Introduction and welcome of the new RAB member, Mr. Thomas Besselman of Browns Mills, NJ
 - Chair of Pemberton Township Environmental Commission and works directly with others to protect threatened and endangered Pinelands species
- Revision of the Restoration Advisory Board Notice in the Local Newspaper
 - The size has been upgraded from 3x4" to 3x6.5"
- Update for McGuire Operable Units 1 through 5
 - Update has been included in this evening's Agenda

"WIN AS ONE"

2




Outstanding Action Items




- Community Involvement Plan Update
 - No comments from Community members, JB MDL currently addressing EPA comments with plan to issue final document by September 2013
- Update RAB Charter
 - Hand out McGuire RAB Charter
 - Issue draft update to RAB members prior to August RAB
- Update on Fence to fence Performance Based Remediation (PBR) contract

"WIN AS ONE"

3




Performance-Based Remediation Contract




- JB MDL planning a 10 year, fixed-price performance-based remediation contract (PBR) for approximately 100 sites
- Includes CERCLA and petroleum UST sites. No MMRP sites
- RFP will detail the Minimum Performance Objective (MPO) required for each site
 - Remedy in Place (RIP)
 - Response Complete (RC)
 - Site Closure (SC)
 - Optimized Exit Strategy (OES)

"WIN AS ONE"

4



Performance-Based Remediation Contract




JB MDL PBR Schedule


Pre-Solicitation	Solicitation	Post Award Implementation
Bid Preparation, Planning Solicitation Development Question Preparation	Request Development Contract Preparation RFP Preparation	Proposal Evaluation Contract Award Contract Implementation
Spring/Summer 2013	Summer/Fall 2013	Summer 2014

"WIN AS ONE"

5



Performance-Based Remediation Contract



- Contract will be awarded through Army Corps of Engineers, Tulsa District
- Stand alone contract planned
- Award planned for summer 2014
- ACOE Tulsa POC: Susan Trussell, 918-669-7046

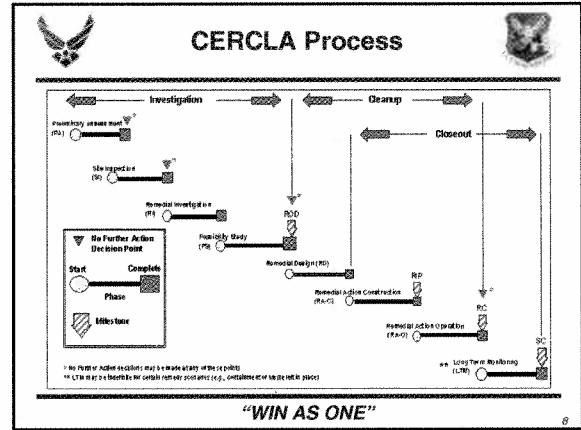
"WIN AS ONE"

6

Performance-Based Remediation Contract

- Existing contracts modified where necessary to select appropriate transition point to PBR contract
- Example: Shaw (CB&I) contract for 24 McGuire sites originally scoped for Remedial Investigation (RI) thru Remedy in Place (RIP). Will be modified to stop at completion of Feasibility Study (FS)

"WIN AS ONE"



Questions?

"WIN AS ONE"

87th Air Base Wing

**Joint Base McGuire-Dix-Lakehurst
Restoration Advisory Board**

McGuire Update: OU-1, OU-2, OU-3, OU-4, OU-5, & BOMARC
 James Richman - Project Manager, CB&I
 King Mak - Project Manager, JB MDL (OU-1, OU-3, OU-4, & BOMARC)
 Michael Brown - Project Manager, JB MBL (OU-2 & OU-5)

**OU-1
(Sites LF-03, LF-04, ST-07)**

"WIN AS ONE"

OU-1

Status/Milestones:

- Remedial Investigation (RI)**
 - Fieldwork completed - April 2012
 - EPA concurrence
 - Draft RI Report - December 2012
 - Draft Final RI Report - July 2013
- Feasibility Study (FS)**
 - Draft Feasibility Study (FS) - August 2013
 - Final FS - December 2013
- New PBR award - June 2013

"WIN AS ONE"

OU-1

RI fieldwork:

- Number of samples by media:
 - 563 soil (surface and subsurface combined)
 - 61 groundwater (GW) screening level
 - 71 GW – monitoring wells
 - 52 sediment (SED)
 - 26 surface water (SW)

13

OU-1

- Soil sources:
 - Buried refuse at LF-03 and LF-04
- Groundwater contamination (MCL exceedances):
 - LF-03: Volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs), and metals
 - LF-04: SVOCs and metals
 - Bis-2-ethyhexyl phthalate (BEHP)
 - Cd
 - Pb

14

LF-03 VOC PLUME

"WIN AS ONE"

15

LF-04 SVOC & VOC PLUMES

"WIN AS ONE"

16

OU-1

Human Health Risk Assessment (HHRA):

- LF-03/ST-07
 - GW:
 - Unacceptable risk/hazards
 - MCL exceedances
 - Soil:
 - LF-03 - No unacceptable risk/hazards outside presumptive cap area
 - ST-07 - No unacceptable risk/hazards, but exceed NJDEP unrestricted concentration for PCBs

"WIN AS ONE"

17

OU-1

Human Health Risk Assessment (HHRA):

- LF-03/ST-07
 - GW:
 - Unacceptable risk/hazards
 - MCL exceedances
 - Soil:
 - LF-03 - No unacceptable risk/hazards outside presumptive cap area
 - ST-07 - No unacceptable risk/hazards, but exceed NJDEP unrestricted concentration for PCBs

"WIN AS ONE"

18

OU-1

Human Health Risk Assessment (HHRA):

- **LF-04**
 - **GW:**
 - Unacceptable hazards
 - MCL exceedances
 - **Soil:**
 - No unacceptable risk/hazards outside presumptive cap area
- **North Run Corridor (NRC)**
 - **Surface Water/Sediment:**
 - No unacceptable risk/hazards from surface water or sediment

"WIN AS ONE"

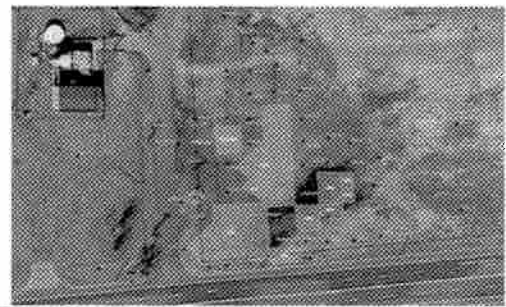
OU-1

Screening Level Ecological Risk Assessment (SLERA):

- **Identified Contaminants of Potential Ecological Concern (COPECs) in surface soil and sediment in the vicinity of LF-03 and LF-04 and surface soil within the North Run corridor (non-presumptive remedy areas), based on potential ecological impacts**
- **As endangered or threatened species are not present within OU-1, it is not believed that remediation of COPECs will be warranted, and that implementation of the presumptive remedy for landfills will mitigate ecological concerns**

"WIN AS ONE"

**OU-1
(Continued)**



"WIN AS ONE"

OU-1

Removal Action:

- **Non-time Critical Removal Action (NTCRA) at ST-07; completed July 2011**
 - **Rationale:**
 - To mitigate risk, excavated and disposed of all soils with PCB concentrations exceeding the Toxic Substance Control Act (TSCA) unrestricted use and NJDEP Non-Residential Direct Contact Soil Remediation Standard (NRDCRS) of 1.0 mg/kg
 - **Quantities/Volumes:**
 - 1,202 tons of soil transported to Cumberland County Landfill
 - **Results:**
 - All PCB-contaminated soil above the remediation goal (RG) of 1.0 milligram per kilogram (mg/kg) was excavated and properly disposed
 - Final Removal Action Closure Report (RACR) issued December 2011

"WIN AS ONE"

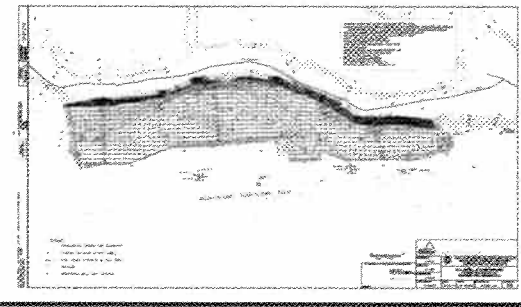
OU-1

Remedial Alternatives (Alt) to be Evaluated in FS:

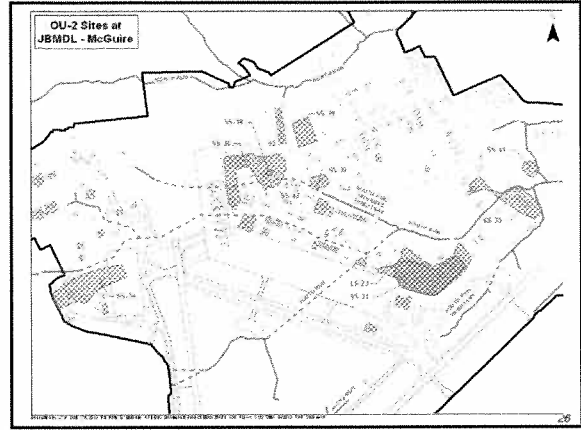
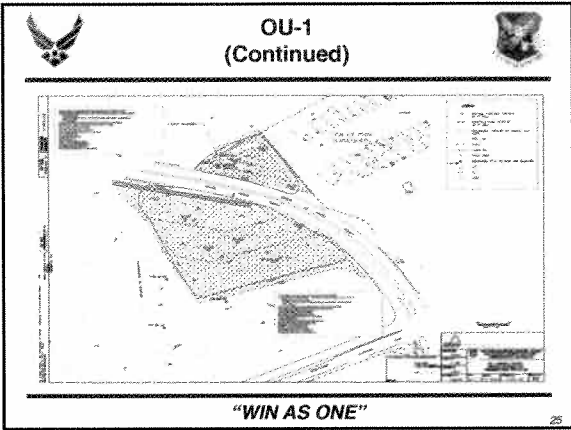
- **LF-03/ST-07**
 - Alt 1 – No Action
 - Alt 2 – 2-foot-thick engineered soil cap over the LF-03 and co-located portion of ST-07 ("Soil Cap") and establish land use controls (LUCs), groundwater institutional controls (ICs), and a long-term monitoring (LTM) program for GW and SW
 - Alt 3 – RCRA Subtitle D landfill cap and LUCs, groundwater ICs, and LTM of GW and SW
- **LF-04**
 - Alt 4 – No Action
 - Alt 5 – 2-foot-thick engineered soil cap over the LF-04 and establish LUCs, groundwater ICs, and LTM of GW and SW
 - Alt 6 – RCRA Subtitle D landfill cap and LUCs, groundwater ICs, and LTM of GW and SW
 - Alt 7 – Complete removal and off-site disposal of contents of LF-04, groundwater ICs and LTM of GW and SW

"WIN AS ONE"

**OU-1
(Continued)**



"WIN AS ONE"



OU-2
(Sites LF-23, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-41, & SS-42)

Status/Milestones:

- Remedial Investigation complete – April 15, 2013
- Feasibility Study (FS)
 - Draft FS – July 2013
 - Final FS – December 2013
- New PBR award – June 2013

“WIN AS ONE”

31

OU-2

Results of the RI:

- No of Samples by Media:
 - 417 GW, 373 Soil, 23 SW, 20 Sediment, 153 Air
- Soil sources – oil/water separator (OWS), wash rack, lime-chip process tank
- GW plumes identified (MCL exceedances):
 - SS-34 : VOCs, SVOCs, and metals (benzene, naphthalene, As)
 - SS-35 : VOCs (benzene, trichloroethylene [TCE])
 - SS-36 : VOCs and metals (TCE, As, Cd)
 - SS-37: Metals (As, Cd)
 - SS-38: VOCs, SVOCs, and Metals (Tetrachloroethene [PCE], benzene, BEHP, As)
 - SS-39: Metals (Cd)
 - SS-41: Metals (As, Cd)
 - SS-42: PAHs and Metals (BaP, As, Cd)

32

OU-2

HHRA:

- **GW:**
 - Unacceptable risks/hazards at all sites
 - No unacceptable risks from soil exposures at all sites
- **Soil:**
 - No unacceptable risks/hazards from soils at all sites
 - No unacceptable hazards from SW or SED exposures at SS-34, SS-35, & SS-41
- **Surface water/Sediment:**
 - No unacceptable risks/hazards from SW or SED exposures (SS-34, SS-35, & SS-41)

SLERA:

- **Hazard:**
 - No significant hazard to terrestrial or aquatic/riparian feeding guilds

33

OU-2

Chemicals of Concern (COCs) to be Evaluated in FS:

- **GW COC**
 - LF-23/SS-34 – BTEX, naphthalene, As, Cd, Pb
 - SS-35 – TCE, benzene
 - SS-36 – TCE, cis-1,2-DCE, As, Cd
 - SS-37 – As, Cd
 - SS-38 – Benzene, naphthalene, PCE, BEHP, As
 - SS-39 – Cd
 - SS-41 – As, Be, Cd
 - SS-42 – Naphthalene, As, Cd, Cr, & Pb
- **Soil COC**
 - SS-18 – PCBs
- No SW or Sediment COCs

34

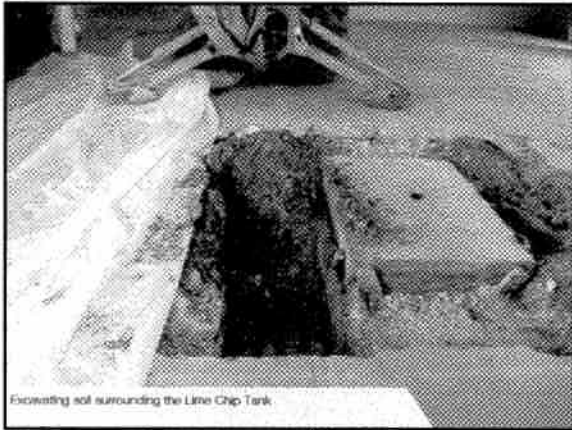
OU-2

Removal Action Completed: SS-36, Building 2305

- **Rationale:**
 - Remove two suspected sources of TCE causing significant groundwater contamination and potential vapor intrusion problems at Building 2305
- **Quantities/Volumes:**
 - 5,000 gallons of TCE waste water
 - 58 tons of TCE-contaminated soil
 - 28 tons of TCE-contaminated debris
- **Results:**
 - Source soils removed to water table
 - Post-excavation sampling confirmed TCE source soils were removed.
 - Installed a vapor barrier beneath Building 2305 to minimize VI potential
- **Removal Dates:** April – May 2011

35





Flowing soil surrounding the Line Chip Tank

OU-2

Remedial Alternatives (Alt) to be Evaluated in FS:

GW Remedial Alternatives:

- Alt 1: No Action – All Sites
- Alt 2: Monitored Natural Attenuation (MNA) & LUCs – All Sites
- Alt 3: Slurry Wall & LUCs – SS-35
- Alt 4: Zero Valent Iron (ZVI) Permeable Reactive Barrier (PRB) & LUCs – SS-35
- Alt 5: GW Pump & Treat & LUCs – SS-36
- Alt 6: AS/SVE, LUCs & MNA – SS-34, SS-35, SS-36, & SS-36
- Alt 7: In Situ Chemical Oxidation, LUCs & MNA – SS-34, SS-35, & SS-36
- Alt 8: Enhanced Aerobic Biodegradation, LUCs & MNA – SS-34
- Alt 9: Enhanced Anaerobic Biodegradation, LUCs & MNA – SS-36
- Alt 10: Source Removal, LUCs & MNA – SS-36

38

OU-2

Soil Remedial Alternatives:

- Alt 11: No Action – SS-18
- Alt 12: LUCs – SS-18
- Alt 13: Excavation of PCBs & LUCs – SS-18

39

OU-3

Status/Milestones:

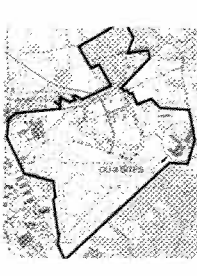

- RI:
 - Fieldwork completed - March 2011
 - Final RI Report - January 2013
- Removal Action:
 - Final Time-critical Removal Action (TCRA) Work Plan - November 2013
 - TCRA field work - November 2012 – January 2013
- Draft FS - June 2013
- Final FS – November 2013
- Draft TCRA Report – May 2013

- New PBR award – June 2013

“WIN AS ONE”

40

OU-3
(Sites LF-02, LF-19, LF-20 and WP-21)

“WIN AS ONE”

41

OU-3

Results of the RI:

- No. of Samples by Media:
 - 575 soil
 - 130 GW screening level
 - 52 GW
 - 20 SW
 - 28 SED
- Soil sources:
 - Buried refuse at LF-02, LF-19 and LF-20.
 - PCB contaminated soil at WP-21 and adjacent to LF-02 and LF-19.
- GW plumes identified (MCL exceedances):
 - GW contamination isolated south of South Run
 - LF-02: VOCs (benzene and vinyl chloride [VC])

42

OU-3

HHRA:

- **Landfill Wastes – Presumptive Remedy cap**
 - Landfill wastes are assumed to exhibit unacceptable environmental risk and hazards, and were not evaluated in HHRA
- **WP-21 and areas Outside PR Cap (except groundwater)**
 - No unacceptable risk or hazards were identified from soil, surface water or sediment exposures
- **GW:**
 - Unacceptable risk/hazards

SLERA:

- **No risks warranting action**

"WIN AS ONE"

43

**OU-3
(Continued)**

"WIN AS ONE"

44

**OU-3
(Continued)**

"WIN AS ONE"

45

**OU-3
(Continued)**

"WIN AS ONE"

46

OU-3

Removal Action: TCRA at LF-19 and LF-20 - January 2013

- **TCRA at LF-19:**
 - **Rationale:**
 - Erosion of the South Run channel had resulted in landfill refuse from the eastern portion of LF-19 coming in close proximity to South Run
 - **Objective:**
 - To mitigate the condition that may have caused the release of refuse to South Run, which would have constituted a threat to human health and the environment if contaminants were dispersed downstream
 - **Result:**
 - Landfill material in close proximity to the stream bank was pulled back and incorporated into the eastern portion of LF-19. The consolidated refuse, along with the portion of LF-19 to the east of the navigational lights, was graded and covered with two feet of clean soil. The TCRA-capped portion of LF-19 will be merged with the western portion of LF-19, which will be capped as part of the final OU-3 remedy

"WIN AS ONE"

47

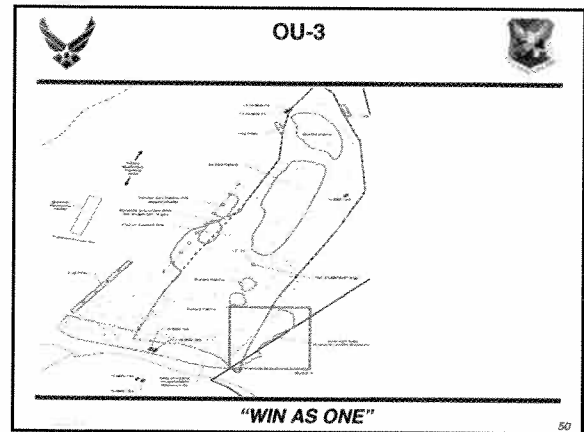
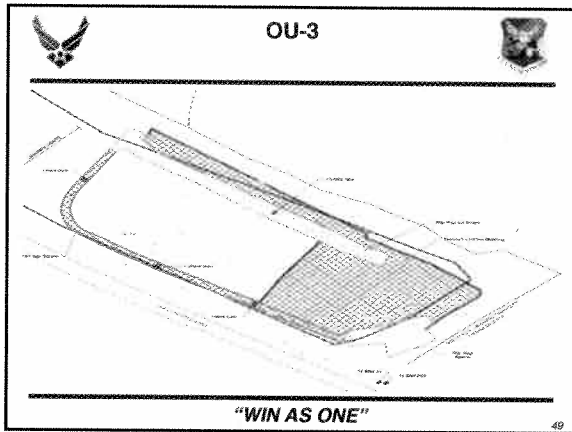
OU-3

Removal Action (Cont.):

- **TCRA at LF-20:**
 - **Rationale:**
 - Several exposed debris piles consisting of asphalt millings, large concrete pieces and construction debris were present throughout the vicinity of the landfill, as well as fugitive landfill refuse present along the periphery of LF-20
 - **Objective:**
 - To effectively manage various debris piles in the vicinity of the landfill through consolidation of the debris piles onto LF-20, in preparation for the future PR cap, and off-site recycling of the asphalt millings
 - **Result:**
 - The debris piles and the material along the periphery were moved onto LF-20 and graded into LF-20. Milled asphalt piles were transported off-site for recycling. The final capping at LF-20 will occur as part of the final OU-3 remedy

"WIN AS ONE"

48



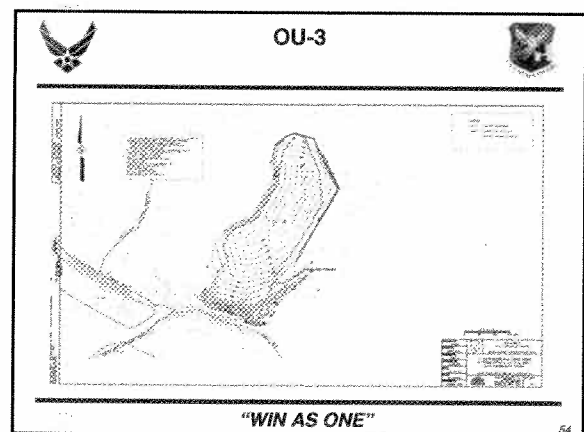
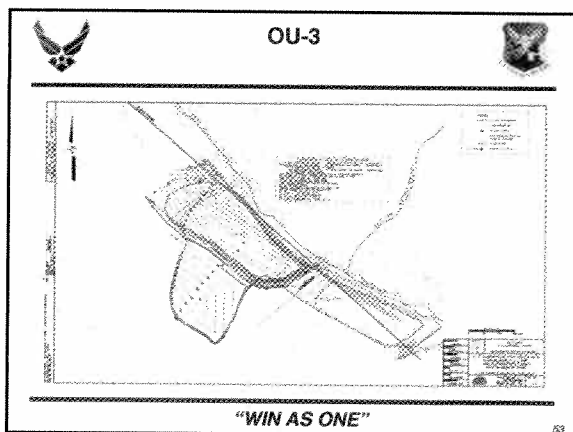
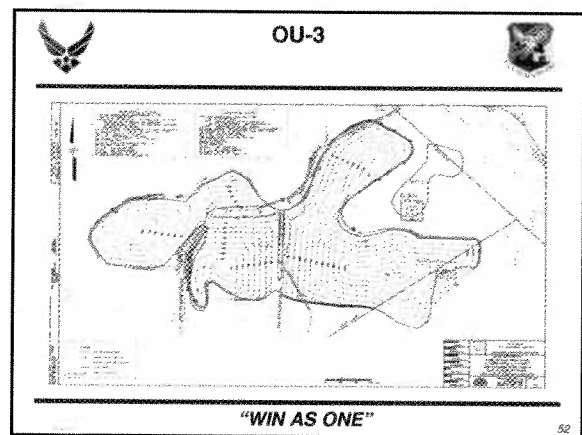
OU-3

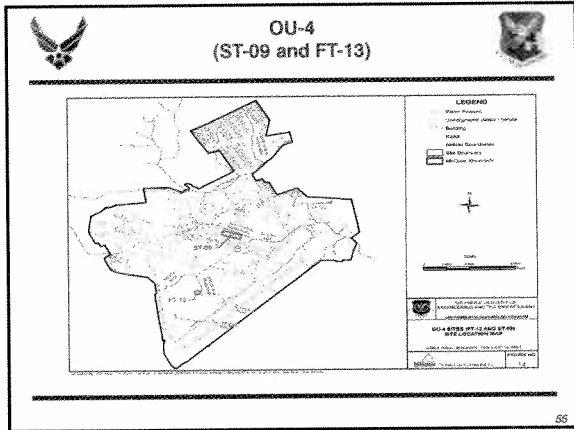
Remedial Alternatives to be Evaluated in FS:

- Alt 1 – No Action
- Alt 2 – 2-foot-thick engineered soil caps over the landfills and soil hot-spots ("Soil Caps") and establish LUCs, GW ICs, and a LTM program for GW and SW
- Alt 3 – 2-foot-thick engineered soil caps over the landfills, soil hot-spot removals, and establish LUCs, GW ICs, and a LTM program for GW and SW
- Alt 4 – 2-foot-thick engineered soil caps over the landfills, establish LUCs for soil hot-spots, and establish LUCs, GW ICs, and a LTM program for GW and SW
- Alt 5 – RCRA Subtitle D caps over the landfills and soil hot-spots and establish LUCs, GW ICs, and a LTM program for GW and SW
- Alt 6 – RCRA Subtitle D caps over the landfills, soil hot-spot removals, and establish LUCs, GW ICs, and a LTM program for GW and SW
- Alt 7 – RCRA Subtitle D caps over the landfills, establish LUCs for soil hot-spots, and establish LUCs, GW ICs, and a LTM program for GW and SW

"WIN AS ONE"

51





OU-4

Status/Milestones:

- Completed Remedial Investigation – January 31, 2013

Future Milestones:

- Draft FS – June 2013
- Final FS – November 2013
- New PBR award – June 2013

OU-4

Results of the RI:

- **Number of Samples by Media**
 - 150 Soil
 - 82 Groundwater
 - 23 Surface Water
 - 20 Sediment
- **Soil sources – Releases from bulk fuel storage tanks**
 - Light Non-aqueous Phase Liquids (LNAPL) in unsaturated zone to the top of the water table and smear zone
- **GW plumes identified (MCL exceedances):**
 - ST-09: VOCs and metals (benzene, As, Pb)
 - ST-13: none

OU-4

HHRA:

- **Risks:**
 - ST-09: Unacceptable risks identified from GW exposure
 - ST-09: No unacceptable risks from soil, surface water, or sediment exposures
 - FT-13: No unacceptable risks at FT-13 from soil, groundwater, surface water or sediment exposures
- **Hazard:**
 - Unacceptable hazards identified from sediment exposure at both sites.
 - No unacceptable hazards from soil, surface water or sediment at both sites.

Results of the SLERA:

- **Hazard:** No significant hazard to terrestrial or aquatic/riparian feeding guilds at either site



OU-4

Chemicals of Concern (COCs) to be Evaluated in FS:

- ST-09:
 - Soil, SW or sediment COCs – None
 - GW COCs
 - Benzene
 - Total xylenes
 - Naphthalene
 - Arsenic
 - Iron
 - Thallium
- FT-13:
 - Soil, SW or sediment COCs – None
 - GW COCs
 - Fe

61

OU-4

LNAPL Remedial Alternatives to be Evaluated in FS:

- Alt LNAPL 1: No Action
- Alt LNAPL 2: Natural Source Zone Depletion
- Alt LNAPL 3: Collection Wells
- Alt LNAPL 4: Impermeable Liner
- Alt LNAPL 5: Excavation of Accessible LNAPL Areas
- Alt LNAPL 6: Low Temperature Thermal Conduction

GW Remedial Alternatives to be Evaluated in FS:

- Alt GW-1: No Action
- Alt GW-2: MNA & LUCs
- Alt GW-3: Enhanced Bioremediation & LUCs
- Alt GW-4: GW Pump & Treat

62

**OU-5
(SS-24, SS-25 & SS-26)**

63

OU-5

Status/Milestones:

- Remedial Investigation:
 - Draft RI – July 2012
 - Final RI – July 2013
- Feasibility Study:
 - Draft FS – Aug 2013
- Removal Action:
 - SS-26 NTCRA field work – May 2013
 - Draft Report – June 2013
- New PBR award – June 2013

64

OU-5

Results of the RI:

- No of Samples by Media
 - 373 Soil
 - 112 GW
 - 12 SW
 - 11 SED
- Soil sources
 - SS-25: Pesticides and Polycyclic Aromatic Hydrocarbons (PAHs) from milled asphalt
 - SS-26: Pesticides
- GW plume Identified (MCL Exceedances):
 - SS-24: VOCs and metals (TCE, cis-1,2-DCE, VC, benzene, TI)
 - SS-25: Metals (As)
 - SS-26: Metals (Cd)

65

OU-5

Results of the HHRA:

- Risks:
 - No unacceptable risks identified from Soil exposure at SS-24
 - Unacceptable risks identified from Soil exposure at SS-25 & SS-26
 - Unacceptable risks identified from GW exposure at SS-24 & SS-25
 - No unacceptable risks from GW, SW and SD exposures at SS-26
- Hazard:
 - Unacceptable hazards identified from GW exposure at all sites
 - No unacceptable hazards from SW and SED at SS-26

Results of the SLERA:

- Hazard: Pesticide levels in soil at SS-25 & SS-26 pose potential hazards to terrestrial receptors; levels of several compounds in sediment at SS-26 pose a hazard to aquatic/riparian receptors

66

SS-24

"WIN AS ONE"

OU-5

Chemicals of Concern (COCs) to be Evaluated in FS:

- Soil COCs
 - SS-24 – None
 - SS-25 – dieldrin, DDT
 - SS-26 – dieldrin, chlordane
- GW COC
 - SS-24 – benzene, TCE, DCE, VC, TI
 - SS-25 – dieldrin, As, TI
 - SS-26 – Cd, TI
- SW COC (SS-26 only)
 - SS-26 - TI
- No Sediment COCs (SS-26 only)

OU-5

Removal Action Planned: SS-26 – May 2013

- **Rationale:**
 - Excavate and dispose of all pesticide-contaminated soil exceeding the unrestricted use standards
 - RG for dieldrin (2.2 mg/kg): JB MDL-McGuire Statistical Background Value
 - RG for all pesticides except dieldrin: the NJDEP Residential Direct contact Soil Remediation Standards (RDCSRS)
- **Estimated Quantity:**
 - 3,700 cubic yards of pesticide-contaminated soil
 - Areal extent of impact: 1.7 acres
- **Expected Results:**
 - Unrestricted use standards, no further action

SS-26 Removal Action

"WIN AS ONE"

OU-5

GW Remedial Alternatives to be Evaluated in the FS:

- Alt 1: No Action – All Sites
- Alt 2: MNA & LUCs – All Sites
- Alt 3: GW Pump & Treat with LUCs – SS-24
- Alt 4: AS/SVE, LUCs & MNA – SS-24
- Alt 5: ZVI injections, LUCs & MNA – All Sites
- Alt 6: In Situ Chemical Oxidation, LUCs & MNA – SS-24
- Alt 7: Source Removal, LUCs & MNA – SS-25 & SS-26

Soil Remedial Alternatives to be Evaluated in the FS:

- Alt 8: No Action – All Sites
- Alt 9: LUCs – All Sites
- Alt 10: Excavation of pesticides in soil above the restricted use standards & LUCs – SS-25

"WIN AS ONE"

BOMARC OT-16 TCE Groundwater Plume

Status/Milestones:

- Final Pilot Test RAWP – Apr 24, 2013
- Initiated pre-injections activities – Apr 11, 2013
- Mobilization – May 13, 2013
- Initiate injections – May 16, 2013

"WIN AS ONE"

BOMARC OT-16 TCE Groundwater Plume


Pilot Study Performance Objectives

- Pre-injection
 - Clear vegetation and install gravel road (as necessary)
 - Install 4 MWs (2 shallow/2 deep) at PRB edges
 - Complete baseline GW & SW sampling
 - Complete baseline hydraulic conductivity testing
- Phase I & II Injections
 - Complete Phase I PRB injections (to determine final specs)
 - Perform geochemical monitoring of GW to confirm target ROI
 - Complete Phase II PRB injections (based on Phase I)
 - Complete PRB monitoring to evaluate effectiveness and hydraulic conductivity testing to evaluate permeability
- Post-injection
 - Prepare Remedial Action Report (RAR); est. Land Use Controls (LUCs)
 - Initiate PRB Long-term Performance Monitoring (LTPM) of GW & SW
 - Initiate Site-wide Long-term Monitoring (LTM) of GW & SW

"WIN AS ONE"

Questions?

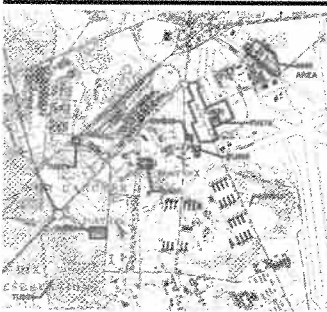
87th Air Base Wing



**Installation Restoration Program,
Compliance Project Overview**

Mr. Michael Wierman
 Project Manager – JB MDL
Ms. Kiran Gill
 President – PARS Environmental, Inc.

Compliance Project Overview




Remedial Investigations
 TU578 – Soil and groundwater
 TU579 – Soil, groundwater, sediment and surface water
 TU937 – Soil and groundwater plus interim removal action

UST/Anomaly Removal
 TUS80 – 2 USTs
 TUS81 – 22 USTs plus anomaly investigation
 3500 Area – 3 USTs

Quarterly groundwater sampling:
 NW043, NW045, TU924
 TU968

"WIN AS ONE"

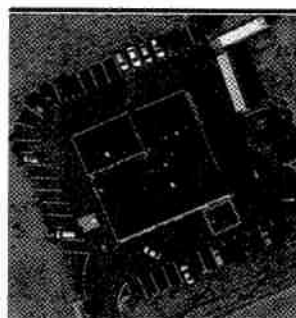
Site ID TU578
Petroleum, Oil, and Lubricants Facility Overview



Historically, USTs containing heating oil, gasoline and petroleum-based dry cleaning fluid were removed from this location. On September 20, 2010, two (2) 20,000-gallon double-wall fiberglass gasoline USTs were removed from this site. Future investigation activities planned include: soil borings, monitoring well installation, and groundwater sampling.

"WIN AS ONE"

Site ID TU579
Area 4200



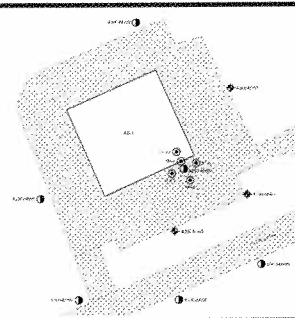
August 15, 2011- An oil/water separator and associated 550-gallon waste oil tank were removed. Holes were observed in the tank and impacts were evident along excavation sidewall adjacent to the building.

Groundwater was observed in the excavation at 5.5 feet below ground surface.

EPH, naphthalene and PCBs exceeded residential direct contact standards. Additional VOCs and SVOCs exceeded default impact to groundwater standards.

"WIN AS ONE"

Site ID TU579
Area 4200



Investigation activities include:

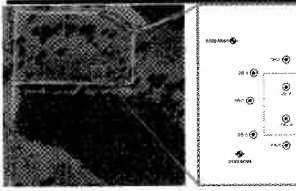
- Soil borings
- Six new monitoring wells
- Groundwater sampling of new (6) and existing (3) wells
- Surface water and sediment sampling at five locations in the creek located approximately 200 feet south of the former oil/water separator

Legend:

- MONITORING WELL
- FENCE
- FLUID SURFACE
- PROPERTY LINE
- MONITORING WELL LOCATION
- PROPOSED SOIL BORING LOCATION

"WIN AS ONE" 79

Site ID TU937
Area 5100



Investigation activities include:

- Soil borings to delineate impacts
- Groundwater sampling at three existing wells

Following delineation of soil impacts an interim remedial action to remove impacted soils will be performed


August 2011 - Leaking heating oil UST was removed. Impacts revealed on eastern and southern sidewalls at 9 feet bgs. Impacted soils unrelated to UST were observed around perimeter of the excavation

Legend:

- MONITORING WELL
- APPROXIMATE PERIMETER OF EXCAVATION
- HEATING OIL UST LOCATION
- ROAD SURFACE

"WIN AS ONE" 80

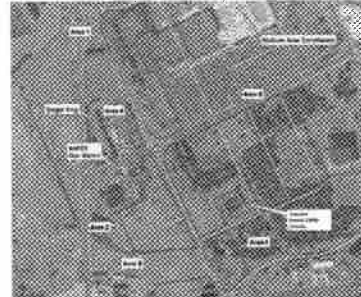
Site ID TU580
Area 0200



Two cottages were demolished sometime before 2003. The heating oil USTs supplying fuel to each of the demolished cottages were not removed and require closure. The remaining eight cottages have been converted to natural gas and their heating oil tanks have been removed. USTs have been located using ground penetrating radar prior to removal

"WIN AS ONE" 81

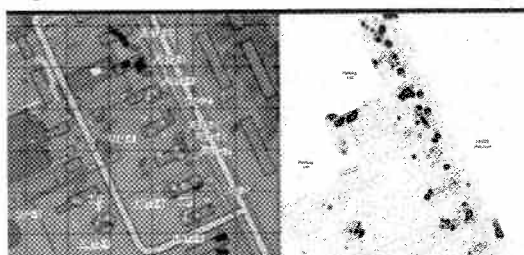
Site ID TU581
Former Barracks Area



22 USTs and multiple anomalies were detected using ground penetrating radar. USTs will be removed and selected anomalies will be uncovered for identification

"WIN AS ONE" 82

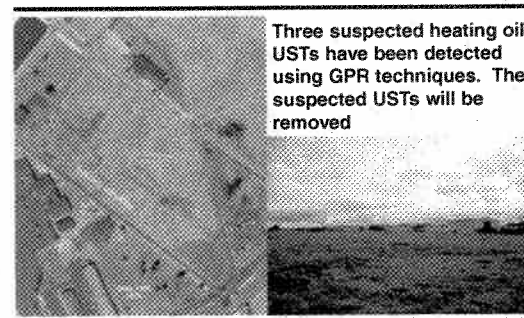
Site ID TU581
Former Barracks Area



Area 2
Anomalies close to suspected USTs will be investigated during UST excavation. Additional anomalies have been selected for investigation based on proximity to former barracks and electromagnetic signal strength

"WIN AS ONE" 83



McGuire 3500 Area




Three suspected heating oil USTs have been detected using GPR techniques. The suspected USTs will be removed

"WIN AS ONE" 84

**Installation Restoration Program
Compliance Monitoring Tasks**

Monitoring natural attenuation of groundwater contaminants at four (4) JB MDL, Dix sites. Results to be reported in annual CEA report





Quarterly Sampling:
 NW043 – Building 4304 – 1 well sampled for VOCs
 TU924 – Building 0199 – 5 wells sampled for VOCs and metals
 TU968 – Building 5348 – 1 well discovered to be abandoned. An attempt to close Site is underway based on historic groundwater results
 NW045 – Building 5339 – 5 wells sampled for VOCs and metals

“WIN AS ONE”

85

Project Schedule

April 15-23, 2013 – Mark out digging/drilling locations, perform GPR survey to clear and verify all locations, contact NJ One Call and initiate digging permit application process

Mid May 2013 – Initiate soil, sediment and surface water investigations and monitoring well installations (where planned) at TU578, TU579 and TU937. Groundwater sampling at these sites to be performed at least two weeks after planned monitoring well installations are completed

June 2013 – Initiate UST removals and anomaly investigations at TU580, TU581 and McGuire 3500 Area



June 2013 – Complete IRA at TU937 based on soil investigation results

July/August 2013 – Install and sample monitoring wells and excavate impacted soils as required at TU580, TU581 and McGuire 3500 Area following receipt of confirmatory soil sample results

Quarterly 2013 – Collect groundwater samples at each CRP site (TU924, TU968, NW043, NW045)

“WIN AS ONE”

86






Questions?

“WIN AS ONE”

87



August RAB Agenda Ideas

- Tentative RAB date is August 8, 2013
 - Public Meeting for Dix New Egypt Armory Site Proposed Plan (excavation of PCB-contaminated soils)
 - Update on McGuire Operable Units 6, 7, and 8 (SAIC)
 - Update on Dix MAG-1 Site Remediation
 - Update on BOMARC OT-16 Pilot Study Permeable Reactive Barrier
 - Discuss Updated RAB Charter

“WIN AS ONE”

88

PUBLIC COMMENTS

“WIN AS ONE”

89