

Joint Base McGuire-Dix-Lakehurst  
Restoration Advisory Board (RAB) Draft Meeting Minutes  
Meeting No. 33 – 23 February 2011

SUBJECT: Restoration Advisory Board (RAB) Meeting No. 33 – Meeting Minutes

- 1) Place: Edward Holloway Senior Citizen Community Center, Cookstown, New Jersey
- 2) Date/Time: Wednesday, February 23, 2011; 6:30 PM
- 3) Co-Chairs: Brigadier General (Select) Gina Grosso, Joint Base Commander  
Mr. Michael Tamn, Resident, Pemberton Township, New Jersey

4) Attendees:

Mr. Albert Hopkins	Resident, Pemberton Township, RAB Member
Ms. Theresa Lettman	Pinelands Preservation Alliance, RAB Member
Mr. Ken Smith	JB MDL, 87 CES/CEAN, Chief, Environmental Division
Mr. Curt Frye	JB MDL, 87 CES/CEAN, Environmental Restoration Program Chief
Mr. King Mak	JB MDL, 87 CES/CEAN, Environmental Restoration Program
Ms. Nicole York	JB MDL, 87 CES/CEAN, Environmental Restoration Program
Mr. William Lewendoski	JB MDL, 87 CES/CEAN, Environmental Restoration Program
Mr. John King	JB MDL, 87 CES/CEAN, Environmental Restoration Program
Mr. Mike Figura	JB MDL, 87 CES/CEAN, Environmental Restoration Program
Ms. Patty Odoardo	JB MDL, Public Affairs Office
Mr. John Malleck	US Environmental Protection Agency, Region II
Mr. Doug Pocze	US Environmental Protection Agency, Region II
Ms. Carla Struble	US Environmental Protection Agency, Region II
Mr. Phil Cole	New Jersey Department of Environmental Protection
Mr. Haiyesh Shah	New Jersey Department of Environmental Protection
Ms. Jennifer Azzarano	Burlington County College
Mr. Michael Wysong	Burlington County College
Mr. Jeff Sagnip	Representative for Congressman Christopher Smith
Mr. John O'Rourke	Resident, Brick Township
Ms. Leotta Tamn	Resident, Pemberton Township
Mr. Frederick Poli	Shaw Environmental & Infrastructure
Mr. Jim Richman	Shaw Environmental & Infrastructure
Mr. Robert Steffan	Shaw Environmental & Infrastructure
Mr. Gerry Maresca	Shaw Environmental & Infrastructure

5) Call to Order:

The meeting was called to order at 1830 by Brigadier General (Select) Grosso who announced she was substituting for Col. Poth as RAB Co-Chair this evening. Mr. John Malleck, EPA introduced Mr. Douglas Pocze, Project Manager, EPA who has replaced Mr. Paul Ingrisano of EPA. Mr. Phil Cole introduced Mr. Haiyesh Shah, who has served as the NJDEP Case Manager for the Dix sites for many

years. Brigadier General (Select) Grosso and Mr. Tamn welcomed Mr. Pocze and Mr. Shah to the JB MDL RAB.

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

Mr. Tamn called for approval of the minutes from the 25 August 2010 RAB meeting. A motion was made by Mr. Frank Storm, seconded by Ms. Theresa Lettman, and the minutes were approved.

7) Lakehurst Five Year Review:

Mr. Mike Figura, Restoration Project Manager, 87<sup>th</sup> CES/CEAN

Mr. Figura presented the results of a basewide vapor intrusion investigation conducted at Lakehurst. Vapor intrusion (VI) is a process by which chemicals in soil or groundwater can migrate into buildings located above a contaminated site. A VI investigation was recommended in the 2006 Five-Year Review for Lakehurst. Mr. Figura explained that the initial VI investigation was conducted in 2007 and included samples of the sub-slab areas under 5 selected buildings. Vapors in the soil below three of the five buildings had detections that were above screening levels. These three buildings, Hangar 1, Building 123 (base gym) and Building 372 (a maintenance building located at the recovery end of the test tracks) exhibited exceedences of all or some of the following: benzene, ethylbenzene, PCE, TCE, toluene, acetone, methylene chloride, hexane and carbon tetrachloride. Therefore, as part of the 2010 VI investigation, confirmatory sub-slab, ambient air and indoor air samples were collected at each of the three buildings. The results are as follows:

- Hangar 1: The indoor air samples had exceedences of trimethylebenzene, chloroform and/or methylene chloride. Please note, the interior walls were recently painted and trimethylbenzene is an ingredient of the paint. Additionally, chloroform and methylene chloride were detected in the ambient air sample and are common laboratory contaminants. The compounds detected in in-door air were not detected in the sub-slab vapor sample.
- Building 123 (base gym): Benzene was detected in the storage room indoor air sample (gasoline is stored there which contains benzene). Chloroform and methylene chloride were detected in an indoor air sample. Again, chloroform and methylene chloride were detected in the ambient air sample and are common laboratory contaminants. The compounds detected in in-door air were not detected in the sub-slab vapor sample.
- Building 372: Benzene was detected in the indoor air sample. Gasoline is also stored in this area. The compounds detected in in-door air were not detected in the sub-slab vapor sample.

Mr. Figura explained that the draft report has been submitted for regulatory review. The conclusions of this report indicate that the 2010 sub-slab results are consistent with the 2007 results; the chemicals in indoor air correspond with the material stored within the sample location and/or are laboratory contaminants, and the levels detected in indoor air are well below the OSHA permissible exposure levels. Therefore, vapor intrusion is not an issue at these buildings and no further action is necessary.

Mr. Tamn inquired about the depth of the sub-slab vapor sampling points. Mr. Figura explained that the sub-slab samples are taken just below the floor slab.

8) Update on McGuire Operable Units 1,2,3,4, 5:

Mr. Fred Poli, Project Manager, Shaw Environmental & Infrastructure, Inc.

Mr. Poli gave a presentation on the current status and the upcoming field activities for McGuire CERCLA Operable Units (OU) 1, 2, 3, 4, and 5. An acronym list was made available with handout packets to provide definitions of the many acronyms used during his presentation. Mr. Poli stated that since the November RAB meeting, Shaw has been actively working in the field, and as a result much progress has been made. He explained that the Draft Final Remedial Investigation Work Plans were submitted for OU-1, OU-3, OU-4 and OU-5 (OU-2 RI Work Plan had been submitted previously). Mr. Poli gave a thorough presentation on upcoming activities at each of the OU's and their associated sites. To summarize:

- OU-1: A non-time critical removal action (NTCRA) is planned for site ST-07. This removal action will address surface soil that is contaminated with PCBs due to the past practice of storing out of service transformers in the DRMO storage yard. Fieldwork for this project is scheduled to be completed in the summer of 2011. The Draft RI report for OU-1 is expected in September 2011.

Mr. Pocze inquired about the groundwater flow near OU-1 site LF-03. Mr. Poli explained that aquifer pump tests are scheduled to confirm groundwater flow.

Mr. Pocze inquired about the distance between the soil samples collected at OU-1 site ST-07. Mr. Poli and Mr. Richman explained that the samples collected were approximately 40-50 feet apart.

- OU-2: Additional sampling and/or plume delineation is scheduled for sites SS-34, SS-35 and SS-36. A time critical removal action (TCRA) is planned at site SS-36 by late summer/early fall of 2011. The Draft RI report is expected in September 2011.

Mr. Pocze inquired as to whether the number of samples for site SS-36 had been predetermined. Mr. Poli responded by stating that some sampling areas have already been decided and that the removal of the manhole and pit outside of the building is also planned. Any type of excavation inside of the building will be complicated. Mr. Poli explained that this will be a removal action, not a final action for the site.

- OU-3: Additional surface water and sediment sampling is scheduled for South Run. Additional tests pits are scheduled for sites LF-02 and LF-19. A TCRA is being considered for site WP-21. All fieldwork is expected to be completed in the late summer/early fall of 2011. The Draft Remedial Investigation report is planned for the fall 2011.
- OU-4: Additional monitoring well installation and aquifer pump tests are scheduled for site ST-09. Fieldwork is expected to be completed in the late spring/summer of 2011. The Draft Remedial Investigation report is expected in September 2011.

Ms. Lettman asked about the locations of samples collected at South Run. Mr. Poli explained that, at the adjacent Site ST-09, Shaw has sampled at ten agreed upon locations, and that TCE was a contaminant of concern. He further stated that TCE is not considered to be associated with Site ST-09. Mr. Frye explained that another contractor will be investigating this as part of an upcoming Stormwater Investigation, which will be conducted in conjunction with the Basewide Background Study.

Ms. Lettman asked what area the samples were taken from. Mr. Poli responded that the samples covered the area from the culvert near Building 2101 (Heat Plant) to McGuire Boulevard.

Mr. Pocze asked if South Run was a gaining stream. Mr. Richman responded that it is in the Pinelands area and considered a gaining stream.

Mr. Pocze asked what the depth to groundwater was in the area and what the general flow direction was. Mr. Frye explained that groundwater generally flows parallel to the stream. Mr. Richman stated that screens will be installed to determine depth to groundwater.

- OU-5: Additional soil borings and possibly a Vapor Intrusion (VI) investigation are planned at site SS-24. Monitoring well installations are planned at site SS-26. Surface water and sediment sampling is planned at South Run. A NTCRA is planned at sites SS-25 and SS-26 during the summer of 2011.

Mr. Pocze inquired about the submittal date for the NTCRA. Mr. Poli said that a memo will be submitted to the EPA within the next month.

- BOMARC: Soil removal at sites WP-05 and ST-15 is planned for the summer of 2011.

9) Update on the Environmental Security Technology Certification Program (ESTCP) Pilot Study for Solar Powered Remediation:

Dr. Robert Steffan, Director, Biotechnology Development and Applications, Shaw Environmental, Inc.

Dr. Steffan presented a detailed update of the progress of the Pilot Study to date. He explained that the Draft Demonstration Plan is expected by mid-March 2011, and the System Design/Procurement is planned for April/May 2011. Based on this, the system installation is planned for June 2011 and system start up is scheduled for July 2011. Tracer testing will be conducted in July/August 2011 and performance monitoring will begin in September 2011.

10) Action Items:

- Mr. Tamn requested assistance with recruiting new members to the Restoration Advisory Board.


11) Meeting Adjourned:

Mr. Michael Tamn, RAB Co-Chair

- The meeting was adjourned at 2000.



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**Michael Figura**  
 Restoration Program Manager  
 87 CES/CEAN  
 Lakehurst Vapor Intrusion Investigation

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**Vapor Intrusion**

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- What is Vapor Intrusion?
- Recommended in 2006 Five-Year Review
- Sub-slab vapor sampling conducted in 2007
- Sub-slab and in-door air sampling conducted in 2010 under contract with URS Corp.

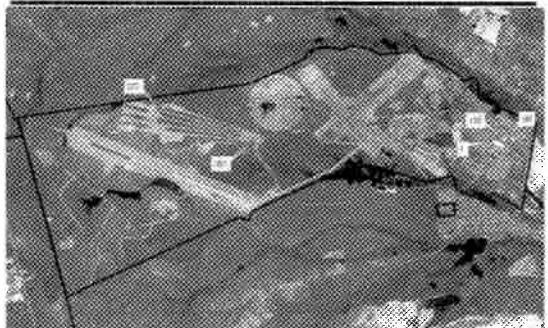
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**Sample Locations**

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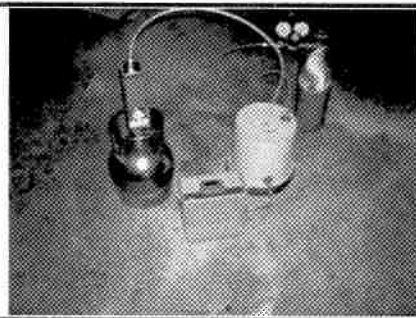



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**Sub-slab Sampling**

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**2007 Sub-slab Sampling Results**

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- No detections above screening levels in Bldgs. 60 (Credit Union) and 351 (maintenance building, launch end of test tracks)
- Detections above screening levels:
  - Hangar 1: TCE, benzene and ethylbenzene
  - Building 123 (base gym): PCE, benzene, ethylbenzene, toluene, acetone, methylene chloride, and carbon tetrachloride
  - Building 372 (maintenance building, recovery end of test tracks) : TCE, ethylbenzene, and hexane

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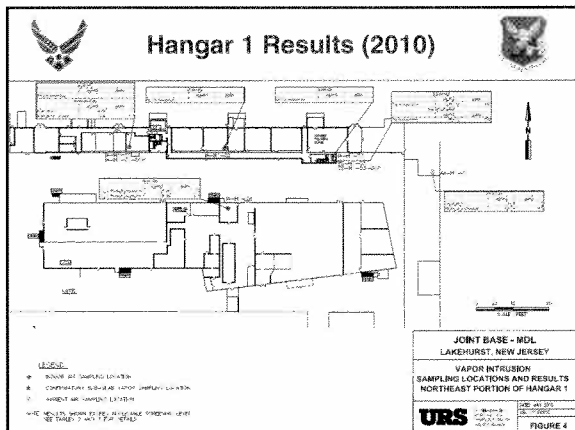
**2007 Recommendations**

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- At each location where sub-slab sampling results were detected above screening levels, an indoor air sample should be collected to assess actual indoor air quality
- At the location of the highest 2007 sub-slab levels, a confirmatory sub-slab vapor sample should be collected to confirm previous results and provide a point of comparison for the indoor air samples

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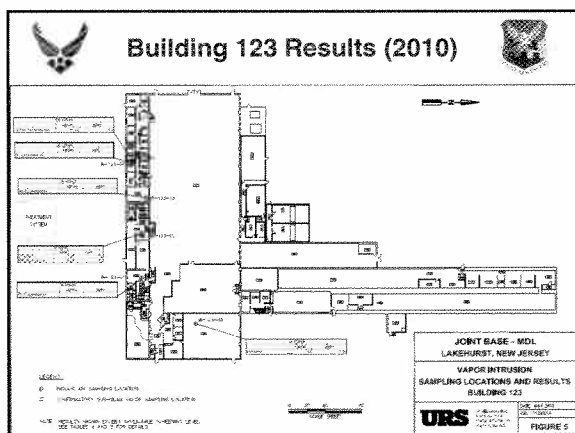
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### 2010 Sampling Results Hangar 1

- Chloroform and methylene chloride detected in one indoor air sample and outdoor air sample
- Not detected in sub-slab vapor sample
- Common lab contaminants
- Trimethylbenzenes detected in training area
- These are ingredients of floor paint stored nearby plus floor and walls were painted within the last year
- Not detected in sub-slab vapor sample

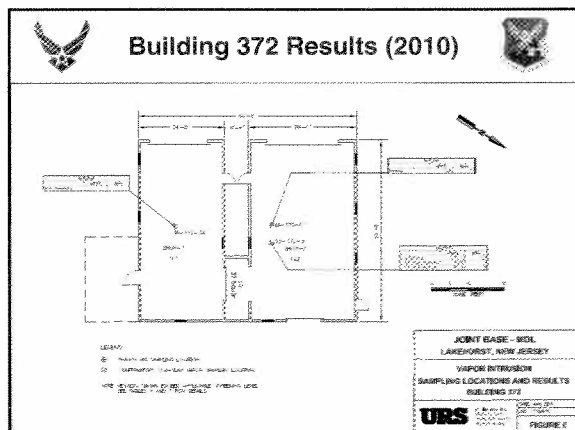
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### 2010 Sampling Results Building 123

- Chloroform and methylene chloride detected in one indoor air sample in women's locker room
- Not detected in sub-slab sample
- Common lab contaminants
- Benzene detected in storage room
- Gasoline containers stored in same room
- Benzene not detected in sub-slab sample

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### 2010 Sampling Results Building 372

- Benzene detected in north garage bay
- Gasoline containers stored in same room
- Benzene not detected in sub-slab sample

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**Summary**

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- Draft report submitted for regulatory review February 16, 2011
- Recommendations/Conclusions:
  - 2010 sub-slab results consistent with the 2007 results
  - Sub-slab compounds correspond with local groundwater impacts
  - Chemicals detected in indoor air do not correspond with those in sub-slab vapor, they are from materials stored and/or used nearby or laboratory contamination
  - The levels detected in indoor air are well below OSHA permissible exposure levels, vapor intrusion is not a problem at these buildings and no further action is necessary

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**Questions?**

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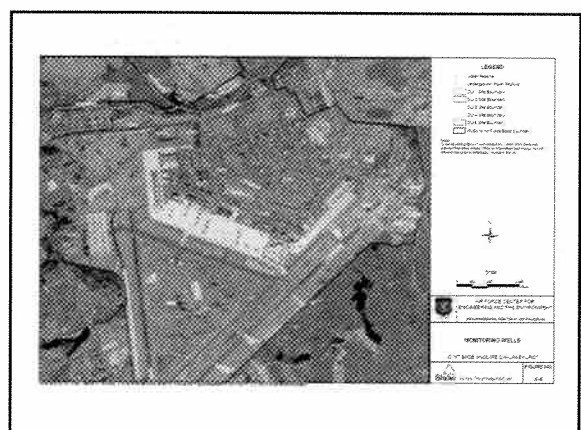
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**Joint Base McGuire-Dix-Lakehurst  
 Restoration Advisory Board**  
**OUs 1, 2, 3, 4, 5 and BOMARC Update**  
 Fred Poli - Project Manager  
 Shaw Environmental & Infrastructure, Inc

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**JB MDL Restoration Program Managers**

- King Mak (OU-1, OU-3)
- Michael Brown (OU-2, OU-5)
- John King (OU-4, BOMARC)

**Shaw Environmental & Infrastructure, Inc. Project Managers**

- Jim Richman (OU-1, OU-3, OU-4, OU-5, BOMARC)
- Gerry Maresca (OU-2)

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**OU-1  
 Remedial Investigation (RI)**

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**SITES**

- LF-03: Landfill No. 02
- ST-07: Former DRMO Facility
- LF-04: Landfill No. 03

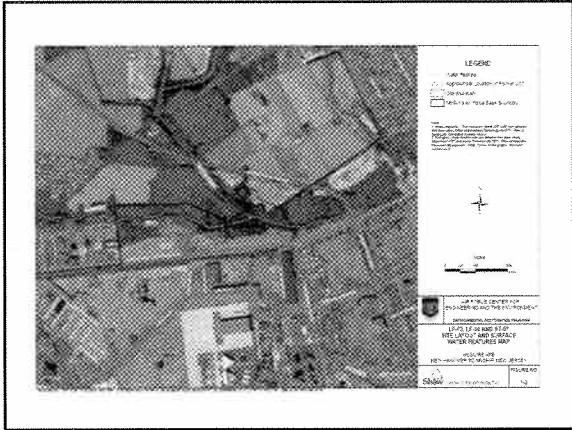
**Workplan status:**

- Submitted Draft Final RIWP for OU-1 in October 2010
- QAPP / HASP / HHRA WP / SLERA WP

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**OU-1**  
**RI Field Activities**

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**OU-1 - Completed Field Activities:**

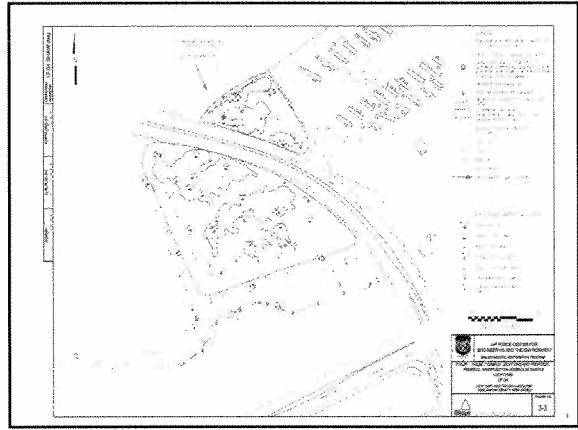
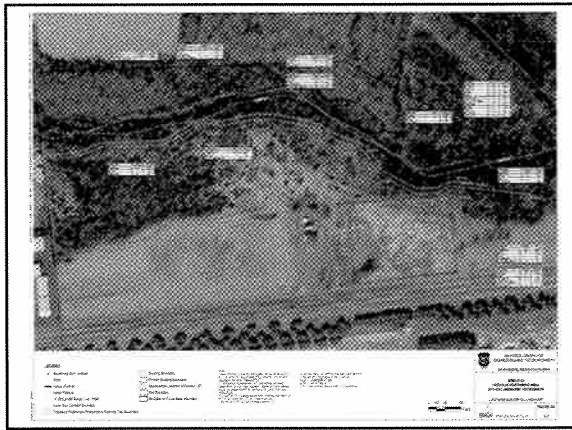
- Well inventory and survey
- Installed 12 MWs: 2 as pumping wells
- Baseline GW sampling (30 Wells)
- 24 soil borings (contamination and/or lithology assessment)
- 49 soil samples

**OU-1 - Future Field Activities:**

- North Run corridor investigation (LF-03 and LF-04)
  - 12 sediment samples and 22 surface water samples
- Aquifer pump tests (LF-03)

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**OU-1**  
**RI Schedule**

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**OU-1 - RI Schedule:**

- Fieldwork completion: Spring 2011
- Draft RI Report expected: September 2011

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**OU-1**  
**ST-07 Removal Action**

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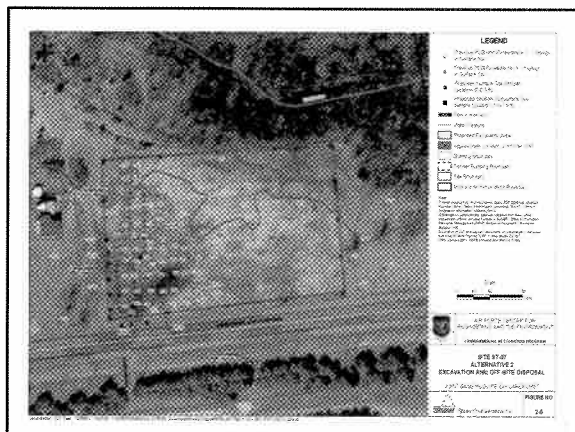
**ST-07 Non-Time Critical Removal Action - PCB Soils**

- Final EE/CA: November 2010
  - Recommended Action: excavation and off-site disposal
    - Delineation sampling to determine excavation limits
    - 11,500 sq. ft. (0.25 acres): ~550 cubic yards of soil (non-hazardous)
    - Confirmation sampling
- Public Notice: November 23, 2010
- Draft RAM: November 2010
- DQO Scoping Session: February 2011
- Draft RAWP: March 2011
- Removal Action planned: Summer 2011

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**OU-2**  
**Remedial Investigation (RI)**

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**SITES**

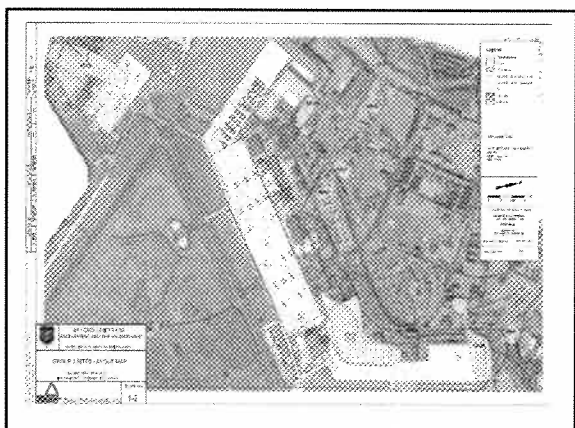
- LF-23: Former Landfill (Surrounded by SS-34)
- SS-34: Vehicle Maintenance
- SS-35: 1900 Area Buildings
- SS-36: 2300 Area Buildings
- SS-37: Vehicle Maintenance
- SS-38: Transportation Motorpool
- SS-39: Aircraft Maintenance
- SS-41: Former Golf Course Maintenance
- SS-42: Central Heat Plant

**Workplan status:**

- Submitted Draft Final RIWP for OU-2 in October 2010
- QAPP / HASP / HHRA WP / SLERA WP

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**OU-2**  
**RI Field Activities**

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**OU-2 – Completed Extensive Field Activities Since June 2009**

- 240 soil borings
- 60 GW monitoring wells
- Identified site contamination, most contaminant boundaries confirmed
- Over 150 vapor intrusion samples
- Vapor intrusion investigation reveals no immediate health threats

**OU-2 – Future Field Activities:**

- Sampling beneath aircraft apron and across South Run (SS-34 and SS-35)
- Plume delineation sampling within Building 2305 (SS-36)

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**Sites LF-23 & SS-34**

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**Site SS-35**

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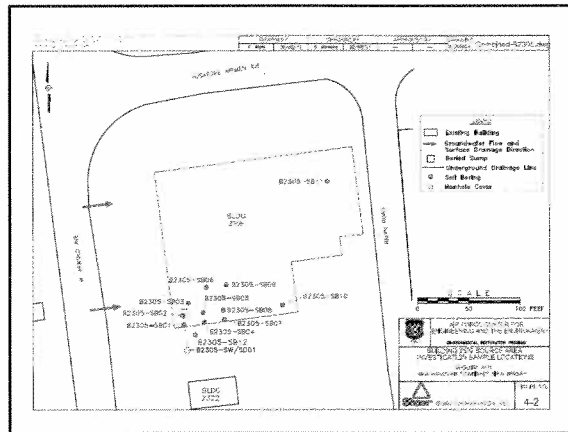
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**OU-2**  
**SS-36 Removal Action**

**SS-36 Time Critical Removal Action – TCE/VOC Soils**

- Excavation and off-site disposal
  - 2 Excavations: 1 outside, 1 inside Bldg. 2305
  - Approximately 1,400 cubic yards of soil (hazardous / non-hazardous)
  - Concurrent with RI field investigation
- **Public Notice: March 2011**
- **Draft RAM: March 2011**
- **DGO Scoping Session: February 2011**
- **Draft RAWP: April 2011**
- **Removal Action planned: Mid-Summer / Fall 2011**

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**OU-2**  
**RI Schedule**

**OU-2 – RI Schedule:**

- Fieldwork completion: Spring 2011
- Draft RI Report expected: September 2011

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**OU-3**

**SITES (Landfill OU):**

- **LF-02: Landfill No. 04**
- **LF-19: Landfill No. 05**
- **LF-20: Landfill No. 06**
- **WP-21: Former Wastewater Treatment Plant Sludge Disposal Area**

**Workplan status:**

- **Submitted Draft Final RIWP for OU-3 in November 2010**
- **QAPP / HASP / HHRA WP / SLERA WP**

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**OU-3**  
**RI Field Activities**

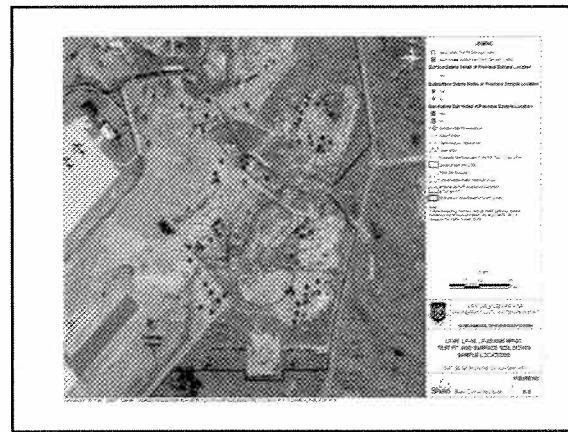
**OU-3 – Completed Field Activities:**

- Well inventory and survey
- Baseline GW sampling (16 Old Wells)
- 9 test pits with sampling and video tape
  - 4 test pits (LF-19): not indicative of a landfill
  - 5 test pits (LF-02): 2 require delineation

**OU-3 – Future Field Activities:**

- South Run SW/SD sampling
- Additional test pits (LF-02 and LF-19)

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**OU-3  
RI Schedule**

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**OU-3 – RI Schedule:**

- Fieldwork completion: Spring 2011
- Draft RI Report expected: June 2011

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**OU-3  
WP-21 Removal Action**

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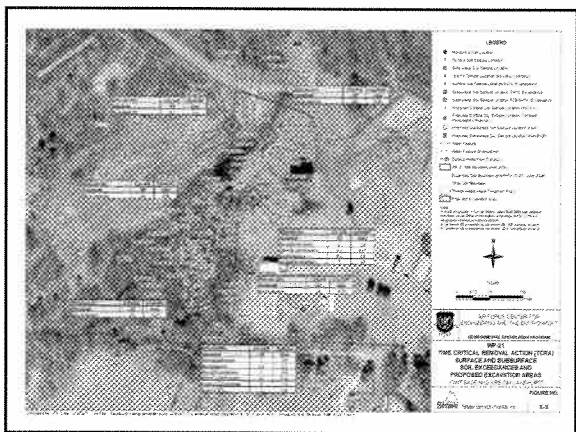
**WP-21 Time Critical Removal Action – PAH/PCB Soils**

- Excavation and off-site disposal
  - 6 excavations: 5 PAH and 1 PAH/PCB
  - 6,800 sq. ft. (0.15 acres): ~650 cubic yards of soil (non-hazardous)
  - Limited delineation to determine final limits
- Public Notice: March 2011
- Draft RAM: March 2011
- RAWP including DQO Scoping Session: February/March 2011
- Removal Action planned: Late Summer/Early Fall 2011

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**OU-4 RI**

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**SITES:**

- ST-09: Bulk Fuel Storage Area
- FT-13: Former Fire Training Area No. 3

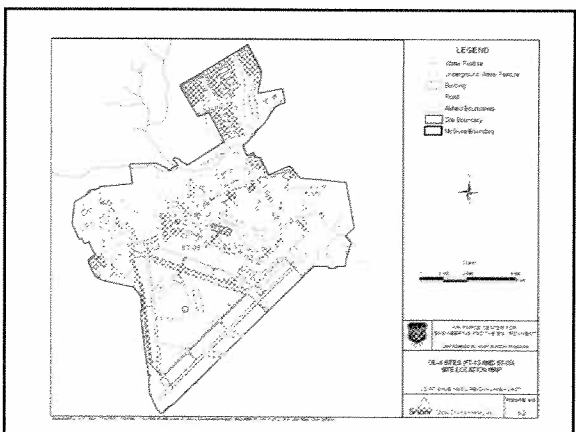
**Workplan status:**

- Submitted Draft Final RIWP for OU-4 in September 2010
- QAPP / HASP / HHRA WP / SLERA WP

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**OU-4  
RI Field Activities**

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**ST-09 – Completed Field Activities:**

- Well inventory and survey
  - 14 out of 30 wells with observed fuel product, 5 damaged
- Baseline GW sampling (16 Wells with no observed product)
- 30 soil borings (contamination and/or lithology assessment)
- 43 soil samples
- 6 surface water/sediment samples in South Run

**FT-13 – Completed Field Activities**

- 3 surface soil samples (Dioxins)


**OU-4 Future Field Activities:**

- Well Installation, four wells proposed (ST-09)
- Aquifer pump tests (ST-09)


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## OU-4 RI Schedule



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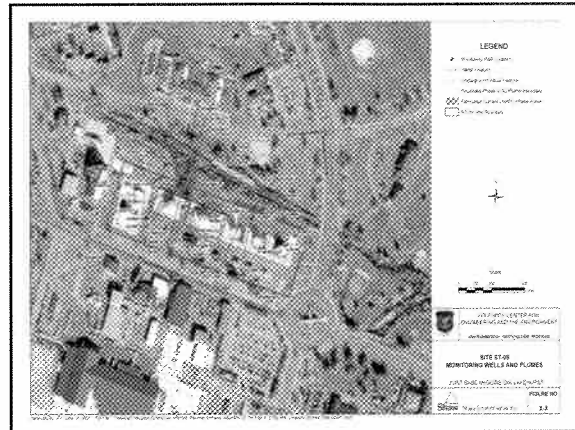
**OU-4 – RI Schedule:**


- Fieldwork completion: Spring / Summer 2011
- Draft RI Report expected: September 2011

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## OU-5 RI



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**SITES**

- SS-24: C-17 Hangar
- SS-25: Former Entomology Shops (Buildings 3205, 3207, and 3208)
- SS-26: Former Golf Course Pesticide Mixing Shop
  - SS-25 and SS-26 (Pesticide OU)

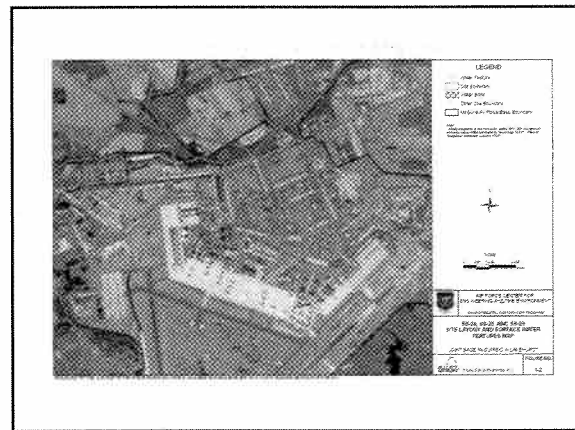
**Workplan status:**


- Submitted Draft Final RIWP for OU-5 in November 2010
- QAPP / HASP / HHRA WP / SLERA WP

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## OU-5 RI Field Activities



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**Completed Field Activities**

- SS-24
  - Well inventory and survey
  - 4 MWs
  - Baseline GW sampling (4 new wells)
- SS-25
  - 3 MWs
  - Baseline GW sampling (3 new wells)


**Future Field Activities:**

- SS-24: soil boring, vapor intrusion assessment (if necessary)
- SS-26: well installation, South Run surface water & sediment sampling


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## OU-5 SS-25 and SS-26 Removal Action



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**ST-25 and SS-26 NTCRA – Pesticide/PAH Soils**

- Final EE/CA: November 2010
- Recommended Action SS-25: hot-spot excavations / consolidation / surface containment and ICs
  - 260,900 sq. ft. (6.0 acres) CAPS: ~9,600 cubic yards of soil
  - 105,100 sq. ft. (2.4 acres) hot-spots: ~3,900 cubic yards of soil
  - 2 veg. soil caps: North & West of RV Lot; Buildings 3207 & 3205
  - 1 stone cap: contractor storage area; Bldg 3208
  - Limited delineation to determine final limits
- Recommended Remedy SS-26: Surface Containment and ICs
  - Falcon Creek Golf Course "rough" area
  - 62,800 sq. ft. (1.5 acres): ~2,300 cubic yards of soil
  - Limited delineation to determine final limits

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**OU-5**  
**SS-25 and SS-26 Removal Action**

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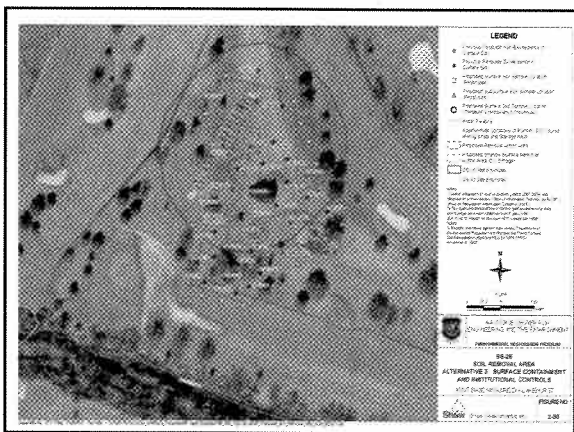
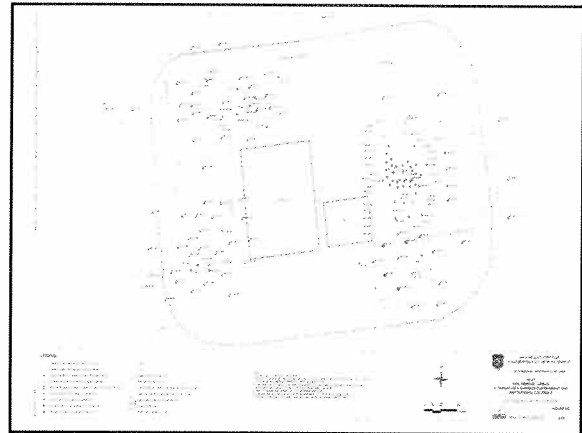
**ST-25 and SS-26 NTCRA – Pest/PAH Soils (Cont.)**

- Public Notice: January 6, 2011
- Draft RAM: November 2010
- DQO Scoping Session: February 2011
- Draft RAWP: March 2011
- Removal Action planned: Summer 2011

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**BOMARC**

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**SITES**

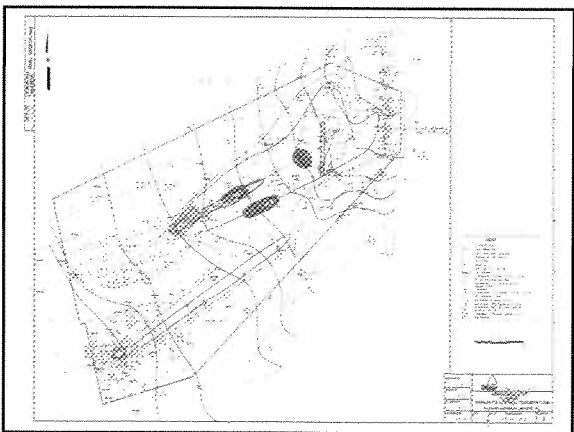
- WP-05: JP-X Discharge Pit
- ST-15: Former MOGAS Underground Storage Tank (UST)
- OT-16: BOMARC TCE Groundwater Plume

- OT-16: Draft Feasibility Study: Jan 2011

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**BOMARC (WP-05 / ST-15)**

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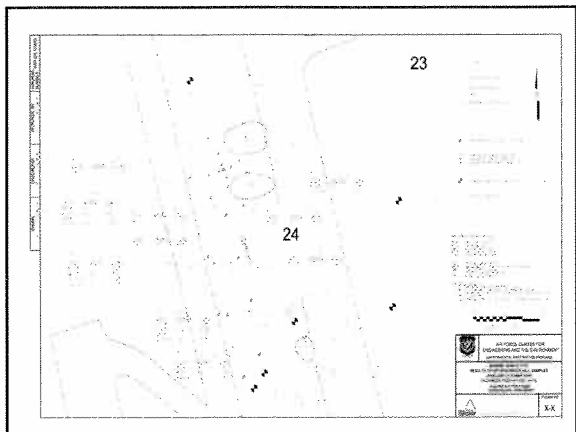
**WP-05 and ST-15 Soil Removal – Polycyclic Aromatic Hydrocarbon Soils: Summer 2011**

- Excavation and off-site disposal
  - 4 soil piles
    - ~ 730 cubic yards from former UST removal
    - WP-05/ST-15 Soils
      - 6,400 sq. ft (0.14 acres): ~670 cubic yards of soil (non-hazardous)
- Remove and dispose of debris in former UST Pit
- Backfill WP-05 discharge pit
- Backfill former UST pit

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**"WIN AS ONE"**

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**Questions?**

**87th Air Base Wing**

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**Joint Base McGuire-Dix-Lakehurst  
Restoration Advisory Board  
Environmental Security Technology  
Certification Program (ESTCP)  
Project Update**

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**87th Air Base Wing**

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**Mr. Michael Brown  
Restoration Program Project Manager  
87 CES/CEAN**

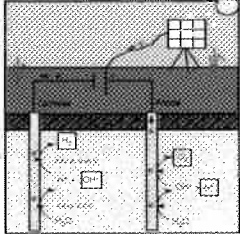
**Dr. Robert Steffan  
ESTCP Project Manager  
Shaw Environmental & Infrastructure**

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**ESTCP Project Activities to Date**

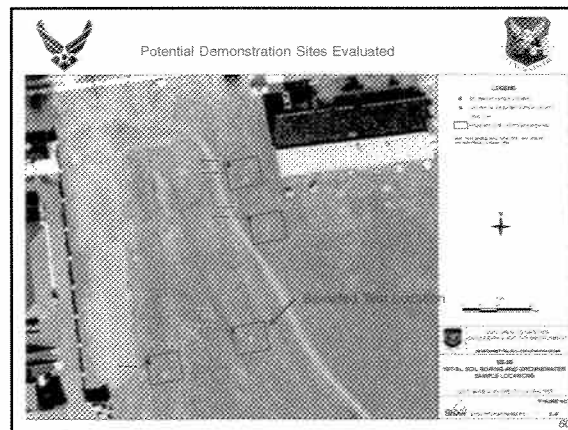
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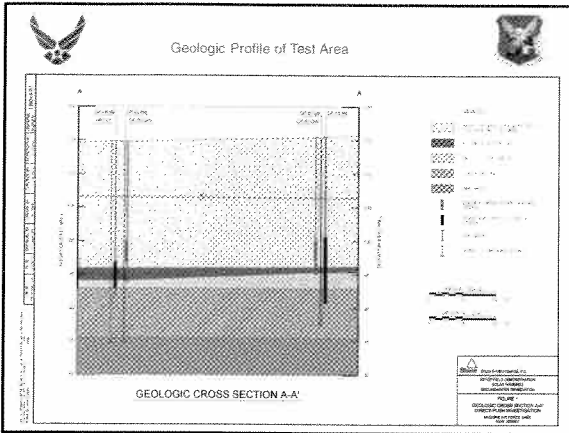
1. Performed initial field sampling for site selection
2. Selected appropriate demonstration site location
3. Performed initial hydrogeological characterization of test location
4. Collected samples for laboratory testing
5. Initiated laboratory microcosm testing
  - a. Demonstrated feasibility of bioremediation
  - b. Demonstrated role of H<sub>2</sub> and pH adjustment in cVOC biodegradation
6. Initiated proton reduction and pH model testing



Proton Reduction increases pH and produces H<sub>2</sub> that is used by TDE-degrading bacteria

**"WIN AS ONE"**





**Schedule**

Complete Draft Demonstration Plan	Mid March 2011
Complete System Design/Procurement	April/May 2011
System Installation	June 2011
System Start-up	July 2011
Tracer Testing	July/Aug. 2011
Performance Monitoring	September 2011

Questions?

BACK-UP SLIDES

