

**Former Williams Air Force Base (AFB)  
Restoration Advisory Board (RAB)  
Meeting Minutes**

May 19, 2009, 7:00 p.m.  
Highland High School  
4301 E. Guadalupe Rd.  
Gilbert, AZ

**Attendees:**

<b>Mr. William Lopp</b>	<b>Air Force Center for Engineering and the Environment (AFCEE)/Base Realignment and Closure (BRAC) Environmental Coordinator (BEC)/Air Force Co-Chair</b>
<b>Mr. Len Fuchs</b>	<b>RAB Community Co-Chair</b>
<b>Mr. Don Atkinson</b>	<b>Arizona Department of Environmental Quality (ADEQ)</b>
<b>Mr. Bob Peeples</b>	<b>ADEQ</b>
<b>Mr. Tom Zuppan</b>	<b>RAB Member</b>
<b>Mr. Jim Holt</b>	<b>RAB Member</b>
<b>Ms. Bev Selvage</b>	<b>RAB Member</b>
<b>Ms. Lisa Gerdl</b>	<b>RAB Member</b>
<b>Mr. Scott Bouchie</b>	<b>RAB Member/City of Mesa</b>
<b>Ms. Michele Crank</b>	<b>Gila River Indian Community</b>
<b>Mr. Jim Husbands</b>	<b>Booz Allen Hamilton</b>
<b>Ms. Amber Cargile</b>	<b>Cargile Communications, LLC</b>
<b>Mr. Jim Husbands</b>	<b>Booz Allen Hamilton</b>
<b>Mr. Jay Harbin</b>	<b>URS Corporation</b>
<b>Mr. Ed Mears</b>	<b>BEM Systems</b>
<b>Mr. John Mieher</b>	<b>BEM Systems</b>
<b>Mr. Eric Jacobs</b>	<b>BEM Systems</b>
<b>Ms. Bharvi Patel</b>	<b>BEM Systems</b>
<b>Mr. Surindar Singh Magoo</b>	<b>BEM Systems</b>

Mr. Fuchs called the meeting to order at 7:00 p.m., welcomed RAB members, and asked attendees to introduce themselves. The RAB approved the November 2008 and February 2009 meeting minutes. Mr. Lopp then began the main presentation, which included updates of cleanup activities at several remediation sites.

First, Mr. Lopp and Mr. Mears addressed remediation progress at site ST012, the former liquid fuels storage area. A pilot test of the thermal-enhanced extraction (TEE) system continues at the site through May and then a period of post-test cooling and monitoring will be conducted from May until August 2009. According to Mr. Lopp, 11.7 million pounds of steam were injected into site ST012 between October 2008 and April 2009. Additionally, since last August, 27 million gallons of water were treated; 11,330 gallons of fuel (as vapor) were destroyed in on-site oxidizers; 8,500 gallons of fuel were removed and recycled; and 376 gallons of dissolved petroleum hydrocarbons (in groundwater) were treated at the site.

Mr. Mears stated that after the pilot study is complete and the TEE cell cools, four different methods of sampling and analysis will be conducted at the site: passive flux meters (PFMs), groundwater monitoring, TEE cell coil sampling, and vapor sampling.

BEM Systems plans to use passive flux meters (PFMs) to test the site after the cooling period. PFMs can be thought of as balloons filled with carbon granules and water that are hung at specific depths in monitoring wells. Dissolved benzene is captured by the carbon as it moves through the PFMs. By injecting clean water into the center of the test cell, then deploying PFMs, BEM Systems can measure the concentration of dissolved contaminants that moves through a “window” in a specified period of time. The results will be compared to results of PFM testing prior to the start of the TEE pilot test.

Post steam injection groundwater monitoring at site ST012 will include weekly well sampling with a field gas chromatograph and monthly well sampling sent to a commercial laboratory for analysis. Samples from five soil borings will be taken from within the TEE cell and vapor samples will also be collected, according to Mr. Lopp.

Mr. Lopp and Mr. Mears also discussed soil vapor extraction (SVE) at site ST012. The purpose of the SVE system at the site is to reduce the length of time required for cleanup of groundwater. SVE removes sources of fuel contamination in deep soils that may continue to impact groundwater. By using SVE, the Air Force has a goal to cleanup the soils at the site to 5mg/kg or less of benzene and 2,000 mg/kg or less of total petroleum hydrocarbons (TPH). The Air Force has conducted SVE at the site since 1997. The initial SVE system was based on internal combustion engines that ran from 1997 to 2003. During that time, 375,000 gallons of TPH were removed at the site. The new SVE system, installed in 2005, is comprised of seven, three-well clusters that operate around the clock. Since installation, this system has removed 223,766 gallons of petroleum hydrocarbons.

Mr. Lopp said that the Air Force plans to expand the SVE system at site ST012. The expansion will be comprised of two new SVE well clusters on the Army Reserve center to the west of Site ST012 and underground piping to connect the new wells to the vapor treatment system. Several new groundwater monitoring wells will also be installed and will be discretely screened in the lower saturated zone and the upper water bearing zone in the late 2009.

In other environmental updates, Mr. Lopp and Mr. Harbin presented the annual groundwater sampling report for sites ST012 and LF004, the old base landfill. They also discussed the preliminary assessment for the Parcel N Debris Area.

Mr. Lopp said that the Air Force continues to conduct long-term monitoring at site ST012 as part of the Operable Unit 2 (OU-2) Record of Decision (ROD) and to complement the TEE pilot test. The most recent annual groundwater sampling was conducted in January 2009. Samples from 17 monitoring wells were collected and analyzed for the following contaminants: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), metals, and pesticides. The Air Force used the low flow (minimal drawdown) method of sampling at the wells.

During the January 2009 testing, the groundwater gradient at the site was calculated and remains east. The effects of groundwater extraction at the TEE test cell were apparent in the results. The rate at which groundwater is rising at the site appears to be decreasing with time. From 1995 to 2000, groundwater rose approximately four feet per year. From 2000 to 2008, it rose approximately three feet per year. From 2008 to 2009, groundwater rose approximately two feet per year.

Annual groundwater sampling in January 2009 yielded the following results:

- Six monitoring wells exceeded the maximum contaminant level (MCL) for benzene (5 micrograms/liter or  $\mu\text{g/l}$ ). (Benzene contours are shown on the map on slide 27 of the attached presentation)
- One monitoring well exceeded the MCL for ethylbenzene (700  $\mu\text{g/l}$ )
- Five monitoring wells exceeded action levels for naphthalene (28  $\mu\text{g/l}$ )
- One monitoring well exceeded the action level for bis (2-ethylhexyl) phthalate (6  $\mu\text{g/l}$ )
- Four samples exceeded action levels for nickel and/or chromium metals. However, the OU-2 ROD attributes detections of nickel and chromium to stainless steel materials in the wells themselves, not site contamination.

Groundwater sampling was also conducted at site LF004 in January 2009. Mr. Harbin said that URS Corporation sampled 20 monitoring wells at the site using passive diffusion bags (PDBs) and low-flow (minimal drawdown) sampling.

The groundwater gradient was calculated at LF004 and remains consistently to the east. Groundwater rise appears to be decreasing with time at this site as well. From 1995 to 2000, groundwater rose at site LF004 at a rate of approximately five feet per year. From 2000 to 2008, it rose at a rate of approximately 2.8 feet per year. Latest sampling shows that from 2008 to 2009, groundwater rose at a rate of approximately 2.5 feet per year. Based on the sampling results for trichloroethylene (TCE) and perchloroethylene (PCE), Mr. Harbin presented two diagrams showing a multi-plume interpretation of TCE and PCE distribution at the landfill. These diagrams are located on slides 35 and 37 of the attached presentation.

In other landfill news, Mr. Harbin said that URS Corporation inspected the landfill cap in November 2008. During this process, they filled erosion fissures on the landfill cap; removed vegetation, sediment and debris from trenches and grated drain outlets; repaired a breached fence; cleared the access road; removed vegetation from around monitoring wells; and regraded and stabilized the southern retaining wall on the site.

Next, Mr. Lopp and Mr. Harbin provided an environmental update regarding the Preliminary Assessment/Site Inspection (PA/SI) at the Parcel N Debris Area, which is located in the south-central portion of the former base, east of site LF004. As briefed at previous RAB meetings, the PA/SI was initiated after Air Force, ADEQ and URS personnel observed expended ruptured ammunition (.50-caliber cartridge casings) on the ground. There were two objectives of the PA/SI: First, identify any environmental releases requiring a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) response action; and second, to identify and clear any possible energetic munitions. The PA/SI work plan included a site inspection, geophysical survey and excavation of any detected anomalies, soil screening and sampling of suspect areas, and a PA/SI report.

Mr. Lopp said that approximately 130 subsurface anomalies were identified during the geophysical survey. They were mapped for future excavation and a security fence was erected around the site. The Air Force temporarily suspended work at the Parcel N Debris Area until the study area is expanded because some inert munitions related debris was found beyond the study area. The Air Force recommended expanding the study area and revising the Work Plan to

accommodate the additional work. The State and EPA agreed. Mr. Lopp noted that a new contract task order will be awarded in FY2009 for the expanded work.

Following the environmental portion of the meeting, Ms. Cargile provided RAB members with an update on the Community Involvement Plan (CIP). She said the Air Force received regulatory comments in February, incorporated those comments and the final CIP was published in March 2009. Since there were no action items from previous meetings, she asked attendees for suggested agenda items for the next RAB meeting. There were no suggested agenda items. However, one RAB member inquired about using economic stimulus funding to pay for cleanup efforts at Williams. Ms. Cargile said she would follow up with him by e-mail following the meeting.

Mr. Lopp adjourned the meeting at 9:10 p.m. The next Williams RAB meeting date is scheduled for Tuesday, August 25, 2009 at 7:00 p.m., at Highland High School.

Attachment:

May 19, 2009 RAB meeting Air Force slide presentation