

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

February 23, 2010, 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. Andre Chiaradia</b>	<b>ADEQ</b>
<b>Mr. Tom Zuppan</b>	<b>RAB Member</b>
<b>Mr. Jim Holt</b>	<b>RAB Member</b>
<b>Ms. Lisa Gerdl</b>	<b>RAB Member</b>
<b>Ms. Beverly Selvage</b>	<b>RAB Member</b>
<b>Mr. Scott Bouchie</b>	<b>RAB Member/City of Mesa</b>
<b>Mr. Lonnie Frost</b>	<b>RAB Member/Town of Gilbert</b>
<b>Mr. Dale Anderson</b>	<b>GRIC</b>
<b>Mr. Paul Cooper</b>	<b>Community Member</b>
<b>Mr. Jim Husbands</b>	<b>Booz Allen Hamilton</b>
<b>Ms. Amber Cargile</b>	<b>Cargile Communications, LLC</b>
<b>Mr. Jay Harbin</b>	<b>URS Corporation</b>
<b>Ms. Janet Workman</b>	<b>URS Corporation</b>
<b>Mr. Ed Mears</b>	<b>BEM Systems</b>
<b>Mr. Phil Schneider</b>	<b>BEM Systems</b>
<b>Ms. Teresa Harris</b>	<b>Tetra Tech</b>
<b>Ms. Laura McNamara</b>	<b>HydroGeologic, Inc.</b>

Mr. Fuchs called the meeting to order at 7:05 p.m., welcomed RAB members, and asked attendees to introduce themselves. After introductions Mr. Lopp announced he had accepted a position in the AFCEE Technology Directorate and would end his Williams AFB BEC role in April 2010. His replacement is slated to be Ms. Michelle Lewis, who has been supporting the Air Force Reserves. Ms. Lewis is scheduled to take over in April and will be assisted by Mr. Lopp during her transition into the BEC role. The RAB members then approved the November 2009 meeting minutes without changes. Mr. Lopp then reviewed Action Items from previous meetings; noting all open items would be addressed within the evening's presentations. Mr. Lopp began the main presentation, which included updates of cleanup activities at several remediation sites.

First, Mr. Lopp and Mr. Harbin addressed the status of groundwater sampling at site ST012, the former liquid fuels storage area. Mr. Lopp said the Record of Decision (ROD) for Operable Unit 2 (OU-2) requires annual long-term monitoring at the site. However, the Air Force has been conducting quarterly groundwater monitoring during the thermal enhanced extraction (TEE) pilot study using polyethylene diffusion bags (PDBs). Although not required, the Air Force chose to conduct this additional sampling in order to closely monitor the fuel plume during, and for a while

after, steam injection conducted under the TEE pilot study. Mr. Lopp said the Air Force collected samples from 11 sentry wells in February, May, and August 2009 and from 17 sentry wells in November 2009. The samples were collected at multiple depths in the aquifer and are analyzed for numerous constituents including benzene, toluene, ethylbenzene and xylene (BTEX).

Mr. Lopp and Mr. Harbin then discussed the specific sampling results at ST012. Mr. Harbin said the results have remained consistent at various depths. No constituents exceeded drinking water maximum contaminant levels (MCLs) at the 11 sentry well locations in the February, May, and August 2009 sampling rounds. However, several constituents were detected in the November 2009 sampling round at concentrations exceeding their respective action levels. Specific findings from the sampling are contained in the groundwater monitoring report, which is currently undergoing Air Force review, is scheduled to be submitted to the regulatory agencies in March.

Mr. Mears continued the ST012 discussion with a review of passive flux meters. PFMs were used before and after operation of the TEE pilot system to measure the effectiveness of TEE in removing contaminant mass. Mr. Holt asked how much contaminant mass was in the aquifer. Mr. Mears said the BCT is still evaluating the data; however, the actual volume may never be known. Mr. Mears then reviewed progress on the monitoring well replacement program ongoing at ST012. He noted nine monitoring wells were installed in December 2009/January 2010 with three additional monitoring wells planned for installation in March. Twelve monitoring wells are planned for abandonment by March. Mr. Holt asked where drinking water comes from in relation to the contamination. Mr. Mears answered that drinking water well screens are located approximately 600-1000 feet below ground surface; several hundred feet below the ST012 contamination zone. Mr. Mears closed the ST012 discussion with a review of the soil vapor extraction system performance metrics noting over 4.1 million pounds of petroleum hydrocarbons have been removed since cleanup began in 1997. Mr. Holt asked how many pounds are in a gallon of JP-4. Mr. Fuchs stated JP-4 has a density of approximately 6.7 pounds-per-gallon.

Next, Mr. Lopp and Mr. Harbin provided attendees an update on groundwater sampling at site ST035, the former Bldg. 760. Site ST035 is a former underground storage tank (UST) site located on the ASU Polytechnic campus. The Air Force conducts quarterly groundwater monitoring at eight monitoring wells at the site. All eight wells were replaced in 2007 and 2008. Sampling was conducted in May, August, and November/December 2009, with groundwater samples analyzed for BTEX, methyl-tert-butyl-ether (MTBE) and ethylene dibromide (EDB). EDB was an additive to prevent "engine knocking" during the era when all gas was leaded. Mr. Lopp said the November/December results were still being analyzed and the report is scheduled to be submitted to the regulatory agencies in March. Of note, benzene exceeds the ADEQ Tier 1 UST Cleanup Standard at six of eight wells sampled in 2009. These detections are located in groundwater 140 feet below ground surface with no receptors or pathways for human exposure.

Mr. Harbin added that five additional monitoring wells were installed at site ST035 in November 2009. These new monitoring wells were sampled in December 2009. Mr. Lopp noted that an additional monitoring well may be required even further east in order to delineate the leading edge of the benzene plume. He said that work on putting in the SVE system at the site continues, with an estimated start date of April. A SVE system evaluation report will be produced after six months of operation.

Mr. Bouchie asked what is being done about MTBE as the minutes indicate it is being handled differently from the other contaminants. Mr. Harbin answered that the MTBE plume mimics the BTEX plume and will be remediated by the SVE and air sparging systems just as the other contaminants. Mr. Harbin noted MTBE moves faster than other organic compounds and can be a

lead indicator of contamination at sites. Mr. Lopp agreed to provide a comprehensive presentation of groundwater sampling results for ST035 at the next RAB meeting.

Next, Mr. Lopp and Mr. Harbin presented an update regarding groundwater sampling at site LF004 (the old landfill). Groundwater is sampled semi-annually at the site. Inspections and maintenance of the landfill cap are conducted annually. The Air Force conducted groundwater sampling and annual landfill cap inspection and maintenance in November 2009. Twenty-one monitoring wells were sampled using PDBs for volatile organic compounds (VOCs). Sampling for natural attenuation parameters was also conducted for all wells using low-flow sampling techniques. Mr. Harbin said the only VOCs detected at LF004 wells were trichloroethylene (TCE) and tetrachloroethylene (PCE). There was no evidence of free-phase TCE or PCE (i.e., dense, non-aqueous phase liquids [DNAPLs]) at the bottom of the shallow aquifer.

The Air Force completed installation of 28 new monitoring wells in November and sampled them in December after conducting an aquifer step test and constant-rate pump test. Results of the monitoring well installation, sampling and aquifer testing will be presented in a report to be submitted in late Spring 2010. Mr. Holt asked for descriptions of the step test and constant-rate pump test. Mr. Harbin stated that in a step test, the well is pumped at successively greater rates over short periods of time until visible stress on the aquifer is observed. In the constant-rate test, the well is pumped over a 24-hour period at a specific rate. Aquifer response is observed in the pumped well as well as other observation wells. Together these tests provide valuable information about the aquifer (e.g., hydraulic conductivity and groundwater flow velocity).

Located next to the landfill, the Parcel N Debris Area is being investigated for ruptured .50-caliber cartridge casings that were observed on the ground. URS Corporation, on contract with the Air Force, is performing a Preliminary Assessment/Site Inspection (PA/SI) to determine if munitions-related activities or other disposal or burning activities warrant additional response actions under the Comprehensive Environmental Response, Compensation and Liability Act, or CERCLA, commonly referred to as the "Superfund Act". Fieldwork for the PA/SI began in January 2009. URS Corporation field workers found various inert munitions debris that appeared to be burnt. All of the debris was inert, but results suggested that the scope of the investigation should be expanded at the site. Mr. Lopp said the Air Force was currently reviewing the Site Inspection Work Plan and is working with the Army Corps of Engineers to obtain rights-of-entry to offsite properties. Fieldwork is scheduled to begin in May.

As the final environmental update of the evening, Ms. McNamara and Mr. Lopp discussed the Temporary Treatment Facility (TTF), which was used to treat dieldrin-contaminated soil from site SS017. All soil from the windrows and all pad material were removed in November 2007. Confirmation samples from under the windrows and pad showed four isolated areas, approximately 6-12" in soil depth, with dieldrin levels above Arizona Residential Soil Remediation Levels (RSRLs). Ms. McNamara said removal of the four isolated areas would be complete by the end of the week. She projected the completion report would be submitted for Air Force review in March.

Mr. Lopp provided a contracting update for FY2010 actions at Williams AFB. BEM Systems was contracted to install three new and abandon eight existing monitoring wells at ST012. BEM was also contracted to provide recommendations for optimizing the ST012 long-term monitoring (LTM) program and prepare the FY2011 groundwater monitoring work plan. URS Corporation was contracted to install nine new monitoring wells at LF004; provide recommendations for optimizing the LF004, SS017, and ST035 long-term monitoring (LTM) programs; and prepare FY2011 groundwater monitoring work plans for each site. URS was also contracted to complete the Record

of Decision for OU-6 and conduct LTM and system operations and maintenance for sites LF004, ST012, SS017, and ST035.

Mr. Lopp provided a property transfer update. Sites FT002, SS017 and Parcel N still await transfer. URS Corporation is removing vapor wells at site FT002. Mr. Lopp noted that transfer of Parcel N is not expected for a couple years because of the ongoing investigation. Mr. Lopp and Mr. Anderson agreed to schedule a meeting of Air Force and Gila River Indian Community representatives to discuss transfer of Parcel N.

Mr. Harbin then presented the attendees with a preview of an informational briefing he and Mr. Lopp will be presenting to the Association of State and Territorial Solid Waste Management Officials. The briefing, entitled Optimization of a Groundwater Monitoring Network (A Three-Dimensional Solution for a Three-Dimensional Problem), discusses the history and evolution of activities at LF004.

Ms. Cargile reviewed action items from the meeting, as follows:

1. Provide a comprehensive presentation of groundwater sampling results for ST035

There were no remaining action items from previous meetings. Ms Cargile asked attendees for suggested agenda items for the next RAB meeting. There were no suggested agenda items.

Mr. Lopp adjourned the meeting at 9:30 p.m. The next Williams RAB meeting date is scheduled for Tuesday, May 18, 2010 at 7:00 p.m., at Highland High School.

Attachment:  
February 23, 2010 RAB meeting slide presentation