

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

August 25, 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. Wayne Miller</b>	<b>ADEQ</b>
<b>Mr. Tom Zuppan</b>	<b>RAB Member</b>
<b>Mr. Jim Holt</b>	<b>RAB Member</b>
<b>Mr. Dennis Orr</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>Mr. Lonnie Frost</b>	<b>RAB Member/Town of Gilbert</b>
<b>Ms. Michele Crank</b>	<b>Gila River Indian Community (GRIC)</b>
<b>Mr. Dale Anderson</b>	<b>GRIC</b>
<b>Ms. Jean Humphries</b>	<b>Arizona State University (ASU) Polytechnic</b>
<b>Mr. Paul Cooper</b>	<b>Community Member</b>
<b>Mr. John Schroeder</b>	<b>Community Member</b>
<b>Mr. Charles Helms</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>Mr. Eric Jacobs</b>	<b>BEM Systems</b>
<b>Ms. Bharvi Patel</b>	<b>BEM Systems</b>
<b>Mr. Phil Whitmore</b>	<b>CH2M</b>
<b>Mr. James Elliot</b>	<b>TetraTech</b>
<b>Mr. Martin Sepulveda</b>	<b>Sepulveda Group</b>

Mr. Fuchs called the meeting to order at 7:05 p.m., welcomed RAB members, and asked attendees to introduce themselves. The RAB approved the November May 2009 meeting minutes, with one correction noted. Mr. Lopp began the main presentation, which included updates of cleanup activities at several remediation sites.

First, Mr. Lopp and Mr. Harbin addressed groundwater sampling status 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 also been conducting quarterly groundwater monitoring at 11 sentry wells during the thermal enhanced extraction (TEE) pilot test using polyethylene diffusion bags (PDBs). Mr. Lopp said that so far in 2009, the Air Force had collected samples in February, May and August. The samples were collected at multiple depths in the aquifer and are analyzed for benzene, toluene, ethylbenzene and xylene (BTEX). Mr. Lopp said that although not required, the Air Force chose to sample groundwater at ST012 quarterly to closely monitor the fuel plume during and for a while after steam injection conducted under the TEE pilot study. He added that the Air Force plans to sample 17 monitoring wells at the site in November during the ROD required annual sampling.

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 exceed drinking water maximum contaminant levels (MCLs) at the 11 sentry well locations. Mr. Holt asked why toluene has become non-detectable at the site. Mr. Harbin said that the reduction in toluene could be the result of the way the compound degrades.

Mr. Harbin said that the Air Force plans to replace abandoned “N-series” monitoring wells at site ST012 in Fiscal Year 2010. The old wells will be replaced with paired Upper Water-Bearing Zone and deeper “W-Series” monitoring wells. The Air Force will also abandon an unused injection well located west of site ST012 and 11 “N-Series” monitoring wells. Mr. Lopp added that the new wells will allow the Air Force to better determine the distribution of contaminants both horizontally and vertically at the site because the “N-Series” wells that are being replaced span more than one discrete zone. The new wells will provide a better vertical profile of contamination at site ST012.

Ms. Humphries asked whether well construction at site ST012 will impact the ASU biofuels project at the site. Mr. Lopp noted that he did not anticipate any impact and said that the Air Force would consult with ASU regarding the specific well locations to minimize any impact to ASU.

Next, Mr. Lopp discussed soil vapor extraction (SVE) at site ST012. He said that more than 700,000 gallons of total petroleum hydrocarbons (TPH) have been extracted and destroyed at site ST012 to date.<sup>1</sup> Mr. Holt asked whether the thermal oxidizer has done a better job of destroying the TPH than the old internal combustion system. Mr. Lopp said that there are more wells extracting vapors now. He also said that the heat in the area from the TEE pilot system may have liberated more TPH as well. A community member asked how much fuel is left at the site. Mr. Lopp said that one of the objectives of the TEE pilot fate and transport modeling is to estimate the volume of fuel remaining at the site.

Next, Mr. Lopp and Mr. Mears discussed the TEE pilot study at site ST012. Mr. Mears said that more than 31,000,000 gallons of groundwater were treated during the pilot study. From that, 128 gallons of benzene and 17,960 gallons of TPH were removed from the TEE cell between October 2008 and April 2009.

Mr. Zuppan pointed out that the May 2009 RAB meeting minutes seem to indicate that more fuel had been removed by the TEE system than reported in this meeting (as of 14 July 2009). The Air Force took an action to determine why inconsistent figures were presented and to report the findings at the next meeting of the RAB.

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<sup>1</sup> As of the drafting of this meeting summary and research into the action items for reconciling the estimates for quantities of contaminants destroyed at Site ST012, the Air Force has determined that approximately 562,000 total gallons of TPH has been destroyed by SVE at the site (not 700,000 gallons). The error tracks to a combination of an inconsistent calculation and to a data transcription error.

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. Quarterly sampling was conducted in May and August 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 August results were still being analyzed; he and Mr. Harbin discussed the May 2009 sampling results. Of note, benzene exceeds the ADEQ Tier 1 UST Cleanup Standard at five of eight sampled wells. These detections are located in groundwater 140 feet below ground surface with no receptors or pathways for human exposure.

Mr. Lopp added that five additional monitoring wells will be installed at site ST035 in late 2009, with the next round of quarterly sampling scheduled for November 2009. He said that work on putting in the SVE system at the site will begin in December 2009, with an SVE system evaluation report produced after six months of operation.

Mr. Holt asked why the MTBE appears to have moved southeast at the site instead of northeast, which seems to be the prevailing direction. Mr. Harbin said that MTBE moves faster than other organic compounds. He added that MTBE can sometimes be a lead indicator of contamination at sites. Mr. Lopp said that URS Corporation would be looking at trends at the site as it analyzes samples and will provide interpretative analyses in the annual report following sampling in November 2009.

Mr. Zuppan asked what is being used at site ST035 to control vapors from the SVE system. Mr. Harbin said a hybrid thermal oxidizer will burn the extracted vapors. As vapor concentrations become smaller over time, the system can switch to catalytic mode, which runs the vapors across a catalytic bed of constant temperature. Eventually, he said the levels should become low enough that the vapors can be absorbed by carbon. Mr. Lopp added that the thermal oxidizer will be operated for a six month period to run tests and calculate when those changes are likely to take place.

Mr. Zuppan asked how the groundwater will be treated. Mr. Lopp said the SVE system treats soils. He said the Air Force will be contracting an air sparging pilot system in Fiscal Year 2010 to see if that would help with groundwater instead of a traditional “pump and treat” system.

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 in May 2009, when 21 monitoring wells were sampled using PDBs for volatile organic compounds (VOCs). The sampling also analyzed natural attenuation indicators at all wells. 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 dense, non-aqueous phase liquids (DNAPLs) at the bottom of the shallow aquifer.

Mr. Lopp said the next steps at site LF004 are annual groundwater sampling in November 2009; annual landfill cap inspection and maintenance in November 2009; installation of 31 new monitoring wells to improve groundwater monitoring, beginning in October 2009; aquifer tests and bench scale treatability tests in December 2009; publication of the Remedial Investigation (RI) and Feasibility Study (FS) document in early 2010; and publication of Proposed Plan Amendment and Record of Decision Amendment, following the completion of the RI/FS. Mr. Lopp added that the

31 new monitoring wells will result in a major renovation of the sampling network at site LF004, providing a much more thorough “picture” of the site.

A community member asked whether previous studies ruled out the existence of perchlorates at site LF004. Mr. Lopp said that yes, they had ruled them out. Ms. Humphries asked whether any new well installation will impact the Kinder Morgan pipeline on the site. Mr. Harbin said it will not impact the pipeline. Ms. Humphries offered to share some of ASU’s archeological surveys from the site with the Air Force.

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 finalizing a contract with URS Corporation to complete the inspection.

As the final environmental update of the evening, Mr. Harbin and Mr. Lopp also 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). The Air Force is in the process of reviewing contract proposals to excavate and remove soil exceed RSRLs.

Mr. Lopp provided a property transfer update. Site SS016 was transferred in February 2009. Site SS017 and Parcel N still await transfer. URS Corporation is removing vapor wells at site FT002.

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

1. Brief the contaminant levels at ST012 after the annual report is published in February.
2. Determine why inconsistent amounts of contaminants removed were presented in the May and August 2009 briefing slides and report corrections at the next meeting of the RAB.

There were no 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 9:20 p.m. The next Williams RAB meeting date is scheduled for Tuesday, November 17, 2009 at 7:00 p.m., at Highland High School.

Attachment:  
August 25, 2009 RAB meeting slide presentation