

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

August 23, 2011, 7:00 p.m.  
Highland High School  
4301 E. Guadalupe Rd.  
Gilbert, AZ

**Attendees:**

<b>Ms. Michelle Lewis</b>	<b>Air Force Center for Engineering and the Environment (AFCEE)/Base Realignment and Closure (BRAC) Environmental Coordinator (BEC)/Air Force Co-Chair RAB Community Co-Chair</b>
<b>Mr. Len Fuchs</b>	<b>Arizona Department of Environmental Quality (ADEQ), Remedial Project Manager</b>
<b>Mr. Andre Chiaradia</b>	<b>ADEQ</b>
<b>Mr. Don Atkinson</b>	<b>RAB Member/Mesa</b>
<b>Ms. Beverly Selvage</b>	<b>RAB Member/Gila River Indian Community (GRIC)</b>
<b>Mr. Dale Anderson</b>	<b>RAB Member/Arizona State University (ASU) Polytechnic</b>
<b>Ms. Pat Tennant</b>	<b>RAB Member/ASU student</b>
<b>Mr. Matt Fesko</b>	<b>RAB Member/Phoenix-Mesa Gateway Airport</b>
<b>Mr. Dennis Orr</b>	<b>RAB Member/Power Ranch HOA</b>
<b>Mr. Alan Ruffalo</b>	<b>Town of Gilbert/Public Works</b>
<b>Mr. Lonnie Frost</b>	<b>RAB Member/Mesa</b>
<b>Mr. Tom Zuppan</b>	<b>Arizona Republic</b>
<b>Mr. Art Thomason</b>	<b>Cargile Communications, LLC</b>
<b>Ms. Amber Cargile</b>	<b>URS Corp</b>
<b>Mr. Jay Harbin</b>	<b>Booz Allen Hamilton</b>
<b>Mr. Charles Helms</b>	<b>BEM Systems</b>
<b>Mr. Jeff Schone</b>	<b>CH2M</b>
<b>Mr. Frank Skocypec</b>	<b>AMEC</b>
<b>Mr. Everett Wessner</b>	<b>AMEC</b>
<b>Mr. Ray Hendry</b>	<b>AMEC</b>
<b>Mr. Don Smallbeck</b>	<b>AMEC</b>

Mr. Fuchs called the meeting to order at 7:00 p.m. and RAB members and attendees introduced themselves. Mr. Fuchs introduced the RAB's Air Force Co-Chair, Ms. Michelle Lewis. The RAB approved the May 2011 meeting minutes without changes. Ms. Lewis began the main presentation with updates of major environmental remediation actions.

First, Ms. Lewis and Mr. Harbin provided a program update on the Parcel N Debris Area, which is also called Military Munitions Response Program (MMRP) Site XU403a. Mr. Harbin reviewed the timeline of the munitions debris discovery at the site, beginning with the discovery of .50-caliber unfired shells in October 2003, through the site's designation as an MMRP site, up through the current Phase 3 investigation at the site.

He said URS Corporation is conducting the Phase 3 investigation, which has included a visual surface clearance over the entire site that is aided with metal detectors. The investigation also includes a comprehensive grid-based geophysical survey covering the entire site. Any munitions

and explosives of concern (MEC) are identified, removed and disposed of in accordance to law. He said URS would write a technical report after the investigation and conduct follow-on sampling, in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), which is also known as the Superfund law. URS is monitoring and curating any artifacts discovered (such as Native American pottery shards) discovered during the investigation.

During excavation at the site, Mr. Harbin said workers discovered several steel drums, with a fuel odor emanating from one of the drums near the ground surface, as shown in the photos on slide 12 of the attached slide presentation. Workers used a photo-ionization detector and confirmed the presence of hydrocarbons in the drum (at concentrations of about 5 parts per million). After further excavation, they found burned .50-caliber shells, empty ammunition boxes, flares and other debris that indicate the area was used as a debris burn pit. Mr. Harbin said URS continues to investigate the area to determine the full extent of the debris pit.

In addition to the items described above, Mr. Harbin said workers also discovered two blasting caps and various pieces of solid rocket propellant that were turned over to the Mesa Police Department's bomb squad for disposal. Fourteen signal flares were also discovered at the site.

Mr. Anderson asked how many total drums were discovered. Mr. Harbin said six were found in the top layer and they are still digging to see if they find more. Mr. Anderson asked if it appears the debris burn pit was used regularly, or just one time. Mr. Harbin said it is hard to know.

Mr. Zuppan asked how the drums were burned and buried. Mr. Harbin said it is hard to tell, but the people burning the items could have put fuel in the drums, popped off some of the shells in the drums and then buried them.

Mr. Ruffalo asked if the drums contained aircraft fuel waste. Mr. Harbin said that it would be very doubtful, because the Air Force disposed of aircraft fuel elsewhere.

Mr. Zuppan asked what the CERCLA follow-up sampling would include. Mr. Harbin said they would test for volatile organic compounds such as benzene, toluene and xylene as well as semi-volatiles and metals. Mr. Zuppan asked if the rocket propellants contained perchlorates. Mr. Harbin said that perchlorates are a solid booster fuel and are more of an issue if they are in groundwater, not soil. He said the likelihood of a solid perchlorate reaching groundwater 160 feet below ground at the site is very unlikely.

Next, Michelle Lewis introduced three consultants from AMEC Corporation: Everett Wessner, Don Smallbeck and Ray Hendry. She said AMEC has been chosen as the new performance-based remediation (PBR) contractor for the former Williams AFB. She said that the Assistant Secretary of the Air Force for Installations, Environment and Logistics, Mr. Terry Yonkers, has directed all Air Force remediation sites be placed on PBR contracts in order to enhance continuity, speed cleanup and reduce life cycle costs. She said Williams has been a great cleanup success story—the program began with 39 sites and all but the six remaining sites have been cleaned and transferred for reuse. The PBR contract will address the remaining sites and bring the base closer to de-listing from the National Priority List (NPL).

Mr. Hendry provided RAB members with an overview of AMEC and its experience relevant to the work at Williams. He said AMEC has experience closing sites in Arizona, including Camp

Navajo in Flagstaff and 30 years of work with ADEQ on its underground storage tank (UST) program. He said AMEC also has successfully used In-Well Air Stripping (IWAS) systems to clean up and close sites across the U.S. This treatment system is proposed for cleaning up the old landfill (site LF004) and the former base gas station (site ST035). He said AMEC's key team member, Terra Therm, also provided peer review on the thermal-enhanced extraction (TEE) pilot project at site ST012 and so they plan to leverage lessons learned as they clean that site. Mr. Hendry said AMEC has experience cleaning and closing large, complex sites similar to Williams.

Next, Mr. Hendry discussed AMEC's plans for Williams under the PBR contract. He said of the six remaining sites requiring cleanup at Williams, they intend to achieve unrestricted site closure for four sites (meaning there will be no development restrictions placed on the land) and two sites with a goal of "optimized exit strategy", which is essentially accelerated cleanup. He said the period of performance of the contract is nine years, and they plan to have the last remedy in place by the end of fiscal year 2014.

Mr. Fesko asked if the contract requires them to have the last remedy in place by that time. Mr. Hendry said yes, the contract requires the last remedy to be in place by September 30, 2014.

Mr. Ruffalo asked if AMEC is the new anticipated contractor. Mr. Hendry said yes. Ms. Lewis said that AMEC has been selected for the PBR contract award.

In addition to the sites mentioned above, Mr. Smallbeck said one of the PBR contract goals is to have the 50 sites that are already cleaned up and closed de-listed from the NPL. Currently, Williams AFB is deemed a Superfund site on the NPL from "fence to fence", meaning the entire base. However, more than 95% of the base is clean and transferred, and the Air Force would like EPA to remove those 50 clean and closed sites from the NPL in order to lift the "Superfund stigma" from those sites.

Mr. Smallbeck next provided an overview of plans for each of the six cleanup sites under the PBR contract.

***Site FT002—the former fire protection training area***

Site FT002 is the former fire protection area that was operated from 1958 to 1991. Soils at the site are contaminated with benzene, chloroform and 1-4 dichlorobenzene. There is no evidence of groundwater impact. The Air Force plans to collect verification samples for soil and soil gas and conduct a risk-based closure report, ultimately resulting in a record of decision (ROD) for the site requiring no further action due to low risk at the site. This would lead to an unrestricted site closure by 2013.

Mr. Skocypec asked if unrestricted use means the site will be cleaned to residential levels. Mr. Smallbeck said, yes, they would clean the site to unrestricted use and verify there are no soil vapor concentrations impacting use of the site.

Mr. Ruffalo said his brother works in defense and says that when the military leaves, they have to leave the site as if they were never there. Mr. Smallbeck said that this is a vacant site with no infrastructure. Mr. Hendry said that unrestricted site closure means it is cleaned to the point that it is safe for any type of reuse. Mr. Chiaradia said that there is a deed restriction on the property

now but that it would be removed once cleaned. The plan is to transfer the property to the Phoenix Mesa Gateway Airport.

Mr. Zuppan asked if non-restricted site closure was being based on soil remediation standards or a risk-based standard. Mr. Chiaradia said one or the other would be used to clean the site to residential standards.

The RAB took an action item to provide information on the treatability and risk evaluation done for site FT002.

***Site LF004—the old base landfill***

Next, Mr. Smallbeck discussed the former base landfill, which was closed in 1976. Groundwater at the site is contaminated with trichloroethylene (TCE) and perchloroethylene (PCE). The Air Force plans to complete a feasibility study (FS), issue a proposed plan for the site with accompanying public comment period, and then issue a record of decision (ROD), which will be the legally binding document that specifies the remedy for the site.

AMEC plans to perform a pilot study to test performance of an IWAS system on the site before implementing the system full scale. AMEC anticipate installing 14 IWAS wells on the site in order to treat the on-site plume and cut off any potential off-site plume migration. Soil gas hot spots will also be cleaned by the IWAS system. The goal is to meet state and federal regulatory requirements for groundwater cleanup. Slide 27 of the attached slide presentation shows how an IWAS well operates.

Mr. Smallbeck said that URS is on contract to install and test some additional wells which may help to further define the current plume boundary. He said the theory is that groundwater is rising across the East Valley, which has reached TCE and PCE that was in soil at the landfill. He said concentrations are not high, 20-120 parts per billion, which is not indicative of a large source.

Mr. Ruffalo asked if this was a managed landfill with rock. Mr. Smallbeck said yes, it was the base solid waste landfill with rock cover. Mr. Ruffalo asked if there were any records kept for the landfill. Mr. Smallbeck said some records were kept. Mr. Ruffalo asked if any toxic waste was disposed in the landfill. Mr. Smallbeck said that the records indicate mostly debris was disposed in the landfill. Mr. Ruffalo asked if the TCE and PCE plume is moving west. Mr. Smallbeck said it is moving east. Mr. Ruffalo asked if that means it is moving away from Power Ranch subdivision. Mr. Smallbeck said yes.

Mr. Ruffalo asked how it would work to drill into caliche. Mr. Smallbeck said they would not be drilling, they will be installing wells in situ—in place—below the surface of the ground. They will only be putting in borings, not digging large volumes.

Mr. Zuppan asked if the soil gas would be directly discharged or treated. Mr. Smallbeck said it would be treated. He said the wells would be placed in the heart of the plume and around the edge. The idea is to target the high concentrations in the source area while also removing soil gas in the upper level of soil.

Mr. Fesko asked if any solid objects that might be the source have been removed from the landfill. Mr. Smallbeck said that they have narrowed down the likely source area but not a

specific source. Mr. Fesko asked if there are monitoring wells at the landfill. Ms. Lewis said there are lots of monitoring wells and lots of sampling has been done at the landfill over the past several years.

Mr. Zuppan asked if the Air Force has any idea of the quantity of the source—for example, could five gallons have done this? Mr. Smallbeck said that yes, the concentrations are so low that it would not have taken much to cause it.

Mr. Zuppan asked what size the IWAS wells are. Mr. Smallbeck said the wells are six inches in diameter. Mr. Zuppan asked if these wells have been tried in Arizona. Mr. Chiaradia said they have not been tried in Arizona previously, so ADEQ is very interested to see how the pilot study performs. Mr. Zuppan asked if hard water is an issue. Mr. Smallbeck said it is an issue but they have scaled the IWAS system at sites in other states to account for hard water.

Mr. Fesko asked what the range of concentrations was at other sites where IWAS was used. Mr. Smallbeck said TCE and PCE in the 2-4,000 parts per billion range, much higher concentrations than the 150 parts per billion found at the landfill.

Mr. Ruffalo asked if these disposal methods that happened between World War II and the 1970s were to happen now, if they would be considered felonies. Mr. Chiaradia said that a person could be charged under environmental compliance regulations today for solid waste disposal violations. Mr. Ruffalo said Power Ranch Homeowners Association has developed guiding statements about waste disposal because of what they've learned from the Williams project. Mr. Chiaradia noted that residential and industrial wastes have different disposal standards.

The remedial objective for site LF004 under the PBR is an optimized exit strategy, which means accelerated cleanup and closure, with some possible use restrictions.

### ***Site ST035—former base gas station***

Mr. Smallbeck said that contaminants in soils at the former base gas station (also known as Building 760) are currently being treated by a soil vapor extraction (SVE) system. (RAB members were given a tour of this site in October 2010.) AMEC intends to take over the SVE system from URS Corporation (currently operating the system) in January 2012 and conduct a supplemental investigation of groundwater at the site to determine the extent and concentrations of groundwater contamination. AMEC plans to use an IWAS system to treat groundwater at the site. He said that this site is not part of the Superfund, but will be cleaned and closed under Arizona's UST cleanup rules. He said that the Air Force and AMEC will continue to work closely with ASU in order to be good neighbors on the site. The PBR remediation goal for site ST035 is unrestricted reuse by 2015.

### ***Former UST 114***

This former UST site is located near the flightline and is also part of the Arizona UST program. Mr. Smallbeck said the UST was removed in 1993 but that closure paperwork was never finalized. In 2008, ADEQ indicated that they would not grant site closure without additional site investigation. Mr. Smallbeck said AMEC intends to meet with ADEQ and determine the state's soil sampling requirements, collect the samples and then, based on the sample results,

close the site under the state's UST cleanup rules. The remediation goal under the PBR is unrestricted site closure by 2012.

***Site ST012—the former liquid fuels storage area***

The former liquid fuels storage area was operated from 1942 until 1990. It is estimated that one to two million gallons of jet fuel was released, impacting soil and groundwater. Contaminants at the site are benzene and petroleum hydrocarbons. Like at other sites, groundwater at site ST012 is rising. The current water table is at 158 feet below ground surface, up from 245 feet below ground surface in 1978. Mr. Smallbeck said that the shallow soils at the site were remediated with SVE and a thermal-enhanced extraction (TEE) pilot study was conducted at the site. The TEE pilot study removed approximately 100,000 pounds of petroleum hydrocarbons.

Mr. Smallbeck says that AMEC intends to utilize TEE as part of a multi-tiered remediation approach at site ST012 that also includes SVE of soils, multiphase extraction, thermally-enhanced bioremediation outside the treatment zone, and monitored natural attenuation for any groundwater residuals. The cleanup objective for site ST012 is optimized exit strategy, which means accelerated cleanup. The site was previously transferred to Phoenix-Mesa Gateway Airport for future industrial reuse.

Mr. Ruffalo asked if using steam moves the contamination. Mr. Smallbeck said they will use multiphase wells that will minimize migration. This technique is known as “huff and puff” and is designed to keep the contamination on site. Mr. Ruffalo stated that it sounds like there is a nil chance that this could impact a water well a mile away that is 800 to 1000 feet below ground. Mr. Smallbeck agreed and said the contamination has not moved outside the site boundary. Mr. Orr asked what well is located one mile from site ST012. Mr. Ruffalo said there is a well at the corner of Power Rd. and Germann Rd. Mr. Smallbeck added that the groundwater at site ST012 is around 200', which is nowhere near as deep as the well Mr. Ruffalo described.

Mr. Zuppan asked if clean groundwater is put back into the earth as steam or if water will be discharged into the sanitary sewer system. Mr. Smallbeck said some water will be reused and some will be discharged under permit.

***Site SS017—the former paint and pesticide shop***

Site SS017, the former paint and pesticide shop site, located under the ASU water tower, had some soils contaminated with the pesticide dieldrin. An emergency response action removed contaminated soil to a maximum depth of four meters and replaced it with clean fill. Contaminated soil below four meters may still be present. One groundwater well on the site has historically screened with small detections of dieldrin. The Air Force will be issuing a proposed plan for the site in September. Plans under the PBR contract include annual groundwater monitoring and institutional controls to ensure protectiveness of human health and the environment, both of which can be terminated if it is demonstrated that the site no longer poses a potential risk. The Air Force intends to transfer the property to ASU once a ROD is in place. The PBR remediation goal for site SS017 is unrestricted site closure by 2016.

Next, Mr. Smallbeck said that six sites have remedies in place and require no further action. These sites will be evaluated under the Five Year Review that is required by CERCLA. That review will determine whether the remedies at the sites remain protective of human health and

the environment. These sites are: SS016 (former electroplating/chemical cleaning shop), SS019 (former skeet range), SS020 (former firing range), SS021 (facilities 1020 and 1021 and surrounding areas), SS024 (building 1010) and DP028 (sewage sludge trenches).

Ms. Lewis provided RAB members with a property transfer update. To date, 3,902 acres have been transferred at Williams. Three sites remain: site SS017, site FT002 and Parcel N, which includes the MMRP site and site LF004.

Ms. Lewis said she will be meeting with the GRIC on Aug. 24 to discuss the future transfer of Parcel N to the Bureau of Indian Affairs and then to GRIC. Ms. Tennant asked when site SS017 will be transferred to ASU. Ms. Lewis said the Air Force cannot transfer to the Department of Education until there is a ROD for the site. The proposed plan that will be published in September for OU-6, which includes site SS017, is the first step. Once the proposed plan is published and public comments received, the Air Force can develop a ROD and move closer to property transfer.

That concluded the information portion of the evening. Ms. Cargile noted one action item taken during the meeting, to provide information on the treatability and risk evaluation done for site FT002. No other topics were suggested for the next meeting. Ms. Lewis thanked the RAB for attending. Mr. Fuchs adjourned the meeting at 8:30 p.m. The next Williams RAB meeting date is scheduled for Tuesday, Nov. 15, 2011 at 7:00 p.m., at Highland High School.

Attachments:

Aug 2011 RAB meeting slide presentation