



WILLIAMS AFB ARIZONA

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 301216



DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER

AFCEC/CIBW
706 Brooks Road
Rome, NY 13441

5 May 2014

Ms. Carolyn d'Almeida
U.S. EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

and

Mr. Wayne Miller, P.E., R.G.
Arizona Department of Environmental Quality
1110 West Washington Street, 4415B-1
Phoenix, Arizona 85007

Subject: Submission of "Meeting Minutes: Restoration Advisory Board Meeting, 17 September 2013, Former Williams Air Force Base, Mesa, Arizona"

The Air Force is pleased to submit the attached record of the Restoration Advisory Board Meeting held on 17 September 2013, at the Arizona State University Polytechnic Campus (Peralta Hall #132) in Mesa, Arizona. These minutes were approved by the RAB in the March 25, 2014 meeting. Included with the minutes are the attendee list and presentations slides.

Please contact me at (315) 356-0810 or catherine.jerrard@us.af.mil if you have any questions regarding this submittal.

Sincerely,

A handwritten signature in black ink, appearing to read "Catherine Jerrard", is positioned above the typed name.

CATHERINE JERRARD, PE
BRAC Environmental Coordinator

Attachment:

1. Meeting Minutes: Restoration Advisory Board Meeting, 17 September 2013, Former Williams Air Force Base, Mesa, Arizona
 2. 17 September 2013 RAB meeting attendee list (redacted)
 3. 17 September 2013 RAB presentation slides
 4. 17 September 2013 RAB distribution list
- c:
- ADEQ - Wayne Miller (2 and 1 CD)
 - Administrative Record – Terie Glaspey (1 and 1 CD)
 - AFCEC –Catherine Jerrard (1 and 1 CD)
 - ASU Libraries – Dan Stanton (1 and 1CD)
 - CNTS – Geoff Watkin (1 and 1 CD)
 - TechLaw – Bill Mabey (1 and 1 CD)
 - TechLaw – Michael Anderson (1 and 1 CD)
 - USEPA – Carolyn d’Almeida (1 and 1 CD)
 - USEPA – Eva Davis (1 and 1 CD)
 - UXOPro – Steve Willis (1 CD)
 - RAB Distribution List (via email transmittal)
 - File

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

**September 17, 2013, 7 p.m.
Arizona State University Polytechnic Campus
Peralta Hall #132
7171 E. Sonoran Arroyo Mall
Mesa, AZ**

Attendees:

<i>Name</i>	<i>Organization</i>
Ms. Cathy Jerrard	Air Force Civil Engineer Center (AFCEC) /Base Realignment and Closure (BRAC) Environmental Coordinator (BEC)/Air Force Co-chair
Mr. Len Fuchs	RAB Community Co-chair/Gilbert resident
Mr. Scott Johnston	Sytsma Group, Public Affairs support contractor
Mr. Wojciech Betlej	AFCEC, Public Affairs
Mr. Geoff Watkin	Cherokee Nation Government Solutions, AFCEC technical support contractor
Mr. Everett Wessner	AMEC, AFCEC remediation contractor
Mr. Don Smallbeck	AMEC, AFCEC remediation contractor
Ms. Carolyn d'Almeida	RAB member/U.S. Environmental Protection Agency (USEPA), Region 9, Project Manager
Mr. Bill Mabey	TechLaw, USEPA technical support contractor
Mr. Neil Feist	HydroGeoLogic, Inc.
Ms. Kimberly Vaughn	HydroGeoLogic, Inc.
Mr. Dennis Orr	RAB member/Phoenix/Mesa Gateway Airport
Mr. Steven Hunter	Arizona State University
Ms. Delfina Olivarez	Arizona Department of Environmental Quality (ADEQ)
Ms. Stephanie Olivarez	Arizona State University student
Ms. Beverly Salvage	RAB member/Mesa resident
Mr. Dale Anderson	RAB member/Gila River Indian Community
Mr. Matt Fesko	RAB member/ASU student
Mr. Wayne Miller	Arizona Department of Environmental Quality (ADEQ)

Mr. Len Fuchs called the meeting to order at 7 p.m. and asked the attendees to introduce themselves and reminded everyone to please provide their contact information on the sign in sheet (Attachment 1). Mr. Fuchs tabled approval of the RAB minutes.

The May RAB minutes were approved by consent via email correspondence with RAB members Nov.

5-12, 2013.

Ms. Cathy Jerrard provided a brief introduction and turned the presentation over to Mr. Everett Wessner.

Status Updates for ST035, ST012, FT002, SS017, and LF004

Mr. Wessner presented updates for each site, see attached slides (Attachment 2) for more information. RAB and community discussions for each site are presented below.

ST035, Former Base Gasoline Station Building 760

Mr. Wessner summarized the slides presenting the site background, contaminants, and cleanup methods in place. Soil vapor extraction (SVE) continues to remove fuel contaminants from the soil and groundwater and groundwater monitoring is ongoing. Cleanup at the site is regulated by the ADEQ and the goal is to achieve site closure under the State Leaking Underground Storage Tank (LUST) regulations.

Groundwater flow continues on a due east trajectory with a slight southern component. There are 19 groundwater monitoring wells that were sampled in May 2013. Benzene was detected in 6 wells during the May event in contrast to 11 wells in the previous sampling event (February). No wells containing benzene detections exceed the action criteria.

1, 2 Dichloroethane (1, 2 DCA) was detected in 8 wells in contrast to the 11 wells in February. Five of the eight wells contain 1,2 DCA above the Tier 1 standard. In coordination with ADEQ, an additional downgradient well was installed in August 2013 to delineate the downgradient portion of DCA plume.

No wells exceeded the cleanup criteria for Methyl tertiary butyl ether (MTBE) in the May quarterly groundwater sampling event. The SVE system has removed 553 gallons of total petroleum hydrocarbons (TPH) from April through June compared to 596 from January through March. Six of the 15 SVE wells are operational. The next performance sampling is scheduled for November 2013.

The SVE system will continue to operate and rebound testing will be conducted in October to assess the level of remaining residual contamination in the subsurface and if cleanup levels have been achieved. In areas where soil cleanup levels have not been attained, an estimate of the time required to reach the cleanup levels will be determined.

The extent of 1,2-DCA and MTBE in groundwater will be evaluated following receipt of results from the new downgradient monitoring well. Quarterly groundwater sampling will continue.

Questions asked during ST035 presentation:

Mr. Anderson asked if the two plumes being shown imply that there are two different sources of contamination. Mr. Wessner responded that historically there has been one plume emanating from the original source area but as areas in the center of the plume clean up, the plume will bifurcate into two smaller plumes.

ST012, Former Liquid Fuels Storage Operation

Mr. Wessner summarized the slides presenting the site background, contaminants, cleanup methods in place, and the path forward. The primary soil contaminants for the site are petroleum hydrocarbons which

includes benzene. The deep vadose zone, which is defined as greater than 25 feet below ground surface (bgs), is currently being treated with an SVE system.

The 1992 OU-2 Record of Decision (ROD) pump-and-treat remedy was ineffective in cleaning the groundwater. A pilot test for steam enhanced extraction technology was conducted and led to a Focused Feasibility Study in November 2012. An Amended Proposed Plan public meeting was held in April and presented steam enhanced extraction (SEE) and enhanced bioremediation as the preferred remedy for the groundwater problem. Currently there are no human health exposure pathways to contaminants at the site.

Mr. Wessner summarized the operation of the onsite containment system. Containment is achieved by extracting and treating groundwater using some of the existing wells. The containment system is focused on the lower saturated zone. The system operated for 18 months and was shut down on July 30 2013 after extracting and treating a total of 14.1 million gallons of groundwater. Contaminants removed through June 2013 included 262 pounds of benzene, 145 pounds of toluene, 38.3 pounds of ethylbenzene and 87.3 pounds of total xylenes. Containment operations were shut down on to prepare the site for full scale remediation.

The SVE system was 96.9 percent operational from April through June 2013 and removed 3,790 gallons of TPH from the subsurface. It will continue to run until implementation of the groundwater remedy and will be incorporated into the remedy. Currently 9 of the 27 SVE wells are operating. The quarterly removal rate has remained stable with 270,600 gallons of TPH having been removed from the vadose zone to date. The next system monitoring is scheduled for November 2013.

Mr. Wessner also presented information for the groundwater remedy for ST012 which included SEE and bioremediation, a SEE design update, the remedial design/remedial action (RD/RA) work plan and preliminary implementation schedule. See attached slides (Attachment 2) for more information.

Questions asked during ST012 presentation:

Mr. Fesko asked if TerraTherm will be involved in the remedy project at ST012. Mr. Wessner responded that TerraTherm is integral to the process and will be working side by side with AMEC on the design and implementation.

Mr. Fesko asked how many extraction wells will there be. Mr. Smallbeck responded that there are approximately 51 total extraction wells.

Mr. Orr asked if outside air temperature or ground temperature will affect the temperature of the steam and if the temperature of the steam could be adjusted because it does drop below freezing here. Mr. Smallbeck responded that low ambient temperatures will not affect the steam injection process. Soil has a great capacity to hold heat; therefore, when injecting steam into the soil, the ambient temperature plays no role in changing what happens beneath the surface. The goal is to heat up the subsurface to 100 degree Celsius. Mr. Watkin added that heat loss from the boiler to the injection points is going to be minimal.

Dale Anderson stated that he is skeptical that there is no pathway for human exposure, even without the steam issue. He asked how they were able to rule out vapor intrusion. Are there no buildings in the area? Mr. Wessner responded that currently there are no buildings on the site.

Mr. Anderson stated his major concern is nearby buildings. He said that for decades radon was not recognized as an issue and TCA and TCE vapor intrusion was never recognized in the neighborhoods in

Phoenix and Scottsdale. He said it took a long time to convince people to do the testing. You find when the testing is actually done, instead of modeling and estimations, different results are found. If there are any buildings in the area it would be a good idea to do vapor intrusion testing.

Regarding the steam issue, Mr. Anderson said you're acknowledging that there are pathways because certain areas are being evacuated. It doesn't sound very congruent. Mr. Wessner responded that there is a buffer zone established for the locations where steam is injected which is a safety issue. The steam injection is accomplished under pressure, which will be monitored throughout the injection process.

Mr. Anderson asked how it is being contained. Mr. Smallbeck responded it is contained by multiphase extraction wells surrounding the steam injection points which will pull the steam towards them. Mr. Smallbeck also indicated that there will be numerous monitoring probes at the site. Mr. Anderson asked what kind of monitoring probes will be used. Mr. Smallbeck responded they are temperature monitoring probes that will be able to assess if the steam is leaving the site.

Mr. Anderson asked if there would be anything independent for the vapors of interest. Mr. Smallbeck responded that the vapors would be collected in the multiphase extraction wells, which collect vapors as well as water. Mr. Anderson added that he is a big believer in actual testing. Mr. Smallbeck said actual testing is done. Mr. Anderson added that if there are some surrounding points that might be of concern it is standard environmental practice to run some tests before, during and after to prove that there was no vapor release. He said that otherwise it is just a leap of faith, and based on what we are learning from radon, TCA and TCE, vapors go everywhere, and they don't have 100 percent containment. He recommended the AF be aware and take precautionary measures.

Mr. Watkin added that when considering pathways, it is important to note that there was a shallow soil remedy that addressed zero to 25 feet. That portion has achieved cleanup levels. There is ongoing SVE for soil deeper than 25 feet. The SVE provides a negative pressure which prevents the movement of vapor offsite. Restrictions on the property prohibit residential use and any installation of wells. Restrictions also require that any excavation on the property has to comply with soil management requirements. The restrictions are in place to eliminate pathways that could exist while the site is contaminated. Mr. Anderson suggested that those caveats be added in a document that basically says no pathways. He said that to him, it is really insulting to the public.

Mr. Fesko asked on slide 38 it says the EBR design will consist of injection and recirculation within a treatment zone. What injection and recirculation is that referring to?

Mr. Smallbeck responded that it is part of the enhanced bioremediation process. Naturally occurring organisms in the soil and groundwater have the ability to degrade the hydrocarbons. The reason they don't degrade them all is because they are limited in some fashion. After the SEE is done, there will be a period of time when that soil will remain heated which will increase the biological activity and aid in the degradation of the remaining residual hydrocarbons. In the areas on the perimeter with levels of residuals are higher than the target levels, a network of extraction and injection wells will be established to create a closed loop treatment system. Oxygen and nutrients are injected into groundwater, the groundwater moves through the soil and is extracted at another location, treated, and returned to the injection well. Creating this closed loop stimulates the microorganisms to degrade the residual contaminants in soil and groundwater. Mr. Smallbeck said whether it's a three-point injection/extraction system or a five-point system will depend on level and orientation of the residual contamination that requires treated.

Mr. Fesko asked if the nutrients injected are oxygen, nitrogen, and phosphorus. Mr. Smallbeck responded that the most common nutrients are nitrogen phosphorus. Oxygen is an electron acceptor which is necessary to degrade the hydrocarbons. Mr. Smallbeck indicated that there are a number of methods to add the oxygen to the groundwater.

Ms. Olivarez asked how the steam will be generated. Mr. Wessner responded the steam will be generated using large boilers powered by natural gas. Mr. Smallbeck added that in the design there is a sustainability component as well. Natural gas will be used initially to produce the steam. Because there is a lot of potential fuel in the subsurface to be extracted, it will be used to produce steam as the project progresses. The boilers are designed to operate on natural gas or the fuel that will be pulled from the ground. This will minimize the carbon footprint as much as possible.

Ms. Olivarez asked if the steam is treated in the vapor treatment or the knockout pot. Mr. Wessner responded the steam comes in and cooled down. The water drops out and is treated. Then there is an air phase that will be treated. Ms. Olivarez asked how much vapor will come out at the end of the process. Mr. Smallbeck responded that there will be at least a couple vapor systems and each one will treat at least 1,000 cubic feet per minute.

Ms. Olivarez asked if the vapor could be recaptured. Mr. Smallbeck said recapture was looked at as part of the sustainability, but it the cost/benefit of using the vapors as fuel was not viable. Most of the fuel will be removed as a free product versus vapor, so the heat advantage is to burn the fuel. Vapor will be treated through an oxidizer then emitted to the atmosphere. Ms. Olivarez asked if it would be emitted under an emissions permit. Mr. Smallbeck responded that the emissions would meet the requirements of Maricopa County. Mr. Watkin stated that a permit is not required. Mr. Smallbeck added that because it's a CERCLA site, but the requirements of a permit do have to be met but it is not required to go through the process of actually acquiring a permit.

Mr. Fesko asked how much the SEE treatment program would cost. Mr. Smallbeck responded that the cost estimates are available in the ST012 Focused Feasibility Study. Ms. Olivarez asked if the Focused Feasibility Study has been submitted to the state. Mr. Smallbeck responded that it has been submitted and approved by USEPA and ADEQ. The document can be found in the Administrative Record and/or at the Arizona State University library.

FT002 Former Fire Training Area No. 2

Mr. Wessner stated soil contamination is the issue at this site and the contaminants of concern (COCs) are benzene, chloroform, and 1,4-dichlorobenzene (1,4 DCB). There is no evidence that the site soil contamination has impacted groundwater. The 1996 OU3 ROD included a bioventing remedy for this soil site. However, confirmation sampling indicated the soil cleanup goals were not achieved. There is currently a Declaration of Environmental Use Restriction (DEUR) to prohibit residential use on the site because the soil cleanup goals were not met. The DEUR also requires applicable soil management procedures for excavations below 5 feet.

AMEC conducted confirmation soil and soil gas sampling in January. Additional sampling was completed in June and data evaluation is on-going.

Questions asked during FT002 presentation:

There were none.

SS017, Former Pesticide/Paint Shop

Mr. Wessner provided background and a status update for SS017. SS017 is the old pesticide/paint shop and the chemical of concern is dieldrin in both the soil and groundwater. There was a removal action in 2000 in which soil contaminated with dieldrin was excavated and removed from the site. AMEC continues to monitor the groundwater to evaluate the presence of dieldrin. There are levels of dieldrin in some wells that intermittently exceed screening levels but there is no maximum contaminant level (MCL) for dieldrin in groundwater. An updated risk evaluation is currently under regulatory review. The outcome of the risk evaluation will determine the path forward for this site. Annual sampling was performed in August 2013 and those results will be presented at the next RAB meeting.

Questions asked during SS017 presentation:

There were none.

LF004, Former Solid Waste Landfill

Mr. Wessner provided background and a status update for LF004. The OU-1 ROD dealt with soil contaminants at LF004, including dieldrin and beryllium in surface soil, and the remedy, a permeable cap, was successfully implemented. The groundwater has risen and as a result, groundwater impacts have been identified by ongoing groundwater sampling events. The COCs for groundwater are perchloroethylene (PCE) and trichloroethylene (TCE).

No public comments were received on the LF004 Proposed Plan. The Proposed Remedy is In-Well Air Stripping, Oxidation and Soil Vapor Extraction. A draft of the ROD Amendment is currently under review by the USEPA and ADEQ.

A total of 54 wells at the site monitor groundwater in three zones, shallow, middle and deep. TCE and PCE are the only contaminants above EPA MCLs and Arizona Aquifer Water Quality Standards of 5 micrograms per liter. TCE was found to be greater than the action levels in 13 wells and PCE greater than the action level in 15 wells.

Groundwater results indicate a downward trend in concentrations of TCE and PCE in hot spot areas. Both TCE and PCE plumes are stable and adequately defined. Semiannual sampling will take place in November.

Questions asked during LF004 presentation:

Mr. Fesko asked what is in the landfill, will it ever be dug up, and will the monitoring going to go on forever? Mr. Wessner responded that LF004 is not a lined landfill. It holds solid waste that will not be dug up. Mr. Watkin added that there was not a lot of contamination identified during the remedy investigation. The original remedy identified some soil contaminants in the surface -- metals and low level dieldrin. The ROD decision document indicated that based on the soil contaminants a cap was placed over the landfill.

As the groundwater elevation has risen it has become evident that during historical disposal a prior release of contaminants had occurred, and when the groundwater rose it encountered that contamination. The Air Force during its ongoing groundwater monitoring identified that the groundwater was found to contain contamination and the groundwater remedy is now being addressed by an amendment to the existing

ROD.

Mr. Smallbeck added that looking at the TCE figure, it can be seen that the hot spot is not within the landfill boundary. For this groundwater, a soil vapor plume is co-located right above it in the vadose zone. The conceptual model is that as the groundwater rose, it contacted the vadose zone with the soil gas in it and that resulted in higher groundwater concentrations that had not been seen before when the groundwater was lower. The TCE plume may not be directly related to disposal activities within the landfill because the hotspot is co-located with the soil gas outside the boundary. The PCE hotspot is right at the landfill boundary, and slightly south. The PCE could have been associated with something in the landfill, but the soil gas is not co-located on top of the hot spot. The existing soil gas is within the boundary of the landfill.

Mr. Anderson asked if there was any cost benefit analysis of looking more closely at potentially removing the hot spot or the landfill itself. Mr. Smallbeck responded that the purpose of the Focused Feasibility Study is to address and remove the hot spots both in the soil vapor and the groundwater. Ms. Jerrard added that as far as the landfill itself goes, the Air Force has evaluated landfills at a number of other bases to see if it is practical to remove the landfilled material. For this landfill, it was determined to be cost prohibitive to remove as well as the liability issues associated with the waste after it is removed. The liability stays with the waste even if it goes somewhere else.

Mr. Anderson stated that if the landfill is the source of the material, the remedy is directed at the landfill itself or the garbage itself, or more directed at the soils surrounding it and the groundwater. He said if there's more in there then we think because landfills are not homogenous, they are really heterogeneous. It could be that someone dropped a 5-gallon can of TCE there 50 years ago or it could be a 55-gallon drum in there now. Mr. Smallbeck responded that all those things are possible, but if you look at the monitoring data that we have it shows that a source of that TCE and PCE has not been found in the soil. We know that it exists in the soil gas and we're going to remove it. The conceptual model is that the soil gas is also causing those low level concentrations in the groundwater. We have not seen increases in those hot spots, we've seen decreases. That does not indicate that there is a continuing source. By addressing the groundwater and the soil vapor we should be able to clean this site up to the point where it won't pose a risk to anyone.

Mr. Smallbeck noted that if you are correct and there is some source there that we currently don't know about, it would become apparent during the remediation process. If there was a source there and we are remediating the groundwater and the concentrations aren't going any lower than we would evaluate if an alternative source exists in the landfill. However, the data to date suggests that there is not a continuing source, the soil data doesn't indicate that there was a source of VOCs in the landfill, the TCE hot spots are not associated with the landfill and we've characterized where the contamination is in the soil vapor and the groundwater.

Ms. Olivarez stated that she would like to see a graph of the water tables and the contamination through time. The water tables have been rising over the last two decades and the contamination levels are falling. Mr. Smallbeck responded that if you look at the TCE time series graph and recognize that the water table has been rising since 2008, but the concentrations have still be going down. It's rising up into that soil gas area and whatever the residuals are that are left there are not significant enough to cause the groundwater concentration to increase. Although the groundwater is rising it's not coming in contact with residual soil gas that is increasing the groundwater concentrations. Mr. Anderson asked if the groundwater level ever got high enough to intrude into the fill. Mr. Smallbeck responded no. The groundwater level is still around 130 feet below the surface; the cells are approximately 15 feet below ground surface.

Ms. Olivarez added what's interesting about those maps is the groundwater flow goes in the direction of where the contamination is. Is that true for all the sub units? Mr. Smallbeck responded it is true. The groundwater flow is from west to east. The contamination is moving in the direction of groundwater but it is has been characterized.

Mr. Anderson asked (referring to the slide 58) what that TCE concentration means.

Mr. Smallbeck responded that this shows the hot spot well and it is the maximum concentration that we've seen at the site, which is 100 parts per billion.

Mr. Anderson asked where the groundwater level graph would be over time. Mr. Smallbeck responded that wherever the elevation was at this point and time, each year that elevation would be approximately two feet higher because that groundwater on average has been increasing two feet per year.

Mr. Anderson stated that the effect there could just be to dilution. Mr. Smallbeck responded that dilution is part of the natural attenuation process and that this process has resulted in a decrease in the concentrations over time, which would indicate that there is not a continuing source to the groundwater. Ms. Olivarez stated that these chemicals weren't found before the water table started rising. Mr. Smallbeck responded they were first discovered in the groundwater as part of the monitoring program.

Mr. Anderson asked if about other sites landfills, referring to the concept that landfills are very heterogeneous. You might have a lot of surprises. Mr. Watkin responded that is part of the reason for the remedy. The regulations require that a detection monitoring groundwater program be in place because of the unknown nature of landfills. So if there was a release it would be identified and that's what happened in this case. The detection monitoring program worked and now we are in corrective action phase of the project. The detection monitoring program will continue to exist because of the unknown nature of landfills.

Mr. Fesko stated that all he wanted to hear that the detection monitoring system will not go away even after groundwater has been cleaned up.

Contracting Update

Ms. Jerrard provided an update on contracting issues. The Army Corps of Engineers in Huntsville, Alabama will oversee the contract for the Munitions Response Site XU403 (located in Parcel N Debris Area) in February 2013. The contract was awarded to HydroGeoLogic, Inc. (HGL).

Ms. Jerrard introduced HGL project manager Kimberly Vaughn. Ms. Vaughn gave an overview of the work that is planned for later this year at the Munitions Response Site; see attached slides (Attachment 2) for more information.

Work plans were submitted in July. Field work is anticipated to start in November 2013 and take two months to complete. It will include munitions removal, environmental sampling and debris removal. Following the completion of the field work there will be several different completion reports: one is pertaining to environmental results and the one pertaining to munitions results. The chemical safety submission also has to be closed out. In addition, 34 acres of the site were previously cleared for munitions. A No Further Action document for those 34 acres will be prepared as well.

Questions asked during Contracting update:

Mr. Orr asked if Area 1 at South Sossaman Road will be a closed area when the team is in Area 1 and/or detours. Mr. Vaughn responded that when teams are actively digging that traffic control would be in place. Ms. Vaughn said they can plan to dig at a time of day when there is low traffic. Mr. Orr asked if one lane of Sossaman Road will be detoured. Ms. Vaughn responded that it will not be detoured. Mr. Orr stated that there will not be any road closures. Ms. Vaughn responded there will be no detours.

Meeting Wrap-up

That concluded the information portion of the evening. There were no action items identified as a result of the meeting.

Mr. Fuchs added that October will mark the 20th anniversary of the Williams RAB.

Mr. Fuchs adjourned the meeting at 8:50 p.m.

The next Williams RAB meeting is scheduled for Tuesday, March 25, 2014 at 7 p.m. at the Arizona State University Polytechnic Campus.

Attachments:

Sign in sheet

September 17, 2013 RAB meeting slide presentation

Date: 17 September, 2013

Please sign in. If your information has changed since you last attended, please place an asterisk (*) next to your name.

	<u>NAME/ORGANIZATION</u>	<u>ADDRESS</u>	<u>PHONE</u>	<u>E-MAIL</u>
1.	NEIL FEIST HGL			
2.	KIMBERLY VAUGHN HQ			
3.	DENNIS ORR			
4.	Steven Hunter			
5.	Don Smallhank			
6.	Delfina Oliver			
7.	Stephanie Oliver			
8.	Beverly Selwage			
9.	Craig Almeida			
10.	Stanley			
11.	BILL MABRY TECHNO			
12.	Dale Anderson			
13.	Matthew Fesko			
14.	Wayne Miller			
15.	EVERETT WASSNER			

✓ Geoff Watkin

Headquarters U.S. Air Force

Integrity - Service - Excellence

Former Williams AFB Restoration Advisory Board (RAB)



September 17, 2013

Arizona State Polytechnic Campus
Peralta Hall Room 132
7171 E. Sonoran Arroyo Mall Rd.
Mesa, AZ

Headquarters U.S. Air Force

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Welcome & Introductions



Presented by:
Mr. Len Fuchs / Ms. Catherine Jerrard,
RAB Community Co-Chairs
and Scott Johnston



Welcome & Introductions

- Mr. Len Fuchs, RAB Community Co-Chair

- Ms. Catherine Jerrard, Air Force Civil Engineer Center (AFCEC), PM/BEC and RAB Co-Chair

- Ms. Carolyn d'Almeida, Project Manager, U.S. Environmental Protection Agency (EPA), Region 9

- Mr. Wayne Miller, Project Manager, Arizona Department of Environmental Quality (ADEQ)



Agenda

<u>Time</u>	<u>Topic</u>	<u>Presenter</u>
7:00 PM	<u>RAB Meeting Convenes</u> <ul style="list-style-type: none">• Welcome and Introductions• Community Co-chair Remarks• Review May 2012 Meeting Minutes and Action Items	Mr. Len Fuchs Ms. Catherine Jerrard Mr. Scott Johnston
7:15-8:30 PM	<u>Program Updates</u> ST035 Status Update <ul style="list-style-type: none">• May 2013 Groundwater (GW) Results• Apr-Jun 2013 Soil Vapor Extraction (SVE) Performance Results• Path Forward ST012 Status Update <ul style="list-style-type: none">• OU-2/ST012 ROD Amendment 2 (RODA) Update• Apr-Jun 2013 SVE Performance Results• GW Containment Study Results• Remedial Design/Remedial Action (RD/RA) Update• Path Forward	Ms. Catherine Jerrard Mr. Everett Wessner



Agenda Continued

<u>Time</u>	<u>Topic</u>	<u>Presenter</u>
7:30-8:30 PM	<u>Program Updates <i>continued</i></u> FT002 Status Update <ul style="list-style-type: none">• Path Forward SS017 Status Update <ul style="list-style-type: none">• Path Forward LF004 Status Update <ul style="list-style-type: none">• OU-1/LF004 ROD Amendment 1 (RODA) Update• May 2013 GW Results• Path Forward	Mr. Everett Wessner
8:30-9:00 PM	<u>Meeting wrap-up</u> <ul style="list-style-type: none">• Other Active Projects• Review action items for next meeting• Call for agenda items for next meeting• Propose next RAB meeting – March 25, 2014	Ms. Catherine Jerrard
9:00 PM	Adjourn	Mr. Len Fuchs

Headquarters U.S. Air Force

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Program Updates

**Sites ST035, ST012, FT002,
SS017, and LF004**



Presented by:
Ms. Catherine Jerrard, AFCEC
Mr. Everett Wessner, AMEC

Headquarters U.S. Air Force

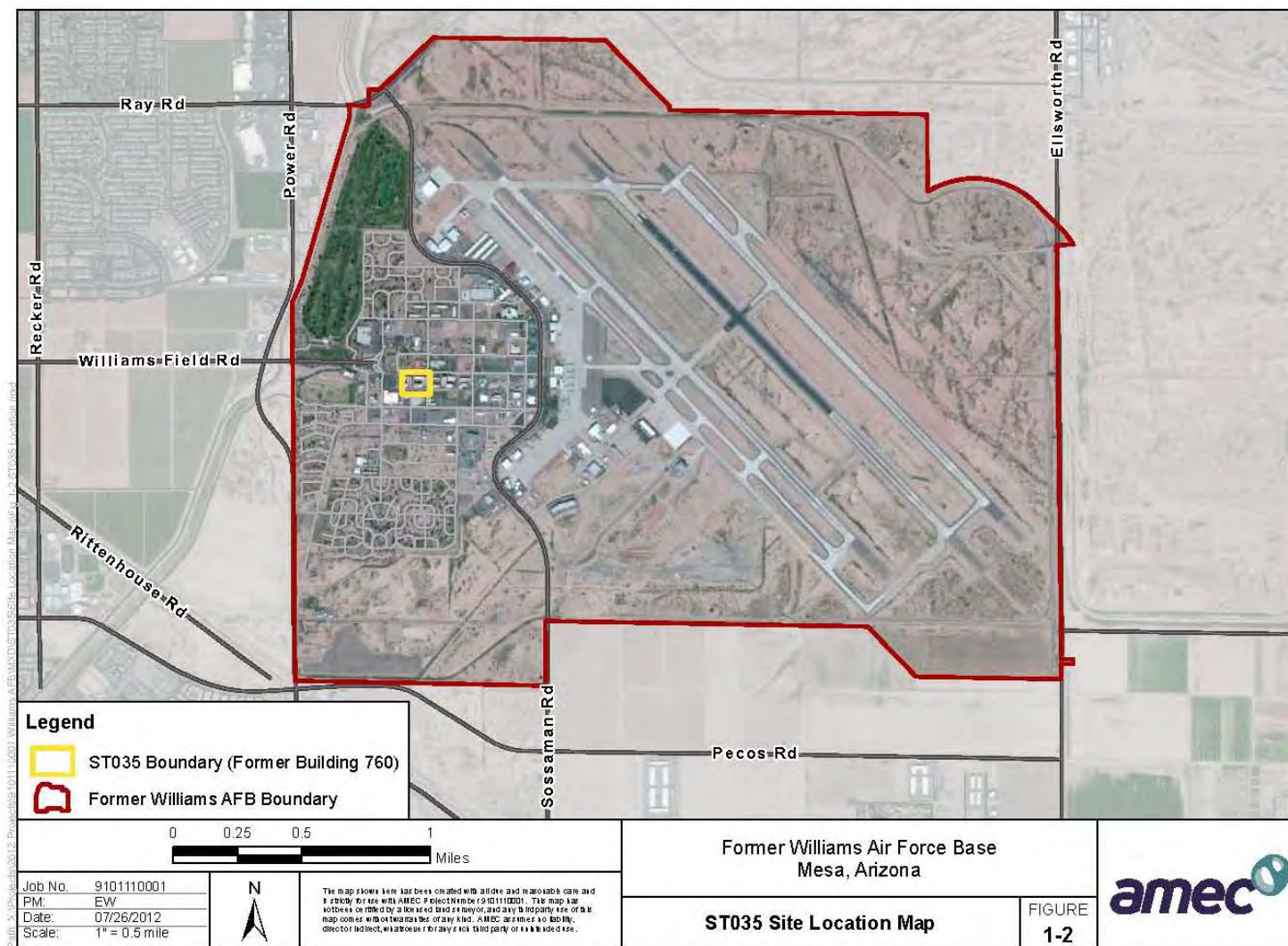
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**Site ST035,
Former Building 760
Underground
Storage Tanks
(USTs)**



Site ST035 Location Map





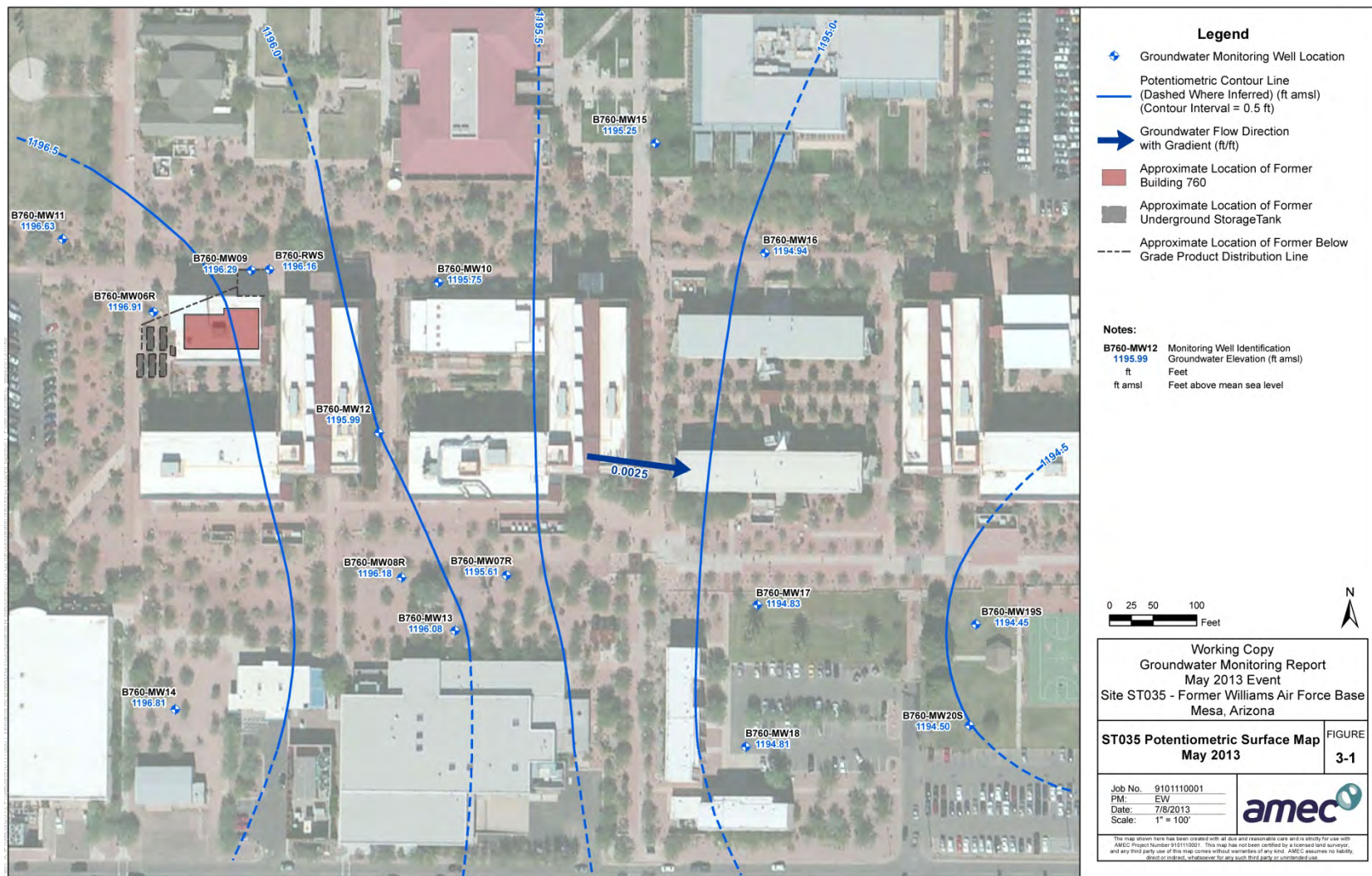
Site ST035 Site Background

- **Building 760 gas station and oil/water separator**
 - Gas dispensing until 1986
 - Tank and dispensing equipment removed in 1993-1994
 - Oil/water separator removed in 1996
- **Vadose zone soil chemicals of concern (COCs)**
 - Benzene
- **Groundwater COCs**
 - Benzene, toluene, ethylbenzene, xylenes (BTEX)
 - 1,2-Dibromoethane (EDB)
 - Methyl tertiary butyl ether (MTBE)
 - 1,2-Dichloroethane (DCA)
- **Soil Vapor Extraction (SVE) system to treat COCs in vadose zone soil in operation**
- **Site cleanup regulated by ADEQ under Leaking Underground Storage Tank (LUST) regulation (R18-12-263)**
- **Ongoing quarterly groundwater monitoring**



Site ST035 Groundwater Monitoring Update

May 2013 Flow Direction





Site ST035 Groundwater Monitoring Update

May 2013 Sampling Event

Williams AR# 11111111

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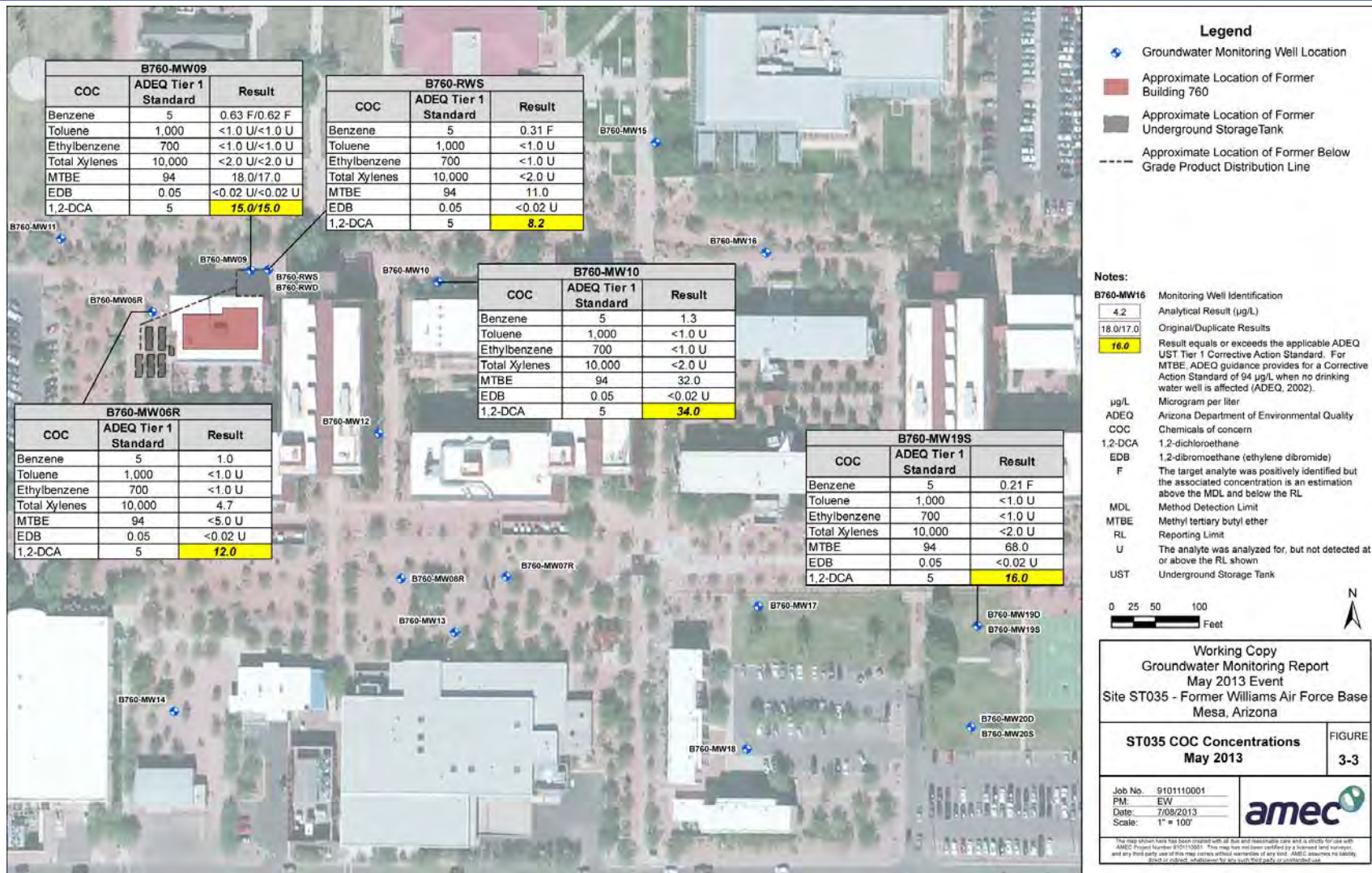
- **19 wells**
- **Groundwater flowing west to east**
- **Benzene detected in 6 wells (11 wells in Feb 2013):**
 - Tier 1 Standard = 5 micrograms per liter ($\mu\text{g/L}$); Reporting Limit (RL) = 1.0 $\mu\text{g/L}$
 - 6 wells < 5 $\mu\text{g/L}$ (11 wells in Feb 2013)
 - 0 wells > 5 $\mu\text{g/L}$ (0 wells in Feb 2013)
- **1,2-DCA detected in 8 wells (11 wells in Feb 2013)**
 - Tier 1 Standard = 5 $\mu\text{g/L}$; RL = 1.0 $\mu\text{g/L}$
 - 3 wells < 5 $\mu\text{g/L}$ – (6 wells in Feb 2013)
 - 5 wells > 5 $\mu\text{g/L}$ – (5 wells in Feb 2013)
- **MTBE detected in 6 wells (9 wells in Feb 2013)**
 - Tier 1 Standard = 94 $\mu\text{g/L}$
 - 0 wells > 94 $\mu\text{g/L}$ – (1 well in Feb 2013)



Site ST035 Groundwater Monitoring Update May 2013 Results > Tier 1 Standards

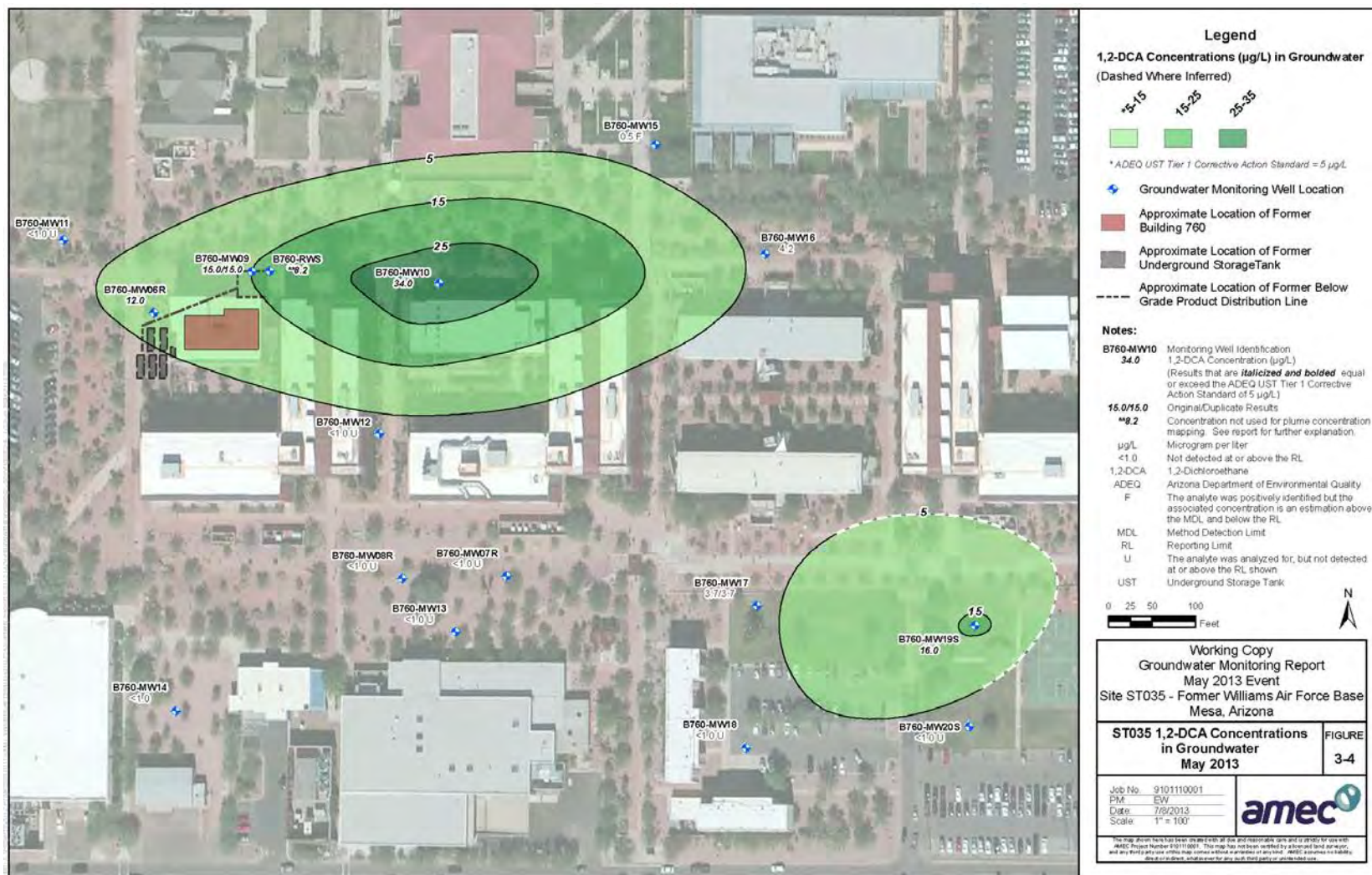
Williams AR#

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Site ST035 Groundwater Monitoring Update May 2013 1,2-DCA Isoconcentration Map





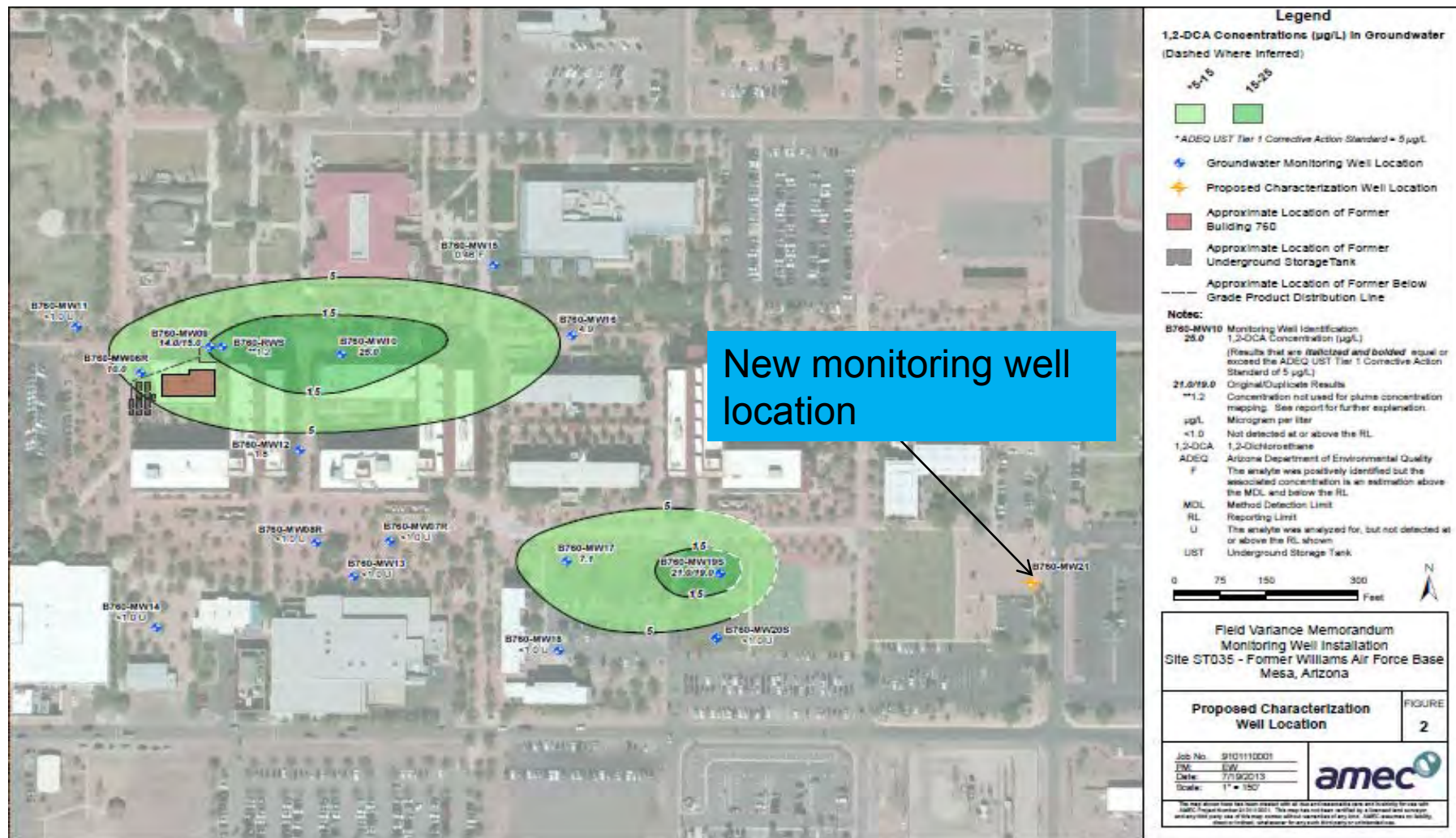
May 2013 Groundwater Summary

- **Benzene remained below the Tier 1 Standard in all wells during May 2013. Concentrations in the source area have significantly decreased since SVE startup in 2010**
- **Toluene, Xylenes, MTBE, and EDB remained below the Tier 1 Standards in May 2013**
- **1,2-DCA was detected above the Tier 1 Standard at 5 wells in May 2013 (including downgradient well MW19S). Following coordination with ADEQ regarding Feb and May 2013 results, an additional downgradient well was installed in Aug 2013**
- **Concentrations of MTBE and 1,2-DCA have decreased at the former source area since 2008**
- **Ongoing quarterly groundwater sampling – Next event Nov 2013**



Site ST035 Groundwater Monitoring Update

New Monitoring Well Location



New monitoring well location



Soil Vapor Extraction System Update

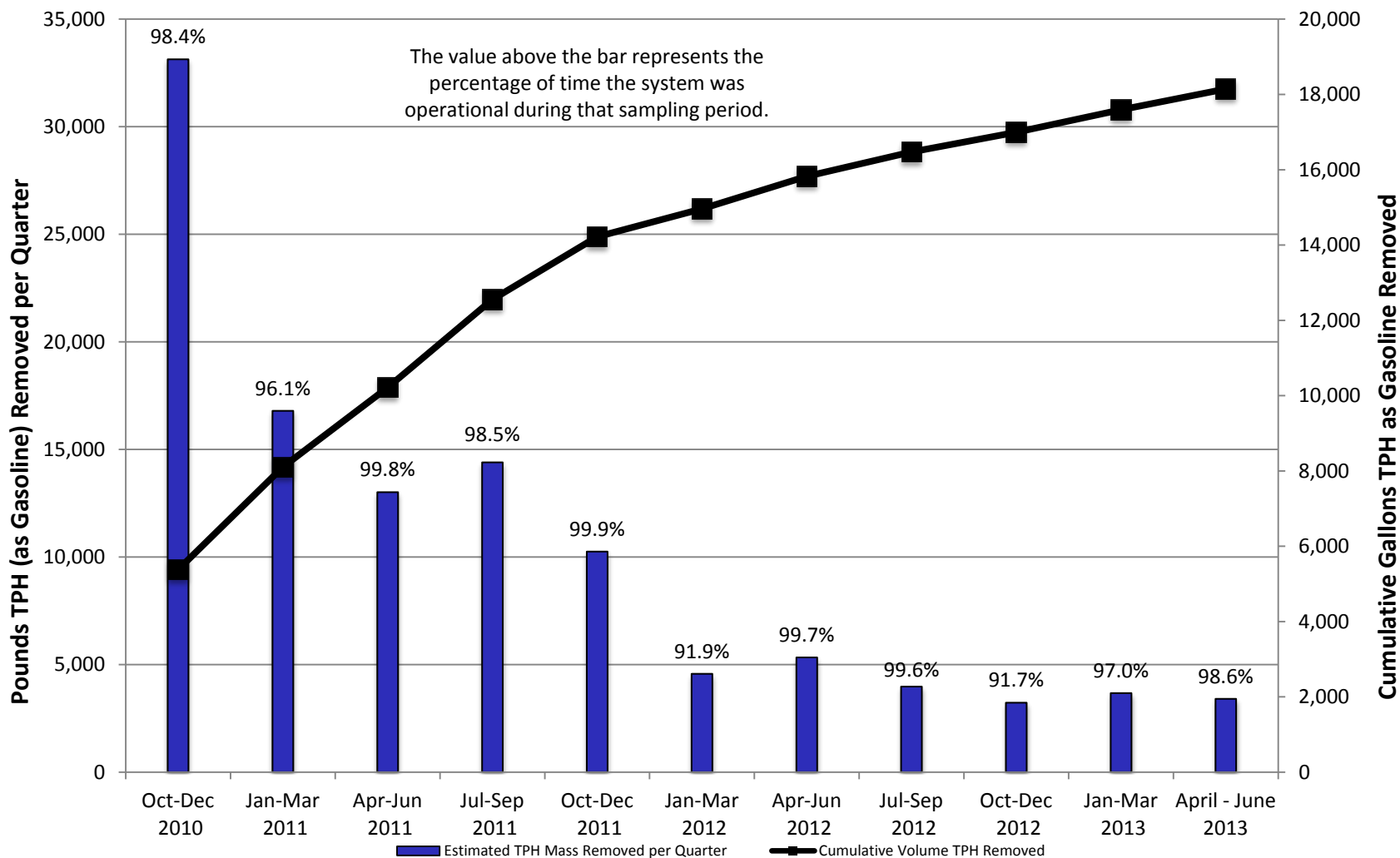
Apr – Jun 2013

- **98.6% operational uptime**
- **Total Petroleum Hydrocarbons (TPH) removed – 3,400 pounds or 553 gallons (596 gallons removed from Jan – Mar 2013)**
- **6 of 15 SVE wells operating**





Site ST035 SVE System Performance





Site ST035 SVE System Summary

- After slight increase in average TPH mass removal during previous quarter when system was focused on higher concentration wells, average mass removal of TPH is declining as expected
- 18,100 gallons of TPH removed to date
- SVE system continues operation within permit emission requirements
- Next performance sampling Nov 2013



Site ST035 Path Forward

- **Continue SVE operation and perform rebound testing in Oct 2013**
- **Evaluate extent of 1,2-DCA and MTBE after sampling new downgradient monitoring well B760-MW21**
- **Conduct quarterly groundwater sampling – Next event Nov 2013**
- **Achieve site closure under LUST regulation (R18-12-263.04) by Apr 2016**

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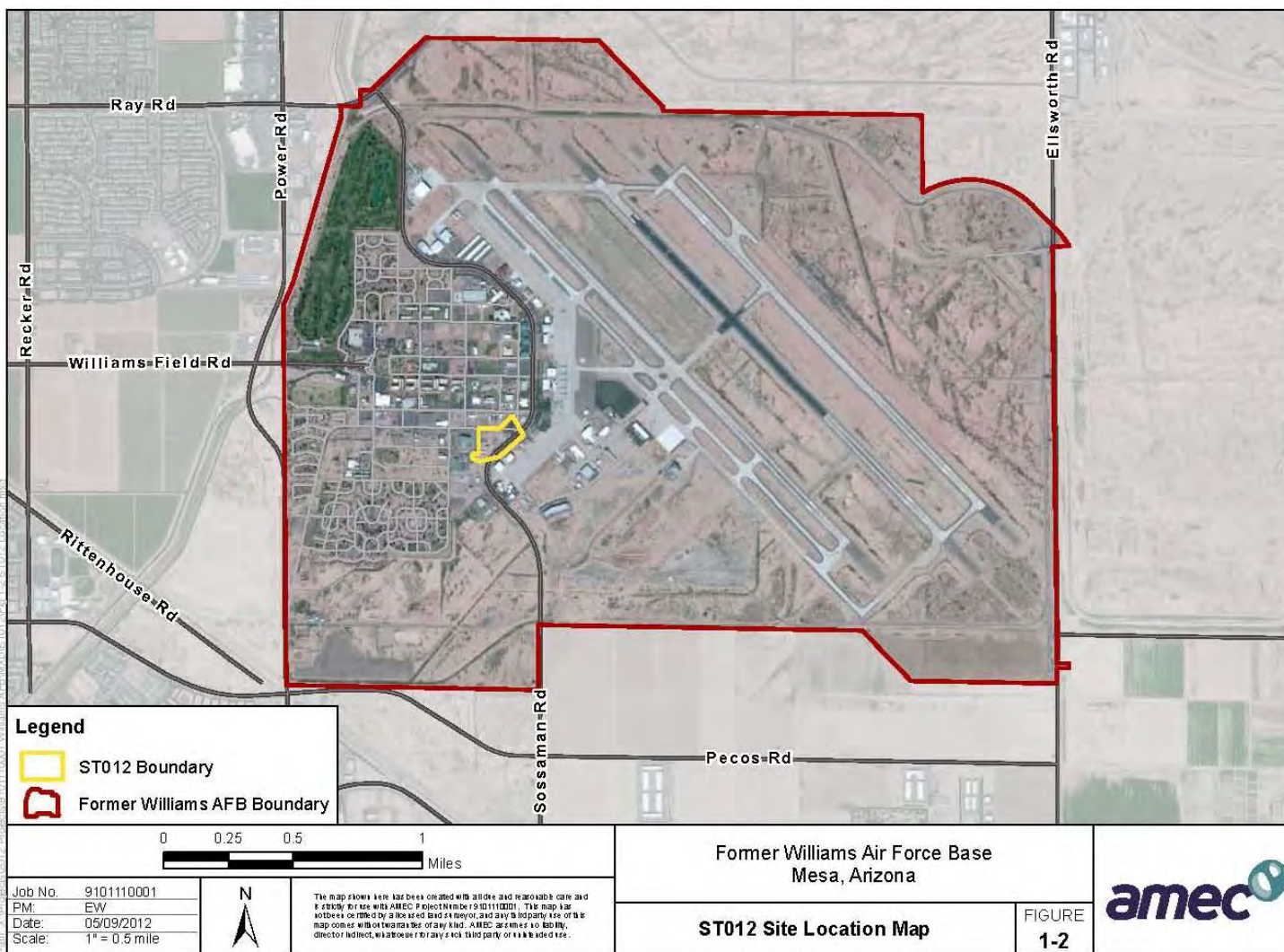
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Site ST012, Former Liquid Fuels Storage Area



Site ST012 Location Map





Site ST012 Site Background

- **Former liquid fuels storage operation, COCs in soil and groundwater are TPH and benzene**
- **Shallow soil (< 25 feet deep) cleanup achieved (1996): Operable Unit (OU)-2 Record of Decision (ROD) 1992**
- **Deep vadose zone soil (> 25 feet deep) currently treated by SVE: OU-2 ROD Amendment 1996**



Site ST012 Site Background cont.

- **OU-2 ROD groundwater pump and treat remedy ineffective-**
 - **Alternative remedies evaluated in a Focused Feasibility Study, Nov 2012**

- **Amended Proposed Plan public meeting – 18 April 2013, presented Steam Enhanced Extraction and Enhanced Bioremediation as the preferred alternative, public comment period 10 April to 9 May 2013**

- **Ongoing SVE, containment system operation and shutdown (Jul 2013) , and annual groundwater monitoring (Nov)**

- **Currently no human health exposure pathways to contaminants at ST012 exist**



OU-2/ST012 ROD

Amendment 2 (RODA)

- **No public comments received on ST012 Proposed Plan**
 - **Selected Remedy - Steam Enhanced Extraction (SEE) and Enhanced Bioremediation (EBR)**
 - **The Draft and Draft Final versions of ST012 RODA have been reviewed by USEPA and ADEQ**
 - **Final ST012 RODA is currently being circulated for signature**
 - **Upon completion of signature process, notification of final ST012 RODA will be provided in local newspaper**
 - **Final ST012 RODA will be available to public in Administrative Record and at ASU library**
-



Site ST012 SVE System Update

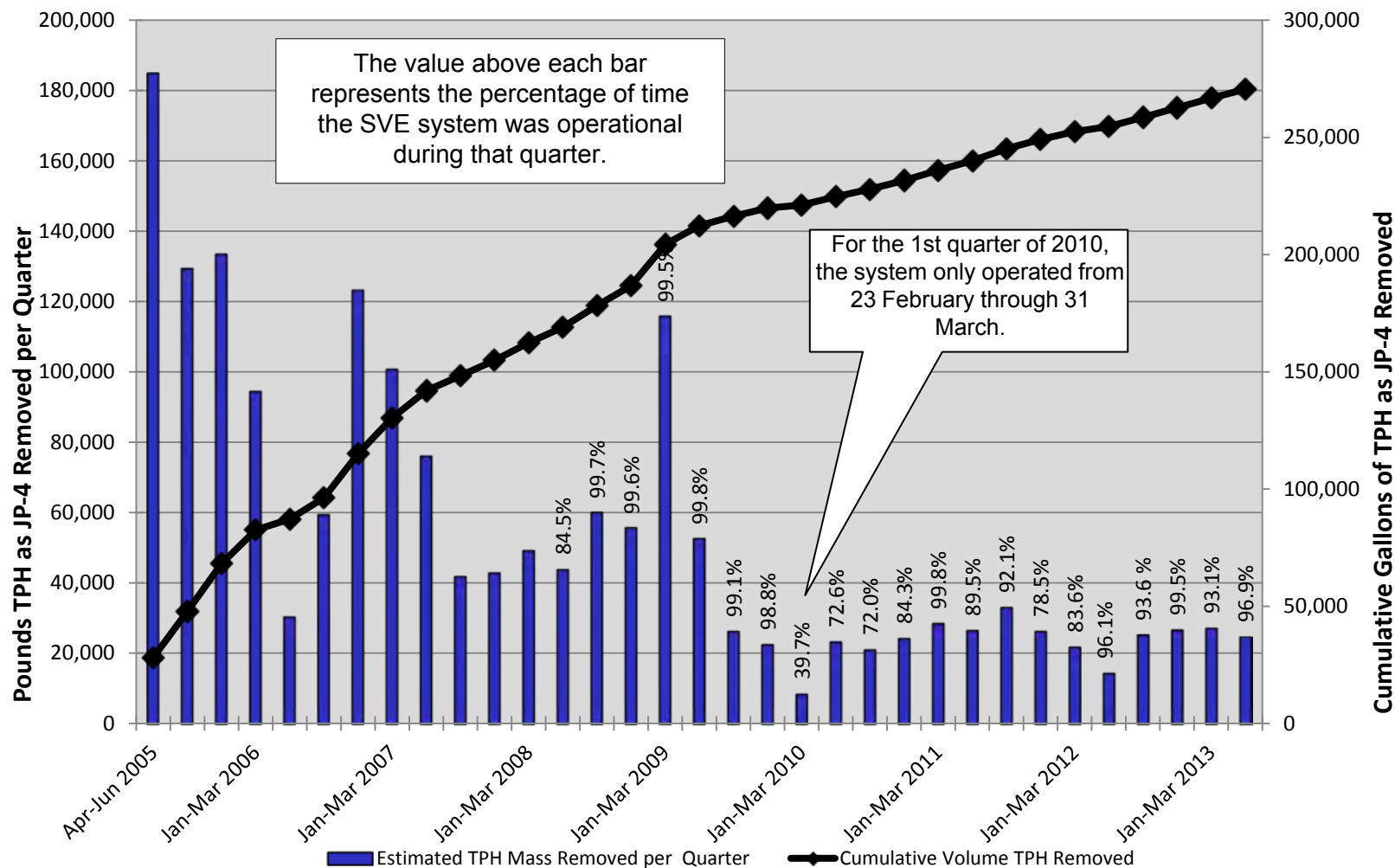
Apr – Jun 2013

- **96.9% operational uptime**
- **TPH removed – 24,900 pounds or 3,790 gallons (4,150 gallons in Jan-Mar 2013)**
- **9 of 27 SVE wells operating (same as Jan-Mar 2013)**





Site ST012 SVE System Performance





Site ST012 SVE System Summary

- **Average TPH mass removal rate remained stable in Apr through Jun 2013**
- **TPH removed to date – 270,600 gallons**
- **Next SVE performance monitoring –Nov 2013**



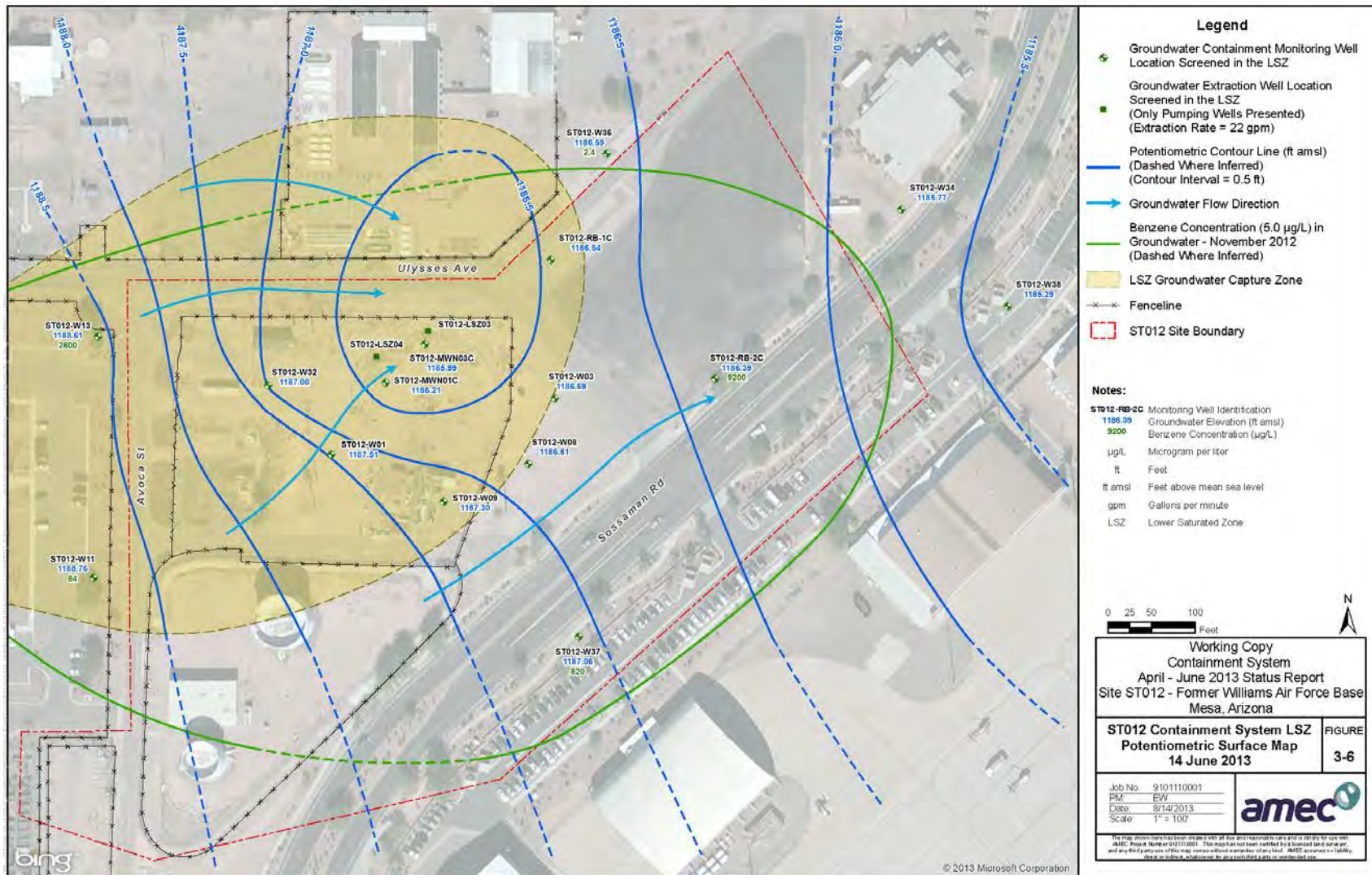
W1112108 AP# Page 41 of 96

Site ST012 Groundwater Containment System

- **Existing extraction wells and equipment configured to allow operation of a modified pump-and-treat system**
- **Lower saturated zone (LSZ) extraction wells targeted for pumping**
- **Containment system was to operate for approximately 18 months**
- **Extraction operations began Jan 2012 and were suspended in Jul 2013 to prepare for remedy installation including well drilling/abandonment and site construction**



Site ST012 Groundwater Containment System LSZ Groundwater Surface Map Jun 2013 – 22 gpm Extraction





Site S1012 Groundwater Containment System

W11111111 AP#

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- 2.5 million gallons of groundwater extracted and treated from Apr through Jun 2013, a total of 14.1 million gallons treated since startup
- Contaminant mass removed through Jun 2013
 - Benzene – 262 pounds (lbs)
 - Toluene – 145 lbs
 - Ethylbenzene – 38.3 lbs
 - Total Xylenes – 87.3 lbs
- Shutdown of operations on 31 Jul 2013 in preparation for full scale remediation



ST012 Amended Selected Remedy

13011368 AP#

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- **Selected Remedy - Steam Enhanced Extraction (SEE) and Enhanced Bioremediation (EBR)**
 - **Steam will be injected and extracted in order to remove fuel based contamination from the main area of the site.**
 - **EBR will follow SEE to address perimeter areas of contamination and to further address the SEE treatment area, if needed.**
 - **The combination of SEE and EBR will result in removal and/or treatment of contamination such that cleanup levels will be achieved in approximately 20 years, resulting in unrestricted use.**



ST012 RD/RA WORK PLAN

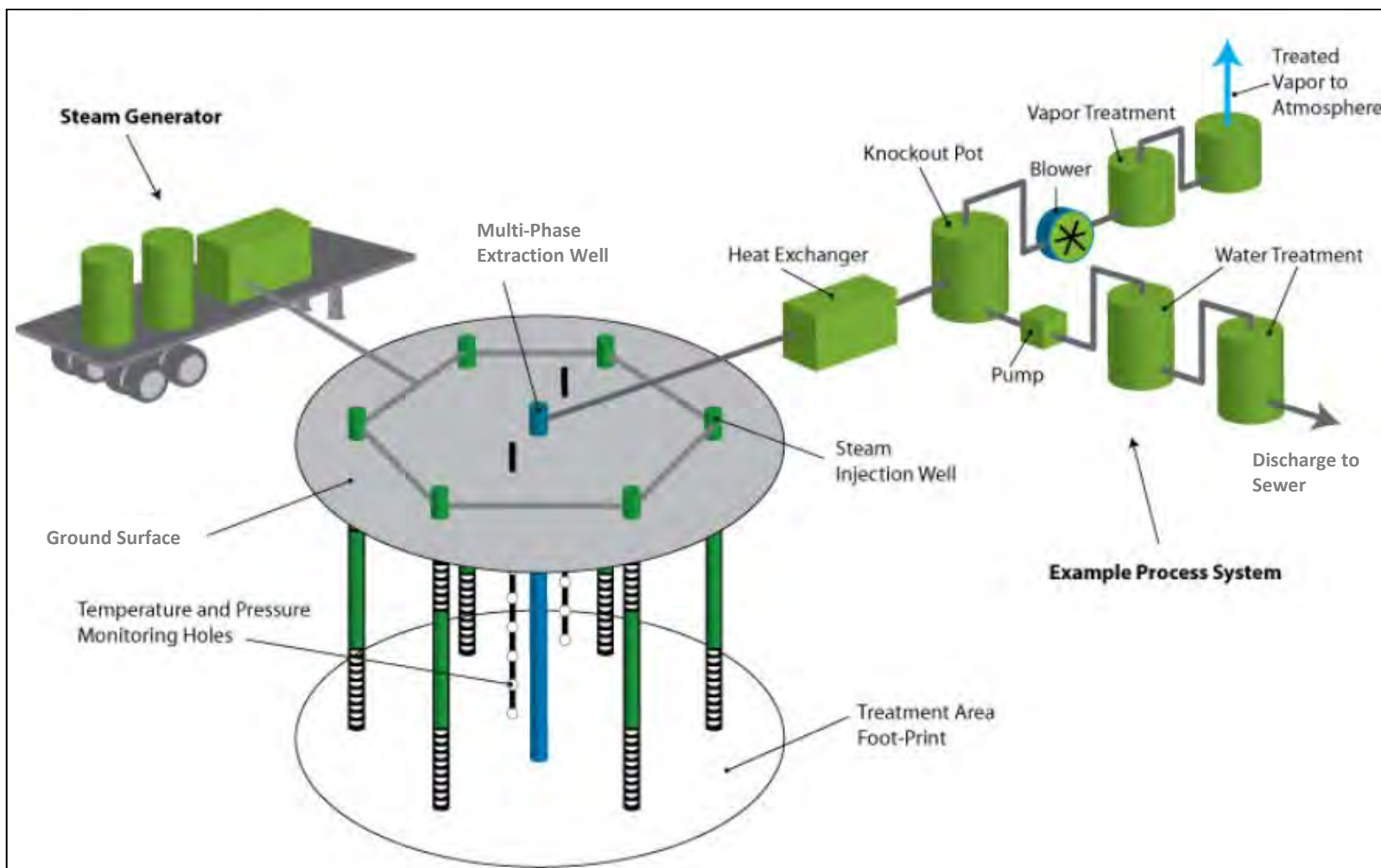
- **Selected Remedy Design Discussion**
 - SEE Preliminary Drawings/Process Discussion
 - SEE Planned Well Locations
 - SEE Discussion
 - EBR Discussion

- **Update on Schedule/Sequencing of Work**



ST012 SEE DESIGN

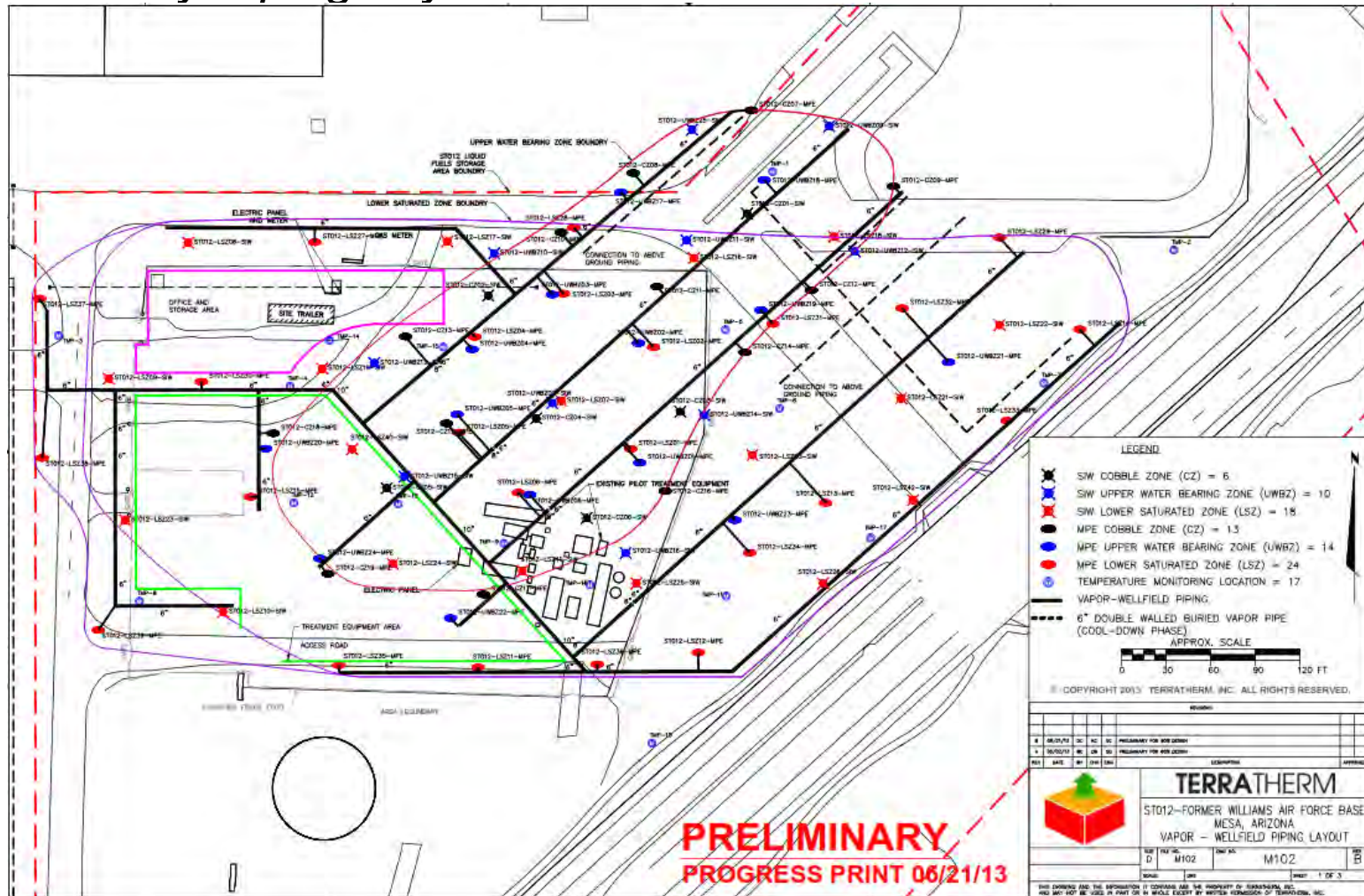
SEE Process Overview





ST012 SEE DESIGN

Preliminary Piping Layout





SEE Design Discussion

- **SEE is expected to remove approximately 95% of the benzene from the SEE treatment areas.**
- **The objective of SEE is to optimize the removal of fuel contaminants while maintaining control of the contaminants within the site area. Accomplished by:**
 - **During design, groundwater modeling is used to determine the best well locations and flow rates for steam injection and extraction.**
 - **The system is designed with higher extraction rates than injection rates in order to control groundwater flow within the site area.**
 - **Steam injection and extraction operations will be gradually initiated and expanded to assure that contaminant recovery is optimized and controlled.**



SEE Design Discussion (cont.)

- During operations, monitoring will be conducted for:
 - Light Non Aqueous Phase Liquid (LNAPL)/dissolved contaminants to make sure contamination is not migrating;
 - Groundwater elevations to confirm the extraction rates are having the expected site influence for hydraulic control;
 - Temperatures to make sure steam is addressing the appropriate areas while not moving out of the site area.
- During the first 90-120 days of SEE, hydraulic control is established and temperatures are raised throughout the site, followed by a period of steam injection and extraction cycles to maximize removal of contamination, and eventually extraction of contamination will diminish and a cool down period will start at which time the transition to EBR will occur.
- Current model scenarios indicate a period of SEE operations of just over 400 days.



ST012 EBR DISCUSSION

- **EBR is the process of modifying existing conditions to promote biological activity among bacteria that feed off of contamination present at the site**
- **EBR will be used to augment SEE around the periphery of the site to complete treatment, as needed**
- **The EBR design will consist of injection and recirculation within a treatment zone**
- **Existing site data are being used to design a preliminary treatment layout**
- **A Field Test Work Plan is being prepared to conduct additional tests that will refine the preliminary design parameters**



ST012 EBR DISCUSSION (CONT)

- **The EBR phase of the remedy is expected to operate for 3-5 years following SEE and will reduce site contaminant levels such that cleanup levels can be achieved within the remedial time frame (2030 target)**
- **The final design of EBR will be dependent on post-SEE conditions and will be coordinated with the regulatory agencies**
- **Regular updates will be provided to the public throughout the remedial process**



ST012 SEE IMPLEMENTATION SCHEDULE

■ Equipment Procurement	Sep 2013
■ Well Abandonment/Drilling	Fall 2013–Spr 2014
■ Utility Connections	Jan 2014
■ SEE System Construction	Feb–Aug 2014
■ SEE Startup	Aug-Sep 2014
■ SEE Operation	Sep 2014–Nov 2015
■ Road Closure*	May 2014–Dec 2015
■ Cell Phone Lot Closure*	Aug 2014–Aug 2015
■ EBR Groundwater Treatment	Nov 2015–Nov 2018

***Construction activities (drilling) will have temporary impacts from
Oct 2013–Feb 2014**



Site ST012 Path Forward

- **Groundwater ROD Amendment signatures – Sep 2013**
- **RD/RA Work Plan – Fall 2013**
- **Ongoing annual groundwater sampling – Next event Nov 2013**
- **Ongoing SVE performance monitoring**
- **SEE system construction – Feb-Aug 2014**

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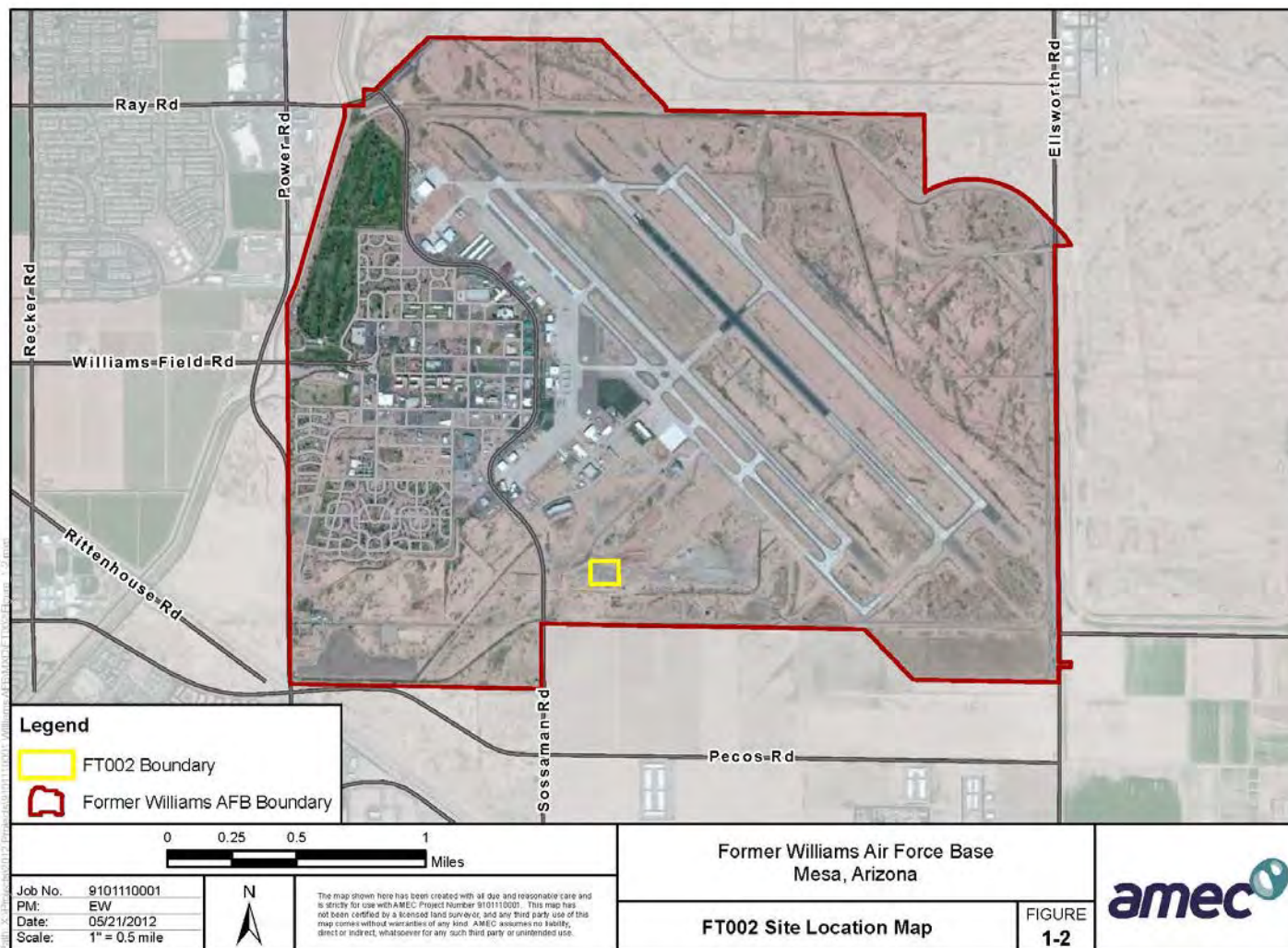
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**Site FT002, Fire
Training Area
Number 2**



Site FT002 Location Map





Site FT002 Site Background

- **Fire protection training activities (1958-1991)**
- **Soil COC: benzene, chloroform, 1,4-dichlorobenzene**
- **No evidence of groundwater impact**
- **OU-3 ROD 1996; Soil Remedy (bioventing) implemented in 1996-1997**
- **Declaration of Environmental Use Restriction (2008) to prohibit residential use and require soil management below 5 feet**



Site FT002 Path Forward

- **January confirmation sampling locations incorrect due to errors in previous report figures, survey data and field reconnaissance**
- **Additional confirmation soil and soil gas sampling performed at eastern and western burn pits in Jun 2013**
- **Data evaluation is on-going**
- **The goal is regulatory approval for unrestricted site closure**

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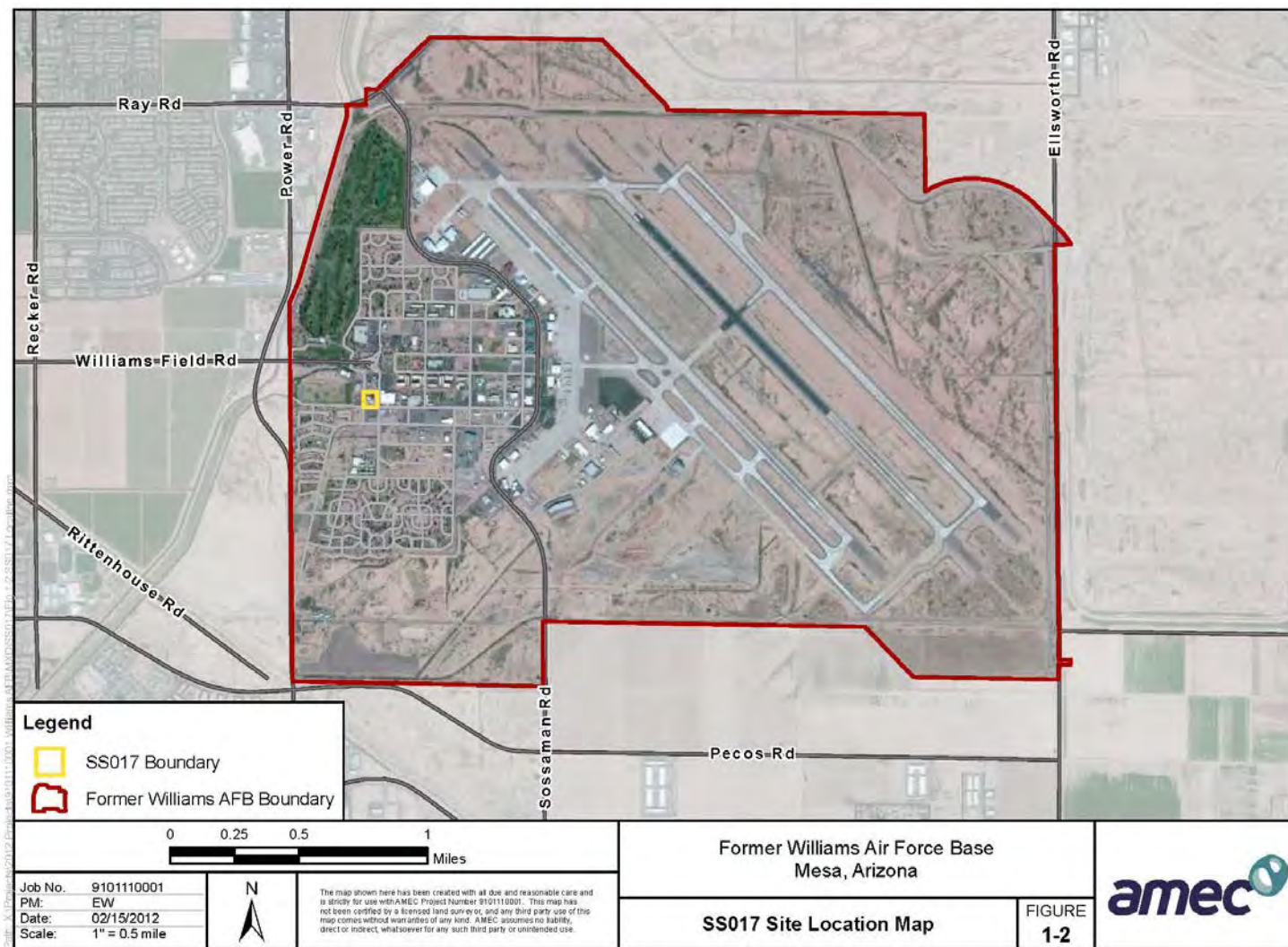
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**Site SS017, Old
Pesticide/Paint
Shop**



Site SS017 Site Location Map





Site SS017 Path Forward

- **Air Force submitted updated soil and groundwater risk evaluation for regulatory review – Jun 2013**
- **Next steps will be based on outcome of soil and groundwater risk evaluation**
- **Annual (Aug 2013) groundwater monitoring complete – Results will be presented in next RAB**
- **Next groundwater monitoring event – Aug 2014**

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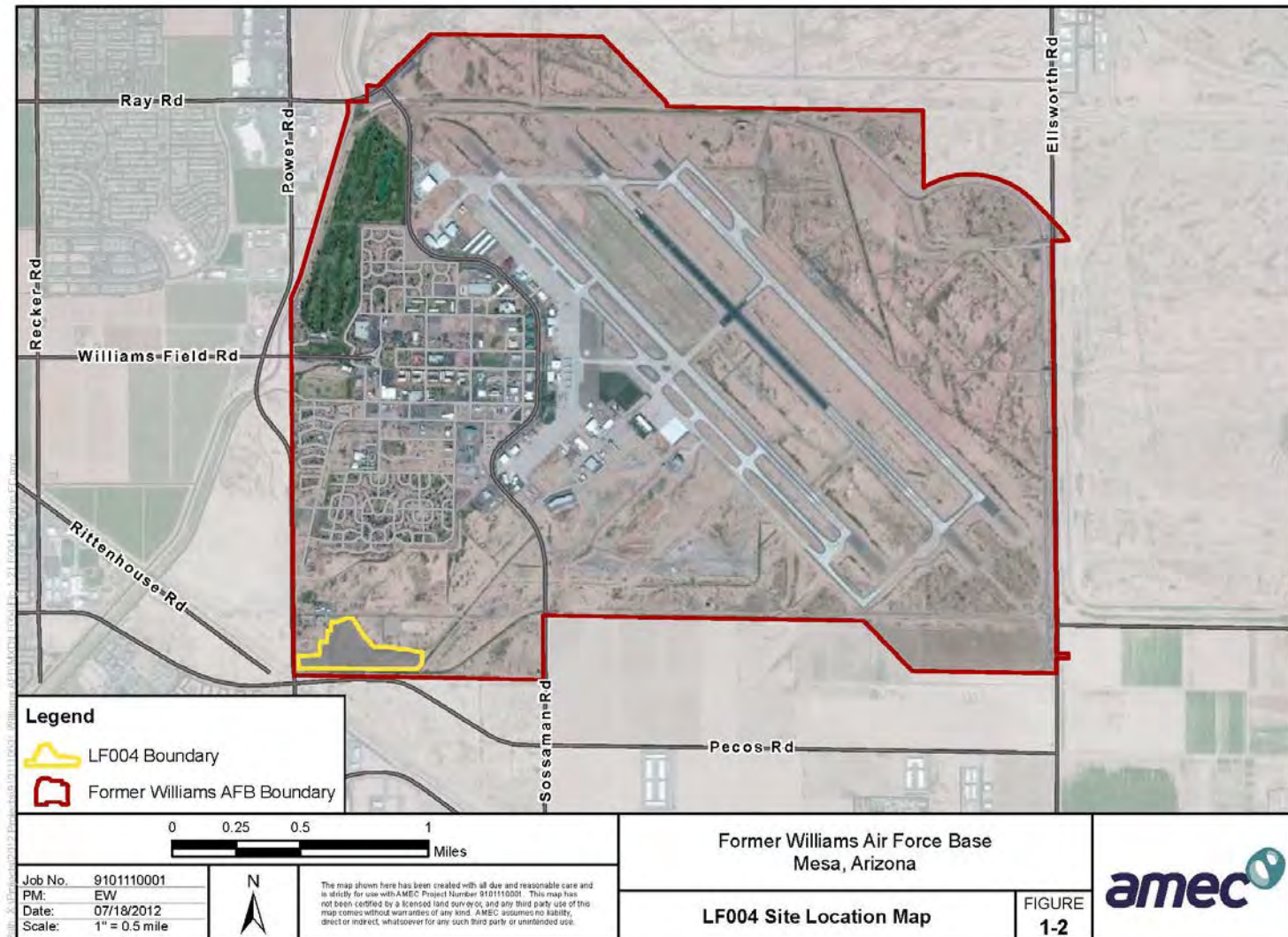
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Site LF004, Landfill



Site LF004 Site Location Map





Site LF004 Site Background

■ Landfill

- Former solid waste landfill
- Operated from 1941 to 1976
- Closed in 1995 with a permeable soil cap (OU-1 ROD 1994)
- Rising groundwater table
- Ongoing semiannual groundwater monitoring

■ COCs

- Dieldrin and beryllium in surface soil
- Tetrachloroethene (PCE) and Trichloroethylene (TCE) in groundwater and soil gas



OU-1/LF004 ROD

Amendment 1 (RODA)

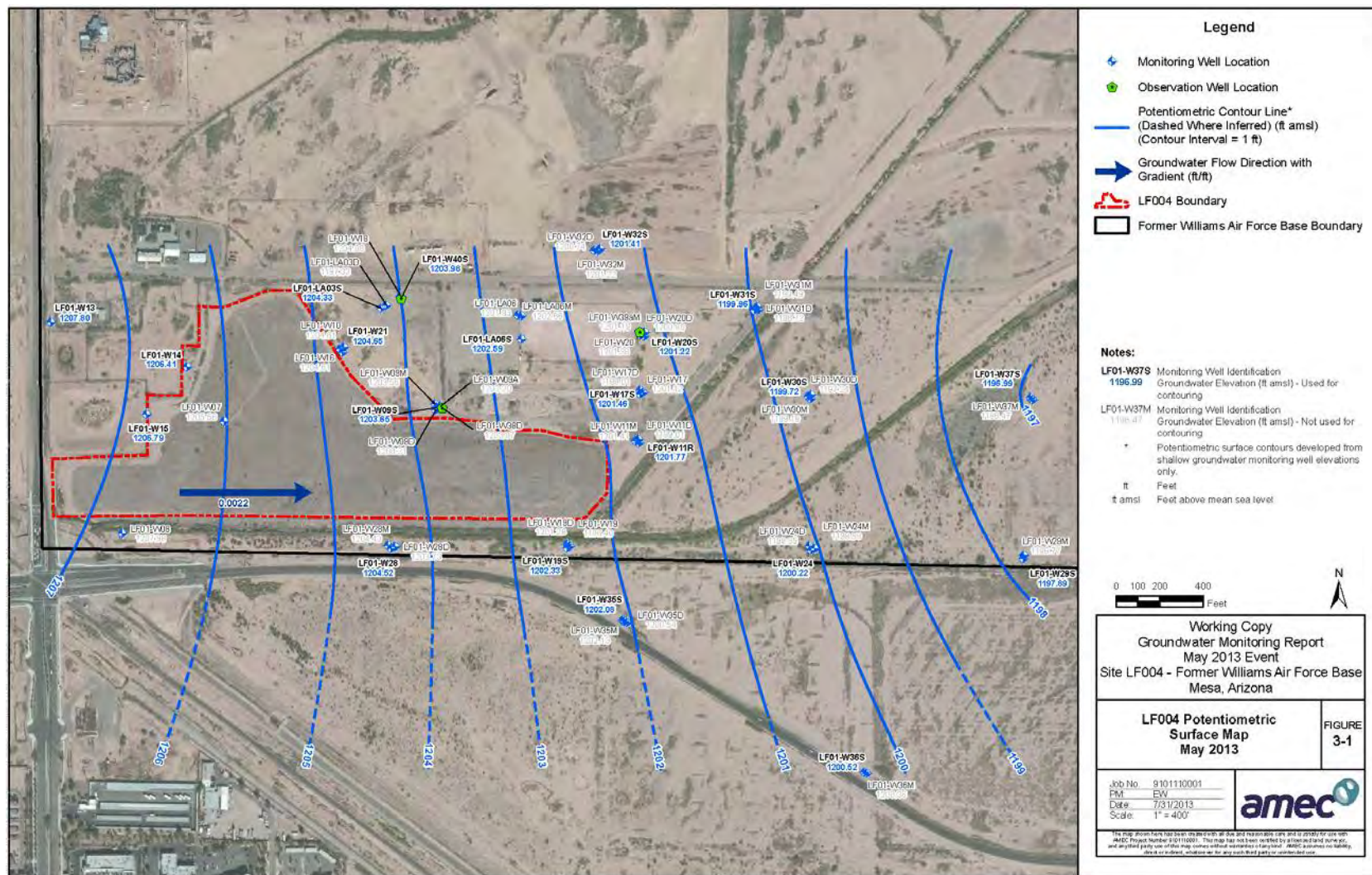
- **No public comments received on LF004 Proposed Plan**
- **Proposed Remedy - In-Well Air Stripping, Oxidation, and Soil Vapor Extraction**
- **The Draft version of LF004 RODA is under review by USEPA and ADEQ**
- **Upon completion of signature process, notification of final LF004 RODA will be provided in local newspaper**
- **Final LF004 RODA will be available to public in Administrative Record and at ASU library**





Site LF004 Groundwater Monitoring Update

May 2013 Flow Direction





Site LF004 Groundwater Monitoring Update May 2013 Sampling Event

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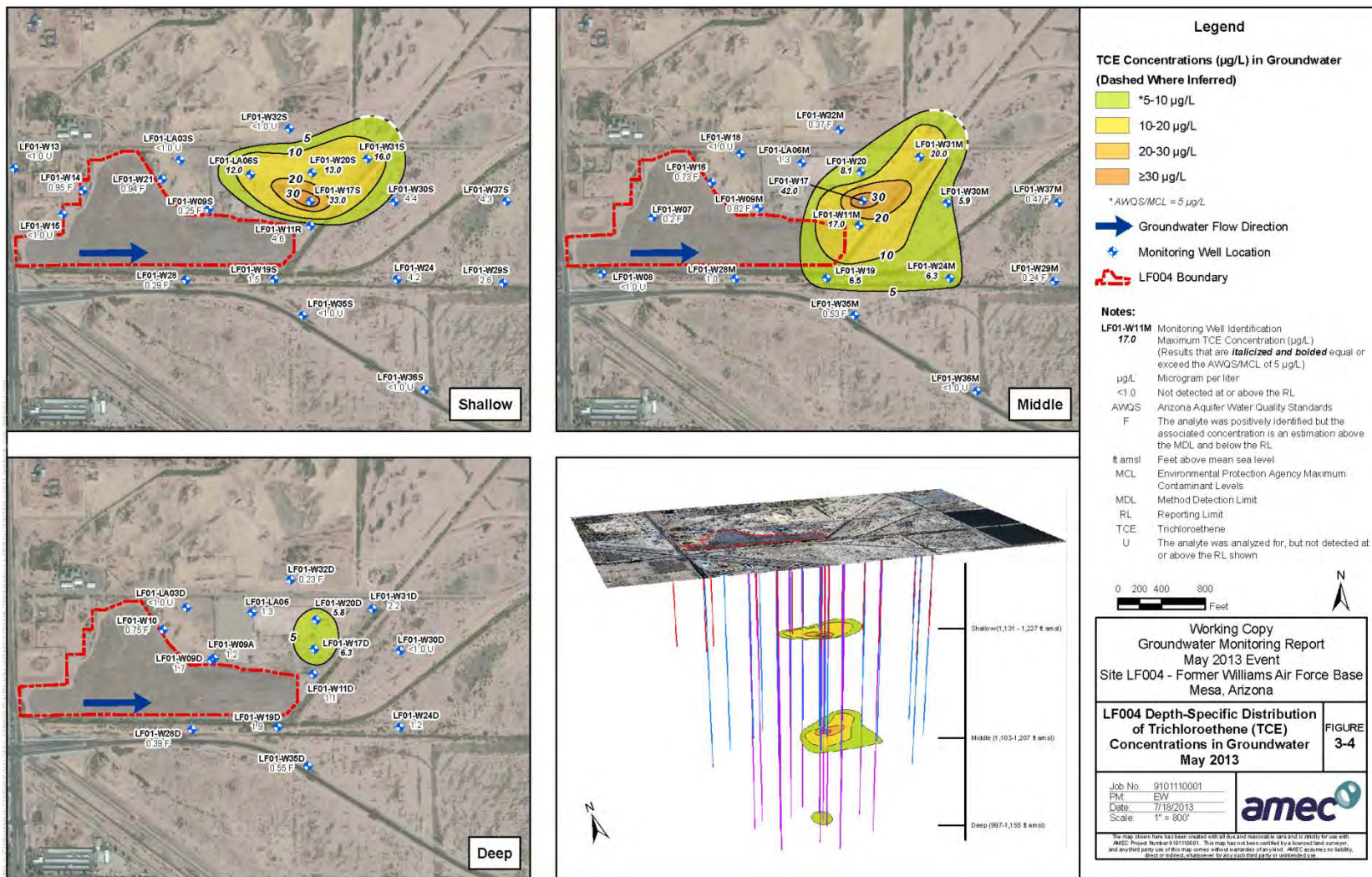
- 54 wells sampled
- Results:
 - TCE and PCE only contaminants above EPA Maximum Contaminant Levels and Arizona Aquifer Water Quality Standards = 5 µg/L
 - TCE > 5 µg/L in 13 wells (13 wells in Nov 2012)
 - Highest TCE = 42 µg/L at LF01-W17 (up from 35 µg/L in Nov 2012)
 - PCE > 5 µg/L in 15 wells (17 wells in Nov 2012)
 - Highest PCE = 48 µg/L at LF01-W19 (down from 86 µg/L in Nov 2012)



Site LF004 Groundwater Monitoring Update May 2013 TCE Results

Williams AR#

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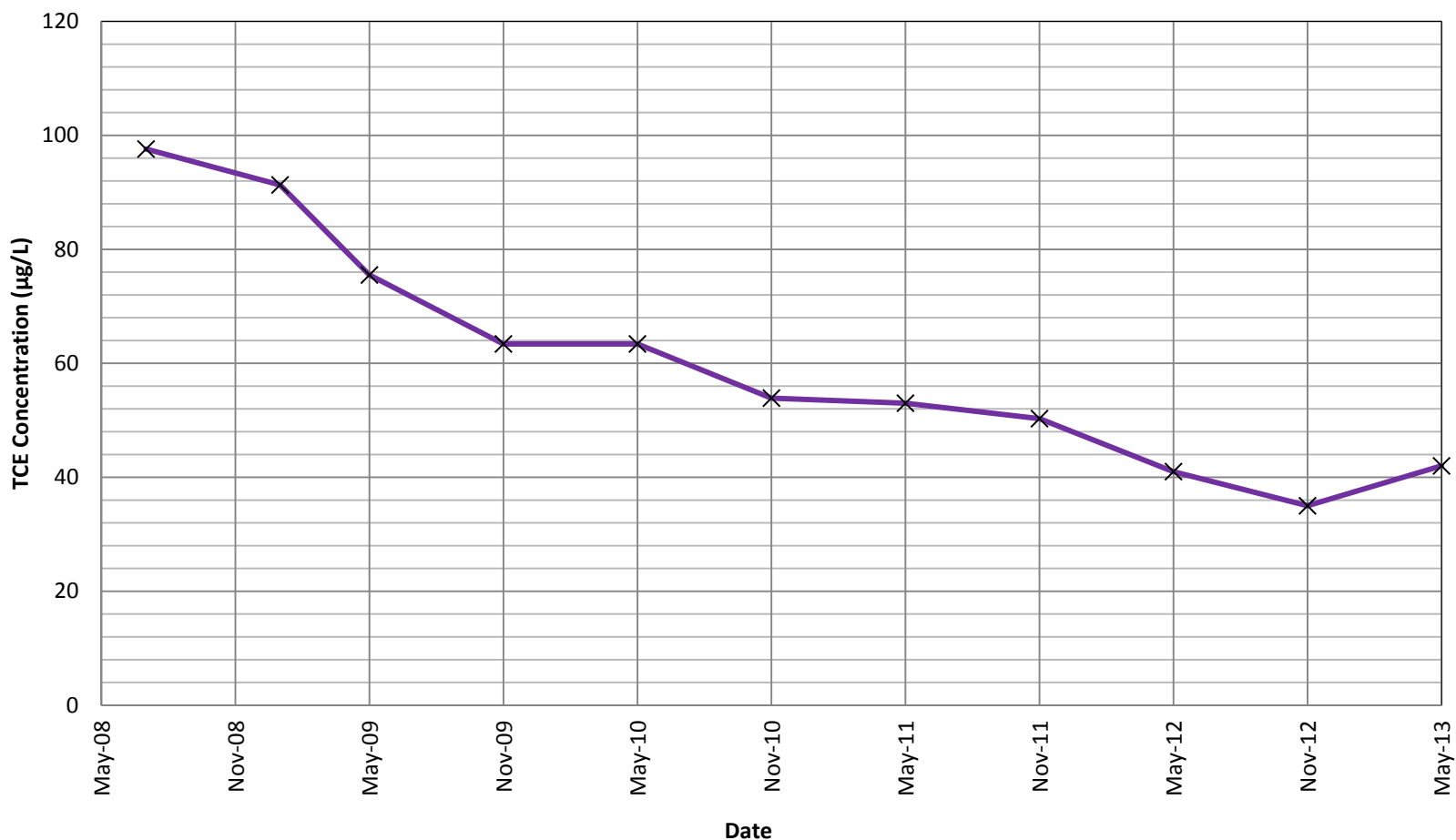


Site LF004 TCE Source Area Concentrations Since 2008

WFO12-001-AR#

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LF01-W17 Historical TCE Concentrations

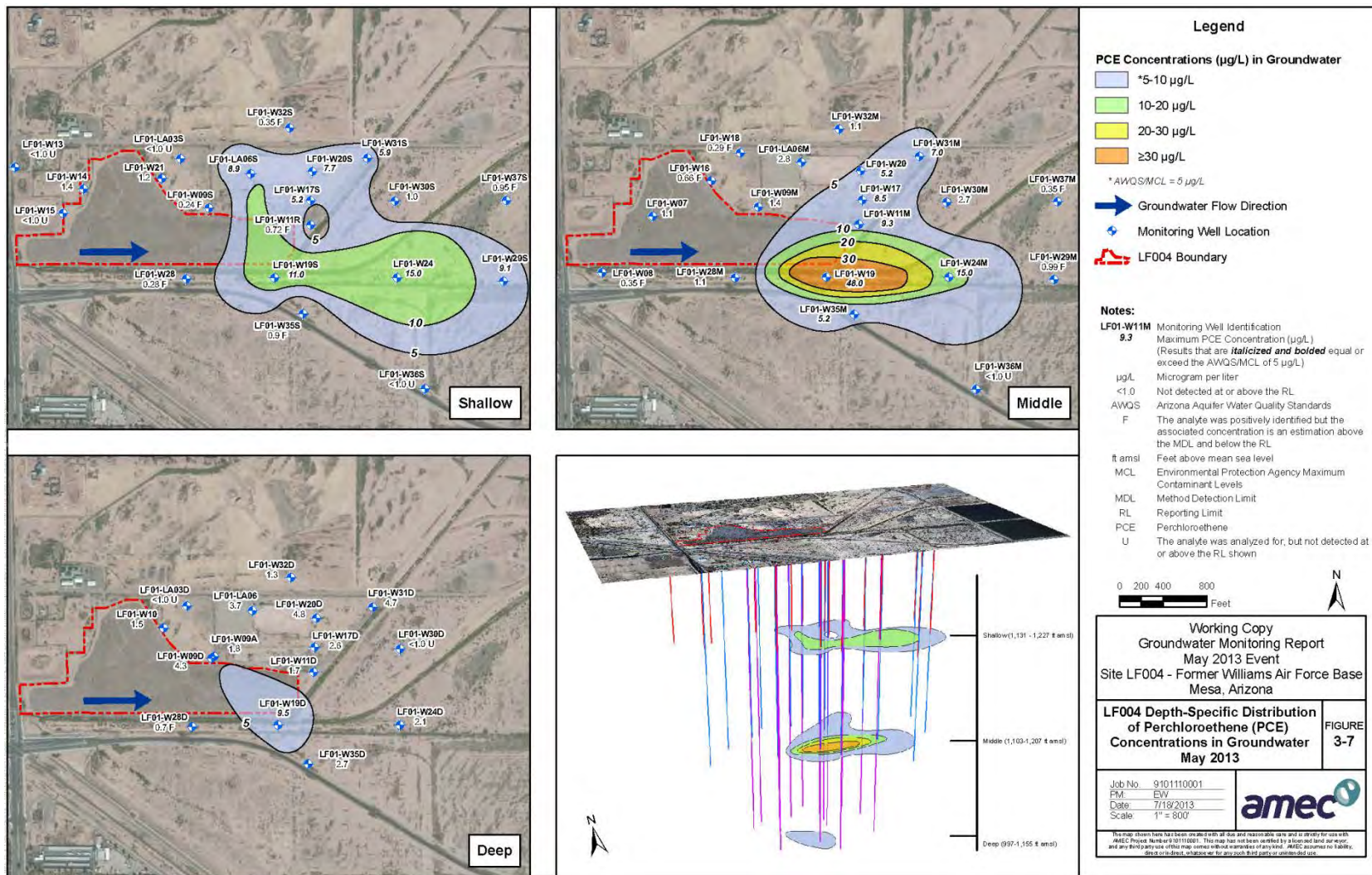




Site LF004 Groundwater Monitoring Update May 2013 PCE Results

W101110001 AR#

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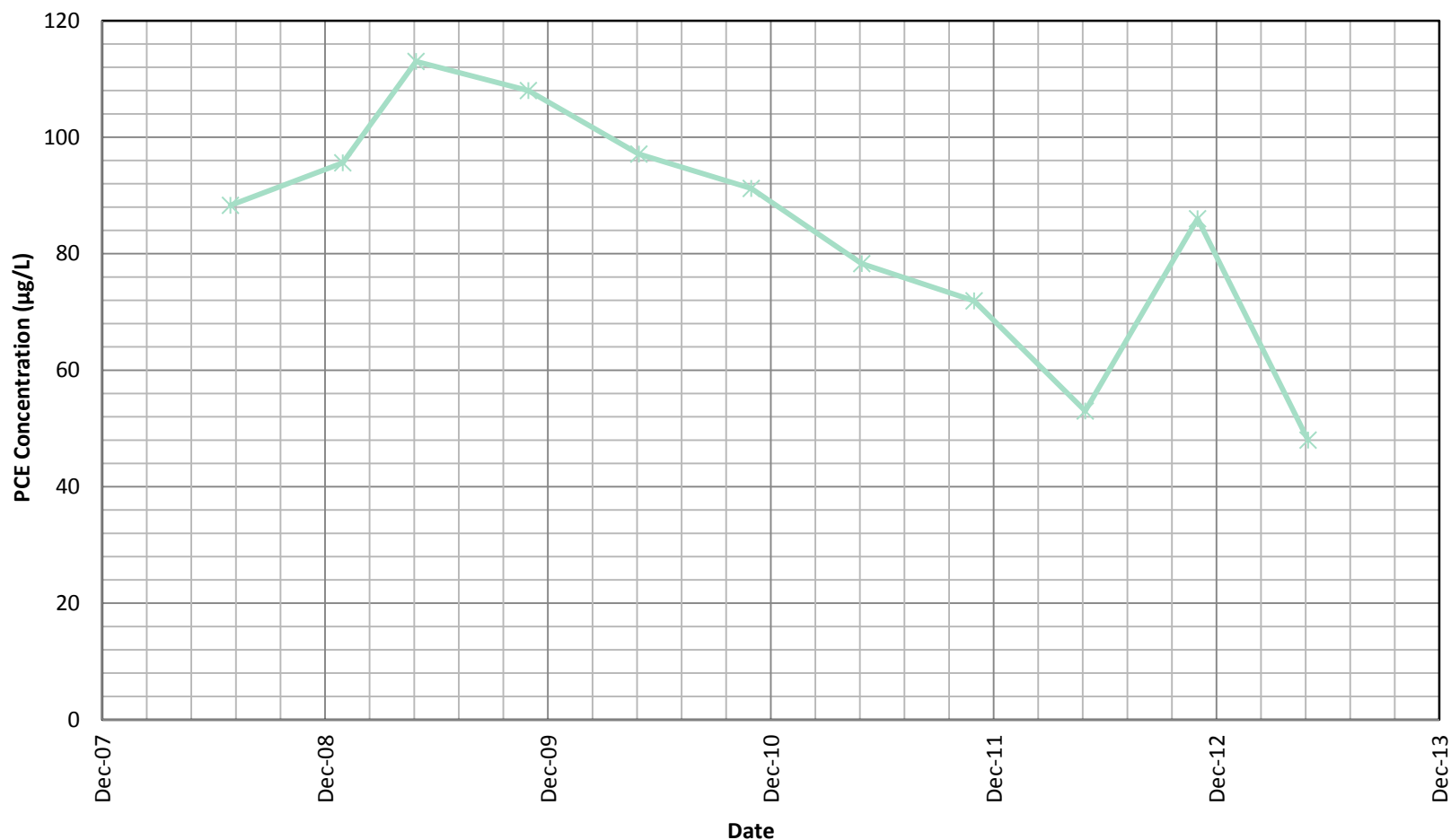


Site LF004 PCE Source Area Concentrations Since 2008

Well ID: LF01-W19

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LF01-W19
Historical PCE Concentrations





May 2013 Summary

- Groundwater results indicate downward trending concentrations of TCE and PCE in hot spot areas
- TCE and PCE plumes are stable and adequately defined
- Next groundwater sampling event - Nov 2013



Site LF004 Path Forward

- **Pre-Design Investigation – Sep 2013-Nov 2013**
- **ROD Amendment – Fall 2013**
- **RD/RA Work Plan – Winter 2013**
- **Ongoing semi-annual groundwater monitoring –
Next event Nov 2013**
- **Annual Landfill Cap Inspection – Fall 2013**
- **Continue landfill maintenance**
- **Remedial system construction and startup –
Apr-Aug 2014**

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Other Active Projects

Presented by:
Ms. Catherine Jerrard
AFCEC

Munitions Response Site XU403 Area 1

Final Munitions Response Action

- **Contract Awarded February 28, 2013**
- **Modification 1 awarded July 2013**
 - Additional digital geophysical mapping (DGM) identified
 - Changes to planning documents
- **Work Plan Submittals July 2013**
 - Internal review and revision in August 2013
 - Regulator version submittal in September 2013

Munitions Response Site XU403 Area 1

Basic Definitions

- MEC – Munitions & Explosives of Concern (MEC), specific categories of military munitions that may pose unique explosives safety risks. MEC includes unexploded ordnance (UXO), discarded military munitions (DMM), & explosive concentrations of munitions constituents (MC)
- MD – Munitions Debris (MD), scrap metal from munitions (no explosive safety risk)
- MC – Munitions Constituents, Any materials originating from UXO, DMM, or other military munitions, including explosive & non-explosive materials & emission, degradation, or breakdown elements of such ordnance or munitions

Munitions Response Site XU403 Area 1

Basic Definitions

- CWM – Chemical warfare materiel (CWM), generally configured as a munition containing a chemical compound that is intended to kill, seriously injure, or incapacitate a person through its physiological effect. CWM can be explosively or non-explosively configured, as well as in bulk containers.
- CACM - chemical agent contaminated media (CACM) may include soil or other media, MD, cultural debris (CD), wood, trash, or any other debris that may be impacted by CA

Munitions Response Site XU403 Area 1

Basic Definitions

- CAIS – chemical agent identification sets (CAIS) are military training aids containing small quantities of CA used to train soldiers to identify and decontaminate chemical agents in the field. There are two general types:
 - Most CAIS—those determined to contain dilute chemical agents or industrial chemicals—can be disposed of as hazardous waste; however
 - Two sets--CAIS K941, toxic gas set M-1; and CAIS K942, toxic gas set M-2/E11 contain a relatively large quantity of chemical agent (mustard). Because of the large quantity of mustard agent, these two CAIS are more hazardous than all other CAIS. And are classified as CWM.

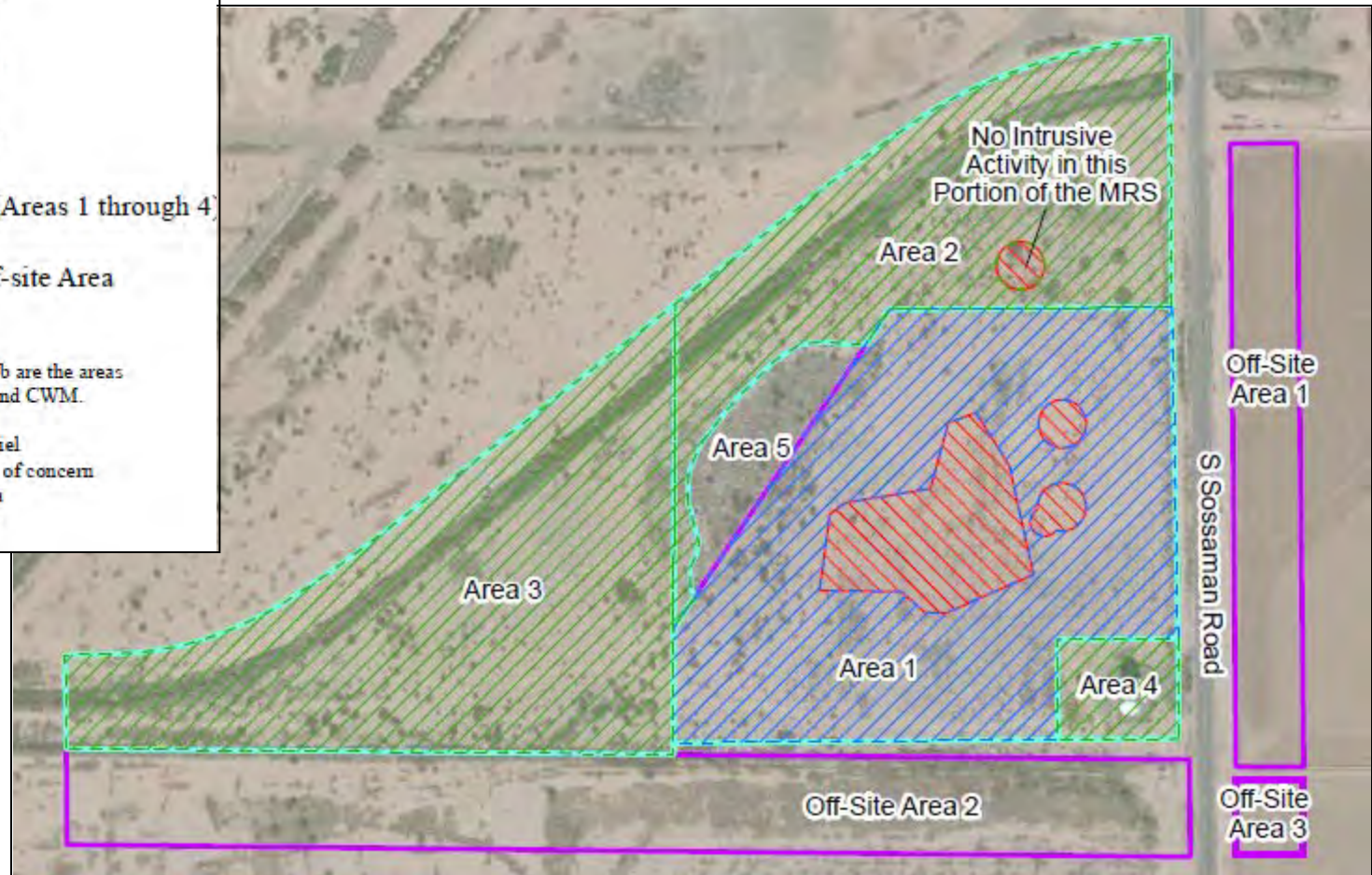
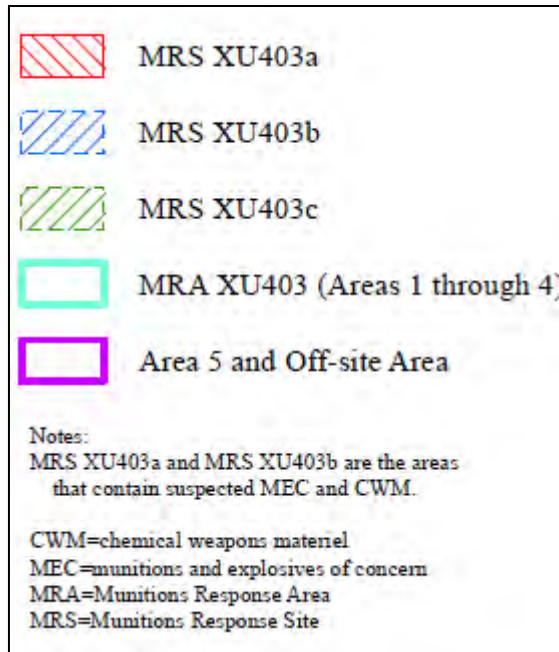
Munitions Response Site XU403 Area 1

Site History

- **Munitions response area (MRA) XU403 (42 acres) includes Parcel N Debris Areas 1 through 4 (*Area 5 and the Off-Site Areas are not part of MRA XU403*)**
- **Munitions response site (MRS) includes three MRS:**
 - MRSs XU403a (3 acres primarily within Area 1 and a small area in Area 2)
 - MRS XU403b (14 acres of Area 1 not including MRS XU403a); and
 - MRS XU403c (25 acres including the remainder of Area 2, Areas 3 and 4)
- **Current project scope includes investigation of MRS XU403a and portions of XU403b**

Munitions Response Site XU403 Area 1

Site Location and MRSs



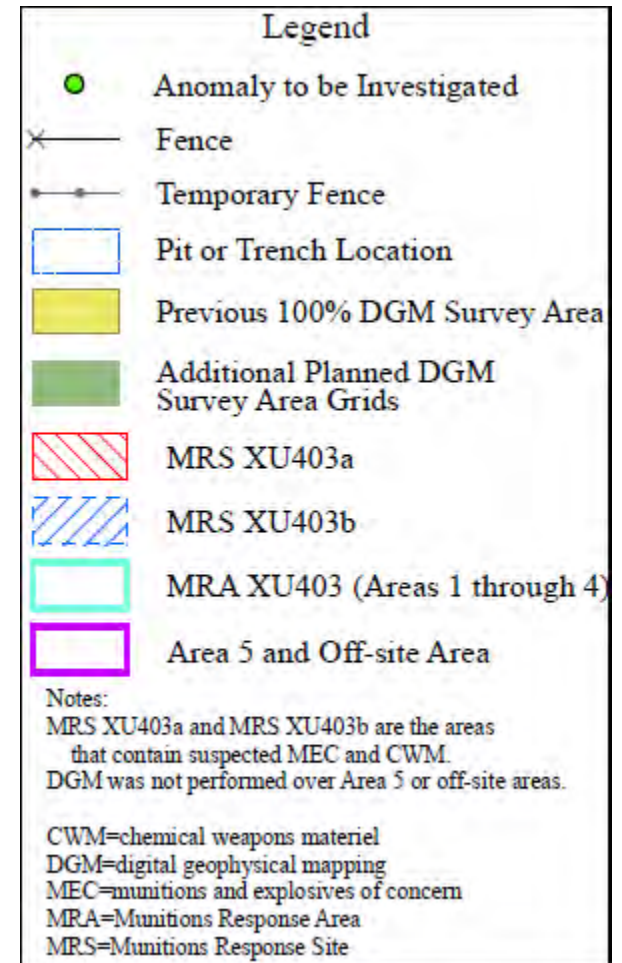
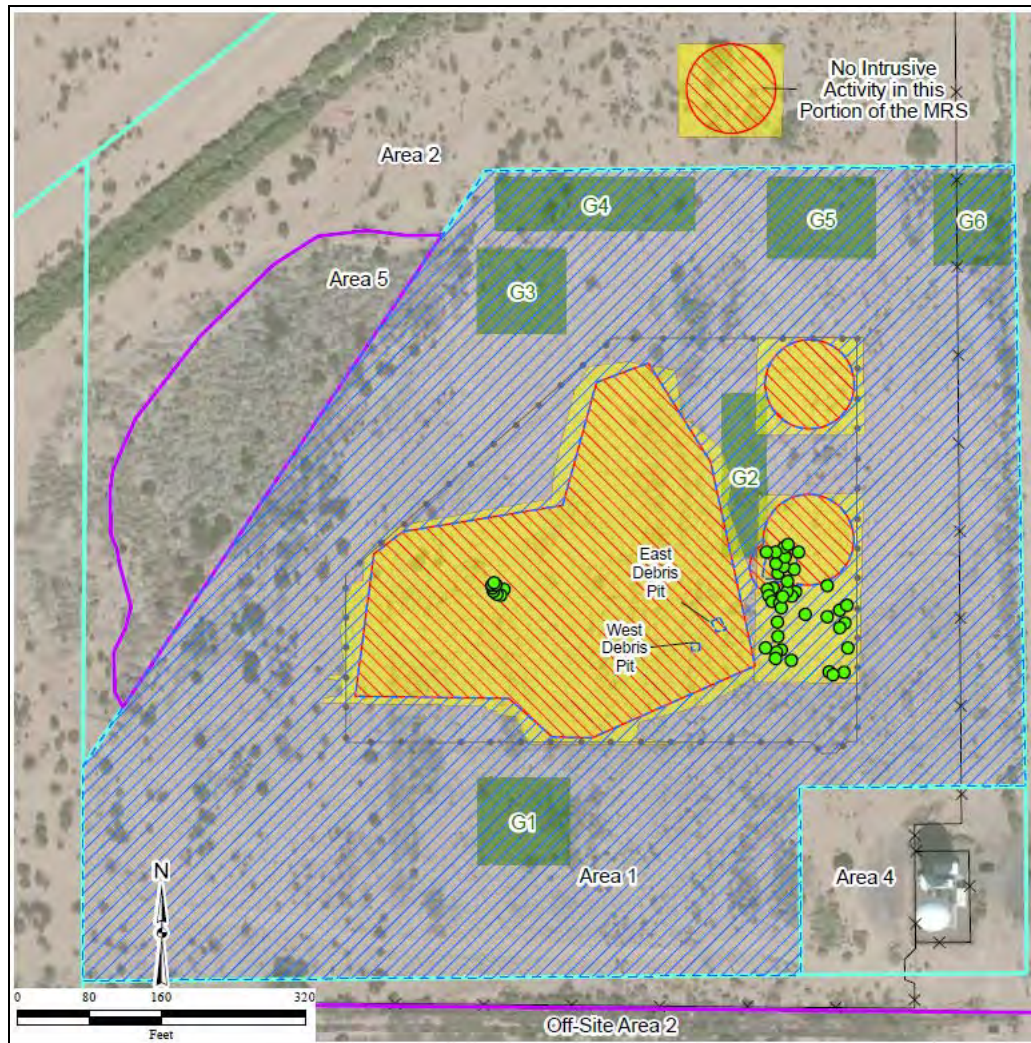
Munitions Response Site XU403 Area 1

Added scope of investigation

- **Additional DGM identified**
 - Historical aerial photograph analysis performed
 - Aerials from 1961 and 1962 located
 - Compared to previous USEPA analysis
 - Compared to all historical investigation
- **Potential pits identified**
- **Additional investigation indicated**

Munitions Response Site XU403 Area 1

Additional DGM planned investigation areas



Munitions Response Site XU403 Area 1

Current Status

➤ Stakeholders

- Government Agencies
 - U.S. Army Engineering and Support Center, Huntsville (USAESCH)
 - Air Force Civil Engineer Center (AFCEC)

➤ Regulators

- Arizona Department of Environmental Quality (ADEQ)
- US Environmental Protection Agency (USEPA)

➤ External Technical Resources (Technical Experts)



ECBC

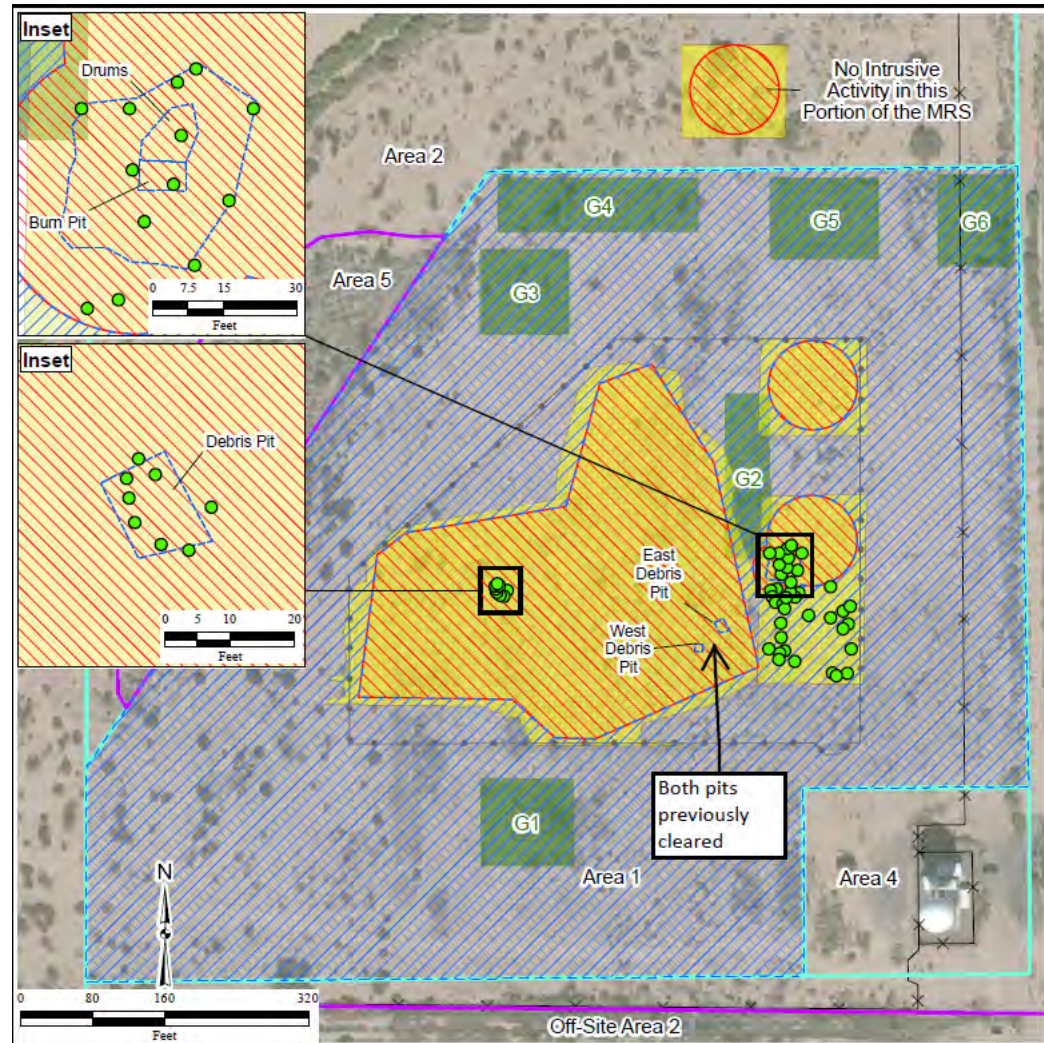
CBRNE
Analytical and
Remediation
Activity (CARA)



Munitions Response Site XU403 Area 1

Field Work Schedule

- **Field Work ~ Nov 2013**
- **Phases of Field Effort:**
 - Site setup / training
 - DGM survey
 - CWM/MEC investigations/removals
 - Environmental sampling
- **All activities conducted with required CWM / CACM procedures in place**



Munitions Response Site XU403 Area 1

CWM Investigations/Removals

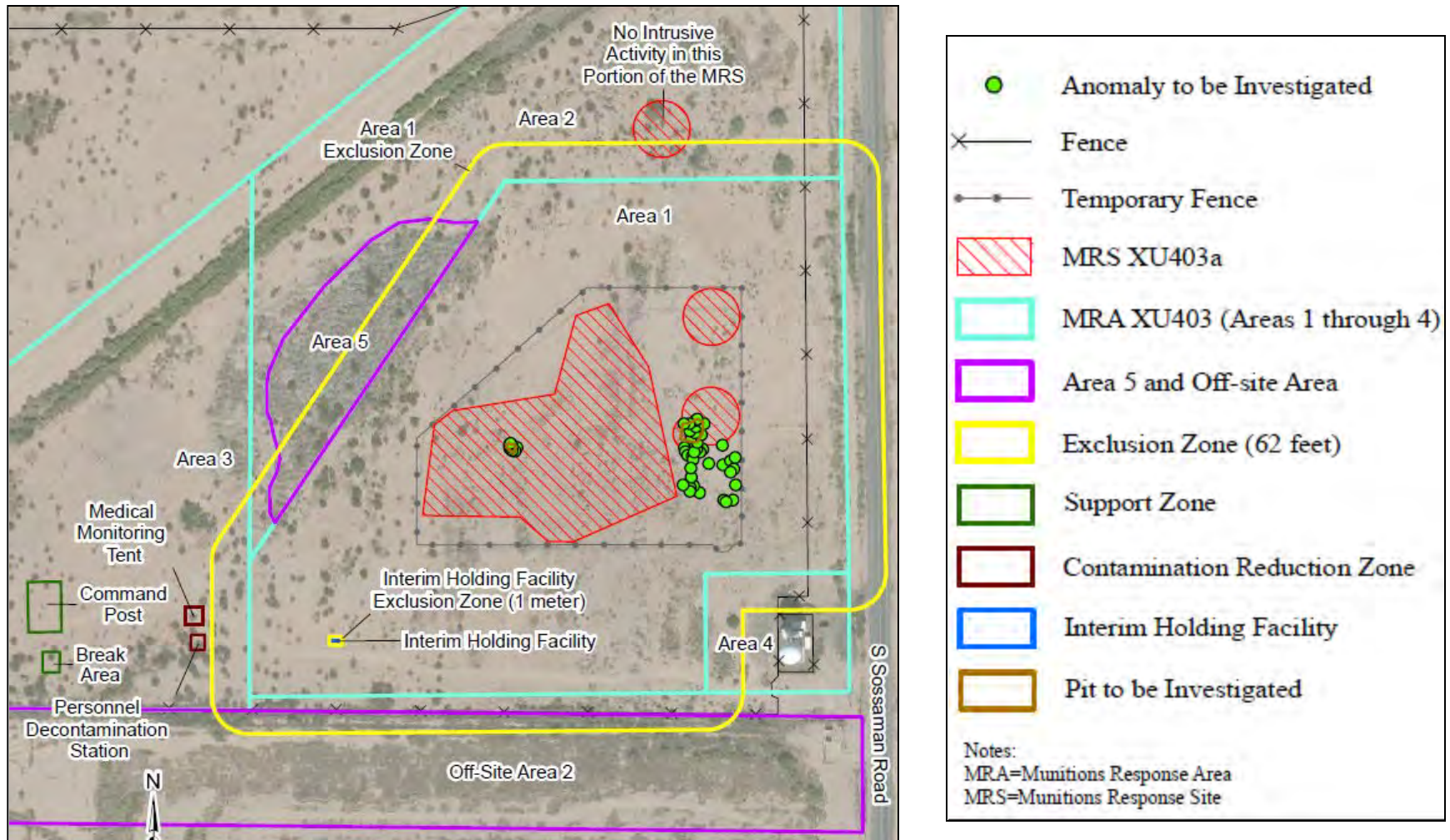
- **Anticipated CWM is the less common K941**
- **Contains mustard or distilled mustard**
 - Amber to black colored liquid, water clear if pure
 - Garlic or horseradish odor (odor threshold 0.6 mg/m³)
 - Skin, eye and respiratory irritation with swelling and blistering of skin 4-24 hours post exposure
 - Potential for further injury
- 1 meter is the distance for the maximum credible event based on the 1% lethality of an evaporative release of 3.5 ounces of mustard (H) or distilled mustard (HD).



Munitions Response Site XU403 Area 1

CWM Investigations/Removals

Locations for work areas



Munitions Response Site XU403 Area 1

Field Activities

- **Site Setup**
- **DGM Survey**
- **Reacquisition and intrusive investigations**
 - 49 single point anomalies
 - Two debris pits and previously excavated areas
 - Excavation by manual and mechanical means
 - Investigation of areas in additional DGM survey



Munitions Response Site XU403 Area 1

Post Field Work Schedule

- **Field work completion January 2014**
 - **Holiday breaks will be scheduled**
 - Adaptation of the schedule for training and pre-operational surveys to meet holidays
- **Completion Reports 2014**
 - Site Inspection Report
 - No Further Action Explosives Safety Submission
 - Archaeological Monitoring Report
 - After Action Report

Munitions Response Site XU403 Area 1 *Closure*

Questions?



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Meeting Wrap-Up

Presented by:
Mr. Len Fuchs/ Ms. Catherine Jerrard
RAB Community Co-Chairs
and Scott Johnston



Meeting Wrap-Up

- **Review action items**
- **Call for agenda items for next RAB meeting**
- **2014 RAB meeting frequency**
- **Meeting adjourned**

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Meeting Adjourned

DISTRIBUTION LIST

Final 17 September 2013 Williams RAB Meeting Minutes

Electronic Copy

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 Bill Mabey, Tech Law, USEPA contractor

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 Mary Hall, Sytsma Group
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 Calvin Cox, Cherokee Nation Tech. Services

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 Brian Sexton, Gateway Airport
 Janet Workman, URS
 Jay Harbin, URS
 Elspeth Sharp, URS
 Devan Phelan, Terra Therm
 Patrick Banger, Town of Gilbert - City Manager
 Kathy Rall, Town of Gilbert
 Collin DeWitt, Gilbert Fire Dept.
 Mark Holmes, City of Mesa
 John Meter, City of Mesa
 Glen Stephens, Ch. 11 Mesa public access
 Art Thomason, Arizona Republic
 Ben Shunk, Community, Gilbert
 Leo Pessin, Community, Gilbert
 Thom Schuett, Community, Queen Creek
 Glenn Stark, Gila River Indian Community

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE