

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

February 21, 2012, 7:00 p.m.
Highland High School
4301 E. Guadalupe Rd.
Gilbert, AZ

Attendees:

Ms. Michelle Lewis	Air Force Center for Engineering and the Environment (AFCEE)/Base Realignment and Closure (BRAC) Environmental Coordinator (BEC)/Air Force Co-Chair
Mr. Scott Johnston	AFRPA Public Affairs/ Napkin Communications
Ms. Mary Hall	AFRPA Public Affairs/Napkin Communications
Mr. Andre Chiaradia	Arizona Department of Environmental Quality (ADEQ), Remedial Project Manager
Mr. Don Atkinson	ADEQ
Mr. Don Smallbeck	AMEC
Ms. Beverly Selvage	RAB Member/Mesa resident
Mr. Dale Anderson	RAB Member/Gila River Indian Community (GRIC) Dept. of
Mr. Calvin Cox	AFRPA contractor/Booz Allen Hamilton
Ms. Joan Johnson	AFRPA contractor/Booz Allen Hamilton
Mr. Dennis Orr	RAB Member/Phoenix-Mesa Gateway Airport
Mr. Isaac Roll	ASU Student
Mr. Thomas Schwett	RAB Member/Queen Creek resident
Mr. Jim Holt	RAB Member/Queen Creek resident
Mr. Lonnie Frost	RAB Member/Town of Gilbert Public Works
Mr. Chris Courtney	AMEC
Mr. Steven Willis	URS Corp.
Mr. Frank Skocypec	CH2M Hill
Mr. Everett Wessner	AMEC

Ms. Lewis called the meeting to order at 7:00 p.m.

The RAB approved the November 2011 meeting minutes without changes.

Mr. Johnston reviewed action items from the November 2011 RAB meeting.

Program Updates for LF004, ST012, and ST035

Mr. Wessner began the main presentation, which focused on Sites *LF004, ST012, and ST035*.

Mr. Wessner began by giving a summary of what has taken place since the last briefing on each site.

Site LF004 (Landfill) off-site well installation

Mr. Wessner presented the groundwater monitoring update from the May 2011 sampling results for Site LF004. Slides were presented showing what the groundwater contamination at the different depths for perchloroethylene (PCE) and trichloroethylene (TCE), the key cleanup drivers.

Forty-nine wells were sampled with Polyethylene Diffusion Bags (PDB) samplers and analyzed for volatile organic compounds (VOC). Results were similar to past events. PCE and TCE are the only VOCs begin detected above the Environmental Protection Agency's Maximum Contaminant Levels (MCL) and Arizona Aquifer Water Quality Standards (AWQS). Wells 19 and 17 have shown the highest concentration of PCE and TCE. Mr. Wessner stated that those two wells have consistently shown the highest concentrations for PCE and TCE and that continues to be the case.

Additional sampling was conducted in November 2011 and those results will be presented at the May RAB in more detail. Mr. Wessner stated the groundwater plume is very stagnant.

Mr. Hunt asked where the groundwater was located in the fourth quadrant of slide 11. Mr. Wessner responded that all three sections of the slides represent groundwater plumes.

Mr. Wessner stated that in the areas where new wells have been placed, results will be ready by the May 2012 RAB meeting and should provide that last piece to the puzzle needed to understand what that plume looks like in all directions.

Mr. Anderson asked if there were any results yet from the new wells installed south of the landfill. Mr. Wessner responded that they completed sampling and lab results should be back in a couple months and will be available at the next RAB meeting.

Mr. Hunt asked if the off-site wells were shallow, midrange or deep. Mr. Wessner responded they were shallow, midrange and deep.

Site ST012, Former Liquid Fuels Storage Area

Mr. Wessner stated that results from the May 2011 sampling event indicate that even with the groundwater rising, the plume is stable at this site. Eleven wells were sampled and the results will be provided at the May RAB meeting. The next sampling event is scheduled for November 2012.

Mr. Wessner stated that once a remedy is in place around 2014, then the frequency will pick up so more data can be acquired on a shorter time frame.

Mr. Wessner also presented a performance report for the SVE System at ST012, which has been effective and AMEC will continue to operate, maintain and monitor it.

Mr. Wessner stated that while AMEC is getting through the process of selecting a remedy, and design and construction, the SVE system will continue working on the site, as well as a groundwater containment system that was brought online in January 2012. Both of these systems are removing mass, so time is not being lost through the larger remedy design and implementation phase.

Mr. Orr asked if the thermal enhanced extraction has been abandoned and won't be looked at again. Mr. Wessner responded that the pilot project is completed, but that a focus feasibility study is being done that will focus on thermal and based on the pilot study, it looks very promising. He added that thermal is the way they are leaning, but they are going through the process to evaluate all the other alternatives.

Mr. Hunt asked if the 240,000 gallons extracted from ST012 signified contaminants that have been removed and asked if the original estimate was around 6 million gallons. Mr. Smallbeck responded that yes, that is gallons of contaminants removed, and the total estimated amount in is closer to 2 to 4 million.

Mr. Atkinson asked if there was an estimate for completing the groundwater cleanup. Mr. Smallbeck responded that AMEC's proposal is to be able to reach MCLs in the groundwater approximately 20 years from now, which is a significant advancement over the previous estimate which was 100 years.

Site ST035, Former Building 760 UST

Mr. Wessner pointed out that the May 2011 sampling event results from ST035 are consistent and that it is a stable plume. Sampling was conducted in November 2011 and those results will be available at the May RAB meeting.

Mr. Wessner pointed out that there is an SVE system operating right at the source area around the former UST and it is focused on the soil above the water.

Mr. Wessner stated the February 2012 groundwater sampling event is complete and samples are in the lab. Results will be available at future meetings.

Mr. Hunt asked about the effectiveness of In-Well Air Stripping compared to steam injection. Mr. Wessner responded that steam is a dramatic technology, a big solution for a big problem. Mr. Smallbeck added that there are a number of technologies that would be applicable at ST035, but In-Well Stripping is preferred because with the one technology they can treat contaminants in both the vadose zone and the groundwater.

Mr. Frost asked what the spacing in the wells would be to make the process work. Mr. Wessner responded that at ST035 there will only be one well.

Mr. Atkinson asked what the pump rate for the In-Well Stripping would be. Mr. Smallbeck responded that it will be in the neighborhood of 20 to 25 gallons per minute maximum.

Mr. Chiaradia asked if the extraction rate from the well was lower how much that would affect the radius of influence. Mr. Smallbeck responded that it would affect it in two ways: It either takes longer to treat a given radius; or it would effectively narrow the radius, one or the other. If you had the advantage of time eventually that radius would be treated. If you're under a time constraint, then that's where the option of installing a second well comes into play.

Mr. Chiaradia asked how much is being pumped at ST012 groundwater treatment system right now. Mr. Smallbeck responded that he did not have the answer to that.

Ms. Lewis added that it wasn't that high and said she will provide that information.

Contracting Update

Ms. Lewis provided an update on contracting issues and updates.

Ms. Lewis stated the one contract that is outside of the base-wide performance based remediation contract is the landfill Parcel N area, the MMRP site that was discussed earlier. Because of the chemical agent that was found out there it has to be run through the Army Corp of Engineers. That contract will also be a performance based remediation, which means that it will have an end point that they need to reach; in this case the goal is no further action. They will continue to clean any munitions.

Meeting Wrap-up

That concluded the information portion of the evening.

Mr. Hunt requested that the volume for the water containment system be added as an action item.

Mr. Hunt asked what the expectation for ultimate disposition of the Parcel N site. Ms. Lewis responded that the site is scheduled to go to the Bureau of Indian Affairs. Because there is a landfill adjacent to the site, there will be a restriction on the entire parcel; however, the cleanup goal is to achieve a No Further Action on the site itself.

Ms. Lewis stated the next RAB meeting will include a wrap up of all the 2011 samplings that have occurred.

No other topics were suggested for the next meeting. Ms. Lewis thanked the RAB for attending and adjourned the meeting at 8 p.m. The next Williams RAB meeting date is scheduled for Tuesday, May 15, 2012 at 7:00 p.m., at Highland High School.

Attachments:

Feb 2012 RAB meeting slide presentation

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Former Williams AFB Restoration Advisory Board (RAB)



February 21, 2012

Highland High School
4301 E. Guadalupe Rd.
Gilbert, AZ

Headquarters U.S. Air Force

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Welcome & Introductions



Presented by:
Ms. Michelle Lewis/Mr. Len Fuchs,
RAB Community Co-Chairmen
and Napkin Communications



Welcome & Introductions

- Mr. Len Fuchs, RAB Community Co-Chair
- Ms. Michelle Lewis, Air Force Center for Engineering & the Environment, PM/BEC and RAB Co-Chair
- Ms. Carolyn d'Almeida, Project Manager, U.S. Environmental Protection Agency, Region IX
- Mr. Andre Chiaradia, Project Manager, ADEQ



Agenda

<u>Time</u>	<u>Topic</u>	<u>Presenter</u>
7:00 p.m.	RAB meeting convenes <ul style="list-style-type: none">• Welcome and introductions• Community co-chair remarks• Review November 2011 meeting minutes and action items	Ms. Michelle Lewis Mr. Len Fuchs Mr. Scott Johnston
7:15 p.m.	Program updates	Ms. Michelle Lewis Mr. Everett Wessner
7:45 p.m.	Contracting Update	Ms. Michelle Lewis
8:00 p.m.	Meeting wrap-up <ul style="list-style-type: none">• Review action items for next meeting• Call for agenda items for next meeting• Propose next RAB meeting date: May 15, 2012	Ms. Michelle Lewis Mr. Len Fuchs Mr. Scott Johnston
8:30 p.m.	Adjourn	Ms. Michelle Lewis Mr. Len Fuchs



Minutes and Action Items

- Review November 2011 RAB meeting minutes
- Action Items from November 2011 RAB meeting

Presented by:
Mr. Scott Johnston
Napkin Communications

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Program Updates: Sites LF004, ST012, and ST035

Presented by:
Ms. Michelle Lewis, AFCEE
Mr. Everett Wessner, AMEC

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Site LF004, Landfill



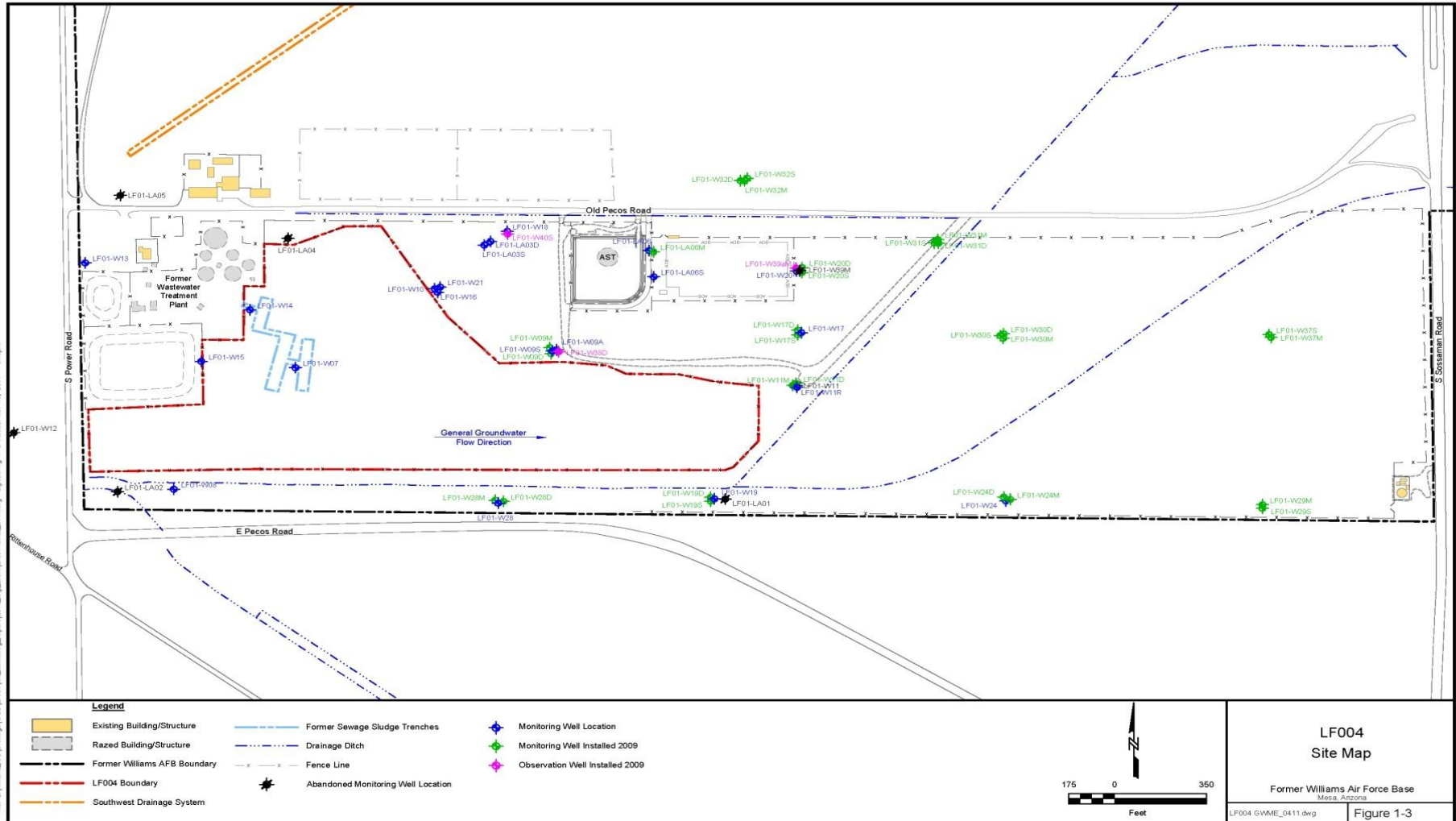
Site LF004 Groundwater Monitoring Update

May 2011 Sampling Event

- **Forty nine wells were sampled with PDB samplers and analyzed for VOCs**
- **Results were similar to past events**
 - **PCE and TCE were the only VOCs detected above EPA Maximum Contaminant Levels (MCLs) and Arizona Aquifer Water Quality Standards (AWQS)**
 - **PCE concentrations exceeded the standards in 16 of 49 wells, with the highest concentration of 78.3 ug/L in LF01-W19**
 - **TCE concentrations exceeded the standards in 14 of 49 wells, with the highest concentration of 53.0 ug/L in LF01-W17**
- **Sampling was conducted in November 2011. These results will be made available in the near future.**



Site LF004 Groundwater Monitoring Update May 2011 Sampling Event



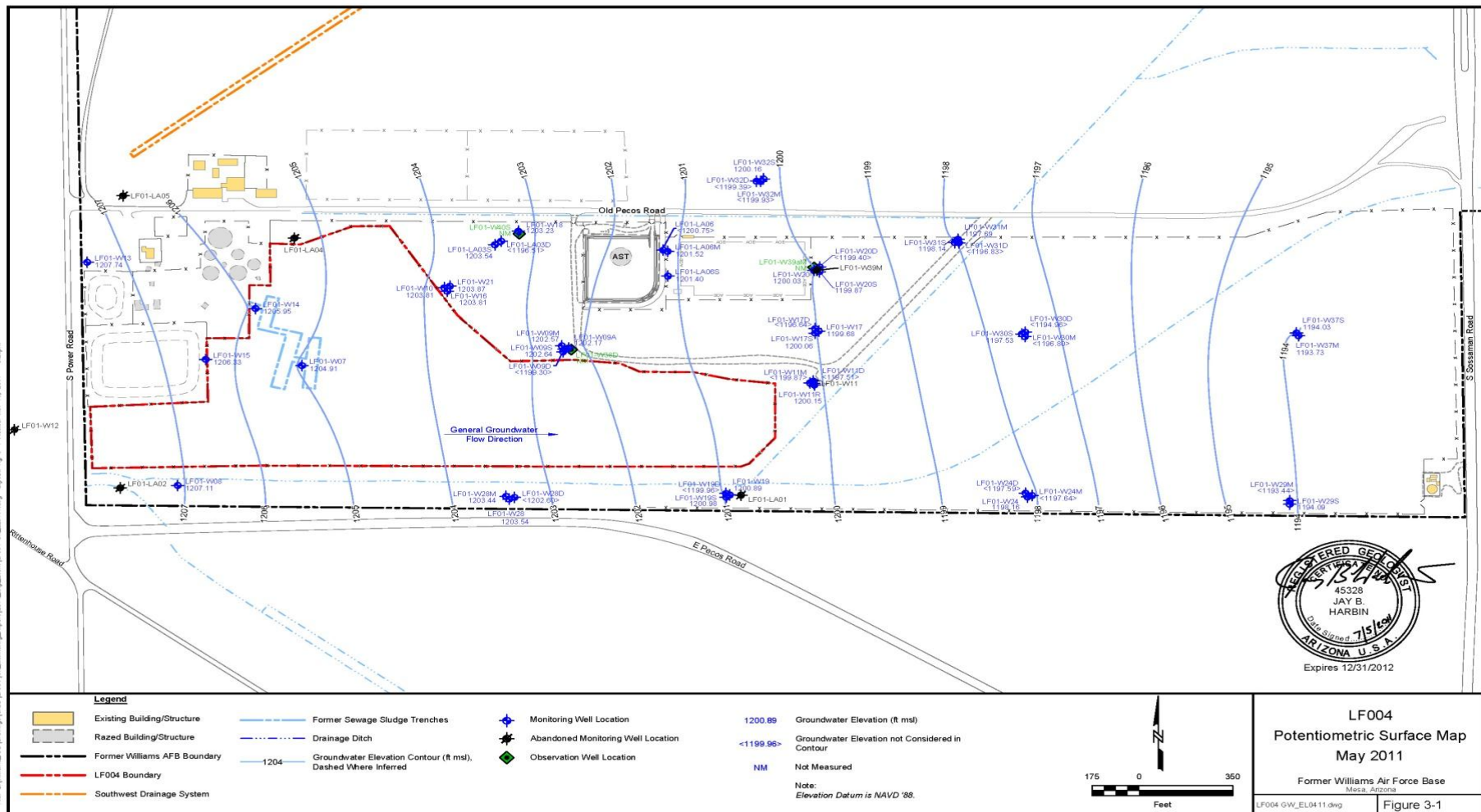
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LF004 Groundwater Monitoring, May 2011 Event
Former Williams AFB, Mesa, Arizona

Final
November 2011



Site LF004 Groundwater Monitoring Update May 2011 Sampling Event



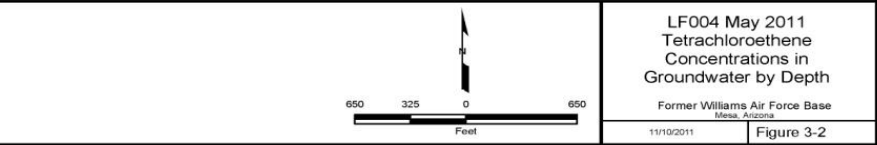
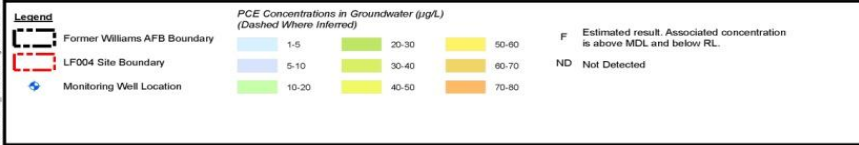
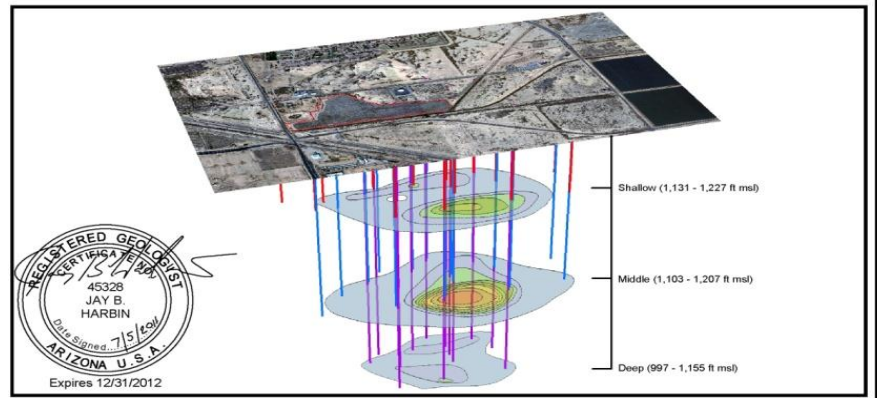
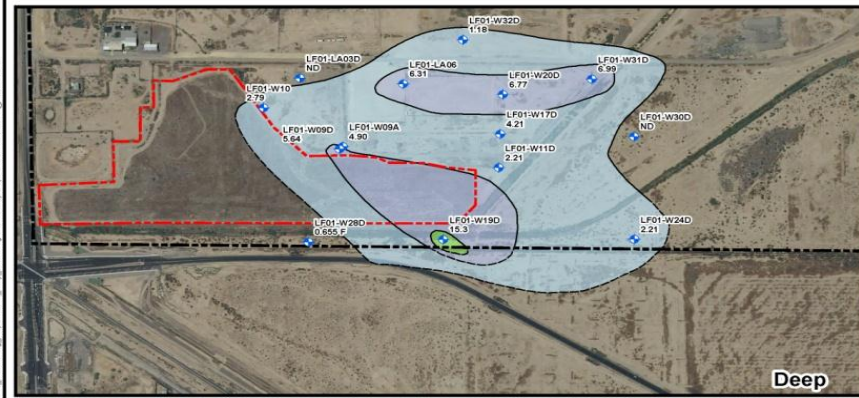
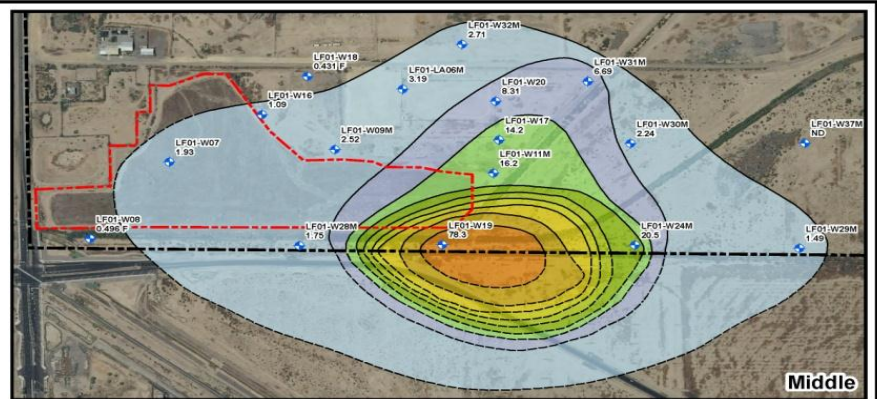
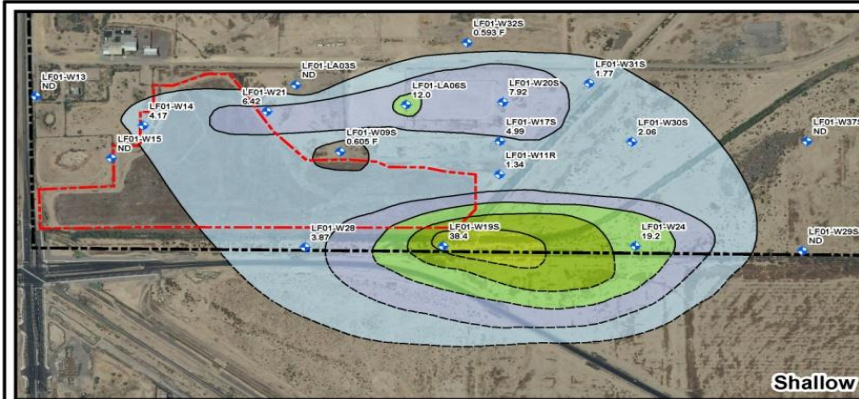
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LF004 Groundwater Monitoring, May 2011 Event
Former Williams AFB, Mesa, Arizona

Final
November 2011



Site LF004 Groundwater Monitoring Update May 2011 Sampling Event

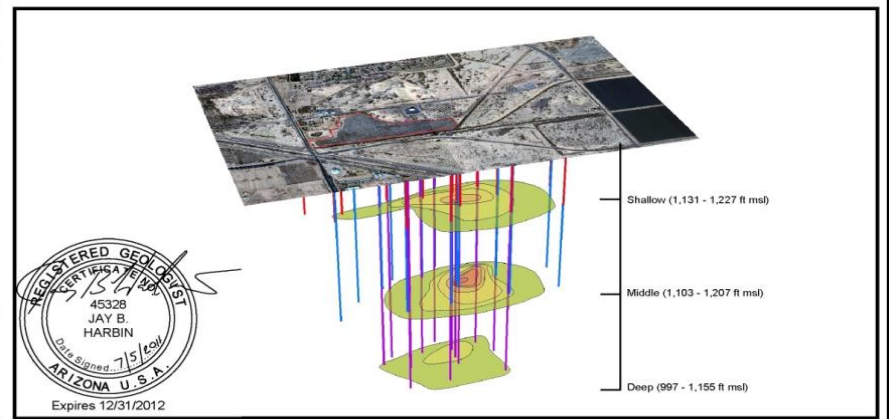
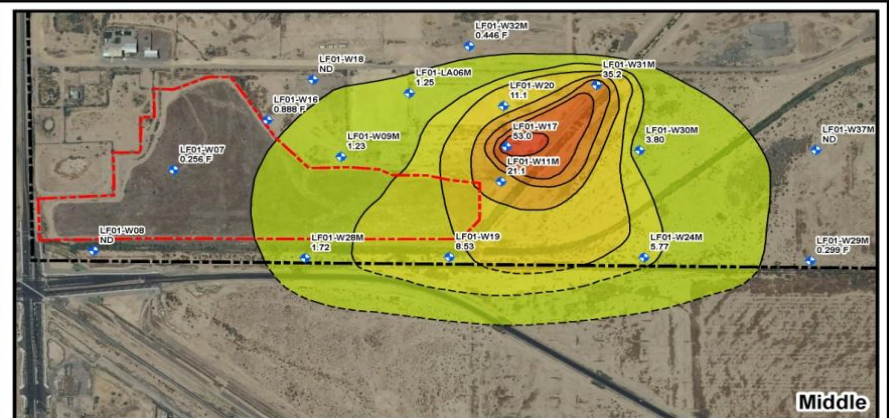


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LF004 Groundwater Monitoring, May 2011 Event
Former Williams AFB, Mesa, Arizona



Site LF004 Groundwater Monitoring Update May 2011 Sampling Event



Legend		TCE Concentrations in Groundwater ($\mu\text{g/L}$) (Dashed Where Inferred)		F Estimated result. Associated concentration is above MDL and below RL.	
	Former Williams AFB Boundary		1-5		30-40
	LF004 Boundary		5-10		40-50
	Monitoring Well Location		10-20		50-60
			20-30		>60
					ND Not Detected



LF004 May 2011
Trichloroethene
Concentrations in
Groundwater by Depth

Former Williams Air Force Base
Mesa, Arizona

11/10/2011 **Figure 3-3**

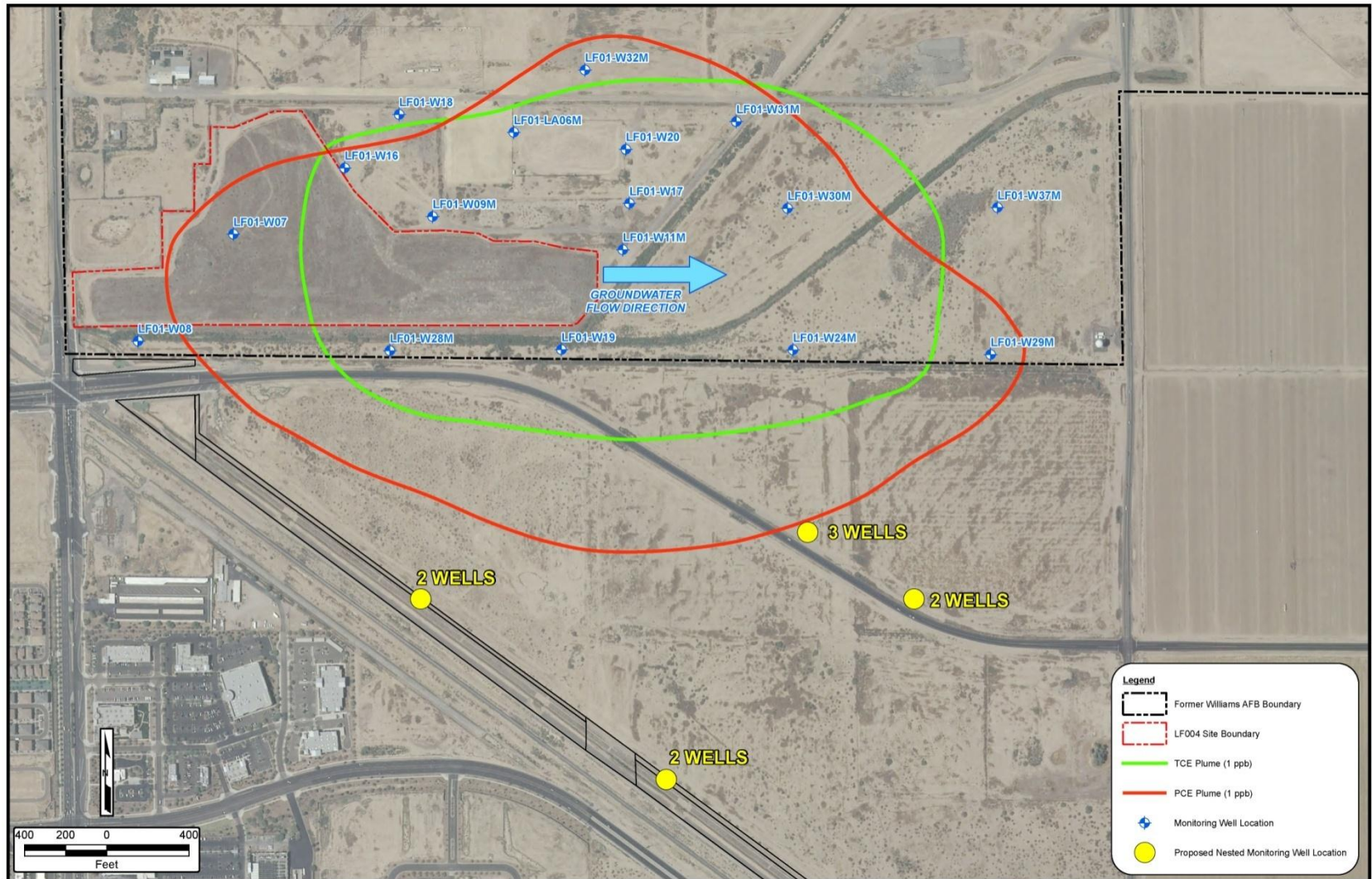
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LF004 Groundwater Monitoring, May 2011 Event
Former Williams AFB, Mesa, Arizona

Final
November 2011



Site LF004 Off Site Monitoring Well Update





Site LF004 Future Actions for Next Quarter

- **Results of off-site wells will be available**
- **Groundwater sampling event is scheduled for May 2012**
- **Draft focused feasibility study submittal to regulatory review (March thru May 2013)**

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**Site ST012, Former
Liquid Fuels
Storage Area**



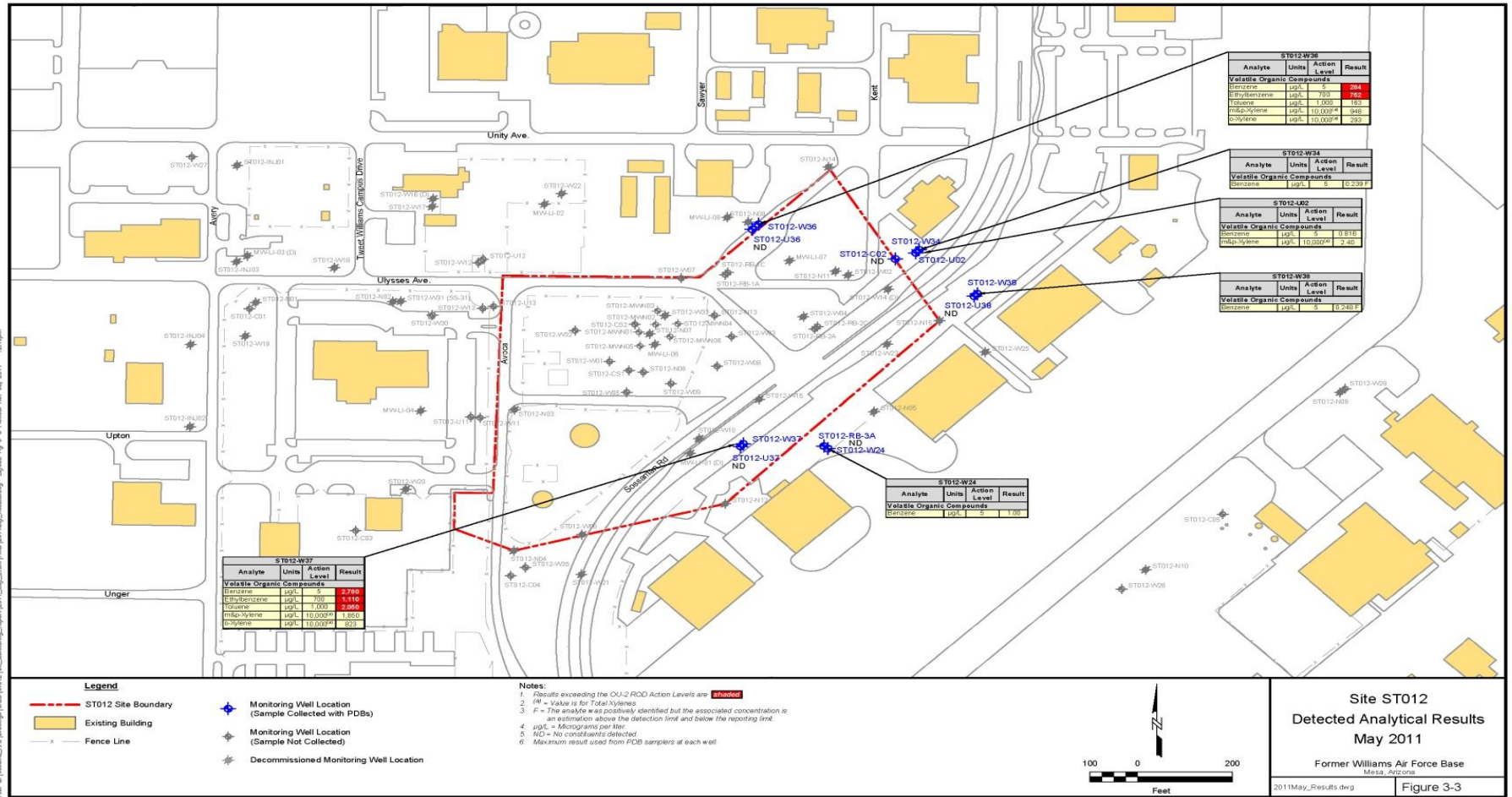
Site ST012 Groundwater Monitoring Update May 2011 Sampling Event

- **Eleven monitoring wells were sampled using polyethylene diffusion bag (PDB) samplers and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX)**
- **Results were similar to past events**
 - **Benzene, ethylbenzene and toluene exceeded Maximum Contaminant Levels(MCLs) in well W37.**
 - **Benzene and ethylbenzene were detected in excess of MCLs in Well W36**
- **Sampling was conducted in November 2011. These results will be made available in the near future.**
- **The next sampling event is scheduled for November 2012 (Note: this is a change from previous years – meets the requirements of the ROD)**



Site LF004 Off Site Monitoring Well Update

May 2011 Sampling Event



ST012 Groundwater Monitoring, May 2011 Event
Former Williams AFB, Mesa, Arizona

Site ST012
Detected Analytical Results
May 2011
Former Williams Air Force Base
Mesa, Arizona
2011May_Results.dwg
Figure 3-3



Site ST012 SVE System 2nd Quarter 2011 System Operation Overview

- **Installed new flow meters and gauges**
- **1856 hours of operation from April to June**
- **89.56% operational uptime**
- **April 19-26 the site operated in flame oxidizer mode while thermal oxidizer was upgraded with new combustion blower**

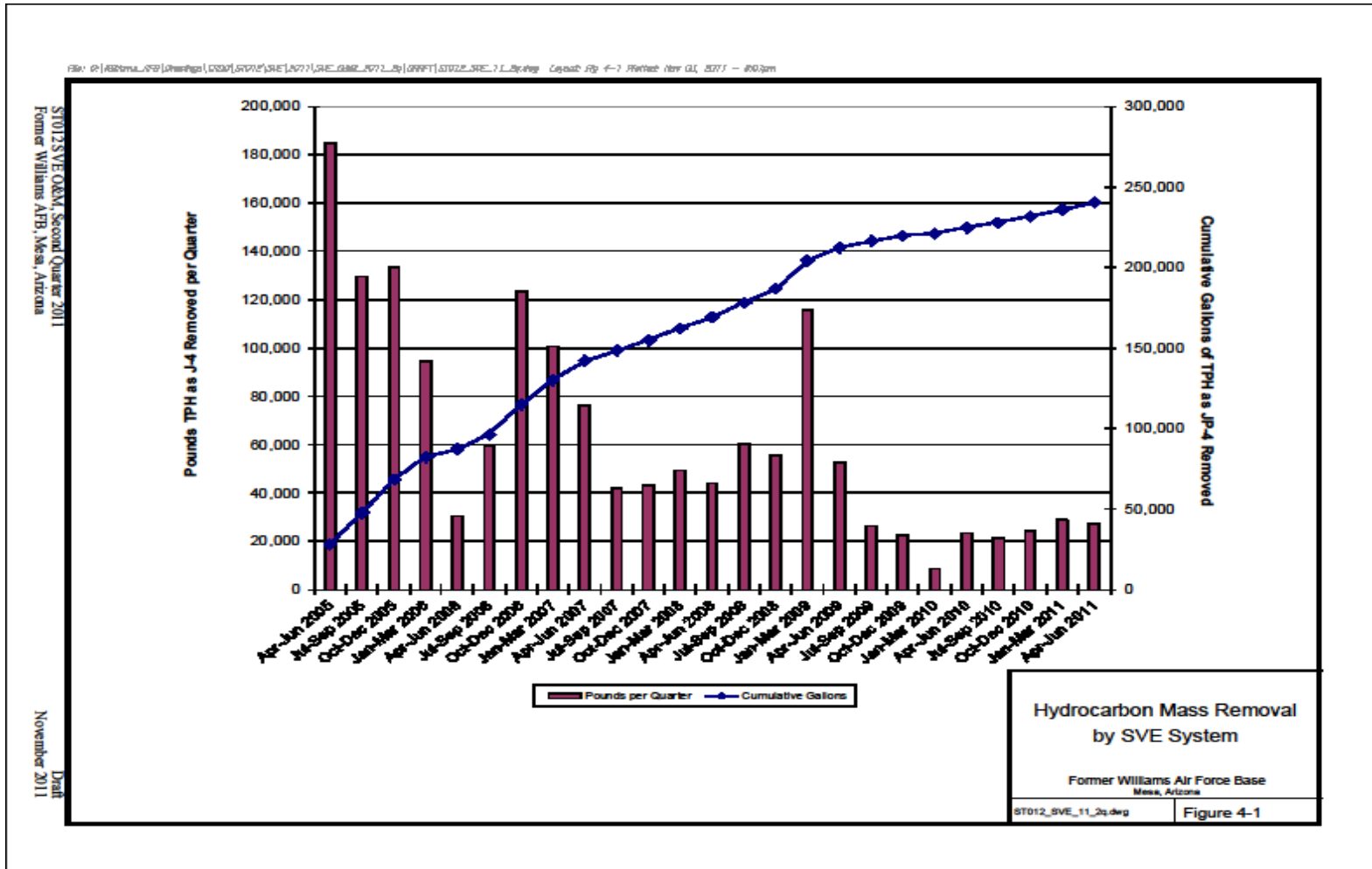


Site ST012 SVE System 2nd Quarter 2011 Performance Reporting

- **Petroleum hydrocarbons (PHC) removed – 26,700 lbs (4,100 gallons) approximately 288 lbs/day**
- **Removed 1,577,000 lbs of PHC (240,000 gallons) since the installation of the soil vapor extraction system**
- **99.94% destruction efficiency for PHC based upon influent and effluent vapor concentrations**



Site ST012 SVE System 2nd Quarter 2011 Performance Reporting





Site ST012 Future Actions for Next Quarter

- **AMEC will continue operation, maintenance and monitoring of SVE system (AMEC assume operations on January 1, 2012)**
- **Draft focused feasibility study submittal for regulatory review (March thru May 2013)**

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**Site ST035, Former
Building 760 UST**



Site ST035 Groundwater Monitoring Update

May 2011 Sampling Event

Where are the August results?

- **Thirteen wells were sampled and analyzed for BTEX, methyl tertiary butyl ether (MTBE), 1,2-dibromoethane (EDB), and 1,2-dichloroethane (1,2-DCA)**
- **Results were similar to past events**
 - **Benzene concentrations in 4 wells exceeded ADEQ UST Tier 1 Level of 5 ug/L**
 - **MTBE, 1,2-DCA and/or EDB exceeded ADEQ UST Tier 1 Levels in several wells**
- **Sampling was conducted in November 2011. These results will be made available in the near future.**



Site ST035 Groundwater Monitoring Update May 2011 Sampling Event



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ST035 Groundwater Monitoring, May 2011 Event
Former Williams AFB, Mesa, Arizona



Site ST035 Groundwater Monitoring Update May 2011 Sampling Event

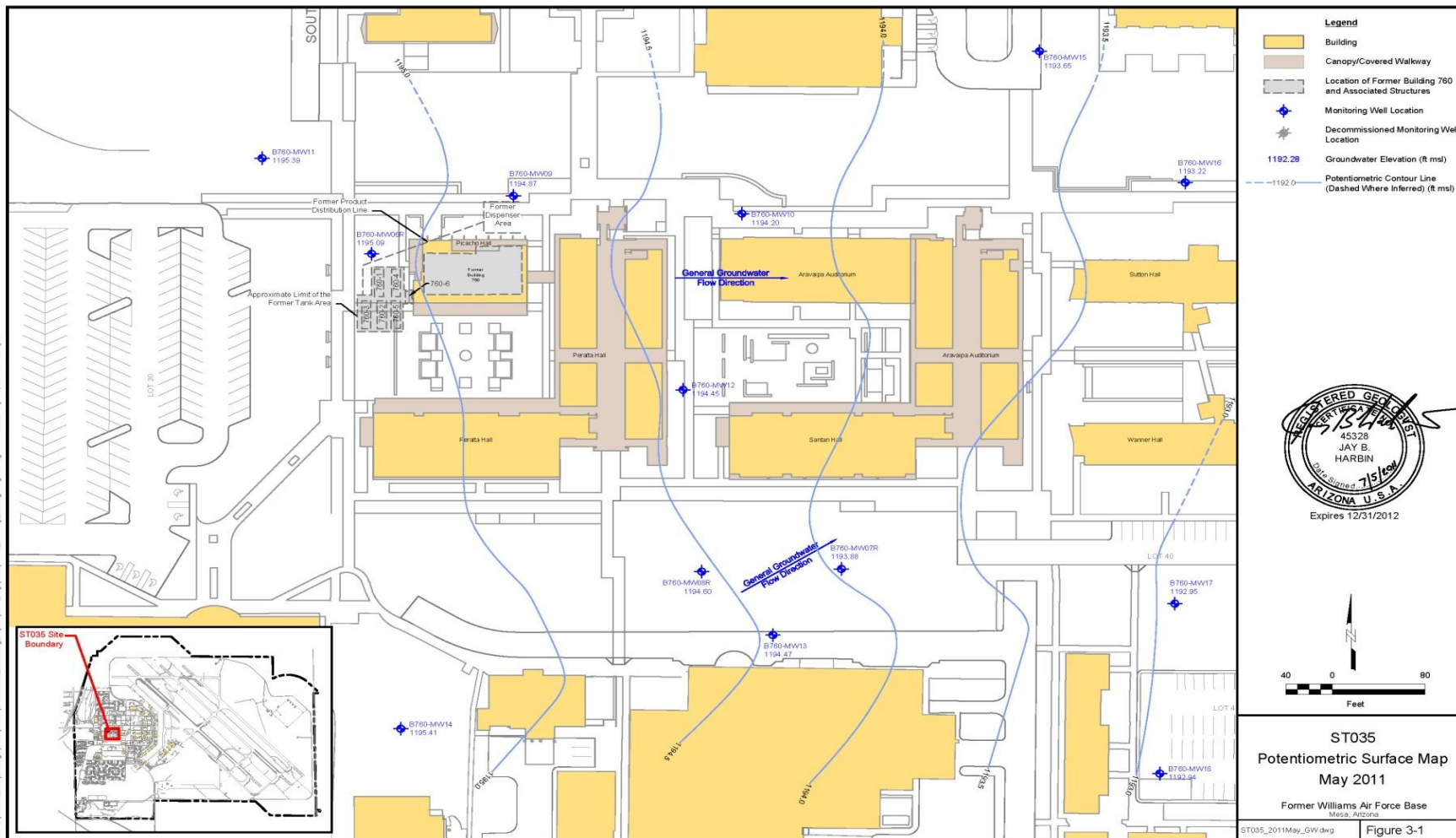
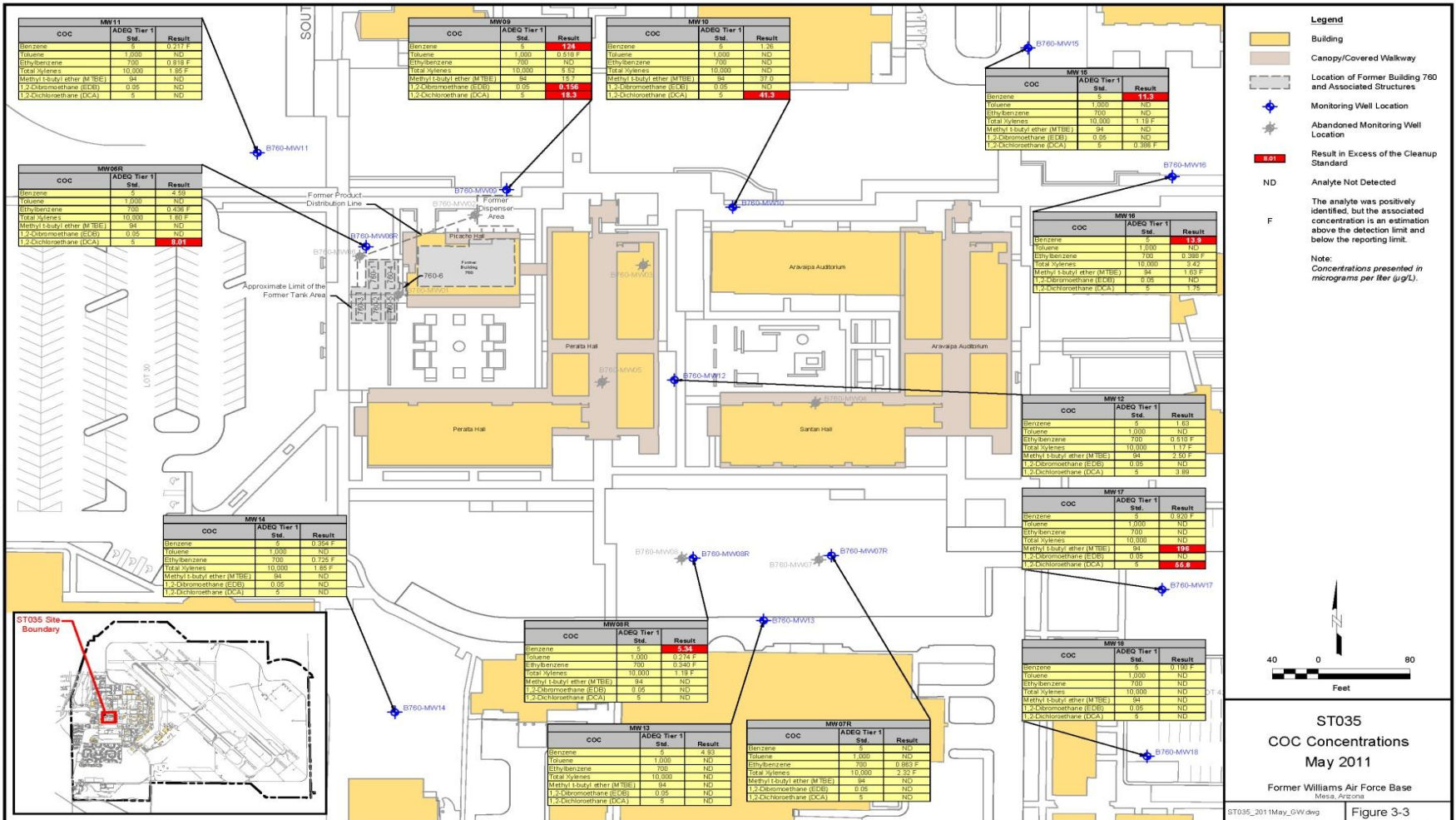


Fig. 3-1 (Williams AFB Drawings) (CAD) (2008) Groundwater Monitoring Report (May 2011) (Rev) (ST035) (2011) (Map) (Scale) (Legend) (Fig. 3-1) (Published: Sep. 17, 2011) -- 3:13pm

ST035 Groundwater Monitoring, May 2011 Event
Former Williams AFB, Mesa, Arizona



Site ST035 Groundwater Monitoring Update May 2011 Sampling Event



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ST035 Groundwater Monitoring, May 2011 Event
Former Williams AFB, Mesa, Arizona



Site ST035 SVE System 2nd Quarter 2011 System Operation Overview

- **2,227 hours of operation from April to June**
- **99.78% operational uptime**
- **SVE-4S and SVE-4M were closed during this quarter since VOC concentrations were very low**

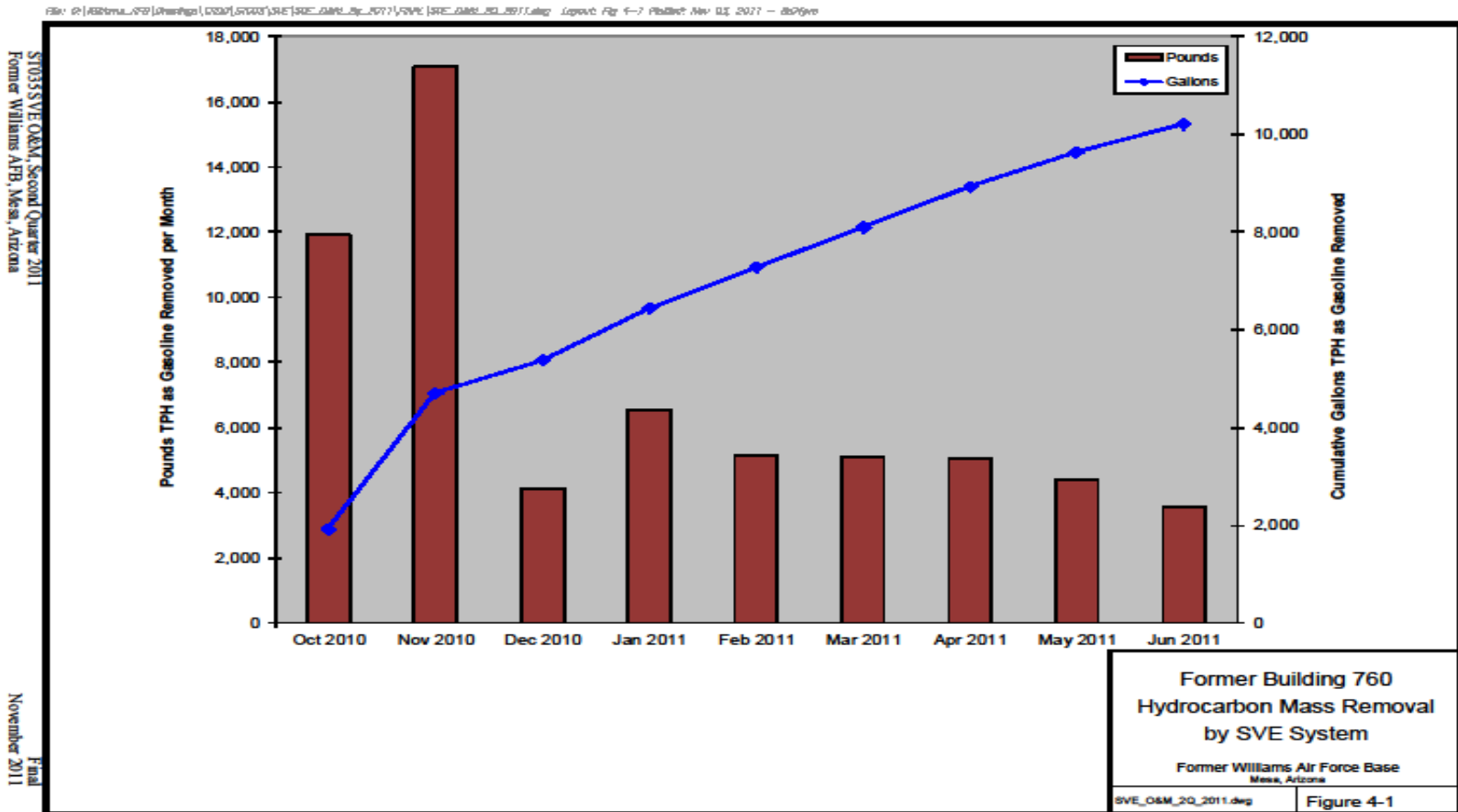


Site ST035 SVE System 2nd Quarter 2011 Performance Reporting

- **Petroleum hydrocarbons (PHC) removed – 13,000 lbs (2,100 gallons) approximately 140 lbs/day**
- **99.84% destruction efficiency for PHC based upon influent and effluent vapor concentrations**
- **Quarterly average mass removal of PHC has continued to decline as expected**
- **Ratio of BTEX to total contaminant mass remains consistent indicating distribution of contaminants in the subsurface has not change significantly**



Site ST035 SVE System 2nd Quarter 2011 Performance Reporting





Site ST0335 Future Actions for Next Quarter

- **Groundwater sampling event is scheduled for Feb 2012**
- **AMEC will continue operation, maintenance and monitoring of SVE system (AMEC assume operations on January 1, 2012)**
- **Draft In-Well Air Stripping and Groundwater Monitoring Well Installation Work Plan will be submitted for regulatory review (March thru May 2013)**

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Contracting Updates

Presented by:
Ms. Michelle Lewis
AFCEE

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Meeting Wrap-Up



Presented by:
Ms. Michelle Lewis/Mr. Len Fuchs,
RAB Community Co-Chairmen
and Amber Cargile, Cargile Communications



Meeting Wrap-Up

- Review Action Items
- Call for agenda items for next RAB meeting
- Schedule next RAB meeting (Proposed date May 15, 2012)
- Meeting adjourned

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Meeting Adjourned

