Former Williams Air Force Base (AFB) Restoration Advisory Board (RAB) October 16, 2018 - 6:30-9:00 p.m.

Phoenix-Mesa Gateway Airport Administration Building, Saguaro Room 5835 S. Sossaman Road, Mesa, AZ

Meeting Summary

RAB members present: Dale Anderson (Gila River Indian Community), Ryan Cavalier (City of Mesa), Carl D'Acosta (Phoenix Mesa Gateway Airport), Carolina d'Almeida (EPA), Len Fuchs (Gilbert resident, Community RAB Co-Chair), James Holt (Queen Creek resident), Cathy Jerrard (AFCEC, Community Co-Chair), Suzanne Kennedy (Arizona State University), Wayne Miller (ADEQ), Tom Schuett (Queen Creek resident), Beverly Selvage (Mesa resident), Tom Zuppan (Gilbert resident).

Meeting support staff present: Linda Geissinger (AFCEC, Public Affairs), Scott Johnston (AFCEC, Public Affairs), Don Smallbeck (Wood).

Others attending: Naomi Bebo (Gila River Indian Community), Eva Davis (EPA), Tom Lyon (Arizona State University), Brian McNamara (Arizona State University), Ben Mitsuda (Arizona State University), Leo Pessin (Gilbert resident), Latonia West, (Arizona State University), Steve Willis (UxoPro).

Action items:

- Provide a copy of the Basewide PFOS/PFOA Site Inspection Report to Dale Anderson at the Gila River Indian Community.
- It is suggested the Air Force look into alternatives other than local newspapers for the distribution of announcements and other Former Williams AFB-related material. Platforms like television, radio and local community, city and town websites can be considered.
- Don Smallbeck will provide information on process for removing any lateral lines for the ST035 Soil Vapor Extraction (SVE) system.

Welcome, Introductions and RAB Administrative Items

Ms. Cathy Jerrard (AFCEC, RAB Co-Chair) and Mr. Len Fuchs (Gilbert resident, Community RAB Co-Chair) welcomed everyone to the former Williams AFB Restoration Advisory Board meeting. Mr. Fuchs invited those in attendance to introduce themselves. Ms. Jerrard reviewed the meeting agenda and presented the meeting goals which included updating the community on cleanup projects, discussing RAB adjournment and recognizing long-standing RAB members.

Program updates

See attached presentation slides, available at <u>https://www.afcec.af.mil/Home/BRAC/Williams/Library.aspx</u>

Mr. Don Smallbeck (Wood) gave a presentation with an update on the cleanup program at Former Williams AFB. The presentation included information on the finalization of the Operable Unit 6 Record of Decision (ROD) and updates on SS017, ST035, ST012, FT002, LF004 and the PFOS/PFOA investigation currently underway at former Williams AFB.

Key questions included:

- Was Site SS017 excavated 18 inches to 2 feet deep, or was that where testing was done? *Mr. Smallbeck: testing was done down to 2 feet below the surface and most of the excavation occurred in the top 12 inches.*
- What does closing down a monitoring well entail? *Mr. Smallbeck: the wells are cut off below ground and sealed with grout. The surface is then restored to match the surrounding area.*
- When a well is decommissioned is it prevented from receiving any sort of storm water? *Mr. Smallbeck: when a well is grouted it is completely sealed.*
- Are there any lateral lines for the ST035 SVE system, and if so, what are the plans for removing them? *Mr. Smallbeck: There are some short lines, but they can be addressed through the grouting process.*
- Was the last spike on the graph (on slide 26) for the Steam Enhanced Extraction (SEE)? Mr. Smallbeck: The spike was the January-March 2016 time period when SEE was stopped and we started extracting from all the SVE wells again. The increase is related to the heating of the soil.
- If it was doing so well during that time, why stop the SEE? Mr. Smallbeck: The increase in contaminant removal via SVE is related to the Vadose Zone soil above where SEE was working. SEE was working in the groundwater below that.
- Is there a new estimate regarding the number of gallons left to be removed at ST012? *Mr. Smallbeck: 1.5 million gallons was one of the estimates. For the entire area approximately 1.1 million gallons have been removed. Which means there could potentially be 400,000 gallons left.*
- Where will the mix tanks and all the other equipment be located at Site 012? *Mr. Smallbeck: It will all be located on site.*
- Is there a start date for Enhanced Bioremediation? *Mr. Smallbeck: The plan is to start EBR in the next couple of months.*
- If PFOS/PFOA was used for fire fighting, why is there a concentration in the landfill? *Ms. Jerrard: it is from the water treatment facility as some of the sludge from the filters was placed there.*
- How deep was the sample taken at the fire training area? *Mr. Smallbeck: it was in the 20 to 30-foot range.*

RAB Adjournment

Ms. Linda Geissinger provided a summary of RAB adjournment process for the former Williams AFB RAB. See attached presentation slides, available at <u>https://www.afcec.af.mil/Home/BRAC/Williams/Library.aspx</u>

Miscellaneous

Ms. Jerrard presented an update on Munitions Site XU403 located east of the landfill and the current property transfer status at former Williams AFB.

Munitions Site XU403: The cleanup action at the site has been completed and the report is on the Administrative Record. An additional action will take place at an adjacent site to remove a rubble pile. Sub-surface geophysical mapping will be performed to see if there are any anomalies or metals buried at the site. This action has not been scheduled yet. There will be a munitions notice (not a restriction) put on the XU403 property stating an action was taken, the site is clean to the extent of technology and listing who to contact should something be discovered in the future.

Property transfer: There are only three Air Force-owned parcels remaining to be transferred. The largest parcel is 140 acres and will be transferred to the Gila River Indian Community. This parcel will be transferred when the munitions project is complete. The fire fighting chemicals in the groundwater will be addressed. There may be an additional restriction put on the site. The 1.8-acre water tower site (Site

SS017) will be transferred to Arizona State University. The environmental documents are under Air Force review and will be sent to the ADEQ and the EPA for comment. The deed and Declaration of Environmental Use Restriction (DEUR) will follow that. It is anticipated it will be completed by the end of December 2018. The final parcel is the fire training area, which will be going to the airport. There is a DEUR in place on the 0.85 acre parcel. When these three parcels are transferred, the AF will no longer own any property on the former base.

Public Comment and Discussion

Comments included:

- Dale Anderson: In regards to the property transfer, the Gila River Indian Community would like to discuss the details regarding the demolition plan for the existing SVE and monitoring wells at Parcel N. Some scientists might find the monitoring wells of interest from a scientific perspective to monitor the area for the long term or for training. We may have some comments on Parcel N transfer documents. We would also like to be involved in the annual groundwater monitoring at the landfill and the landfill inspection.
- **Suzanne Kennedy:** When the RAB is adjourned is there still opportunity to make comments to the Air Force? How would that work? *Ms. Jerrard: Both the Air Force and the environmental contractor will continue to coordinate directly with the stakeholders. There will also be public engagement opportunities and newsletters sent to the mailing list.*
- **Beverly Selvage:** I see these cleanup programs taking place, but in the future what will the prevention be so that it doesn't happen again to this extent? *Ms. Jerrard: A lot of the contamination happened a long time ago when pollution prevention procedures weren't in place. Laws were passed in the 1970s and now most places have the policies to make sure contamination is contained.*

RAB member recognition

Ms. Jerrard recognized long-standing RAB members for their participation with the Former Williams AFB Restoration Advisory Board.

Adjourn

Meeting adjourned at 8:05 p.m.



U.S. AIR FORCE

Former Williams AFB Restoration Advisory Board (RAB) Meeting

October 16, 2018 – 6:30 p.m. Phoenix-Mesa Gateway Airport Administration Building, Saguaro Room 5835 S. Sossaman Road, Mesa, AZ

Agenda

6:30 Welcome and Introductions – Mr. Len Fuchs, RAB Community Co-chair

- **6:35** Air Force Welcome Cathy Jerrard (Air Force Civil Engineer Center)
 - Review Agenda
 - Meeting goals
 - Update the community on cleanup projects
 - Discuss RAB adjournment
 - Recognize long-standing RAB members
- **6:40 Program updates** *Cathy Jerrard and Don Smallbeck (Wood)*
 - Operable Unit 6 Record of Decision, Final Record of Decision signed
 - ST035, Remediation completed
 - ST012 SVE system, Continues removing contaminants
 - FT002 status update
 - LF004 status update
 - PFOS/PFOA investigation
- **7:40** Miscellaneous Cathy Jerrard
 - Munitions Site XU403 update
 - Property transfer update (3 parcels)
- 7:45 RAB Adjournment Linda Geissinger
- 8:00 Public Questions and Discussion General public
- 8:15 RAB Member Recognition Cathy Jerrard
- 8:30 Meeting Recap and Next Steps Cathy Jerrard

Adjourn

FORMER WILLIAMS AIR FORCE BASE Restoration Advisory Board (RAB) Meeting

16 October 2018

Phoenix Mesa Gateway Administration Office Building Saguaro Conference Room 5835 So. Sossaman Rd. Mesa, AZ

THE FORCE CIVIL ENGINEER CENTER



Welcome & Introductions

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







- 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)







6:30 Welcome and Introductions – Mr. Len Fuchs, RAB Community Co---chair

6:35 Air Force Welcome – Cathy Jerrard (Air Force Civil Engineer Center)

- Review Agenda
- Meeting goals
- Update the community on cleanup projects
- Discuss RAB adjournment
- Recognize long---standing RAB members

6:40 **Program updates** – Cathy Jerrard and Don Smallbeck (Wood)

- Operable Unit 6 Record of Decision, Final Record of Decision signed
- ST035, Remediation completed
- ST012 SVE system, Continues removing contaminants
- FT002 status update
- LF004 status update
- PFOS/PFOA investigation



Agenda

- 7:40 Miscellaneous Cathy Jerrard
 Munitions Site XU403 update
 - Property transfer update (3 parcels)
- **7:45 RAB Adjournment** *Linda Geissinger*
- 8:00 **Public Questions and Discussion** General public
- **8:15 RAB Member Recognition** *Cathy Jerrard*
- 8:30 Meeting Recap and Next Steps Cathy Jerrard

Adjourn







Site SS017 Site Location Map







Site SS017 Monitoring Well Location









- Old pesticide/paint shop
- Soil and GW Chemicals of Concern (COCs) -Dieldrin
- Removal action for soil completed in 2000
- Ongoing groundwater monitoring







- Lead based paint soil cleanup and site restoration conducted from Oct 2018 thru Jan 2018. Approximately 750 tons of soil was removed for landfill disposal and site restoration was completed.
- Site cleanup and restoration was performed under the ADEQ Voluntary Remediation Program. The soil remediation report was approved by ADEQ on 2 Aug 2018. AF preparing documentation for No Further Action.
- OU-6 ROD finalized on 23 Feb 2018. The selected remedy was groundwater monitoring and land use controls. A future Declaration of Environmental Use Restriction will be filed for the site.
- Groundwater monitoring is currently performed on quarterly basis. Groundwater monitoring results continue to indicate dieldrin concentrations below the health advisory level. Frequency of groundwater monitoring may be adjusted based on evaluation of results.

Site ST035, Former Building 760 **Underground Storage** Tanks (USTs) THE FORCE CIVIL ENGINEER CENTER



AIR FORCE

Site ST035 Location Map







Site ST035 Well Location Map









- Building 760 gas station & oil/water separator
 - Gas dispensing until 1986
 - >>> Tank & dispensing equipment removed in 1993-1994
 - >>> Oil/water separator removed in 1996
- Vadose zone soil COCs
 - Benzene
 - >>> 1,2-Dibromoethane (EDB)
- Groundwater COCs
 - >>> Benzene, toluene, ethylbenzene, xylenes (BTEX)
 - ➢ EDB
 - >>> Methyl tertiary butyl ether (MTBE)
 - >>> 1,2-Dichloroethane (DCA)
- Site cleanup regulated by ADEQ under Leaking Underground Storage Tank (LUST) regulation (R18-12-263)





- Corrective action Soil Vapor Extraction (SVE) of vadose zone
- Operated Oct 2010 Dec 2013
 - System monitored for one year post-shutdown
 - Rebound testing indicated majority of contamination has been removed and residual levels of COCs will not pose threat to indoor air or groundwater
- Evaluation of vapor intrusion into hypothetical residential structures located over former source areas indicated risk/hazard below thresholds
- Post remediation groundwater monitoring indicated groundwater concentrations met Tier 3 requirements for site closure. Groundwater monitoring ended in June 2016.





- Approximately 115,000 pounds of petroleum hydrocarbons removed during SVE remediation
- Final closure report submitted on 21 Jun 2017
- ADEQ published public notice (30-day comment period) on 7 May 2018
- AF received site closure letter from ADEQ dated 11 Jun 2018





- Decommissioning of treatment system and demolition of treatment enclosure
- Remediation and monitoring well abandonment





Site ST012 Site Location Map







ST012 Cobble Zone Well Locations





10/17/18



ST012 Upper Water Bearing Zone Well Locations





10/17/18



ST012 Lower Saturated Zone Well Locations



10/17/18

IR FORCE V

ST012 PROGRESS

- Steam Enhanced Extraction (SEE) Startup
- SEE complete
- SVE operation
- Pilot Study Construction
- Additional Site Characterization
- Total contaminant mass removed by SEE: Approximately 2,650,000 pounds of Total Petroleum Hydrocarbons (TPH) (equivalent to approximately 400,000 gallons)



Sep 2014



- Mar 2016 Apr 2005 – Present May 2016 – Jun 2018
- Sept 2016 Present



ST012 SVE System Update



■T PH removed from Mar 2016 –Jun 2018: Approximately 60,000 gallons

■T otal TPH removed: Approximately 380,000 gallons





Site ST012 SVE System Performance









- 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 primarily around the periphery of the site to complete treatment of remaining contamination
- The EBR pilot study design consists of injection and extraction wells within a multiple treatment zones and will be implemented in several phases
- A terminal electron acceptor such as sulfate will be injected into the subsurface to stimulate microbial degradation of the residue contamination in soil and groundwater
- Phase 1 EBR pilot study is expected to operate for 12-18 months. Subsequent phases and optimization will be determined by evaluation of the Phase 1 EBR pilot study data.





- Complete additional characterization activities
- Implement Phase 1 EBR pilot study
- Evaluate Phase 1 pilot study effectiveness
- Continue groundwater monitoring
- Continue SVE operation



Site FT002, Fire Training Area

REMEDIAL ACTION



Site FT002 Location Map









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



Site FT002 Soil Vapor Extraction System Update



System Description

- One nested SVE well with three screen intervals - shallow (S) 14-39 ft, middle (M) 42-57 ft, and deep (D) 60-75 ft
- Treatment system: Combination thermal oxidizer (for concentrations exceeding 2000 ppmv) and electric catalytic oxidizer (for concentrations less than 2000 ppmv)
- Treatment system operation commenced on Jun 2, 2014 and ended on Jun 15, 2015






| Total Mass removed as total pounds | |
|------------------------------------|------------------------------------|
| | |
| | 33.85 |
| | 620 |
| | 194 |
| | 1066 |
| | 172 |
| | Total Mass removed as total pounds |





- On site remedial activities, soil vapor rebound study, and confirmation sampling ended Mar 2016
- Draft remedial action completion report submitted to regulatory agencies on 31 Oct 2016. Regulatory comments received on 5 Jan and 6 Feb 2017.
- Final report submitted on 9 May 2017. Regulatory comments received on 5 June and 11 Sept 2017. Response to regulatory comments and finalization of report in progress.
- Documentation for retaining land use controls and DEUR to be developed



SITE LF004, LANDFILL

REMEDIAL ACTION



Site LF004 Site Location Map









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
- >> 2014 Record of Decision Amendment remedy -
- (In Well Air Stripping and Oxidation for groundwater; Soil Vapor Extraction for soil gas)

• COCs

>>> Dieldrin & beryllium in surface soil

>> Trichloroethylene (TCE) & Perchloroethylene (PCE) in groundwater & soil gas



Site LF004 Former AST SVE System Update



- Began operation 9 Sep 2014.
 Operations completed in Oct 2017.
- Estimated 97.1 pounds of TCE and PCE removed by SVE
- Post remediation monitoring indicates TCE and PCE concentration remained below soil vapor goals (SVSLs)





Site LF004 LF01-W17 Area IWAS System Update



- Began operation 29 Aug 2014.
 Completed operation in Feb 2017.
- Estimated 12.4 pounds of TCE and PCE removed
- Post remediation monitoring indicates all groundwater wells below Maximum Contaminant Level (MCLs).





- Began operation 12 Sep 2014.
 Operations completed in May 2016.
- 36.9 pounds of PCE and TCE removed by SVE
- Post remediation monitoring data indicates TCE and PCE concentration remained below soil vapor goals (SVSLs) in all SVE wells and VMPs







- Oxidant injection and recirculation from Sep 2014 thru Feb 2018
- Final May 2018 results indicate only three PCE MCL (MCL is 5 μ g/l) exceedances: W09D 5.1 micrograms per liter (μ g/l), W24 at 7.9 μ g/l, W24M at 6.2 μ g/l. Sufficient oxidant measured in Sept 2018 remains to degrade residual PCE concentrations.
- Semi annual post remediation sampling continues. Next sampling event is Nov 2018.





- Operating Properly and Successfully report approved by regulatory agencies in Jan 2018
- Semi-annual post remediation groundwater monitoring continues. Next event scheduled for Nov 2018
- Landfill cap inspections continue on an annual frequency. Last inspection occurred in Sep 2018.



PFOS/PFOA Investigation





 PFAS have been used in a wide variety of industrial and commercial products such as leather products, paper and packaging, cookware and firefighting foams





Stain resistant upholstery





Stain resistant carpet Teflon Pan

Waterproof Jacket





- PFAS are man-made chemicals, not found naturally in the environment
- PFAS do not break down when exposed to air, water or sunlight
- Found in hundreds of consumer products
- Aqueous Film-Forming Foam (AFFF)
- containing PFAS has been used since 1970 by the Air Force for firefighting





- USEPA has established Health Advisories (HAs) for two PFAS perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA) to protect humans from potential exposure through drinking water.
- The state of Arizona currently has no regulations concerning PFAS

| | EPA Regional Screening | | Air Force | EPA Health | |
|-----------|------------------------|--------|------------------------|---------------------|--|
| | Level ^a | | Guidance for | Advisory Drinking | |
| Parameter | Residential | Tap | Soils and | Water | |
| | Soil | Water | Sediments ^b | (Groundwater) | |
| | (µg/kg) | (ng/L) | (µg/kg) | (ng/L) ^c | |
| PFOA | NL | NL | 1,260 | 70 | |
| PFOS | NL | NL | 1,260 | | |

^aEPA Regional Screening Levels (November 2017)

^b Screening levels calculated using the EPA Regional Screening Level calculator [https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search]. The toxicity value input for the calculator is reference value dose of 0.00002 milligrams per kilogram per day derived by EPA in their Drinking Water Health Advisories for both PFOS and PFOA (November 2017).

° EPA, May 2016a. Drinking Water Health Advisory for PFOA and EPA, May 2016b. Drinking Water Health Advisory for PFOS.







AFCEC is taking a three-step approach – identify, respond, prevent – to assess and respond to potential PFOS/PFOA drinking water contamination.

Sampling at all current and former installations with a suspected AFFF release to confirm if PFOS/PFOA are present in the groundwater and other media.





Preliminary Assessment

- AFFF use on property
 - Interviewed former installation base personnel
 - Reviewed historical records
 - Reviewed installation engineering and drawing records
 - Completed in the Summer 2016
 - Identified 18 potential AFFF Areas

Site Inspection

- Investigated 18 AFFF areas Spring 2018
 - Collected Soil, Groundwater, Sediment and Surface Water Samples



| HIMME OVER WEINTER ON BE | Basewide Site Inspection Results | | | |
|--------------------------|-------------------------------------|----------------------------------|---|---|
| Media | Groundwater Above HA | Soil Above Screening Level | Sediment above Screening Level | Surface Water above Screening Level |
| Soil | - | 1/109 | - | - |
| Groundwater | 15/48 | - | | ~ |
| Surface Water | - | - | - | 0/2 |
| Sediment | - | - | 0/2 | |



Basewide Site Inspection Next Step



Draft Basewide PFOS/PFOA Site Inspection Report

Submit to regulatory agencies November 2018





- The Air Force and PFOS/PFOA
 - <u>http://www.afcec.af.mil/environment/perfluorinatedcompounds</u>
- The USEPA and PFOS/PFOA
 - <u>https://www.epa.gov/ground-water-and-drinking-water/</u> drinking-water-health-advisories-pfoa-and-pfoa
 - http://www.atsdr.cdc.gov/pfc/index.html







RAB adjournment can be considered if:

- RODs are signed
- Remedies are in place
- RAB goals have been achieved
- Land is transferred
- No longer sufficient and sustained community interest





AFCEC BEC must consult with and consider all comments provided by:

Community EPA RAB Members State and Local Government

AFCEC BEC must:

- Notify RAB members of the decision by letter and public through notice in a local newspaper
- Describe other ongoing public involvement opportunities
- Document rationale for adjournment in a memorandum for inclusion in the Administrative Record

Process for Adjourning the RAB









| RAB Rule (Section 202.10) | Proposed Williams Action Plan |
|--|--|
| Consult with EPA, state, tribes, RAB members, and the local community, as appropriate, regarding adjourning the RAB and consider all responses before making a final decision. | Air Force opened consultation at March 24, 2015 RAB meeting and has continued to seek input from the BRAC Cleanup Team and RAB Community Co-Chair. All support proceeding with formal adjournment process. Public Notice soliciting public comment on adjournment will run in newspaper late October. Following 30-Day Comment Period, Air Force will consult with regulators and make a determination. Anticipate decision by early December 2018. |





| RAB Rule (Section 202.10) | Proposed Williams Action Plan |
|---|--|
| Document the rationale in a memorandum for inclusion in the Administrative Record, notify the public of the decision through written | If the RAB elects to proceed with adjournment, a letter will notify members of the mailing list of the adjournment decision. |
| notice to the RAB members and through a publication of a notice in a local newspaper. | An adjournment report will document the rationale for adjournment. A copy of the adjournment report and all |
| Describe other ongoing public involvement opportunities. | related documents will be added to the Administrative Record and placed in the Information Repository. |
| | A public notice will inform the public of the Air Force's decision, and describe other public involvement opportunities for any future news related to Williams cleanup. |





Key things to consider regarding future communications:

- Despite RAB adjournment, Air Force has a commitment to continue sharing information about any news related to the cleanup
- Many other communication avenues will continue:
 - Website <u>www.afcec.af.mil/Home/BRAC/Williams</u>
 - Letters and calls from our BEC, Cathy Jerrard
 - Briefings to special interest groups or meetings with community officials
 - News Releases to local paper and Public Notices
 - Calls to former RAB members, as appropriate

AF Admin Record

http://afcec.publicadmin-record.us.af.mil/



Williams Website



WWW.afcec.af.mil/Home/BRAC/Williams





Miscellaneous Items



Meeting Wrap-up