

FINAL

SUMMARY OF WILLIAMS AFB RESTORATION ADVISORY BOARD MEETING

Tuesday, August 5, 2003

**Arizona State University East Campus Union Building
Mesa, AZ 85212**

Approved February 3, 2004

I. EXECUTIVE SUMMARY

This document summarizes discussions during the Williams AFB Restoration Advisory Board (RAB) meeting on 05 August 2003. The meeting was held at the Arizona State University East (ASU) Campus Union Building and convened at 7:00 p.m. Meeting attendees included Mr. Bill Lopp (Air Force BRAC Environmental Coordinator), Mike Wolfram (U.S. Environmental Protection Agency), Mr. Frank Smaila (Arizona Department of Environmental Quality), Mr. Doug Karas (Air Force Real Property Agency Public Affairs), Mr. John Miehler (BEM Systems) and 36 RAB members. The meeting agenda is included as Attachment 1. Copies of presentation slides are included as Attachment 2.

The meeting included a presentation by Mr. Karas on the mission and purpose of a RAB, RAB best practices, and a draft RAB charter. Mr. Lopp presented information on the status of environmental projects on the former base, as well as plans for future transfer of Air Force property.

Meeting discussions resulted in the identification of eight "takeaway" action items. The bullets below summarize the action items:

- RAB charter development
- E-mail list
- Research whether propellants (perchlorates) were ever used at Williams
- Research presence of heavy metals/lead at ST012 and byproduct of thermal extraction system
- Research methyl tertiary butyl ether (MTBE) at ST012
- Message board for RAB members
- Maps of cleanup sites
- Primer on contaminants
- RAB tours

Additionally, nine agenda items were proposed for the November RAB meeting. The bullets below summarize these agenda items:

- Status of action items
- Information Repository discussion
- Website for Williams RAB
- Technical Assistance for Public Participation (TAPP)
- Mechanics of the thermal extraction system at ST012 (above ground portion of the system)
- Update on latest test/sampling results on cleanup sites
- Info on direct impact to health of families/children living on Williams

- Discuss how frequently the RAB should meet and the formation of subcommittees
- Report from the charter subcommittee

II. INTRODUCTION

The purpose of this summary is to provide a streamlined reference for meeting discussions and decisions that are documented in detail in the meeting transcript. Complete copies of the transcript and this summary will be placed in the Williams Administrative Record.

This summary is focused on issues of interest raised by individuals present at the RAB meeting and action items the Air Force will further clarify at the next RAB meeting.

III. PRESENTATIONS & DISCUSSIONS

Welcome and Introductions

Mr. Lopp opened the meeting by welcoming everyone to the first meeting of the new Restoration Advisory Board, and provided an overview of the meeting's agenda. He then introduced Mr. Len Fuchs, the RAB community co-chair; Mr. Mike Wolfram, of the Environmental Protection Agency Region IX; Mr. Frank Smaila, remedial project manager with the Arizona Department of Environmental Quality; and Mr. Doug Karas, public affairs officer for the Air Force Real Property Agency's central region.

Mr. Lopp then discussed the goals for the meeting:

- To establish a process to review and propose any updates to the RAB guidelines
- To provide an update on the environmental processes at Williams
- To entertain any new RAB agenda items of areas of interest for future RAB meetings

Next, Mr. Fuchs led all the RAB members through introductions, in order for everyone to get to know the other members.

RAB Guidelines/Charter

Mr. Karas made a presentation on RAB best practices and guidelines. The best practices presentation focused on what a RAB "is", and what a RAB "is not".

First, Mr. Karas explained what a RAB "is": A RAB should be a diverse group of people, which he was pleased to see represented in the RAB assembled for Williams. It also consists of regulators and government representatives. RABs exist so that the Air Force can ensure public involvement consistently through the cleanup program. It enables constructive review from the community, and in turn, RAB members take their knowledge about the cleanup process out into the community and share it.

Second, Mr. Karas explained what a RAB "is not": The RAB is an advisory body, so while it will have deliberate input into the process, it will not make final decisions. The Air Force makes these decisions in partnership with the EPA and ADEQ. The RAB doesn't vote on issues or make consensus recommendations. He elaborated that the Air Force wants diversity of opinion, so the RAB is not a "majority rules" kind of organization. The Air Force wants to hear all opinions, even if they're minority opinions.

Third, Mr. Karas discussed the goals of the RAB, which are to provide a proactive forum for the discussion and exchange of environmental restoration program information between the DoD, EPA, ADEQ, members of the community, and other stakeholders. The RAB ensures that all stakeholders have an opportunity to review the progress of environmental restoration activities and participate in a constructive dialogue with the installation's decision makers.

Next, Mr. Karas then went over RAB guidelines. These are intended to ensure the RAB is a productive, useful organization. These guidelines instruct RAB members to:

- understand and agree on the RAB mission
- be proactive
- think in terms of the “big picture”
- respect each other
- truly communicate—both listening and speaking
- put effort into trying to understand other points of view
- develop open, robust agendas
- set priorities and take action on them
- have solid support from the top levels of the installation
- lots of interaction between meetings
- share leadership and have processes in place in case of stalemates
- work toward a sense of fulfillment
- create an environment free from hidden agendas
- take responsibility and realize the realities of the task

Last, Mr. Karas presented a draft RAB charter, which might be useful in guiding the Williams RAB. Mr. Karas suggested that a RAB subcommittee form to review the draft charter and make any proposed changes.

- One RAB member suggested that the subcommittee draft a section of the charter that addresses the creation of the RAB agenda, drafting of meeting minutes, and approval of the minutes.

Mr. Fuchs then asked for a few RAB members to volunteer to form a subcommittee to review the draft charter. Volunteers included Jonathan Johns, Lisa Gerdl, Michael Nosek, Jim Holt and Tom Schuett. Mr. Fuchs then asked Mr. Johns if he would lead the subcommittee, and he agreed. Mr. Karas passed out his business card to the RAB members and offered to take inputs from the members and forward them to the subcommittee for consideration.

- A RAB member asked Mr. Fuchs if the RAB could establish an e-mail list for communication. This was taken as an action item.

Overview of Williams Cleanup Program

Mr. Lopp then took the podium and introduced the next portion of the agenda, which was an overview of the Williams environmental cleanup program. Mr. Lopp began by expressing his personal commitment to work for the betterment and the clean up of the former Williams Air Force Base.

Next, Mr. Lopp gave an historical overview of the cleanup at Williams. He said that we are toward the end of the cleanup at Williams, and certainly at the leading edge of cleanup. He also reported that the base has transferred 94% of its property for commercial and private reuse. He explained that the Williams installation restoration program dates back to 1983, and the EPA added the base to its National Priorities List in November, 1989. He

explained that the cleanup is funded by Department of Defense dollars earmarked for installation restoration. Williams AFB closed in 1993. There were 32 cleanup sites on Williams, divided into six operable units, of which only four individual sites remain with active cleanup work.

Mr. Lopp next spoke about these four sites individually.

ST012

Site 12 (ST012) was a fuel dispensing site for the base. Historically, there were releases of fuel, gasoline, as well as JP-4 jet fuel to soil. Ultimately it got into the shallow groundwater. There was a record of decision (ROD) published for Site 12 in December, 1992. That record of decision dealt with shallow soil down to 25 feet, and utilized a pump-and-treat remedy. Mr. Lopp explained that since then, the Air Force has discovered that the remedy has been ineffective, so the team is looking at another treatment option.

- One RAB member asked whether he was talking about monitoring wells in the upper or lower aquifer. Mr. Lopp explained that he was talking about the groundwater that goes down to 180-240 feet, and is separated from the regional aquifer by an aquitard. The RAB member followed up by asking whether the jet fuel included any accelerants or propellants such as perchlorate. Mr. Lopp replied that no perchlorate was in the fuel, since Williams does not have a history of weapons systems that would use rocket-type fuels or propellants. However, he asked that we take an action item to confirm this.

Mr. Lopp continued to discuss the history of ST012, by explaining that in 1996, the ROD was amended to include soil below 25 feet but above the groundwater. (This soil was not included in the original 1992 ROD.) This ROD amendment in 1996 introduced soil vapor extraction as a remedy for deeper soils. To date, the Air Force has removed approximately 343,000 gallons of jet fuel from these deeper soils.

Mr. Lopp said that background information brings us up to where we are today. The situation with ST012 today is that the Air Force is in negotiations with the EPA and the State of Arizona regarding an "explanation of significant difference". Mr. Lopp explained that this is a legal term. When there is a record of decision and there's a need to modify it, one option is to do an amendment if there is a fundamental change, as in the ROD amendment for ST012 in 1996. On the other hand, if the proposed change is not a fundamental change in the remedy but simply involves doing the same basic remedy with an additional technology, they may do so with an "explanation of significant difference". An amendment needs to go through a more full public process, whereas an "explanation of significant difference" is an agreement between the Air Force and the federal and state regulators.

- A RAB member asked what magnitude of fuel loss is at ST012. Mr. Lopp answered that in the ROD, the estimate was anywhere from 500,000 to 1,500,000 gallons. He noted that the reason the estimate is so broad is because there were really no accurate reconciliation records on how much fuel was dispensed, used or returned to the fuel tanks. So basically, there is some degree of guesswork involved.
- Another RAB member asked about the thermal extraction system, if it was an evaporative process, based on the assumption that the fuel would evaporate faster than the groundwater. And, are the vapors contained when they're extracted? Mr. Lopp said that yes, the technology operates on the basis that jet fuel evaporates more quickly when it's hot than when it's cooler. And he confirmed that the vapors are indeed contained.

- A RAB member asked whether the fuel was spilled or dumped. Mr. Lopp answered that the fuel was spilled, not dumped. He added that there would have never been, to his knowledge, a reason for the Air Force to dump the fuel, since it was a commodity that it used. However, there would have been incidents of accidents in fueling and filling tanks. Mr. Lopp also showed where the fuel storage area is on a map, and explained that there was system of pipes and equipment underground, and that there were also some leaks in the pipes over the history of the site.
- A RAB member asked if the fuel has migrated off the base. Mr. Lopp said that it has not, that it is contained. Mr. Fuchs added that the size of the plume is 500 ft. x 1200 ft.
- A RAB member asked Mr. Lopp to confirm that the plume doesn't touch any groundwater in any of the communities around the base that is used for drinking water. Mr. Lopp replied that no, the plume does not affect drinking water. First, he explained, there is an aquitard, a geologically stable, dense clay, that separates it from the regional aquifer. Additionally, Mr. Lopp explained that part of their research was to investigate whether there were any drinking water production wells in the area of the base, and there are not.
- A RAB member asked for clarification if there was gasoline in addition to the JP-4. Mr. Lopp said that there is some aviation gasoline also present. The RAB member asked if there were any heavy metals such as lead, left behind in the soil vaporization technique. Mr. Lopp said that there were no heavy metals identified as chemicals of concern in the site investigation. Lead was a component of aviation fuel at the time, but this is primarily a JP-4 spill, not an aviation gasoline spill. Mr. Lopp said that he would add this as an action item, to look back at the investigation.

Mr. Lopp went on to explain the basic technology of this thermal extraction system. Praxis Engineering is the contractor helping BEM Systems design the system. He said the Air Force intends to introduce steam into what's called the saturated zone or into the groundwater zone, via a center injection well. Then, around the periphery of the site, extract the steam, as it would move as a steam front across the radius of a circle. The intent is to drive vapors. This is particularly useful, Mr. Lopp stated, because the more volatile of the JP-4 constituents are among the constituents that would pose the greatest problem. Specifically the benzene, toluene, ethyl benzene, xylene compounds would be the compounds that are driven off most quickly. So, what works to our benefit with the thermal enhanced extraction is that the lighter compounds are the more problematic compounds from a health standpoint, and the first to be removed. He continued to explain the technology, and stated that he has requested funding to expand and enhance the soil vapor extraction system in early Fiscal Year 2004, to more aggressively attack the soil vapors, with a full-scale system targeted by early Fiscal Year 2005. Mr. Lopp suggested that the RAB dedicate an entire briefing to the technology of this system at a future meeting, because it is very complex.

Mr. Lopp also added that over the past decade there has been an interesting phenomenon across this region, that the shallow groundwater is actually rising. Some speculations of the cause are the lesser use of agricultural properties adjacent to the base, less use of withdrawing water for agricultural purposes, greater recharge from activities like Central Arizona Project water, CAP water. These are basically speculation, Mr. Lopp said, and ultimately it almost doesn't matter why, because the reality is that as groundwater rises, it is going to create a larger saturated zone that requires cleanup.

- A RAB member asked about how the vapors would be contained once they're extracted. Mr. Lopp explained the vapors are sucked out and treated, and none are released into the air.
- A RAB member asked if this is proven technology, or if it's being developed specifically for this location. Mr. Lopp and Bo Stewart of Praxis Engineering explained that this is relatively new technology that both the EPA and the state have encouraged the Air Force to use. It has been successfully demonstrated at Hill AFB, Utah. The RAB member asked for the budget cost of the thermal extraction system. Mr. Lopp said he didn't have the exact figure, but that the Williams budget for Fiscal Year 2004 is \$7 million, and most of that will go toward the thermal extraction system.
- A RAB member asked if the Air Force would be burning the vapors that are collected out of the ground. Mr. Lopp answered that previously they ran some combustion engines, but that they didn't want to take contaminants out of the ground and then create the kinds of byproducts you get with the incineration of fuel. They don't want to add to air pollution problems. He further explained that they will be burning diesel to create the steam, so there will be that kind of combustion, much like you get from a diesel truck on the highway. But once the vapors are pulled from the soil, they will be put through a thermal oxidizer.
- A RAB member asked if the Air Force considered alternatives to diesel. Mr. Stewart answered that they are still actually investigating what kind of fuel to use to generate the steam, that there are a variety of options.
- A RAB member asked for an explanation of "thermal oxidizer", since it sounds like burning. Mr. Stewart explained that in a combustion engine, there's an explosion because you ignite. In the thermal oxidizer, it's going through a heated bed that's approximately 1100 degrees Fahrenheit. As it moves through, it's oxidized.
- A RAB member asked if ADEQ approves the pollution permit for the whole process. Mr. Lopp confirmed that all of the cleanup plans at Williams are cycled through both EPA and ADEQ.
- A RAB member asked for clarification about ST012. If this is a Superfund site, yet the contaminants can't go into the aquifer, then what are the pollutants we're concerned about? What are the dangers? Mr. Lopp explained that at the current time, there is no anticipated "completed pathway" for people to come into contact with these chemicals in the ground. What we are looking at is basically that there is a large volume of fuel in the ground, which would limit the use of the shallow groundwater in the future. But there is currently no health impact. The RAB member followed up by asking what the specific constituents of concern are at the site. Mr. Lopp said they include benzene, ethyl benzene, toluene and xylene, commonly called the BTEX compounds. He added that those are the compounds that will evaporate most quickly through this cleanup method.
- A RAB member asked if methyl tertiary butyl ether (MTBE) is a problem at this site. Mr. Lopp answered that it was not established as a chemical of concern when the remedial site investigation was done. He added that he didn't think that MTBE was ever an additive to jet fuel. This was taken as an action item.
- A RAB member mentioned that it was important to him that they talk about the agenda for the next RAB meeting.

- Another RAB member asked if there was a website they could get on for more information. Mr. Karas answered that the Administrative Record can be accessed online at www.adminrec.com. All of the documents are PDF files.
- A RAB member asked if we can set up some type of message board where RAB members can get questions answered. Mr. Lopp took that down as an action item.
- A RAB member asked if all of the old fuel system distribution lines, tanks, etc., had been removed. Mr. Lopp replied that it has been removed.
- A RAB member asked about the pipeline that brought fuel to the base. Mr. Lopp and Mr. Miehler answered that it is a Kinder Morgan pipeline, not an Air Force pipeline, and it was properly abandoned so as to remove any fuel in the pipeline.

At this point, the meeting was running long, so Mr. Lopp gave RAB members the option of continuing to discuss ST012, or moving on to the other sites.

Landfill 04

Mr. Lopp briefed that a record of decision on Landfill 04 was put into place in April, 1994. The landfill received municipal wastes from the former base. It never received any hazardous waste. There was never any intentional dumping of hazardous wastes or compounds in that landfill. Mr. Lopp stated that some fairly minor concentrations of beryllium and dieldrin have been found in the surface of the soil in the former landfill. Dieldrin was a pesticide that was used quite commonly in the area. Mr. Lopp said the Air Force put a soil cover over the landfill, and then rocks on top of the landfill so as to protect the soil from erosion. There is semi-annual, twice a year, groundwater monitoring and an annual landfill cap maintenance inspection and cap maintenance program.

Mr. Lopp went on to explain that in April of 1995, some sewage sludge trenches associated with the former base sewage treatment plant, which were located almost in conjunction with the landfill, were capped as well. He added that they have found hits over the years of TCE and PCE, both of which are chlorinated solvents. (TCE is trichloroethylene; PCE is perchloroethylene.) The Air Force conducted a follow-on groundwater investigation and published a report in January, 2002. The conclusion of that report is that there was no evidence that that TCE or PCE was coming from the landfill. However, the Air Force has decided it wants a better conceptual site model of the area, to figure out where the TCE and PCE are coming from. Mr. Lopp added that the concentrations are not large enough that you can readily identify a plume. There are only three or four wells that are just above the maximum contaminant level of the TCE or PCE that would be allowed in drinking water. But since this is fairly close to the southern boundary of the base, the Air Force will be installing some monitoring wells in Fiscal Year 2004 to act as kind of sentinel wells, to ensure nothing migrates off base.

Fire Training Area 02/ Pesticide and Paint Storage Area

Mr. Lopp explained that he has grouped the last two sites together, because both involve records of decision utilizing land use and institutional controls. Mr. Lopp explained that the RODs have not been signed because there is a national-level dispute between the EPA and the Department of Defense over whether documents are enforceable or not. Mr. Lopp explained that this dispute is holding up the signing of the records of decision. Yet meanwhile, he says, we continue to move forward with protective measures here at Williams.

Mr. Lopp briefed that in the case of the pesticide storage area, which is near the old water tower on base, some of the soil that was contaminated with the pesticide dieldrin was

excavated from the site, and taken to a temporary treatment pad on the southern part of the base. The Air Force then started bioremediation to try to break the dieldrin down. Mr. Lopp explained that testing has shown that the remediation hasn't been entirely effective, so now the Air Force needs to make a recommendation about how to get rid of this soil. One option is to segregate the soil, taking some to a hazardous waste landfill, and the clean soil to a regular landfill. Some may have to be sent off for incineration at a hazardous waste incinerator. Mr. Lopp explained that in the meantime, the Air Force continues to inspect the temporary treatment site to ensure that there is no wind-blown dust generated at the site. The soil is kept stable by the use of a compound that forms a crust several inches thick over the top of the soil.

Mr. Lopp then suggested the RAB move on to agenda items for the next meeting, because the meeting was running out of time.

- A RAB member asked two follow up questions. The first question was a concern that the Air Force's restoration plan is based on the initial surveys of Williams Air Force Base, and some sites may have been missed that won't be included in this restoration project. The second question was about the pipeline. Was there a survey done on the pipeline because it is on Air Force property? Is there any chance that there are some leaking sites that were found where the pipeline transported fuel to the Air Force Base? Mr. Lopp addressed the second question first. He confirmed there was a survey done on the pipeline. But he asked that we take this down as an action item for the next meeting, to further discuss the pipeline, since the meeting is short on time. Mr. Lopp answered the first question by saying that the system is flexible enough to add new discoveries/concerns to the restoration program. He then gave the example of the TCE and PCE at the landfill, and how the Air Force is not satisfied not knowing where these are coming from, so it is going back to do more investigation. He went on to add that there is no way to be 100% certain that something wasn't missed. The way the laws are written, if something is found in the future that is there because of the Air Force, then the Air Force takes responsibility and comes back and cleans it up.
- A RAB member asked if there is a way to get a map of the sites. Mr. Lopp said that they currently are in the process of inputting information into a geographical information system so that they can readily produce maps like this. He said he would make maps of the sites available by the next RAB meeting.
- A RAB member asked if they could be provided with a primer on the contaminants and what the allowable levels are for each, also what the original levels were at Williams, and the target levels. Mr. Lopp took that as an action item.
- A RAB member asked if a cost analysis had been done to compare the pump-and-treat method compared to the thermal extraction system. Mr. Lopp explained that part of the problem is that the pump-and-treat method doesn't work with this site, so that is what has driven the Air Force to use the thermal extraction system.
- A RAB member asked about property transfer, and if restrictions were ever put on the land being transferred. Mr. Lopp answered that yes, there are deed restrictions put on some of the property that is transferred. One example is that some of the property cannot be reused for residential development.

Mr. Lopp suggested that the group move on to consider agenda items for the next meeting.

Agenda Inputs for November RAB

Mr. Fuchs suggested that the RAB take a tour to visit the sites discussed at the meeting, to see them in person. Mr. Lopp took that as an action item.

Mr. Hollar suggested that the group take 10 minutes at the next meeting to discuss the Information Repository; 10 minutes to discuss a website; 10 minutes to discuss the Technical Assistance for Public Participation (TAPP) program; and some time on the thermal extraction system, the mechanics of the above-ground portion. He would like to see the permit for the system if possible, too. Mr. Lopp explained that under the Superfund laws, the Air Force does not acquire a permit per se. However, the Air Force has to meet the substantive requirements of any permit. And so, he said, although the Air Force would not produce a permit from the Maricopa County Air Control District, the Air Force will produce the measure that it is implementing to be in compliance with air permitting requirements/emission requirements.

Mr. Nosek asked that a lot of the tests/data results being generated in the months following the August RAB be shared with the group.

Mr. Dow asked for information on the direct impact of these sites on the families/children that are currently residing on the former base.

Ms. Kelly suggested the RAB consider whether it should meet more than four times per year, given the complexity and scope of the issue. Mr. Karas mentioned that perhaps the RAB would still meet quarterly, but that subcommittees would meet more frequently if needed. Ms. Kelly suggested then that the issue of subcommittees be discussed at the next meeting. She also asked if everyone is comfortable with the technology of using message boards and the web for information.

Mr. Abbott suggested that the charter subcommittee report at the next RAB meeting.

Mr. Sinnott asked about how to share information with other RAB members. Karas said that in the meantime, we will get information out to members via e-mail and share e-mail addresses.

Mr. Fuchs suggested that the next RAB meeting be held November 4, 2003. He thanked all the members for the biggest turn out in 10 years of the RAB program.

Mr. Lopp thanked everyone for their interest and participation.

Mr. Fuchs adjourned the meeting.



ATTACHMENT 1

Agenda

**Williams AFB Restoration Advisory Board (RAB)
Meeting Agenda**

August 5, 2003, 7:00 p.m.
Arizona State University East Campus Union
7001 E. Williams Field Road #330, Mesa, AZ

<u>Session</u>	<u>Topic</u>	<u>Presenter</u>
I.	RAB meeting convenes at 7:00 p.m. <ul style="list-style-type: none"> • Welcome and introductions • Discuss goals for the meeting 	Mr. Bill Lopp
II.	Welcome new RAB members	Mr. Len Fuchs
III.	Presentation on RAB members' roles and responsibilities	Mr. Doug Karas
IV.	Presentation of draft Williams AFB RAB Operating Guidelines <ul style="list-style-type: none"> • Overview of current guidelines • Formation of a subcommittee to review guidelines 	Mr. Len Fuchs
V.	Overview of Williams AFB environmental cleanup program <ul style="list-style-type: none"> • Site ST012 – Liquid Fuel Storage Area • Site LF004 – Landfill • Temporary Treatment Facility 	Mr. Bill Lopp
VI.	Meeting wrap-up <ul style="list-style-type: none"> • Address action items from previous meeting • Review action items from present meeting • Call for agenda items for next meeting • Next RAB meeting proposed for Tuesday, November 4, 2003, at 7:00 p.m. 	Mr. Bill Lopp
VII.	Adjournment at 9:00 p.m.	Mr. Bill Lopp

ATTACHMENT 2

Presentation Slides