

**Travis Air Force Base
Environmental Restoration Program
Restoration Advisory Board (RAB) Meeting**

Meeting Minutes

20 October 2011

I. Welcome and Introduction

Mr. Smith called to order the regular meeting of the **Travis AFB RAB** at **7 pm** on **20 October 2011** in the **classroom at the Northern Solano County Association of Realtors office**. General introductions were made. Mr. Smith thanked everyone for attending. Mr. Smith said Lt. Col James Downs nor his Deputy are able to attend due to previous engagements. Lt. Col Downs asked Mr. Smith to sit in as Co-Chair and said he would try to attend the next RAB meeting scheduled for April 2012.

Roll Call

The following RAB members were present:

Name	Affiliation	Present
Lt. Col Downs	USAF, Travis AFB (Air Force Co-Chair)	
David Marianno	Suisun City Resident (Community Co-Chair)	✓
Jim Dunbar	City of Fairfield Representative	
Nadia Hollan Burke	U.S. Environmental Protection Agency (EPA)	✓
Cyrus Morad	Fairfield Resident	
Alan Friedman	SF Bay Regional Water Quality Control Board	✓
John Foster	Nat'l Association of Uniformed Services	✓
Mike Reagan	District 5, Solano County Representative	✓
Jose Salcedo	Dept of Toxic Substances Control (DTSC)	✓
Philip Velez	Travis Armed Forces Committee	✓
Kate Wren Gavlak	Travis Unified School District	✓

Public Members present:

- Bill Cumberland Citizen

Agencies and Contractors present:

- Mark Smith Travis AFB 60CES/CEANR
- Glenn Anderson Travis AFB 60CES/CEANR
- Lonnie Duke Travis AFB 60CES/CEANR
- Gregory Parrott Travis AFB 60 AMW/JA
- Rachel Hess ITSI

II. **Approval of minutes from last meeting**

The previous meeting minutes were approved as written.

III. **Additional Agenda Items and Questions**

Mr. Smith asked if there were any questions about the agenda or if anyone had any additional items not already on the agenda. He stated that there will also be an opportunity at the end of the meeting to add agenda items or ask questions. Mr. Smith announced that Mr. Anderson will be presenting information on "Potholes in The Road to the ROD". Mr. Duke will be presenting the last soil cleanup action at Travis AFB.

Mr. Reagan asked if enhanced use lease will be discussed. Mr. Smith said he would be talking about that later in the meeting.

Mr. Foster said he is used to seeing high profiled military people present at these meetings and he believes a person in uniform should be attending these meetings as Co-Chair. They do not necessarily have to be high-ranking. Mr. Foster said that he would like to express his concern from the public's point of view that these meetings are important and that the absence of military representation could send a signal that these meetings are of little importance to them. He said he finds this disturbing, given all the time, work, effort, and monies put into the success of the cleanup effort. Mr. Smith said the Environmental Restoration Program (ERP) was formerly under the Wing with the Vice Wing Commander acting as the Air Force Co-Chair, and that as we got closer to our cleanup goals by pumping and treating eight to ten years, and closer to the ROD, ERP thought we could take some pressure off The Wing and delegate this responsibility to the Base Civil Engineer (BCE). We submitted a proposal to the Wing and Base Civil Engineer outlining the progress and both agreed that CE could act as Co-Chair. We have since reorganized CE, and ERP is now part of Civil Engineering. Requests are sent up through the chain of command before it is placed on the Civil Engineer's desk.

Mr. Foster said it sounds like you are being penalized for the success of this program. Mr. Smith said he did send an email to his boss yesterday saying the base civil engineer and deputy engineer cannot attend the October RAB meeting and that more leadership is needed in the April 2012 RAB meeting or it may send the wrong message that these meetings are not important to the Travis AFB leadership. Mr. Reagan said that he had a meeting with the new Wing Commander on 31 October 2011 and could mention the concerns addressed in this meeting. Mr. Foster thought it a good idea for Mr. Reagan to speak on behalf of the RAB members and agreed that it is important for the military to attend these meetings. Mr. Marianno agreed that the military personnel should be attending. Ms. Gavlak also agreed and said it is important that the military personnel show up to support the cleanup efforts.

IV. Discussion Topics

a) Potholes in The Road to the Final Record of Decision (ROD)

Mr. Anderson presented a status report on the basewide groundwater ROD.

Mr. Anderson began by reviewing the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) steps taken as discussed in the last RAB meeting held in April 2011:

- Feasibility Study (FS): Compares the different ways that the Air Force could achieve cleanup of the contaminated sites.
- Proposed Plan (PP): The Air Force presents the best and most efficient ways for cleaning up the contaminated sites for public comment.
- Record of Decision (ROD): Describes the different ways the Air Force will achieve cleanup of the contaminated sites once Travis has received input from the stakeholders and received approval from the regulatory agencies.

The Remedy Selection Process: Before a decision can be made on the cleanup remedy, the first step is to identify the contaminants. In the late 1980's to the mid 1990's the base was split into four quadrants, referred to as Operable Units (OU). A remedial investigation was conducted on each OU. When the remedial investigations were completed, Travis then had data on the types of contamination that needed remedial action. Three of the OUs with similar contamination issues were combined into one, leaving just two OUs. The focus then switched to how Travis can best clean up these sites. Feasibility Studies (FSs) were conducted for each of the OUs that identified and evaluated all potential cleanup remedies. After the FSs were completed, the base wrote two Proposed Plans (PPs) and held public meetings to receive community input on its proposed cleanup remedies. Travis then prepared RODs (decision documents) that incorporated the discussions and feedback received from the community.

In 1990, Travis made a decision to start interim cleanup actions, rather than final cleanup actions, because the base was uncertain if they could attain agreement with the regulators regarding cleanup levels, at that time. Travis proposed cleanup goals, which were not legally binding, in order to put the cleanup process in motion. Two interim RODs (IRODs) were written by the Air Force and signed by both the Air Force and the regulatory agencies. Remedial Designs and Remedial Actions (RD/RA) then began and the groundwater treatment systems were constructed. Travis continued to operate the treatment systems for twelve years (to the present day) and achieved a fair amount of cleanup, even though the base did not have mandated cleanup levels. The base was moving in the right direction, as cleanup had started. During this time frame, Travis conducted two legally-mandated five-year regulatory reviews (2003 and 2008) to ensure that all remedies were protective of human health.

Travis is now in the process of selecting the final remedies. The base conducted a site specific data gap investigation from 2008 – 2011 to ensure it was known where contamination existed at each site. Travis was also reviewing the existing cleanup processes and looking for ways to make them more effective and more efficient. In other words, to optimize them. Examples of Remedial Process Optimization (RPO) endeavors are:

- Solar powered equipment installation
- Emulsified Vegetable Oil (EVO) injections
- Biobarrier installation
- Bioreactor installations (2)
- Phytostabilization
- The study of natural attenuation.

The Remedy Selection Schedule that was presented in April 2011 for Travis AFB:

Document	Draft	Draft Final	Final
FFS:	27 January 2011	01 June 2011	01 July 2011
PP:	10 June 2011	13 September 2011	13 October 2011
ROD:	25 January 2012	29 May 2012	27 June 2012

The Remedy Selection Schedule Revised for Travis AFB:

Document	Draft	Draft Final	Final
FFS:	27 January 2011	13 September 2011	13 October 2011
PP:	09 January 2012	28 February 2012	05 April 2012
ROD:	06 April 2012	02 July 2012	01 August 2012

Mr. Anderson said the FFS was originally scheduled to be finalized on 01 July 2011; however, the FFS document took a lot longer than anticipated. Travis and the regulators completed the negotiations on the final FFS this afternoon and will have the document finalized by 28 October 2011. The FFS document has a domino effect on the rest of the document schedule. Originally, we were going to have the groundwater PP public meeting schedule in conjunction with today's RAB meeting, but because of the FFS delay the groundwater PP has been delayed six months. This additional six months will give us more time to work on the most important document, the ROD, and to make sure we have community acceptance, the proper language, and all the legal requirements incorporated.

Mr. Anderson showed a diagram of how some of the documents feed into each other and triggers the review and approval of the next document in line. The Technical and Economic Feasibility Analysis (TEFA) feeds into Proposed Plan (PP), and the PP feeds into Record of Decision (ROD). There was a delay in the FFS but this

document is the foundation for all the other documents. We had to get this one right and we believe we did.

Potential Potholes in the Road:

- How long will it take to finalize all the required documents?
The amount of work put into the FFS will help with the rest of the documents.
The FFS is the foundation for the PP and especially the ROD.
- Which is the best remedy.
Single remedy vs. multiple remedies (treatment train).
Biological vs. chemical treatment.
Can a treatment be both green and effective (i.e., less water use, less non-renewable resources use).

More potential potholes:

- When do we stop pumping/injecting/etc?
- How much is the cleanup going to cost?
- Will the community support the cleanup strategy? The community's support is critical. We will try and make every effort to get the PP circulated to a wide audience; it will be available on the Travis AFB website, it will be mailed to everyone on our distribution list, and we will provide copies to our local libraries.
- Will the State of California, EPA, and DTSC support the cleanup strategy?
- Will the Air Force Center for Engineering and the Environment (AFCEE) support the cleanup strategy? The Air Force cleanup program is centrally managed in San Antonio, at AFCEE, and Travis has to receive approval from them.

Remedy Selection Wrap-up.

- Original Air Force goal was Remedy-in-Place by 2012; Travis is sticking to that.
- Coordination with regulatory agencies is paramount.
- Communication with the community is essential
- Groundwater Proposed Plan Public Meeting will be held in conjunction with April 2012 RAB meeting.

Mr. Anderson wrapped up his presentation by showing photos of some of the green innovative technologies Travis is already using (listed above).

Mr. Reagan asked the regulators if they have a public process review. All answered no, but said they all have internal process reviews. Mr. Reagan questioned if the internal reviews can be done by April 2012. Mr. Salcedo, Ms. Burke, and Mr. Friedman all said they believed they could be ready.

Mr. Marianno asked if we are talking about new remedies, again, what has been done in the last 15 years, and where are the plumes today? Are we ready to split this land up today, is the groundwater and soil safe? He is asking for the average layman. Mr. Duke said we have historical maps that show the plumes are shrinking. Mr. Anderson said as the plumes shrink, some technologies may no longer apply. To pump and treat, using a lot of electricity on a really small plume, is not cost effective. Also technologies improve, and Travis needs to look into and evaluate new technologies.

Mr. Smith, speaking as acting Co-Chair, said that rather than a marathon evening with the RAB and PP, he would propose only the PP for the April 2012 agenda. Mr. Reagan asked what the role of the RAB members would be and if the RAB members need to be present for the PP meeting. Mr. Friedman felt it a good idea for the RAB members to attend, maybe have a separate RAB meeting at a later date. Mr. Anderson said that everyone will have thirty days to respond to the PP either by email, phone call, etc. Mr. Foster said to call it a RAB meeting, but the only agenda item is to hear the public on the PP. Mr. Duke suggested that when we get closer to signing the ROD perhaps hold a RAB meeting.

Mr. Cumberland asked about how to get the public to attend. Mr. Anderson said it is not easy. The meeting will be advertised in the local newspapers/The Guardian, the Travis website, the Travis AFB Facebook site, and the PP will be located in the Public repository for review and comment. Mr. Reagan asked if that is the responsibility of the Travis Public Affairs office. Mr. Anderson said yes this office has a person dedicated to supporting our environmental community relations activities.

b) The “Last” Soil Cleanup Action

Mr. Duke presented information on the last soil cleanup action to be conducted at Travis.

Mr. Duke referenced a map to show the location of the FT005 soil remediation project on Travis AFB, adding this is our last major soil remediation action. FT005 is located at the southern part of the base. This area was used for Fire Training from the 1960’s until the mid 1980’s. Used fuel and oil were poured on the ground and ignited so the fire department personnel could practice fire fighting techniques. The northern portion of this site was used for disposal of construction debris (asphalt, concrete, street sweepings, etc.), until the mid 1990’s. As a result of the Fire Training activities and the disposal of the construction debris, the soil was contaminated with:

- Polycyclic Aromatic Hydrocarbons (PAH)
- Petroleum Hydrocarbons (oil and fuel)
- Low levels of Polychlorinated Byphenyls (PCBs)
- Low levels of Dioxin.

It was enough contamination that this site could not be used “as is”. The levels of the chemicals in the excavated soil were so low that it was not considered hazardous waste and was accepted for disposal at the Potrero Hills Landfill.

The cleanup was originally scheduled for 2007, however time and budget constraints delayed action until now. The excavation footprint was larger than originally thought. In 2010 we did an in depth data investigation and collected samples from the site to verify the Chemicals of Concern (COC), as well as all debris that needs to be excavated in order to meet unrestricted use, as indicated in the Soil ROD. We are targeting for residential cleanup levels. The Air Force policy recently changed to strive to meet a stricter residential cleanup level referred to as Unrestricted Use/Unlimited Exposure (UU/UE).

Mr. Duke referenced a map showing how they approached the 2010 data gaps investigation by laying rope to grid the site into sections to find out what is buried and what the COCs were in each section. During the 2011 soil excavation, samples were taken at a certain depth in the center of each grid as well as the sidewalls to analyze for the COCs. As the data results came in, they would be evaluated to verify if the cleanup levels indicated in the ROD were met, and in some cases excavation continued to meet the new goal of UU/UE. There were nearly 700 truckloads of dirt hauled to Potrero Hills Landfill, approximately 9,000 cubic yards. Potrero Hills used the dirt as “cover” material. Travis collected close to 300 confirmation samples to ensure the cleanup goals were met. About 9,800 feet of orange safety fencing was installed to delineate the construction site. Mr. Duke said that coincidentally Kinder Morgan needed to dispose of six thousand cubic yards of clean soil at one of their constructions sites on Travis. Not only did Kinder Morgan agree to give us the clean soil, they delivered it as well at no charge. Mr. Foster asked if Travis tested the clean soil from Kinder Morgan. Mr. Duke confirmed they had the clean soil tested.

The site remedial action should be completed in a couple of weeks. There is one small area where there may have to be a Land Use Control (LUC) implemented. If the small LUC area is needed, Travis will make sure to fence it off properly.

Mr. Smith was asked how much money and time will it take to clean up this site. He said you would have to look at more than just the cost of all the equipment mobilization and the man-power in the field. There were plenty of manhours spent on preparing documentation for regulatory review prior to the fieldwork. We did save money with the free clean soil from Kinder Morgan to use as backfill. You have to follow the steps in the CERCLA process and we’ve tried to be as efficient as possible from Remedial Investigation to Remedial Action. Mr. Salcedo noted that by the Air Force changing their cleanup goals to UU/UE, any LUCs would be eliminated, saving the expense of the annual oversight from the Water Board, DTSC, and EPA. The Air Force cannot excavate without submitting a work plan to the agencies. It might cost the Air Force more money to meet UU/UE but in the long run it will save

money and time. Mr. Foster said as a member of the public he agreed that is a good policy.

Mr. Cumberland asked if Travis preserved the delineation sampling points for future analysis, if needed. Mr. Duke said it was not necessary. Once we excavated the contaminated soil and collected the confirmation samples we do not need to resample. The contaminated soil has been removed.

V. Cleanup Program Status

Mr. Smith reported on the Cleanup Levels and California Law.

Cleanup Levels and What Does it Mean:

- Basically the Air Force and the Regulatory Agencies agree upon each specific contaminant cleanup concentration that can remain in the soil, sediment, or groundwater. It is based upon the risk that the contaminant potentially poses to human health and/or ecological receptors.
- What it means to the cleanup team is to either stop digging, stop pumping or monitoring once the cleanup level is reached.
- EPA and the California Regulatory Agencies developed a Maximum Contaminant Level (MCL) for each specific contaminant in groundwater. The MCLs represent the highest contaminant levels that are allowed in drinking water. MCLs are enforceable standards that take into account the best available treatment technology and cost.
- The groundwater cleanup started with two Interim Records of Decision (IROD) that were signed back in the late '90s. Travis had to start taking action with the plumes migrating off base. The IRODs allowed the base to build the groundwater treatment plants, and to start cleanup of the groundwater, to start pumping and treating. The interim cleanup goals in the IRODs are MCLs.

IROD to the ROD:

- EPA and California EPA have their own set of MCLs. EPA and Cal EPA review and update the contaminant MCLs based on the most recent human health research. The MCL information can be found on the internet. Go to EPA website and find the MCL level table. Travis selects the lower of the two concentrations (State vs Federal). The groundwater cleanup level selection uses the most recent MCL values.
- The California State Water Resources Control Board perspective (SWRCB), SWRCB Resolution 68-16: the statement of policy with respect to maintaining

high quality of waters in California. SWRCB Resolution 92-49 sets forth the policies and procedures to be used during an investigation of cleanup of a polluted site and requires that cleanup levels be consistent with the policies stated in 68-16. Since a lot of chlorinated organic contaminants are not naturally found in the environment, the background level is usually the concentration that can be accurately measured.

- Excerpt from the Focused Feasibility Study (FFS): the Air Force will meet the intent of the SWRCB resolution 92-49 by conducting a Technical and Economic Feasibility Analysis (TEFA) in accordance with the resolution's direction.
- The TEFA analyzes the technical feasibility and estimates the overall costs to reach MCL vs background. The TEFA is currently in progress. Will the technology get us there and how do the costs compare? A comparison is made that will help determine if it is technically and economically feasible to clean groundwater to background levels, rather than to MCLs. The TEFA will be summarized, and the cleanup levels will be established in the Basewide Groundwater Record of Decision (ROD) that is signed by the representatives of all parties. .

Mr. Foster asked what the opinion is of achieving background versus using the Air Force policy of UU/UE. Mr. Smith said the idea is to be safe, and if in order to be safe a cleanup action needed to achieve background, then that is what we will do. However, if the cost is astronomical then our goal will be MCLs. Mr. Foster said what he meant was do you foresee a situation where the MCL might be the Air Force standard of UU/UE but there is still some "background" contamination so it would conflict with the SWRCB resolutions? Mr. Smith answered "no" and said the TEFA presents the analysis and SWRCB will either accept it or not. Mr. Marianno said he cannot believe that the groundwater has to be cleaned up to residential standards. Mr. Friedman says the SWRCB said that the State does not say you have to cleanup to residential standards; you have to do a cost analysis to see what it would take.

VI. Regulatory Agency Reports

Mr. Salcedo said he wants to encourage everyone to attend the next meeting and to look at the PP document in advance and to see the CERCLA process in action. Ms. Burke said she concurred with what Mr. Salcedo said, adding that the Agencies will be receiving the draft PP in January and will have had their comments in before the April 2012 Public meeting.

VII. Focus Group Reports

The Technical Focus Group provided review and comments on:

- Baseline Implementation Report

Mr. Smith thanked Mr. Foster and Ms. Gavlak, for their participation on the document reviewed.

Mr. Smith discussed Enhanced Use Lease Proposal.

The Air Force Real Property Association (AFRPA) looks for ways to get value out of the land the Air Force owns. Mr. Smith said he is not speaking as a Restoration Program Manager but as a former Energy Manager who was involved in past enhanced use lease options. The intent is to lease Air Force property that is not being utilized to a third party. Right now they are looking at the northern part of the base where sites LF006 and LF007 are located for installation of solar panels or some sort of energy production technology. This enhanced use lease would provide Travis with financial gain or exchange for energy use. They are looking at leasing three parcels. Mr. Smith said he was asked by the AFRPA about the contamination concerns. Mr. Smith advised them that they have been completely characterized; however, they will need to allow access to any monitoring wells, and to avoid the Corrective Action Management Unit (CAMU). We are getting to the point where the land can be used again. Freeing up land to support the base mission is part of what we do. Mr. Smith ended by saying, again, this is not part of the ERP RAB topic, but to answer Mr. Reagan's question, he knows a little about it, having been the former Travis Energy Manager.

VIII. Set Time and Place for Next RAB meeting

The next RAB and Proposed Plan Meeting is scheduled for **19 April 2012** at the Northern Solano County Association of Realtors in Fairfield.

Before Mr. Smith adjourned the meeting he provided maps showing how the contaminated groundwater plumes have decreased in size on Travis AFB over time.

IX. Adjournment

Mr. Smith adjourned the meeting at **8:50 pm**.

Minutes submitted by: Jeannette Cumberland, CH2M HILL

Minutes approved by: Mark Smith