

- Mike Wray CH2M HILL
- Tricia Carter CH2M HILL
- Jeff Gamlin CH2M HILL
- Jeannette Cumberland CH2M HILL

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 discuss “Groundwater ROD Completion”; Mr. Duke will discuss “Groundwater Remedy Implementation”; and Mr. Smith will discuss “Cleanup Program Status” and provide information on “Future Cleanup Funding, Community Involvement and Future RAB Participation”.

IV. Discussion Topics

- a) Mr. Anderson presented information on the Groundwater Record of Decision (ROD) Completion.

Mr. Anderson began by explaining that the Groundwater ROD is a decision document that selects the final remedies to clean up residual groundwater contamination at 19 sites.

- This is Travis AFB’s fifth decision document. This is the first decision document that covers the entire base (the first four focused on operable units or on different contaminated media).
- The selected remedies are based on 30 years of discovery, assessments, investigations, technology demonstrations, and interim cleanup actions.
- All RODs are divided into three parts. The declaration statement summarizes the content of the ROD, the decision summary provides a detailed summary of the past investigations and performance data that support remedy selection as well as descriptions of the remedies and cleanup levels, and the responsiveness summary presents the public comments on the remedies proposed in the Travis AFB Groundwater Proposed Plan.

Groundwater ROD Highlights include:

- Minimizes use of pump-and-treat. Maximizes use of green and sustainable remediation technologies. Applies monitored natural attenuation (MNA) and enhanced attenuation (EA) to site cleanups. Protects workers from vapor intrusion. Significantly reduces base energy consumption.

Dump Pump and Treat (Energy intensive):

- The north treatment plant is shut down and will eventually be decommissioned.
- The west treatment and transfer plant is shut down and will eventually be decommissioned.
- The south plant will continue to operate until the contamination levels at site SS029 are low enough for MNA to finish cleanup.

Greening our Cleaning (Green sustainable remediation):

- Two Bioreactors are very good at cleaning up solvent source areas.
- Eucalyptus trees reduce contaminant concentrations in the central part of the plume that relies only on sunlight for energy.
- Injected vegetable oil (EVO) promotes microbe growth and contaminant breakdown.
- Biobarriers stop plume migration.

Mother Nature's Answer:

- Monitored natural attenuation uses physical, chemical, and biological processes to clean up contamination.
- Works in oxygen rich and oxygen poor environments. In oxygen poor areas it works a little faster.
- At the end of each groundwater cleanup, MNA will be the final remedy.
- For one pesticide site, MNA is the only possible remedy. Pump and treat at this site stirs up the contamination. If left alone the pesticide adheres to the soil and does not migrate.

Keeping the Air Fair:

- Vapor Intrusion (VI) is the movement of solvents from groundwater to soil gas and its flow into occupied rooms. Travis AFB conducted a VI assessment to see if there was an issue. There was only one building that tested positive, and the rest were fine.
- Land use controls (LUCs) were put in place to prevent the occupation of office space for the building that was identified as being susceptible to VI.
- LUCs require VI prevention measures (passive ventilation systems) to be added to new office space that overlies plumes.

Shrinking Energy Bills:

- Fewer electric pumps, blowers, motors, etc., reduces energy consumption.
- Solar panels allow remaining pumps to extract contaminated groundwater.
- Biology-based remedies eliminate the need for operation and maintenance tasks, thus saving energy.

b) Mr. Duke presented information on the Groundwater Remedy Implementation.

Mr. Duke began by showing a picture of a newly-installed, very large solar panel that supplies power to the new LF007C treatment plant that replaced the old “pump and treat” North groundwater treatment plant. This remedy was selected in the ROD. This new LF007C treatment plant is 100 percent off the grid. The groundwater is pumped through carbon filters, and the treated water is discharged to the Duck Pond.

12 Old Oil Water Separators (OWS):

- The 12 old oil water separators were initially managed in an environmental compliance program. Some of the oil water separators have been removed and others still need to be removed.
- Mr. Duke provided a list of the 12 OWSs and a map of their locations.

Lots of Legwork:

- Travis AFB is required to consult with the U.S. Fish and Wildlife Service (USFWS) when doing fieldwork at the Base. Recently, a protected species, California Tiger Salamander, was spotted on one of the runways. Travis AFB is to notify USFWS of the type of work that is going to be conducted and provide assurance that the natural habitat will not be disturbed when conducting the remediation work.
- Work Plans have to be written for the upcoming fieldwork for the Regulatory Agencies to review and comment.
- Dig Permits need to be submitted to the Base Dig Permit Office to ensure that any proposed drilling is not in direct line with underground infrastructure.
- Airfield waivers request permission to conduct fieldwork that is near the flight line. This takes coordination with Airfield Operations and Security Forces.

Then the Work and Fun Begins:

- Install final groundwater remedies; inject Emulsified Vegetable Oil (EVO), build a new bioreactor in place of one of the OWSs that is scheduled to be removed.
- Perform demonstration projects. Looking for ways to optimize our remedies. One demonstration project involves installing gravel chimneys and piping, injecting EVO into the gravel chimneys and recirculating the EVO back through, so it is circulating horizontally through the plume. Travis AFB continued studies with various partners. UC Davis is conducting a study by using an above ground column test to look for microbial activity that breaks down MTBE. AFCEC is

interested in looking for locations to pilot new demonstration projects (ie bioreactors, phytoremediation, etc.)

- Conduct soil investigations to possibly remove land use controls (LUC) at 4 soil sites, to free up land for Travis AFB missions. Soil ROD amendments need to be written and approved.

Continue Treatment Plant Operations:

- Central groundwater treatment plant will continue to treat Site SS016; this is the large plume in the center of the flightline.
- ST018 MTBE groundwater treatment plant will expand by adding 1 new extraction well. The treated water will be discharged to Fairfield Sanitary Sewer District (FSSD). This treatment plant was under an NPDES permit, and by switching the discharge to FSSD, it will save Travis AFB approximately \$6,000.00 annually, due to the reduced permit fees.
- LF007C groundwater treatment plant continues treating an off-base plume. A newly installed solar panel and pump increased the extraction rate. This treatment plant is 100 percent off the grid.
- South groundwater treatment plant keeps the plumes from migrating further off base. A new extraction well will be installed to help with the site cleanup.

Additional Projects:

- 2009 Lawler Ranch fuel release. Travis AFB is working closely with Solano County, assisting with the project to remove a transfer pipeline and old valve pit.
- MMRP Old Skeet Range, investigation work has been conducted and a report is due out soon. The chemicals of concern are lead and PAHs.
- Installation Support Team (IST); Mr. Smith, Mr. Anderson and Mr. Duke will be providing program assistance to Beale AFB.

Mr. Cumberland asked about the LUCs at 4 sites and if the LUCs were removed would that free up land for development? Mr. Duke said it does free up the land for whatever mission that Travis AFB is assigned. It also removes any costs that are associated with those sites; LUC sites are required to be inspected and report annually.

V. Cleanup Program Status

Mr. Smith presented information on Future Cleanup Funding, the Community Involvement Plan, and the Future of RAB Participation.

Mr. Smith began by discussing the status of funding and the importance of transparency. Acknowledging that the Travis AFB cleanup program is using taxpayer money, and “they”, the base, take it very seriously how the money is spent. Every year,

Travis reports their cleanup expenditures to Congress. There is a website which is kept up-to-date with federal spending at Military Installations: Defense Environmental Network and Information Exchange (DENIX), www.denix.osd.mil. This website is where the annual reports to congress are posted; what was spent and the next year's projected spending.

Mr. Smith provided an example, a snapshot, of Travis AFB Cleanup Costs to Date. From 1983 to date Travis AFB has spent 123 million dollars (almost \$4 million per year) to get to where we are today. That is a lot of money, but the risk of exposure to contaminated soil and groundwater is so much less today that it was in 1983 as that money paid for a lot of cleanup.

- Fourteen years of operation by four treatment plant installations, to prevent contaminated groundwater migrating off base into surrounding neighbors' drinking water.
- Due diligence, including conducting interviews with folks that worked at Travis AFB to obtain information on where pesticides/herbicides and other chemicals were dumped, spilled or buried. In many cases, regarding soil contamination, the soil was excavated and placed in a corrective action management unit (CAMU), saving millions in shipping and off base disposal costs.
- Excavated soil contaminated with lead near the current south base entry gate as well as several former fire training areas.
- As Glenn mentioned, we developed five RODs with the Regulatory Agencies.
- Implemented optimization and Green Stainable Remediation where possible and as the reduction in chemical concentrations allowed.
- Installed Bioreactors and biobarriers.
- Installation of EVO injection wells.

Mr. Smith explained a figure that showed future cost estimates as of 2006 and how those estimates were reduced after the FY08 Performance Based Contract (PBC). The PBC allowed for acceleration of cleanup efforts in the first three years that were able to reduce long term operating costs.

- The FY08 PBC paid for optimization of treatment systems and the Groundwater Record of Decision (ROD).
- The FY13 PBC implements the decisions in the Groundwater ROD and accelerates site closure efficiently and effectively.

FY13 PBC program cost and adjustments.

	FY13	FY14	FY15	FY16	FY17	FY18	FY19-21	Total
Programmed amount	\$2.2M	\$4.3M	\$3.4M	\$21.5m	\$3.0m	\$1.4m		\$35,810,303
Awarded amount	\$2.2M	\$21.2M	\$0.3M	\$7.9M	\$2.8M	\$1.4M		\$23,346,390
Increase or Decrease		Increase \$16.9M	Decrease \$3.1M	Decrease \$13.6M	Decrease \$0.2M			

Mr. Smith explained the difference in the Programmed Amount and the Awarded Amount. He stated that his original thought was the first couple of years would mostly consist of documentation: writing work plans and site characterization reports. In reality, much was already known about the sites undergoing remediation and that under the new ROD, remedy implementation should begin as early as possible so we could see the impacts, monitor trends, report on the progress and write site closure documents before the end of the 8 year contract.

The bottom line is that because of our PBCs, the estimated costs of long term operating (LTO) costs have decreased from \$175M as of 2006 to \$112M, a 35% reduction in costs to complete (CTC). The goal is the continual optimization of efficiency and effectiveness to reduce LTO costs. Funding in the future may well be uncertain, however, typically environmental cleanup programs are not cut. They are included in a must pay category due to the legal commitment that RODs provide. Even so, we decided to posture Travis AFB to be “shovel ready” so that we could accept money from other Air Force Bases that couldn’t execute their projects in FY14. Fortunately for us, that scenario did occur, and we were able to acquire funds early, saving the Air Force as a whole from not performing cleanup with money that had been budgeted for just that purpose.

Community Involvement Plan:

- Update existing The Community Involvement Plan (CIP): A guideline for continuing the community involvement activities associated with the environmental cleanup at Travis AFB.
- Provides information about community concerns and explains how the Air Force will involve the public in the decision making process during the ongoing environmental cleanup of Travis AFB.
- Strategy shift from involving the public in the decision making process, since Travis AFB has achieved remedy in place (RIP) – to involving the public in the ongoing cleanup process, is it working, etc.

Development:

- Coordination between EPA, DTSC and Travis AFB to determine what assistance is needed from the public.
- Travis AFB IST will write up the pre-draft of the CIP and work with contractor to develop the draft.
- The draft will be submitted for review by EPA Public Affairs Office and DTSC Public Participation Specialists.
- Adherence to Final CIP through Newsletters, Fact Sheets, Public Meetings and RAB participation.

Ms. Burke emphasized the coordination on the CIP with EPA, DTSC and Travis AFB, but added that it should also include interviews with existing RAB members and community members for their input. Ms. Burke encouraged participation with the RAB members and welcomed their suggestions on how to get this information to the community.

Ms. Smith said he thought about giving a presentation at the local Chamber of Commerce Meetings, adding that he is open to the RAB members giving suggestions as to other possible groups. Mr. Foster said he liked the idea of reaching out to the community, adding that a lot of people most likely have forgotten that Travis AFB is a Superfund site. Suggesting a power point slideshow on how the base has successfully cleaned-up a lot of the sites, implementing GSR, "it's a good news story". Mr. Foster suggested Real Estate offices in Solano County. Mr. Reagan mentioned the Travis Regional Armed Forces Committee and suggested that the power point presentation should not go over 15 minutes. Also, The Wing Commander on base has a quarterly breakfast meeting with the local Mayors, staffers, and Federal and State Legislators. Mr. Marianno suggested speaking at a group he belongs to: the Sons in Retirement (SIR) meet the third Monday of the month. There are about 125 members. And he agreed with the 15 minute presentation limit.

Future of the Restoration Advisory Board:

Air Force Instruction 32-7020, section 12.4 states, The Air Force will support establishing a Restoration Advisory Board (RAB), or equivalent, at each installation where there is sufficient and sustained community interest. The RAB shares community concerns and ideas with the Air Force. The RAB is comprised of Focus Groups, a technical/document review focus group, a relative risk/budget focus group, and a community relations focus group.

Mr. Smith mentioned a past Community Relations Focus Group Meeting (19 Jan 2000); excerpt of the meeting minutes:

- Look for new ways to advertise the meetings.
- Increase RAB to 20 members using a combination of open recruiting from the public and appointments from specific organizations.

- Outreach programs, public speaking engagements at various repositories, educational programs, and ERP site tours.
- Update Community Relations Plan, continue the newsletter, expand the ERP website, and create a brochure to inform elected officials and public about the status of the cleanup program.

Mr. Smith said we've done those things; advertised on the Cable Channel, the two local newspapers, and the Travis Tailwind. We have sought RAB appointments from local businesses and organizations (TRAFAC, Solano Real Estate, National Association of Uniformed Services, and the cities of Fairfield and Vacaville). We have given presentations at Society of Military Engineers (SAME) meetings. It has been a few years since any involvement with the local schools, but the last tour of Travis AFB was offered to the RAB in July 2014.

The Community Involvement Focus Today:

- The level of community involvement has reduced since cleanup decisions were reached. The ERP staff reduced from 10 in 2000 to 3 in 2014.
- At a minimum, maintain awareness of Travis AFB cleanup program through continued Newsletters, fact sheets, and web updates. Perform outreach as needed to obtain feedback on future proposals.

Future of The RAB:

- RAB members should determine what the new goals should be.
- Meeting frequency.
- Focus groups.
- Membership.
- Validation of cleanup progress.
- Sampling of community concern.

How often should the RAB meet, how should we meet.

Mr. Foster commented that he enjoys coming to the RAB meeting and listening to the good news, suggesting to have a few more RAB members or core people and reduce the meeting to once a year. The meetings could consist of status updates. Mr. Reagan agreed that once a year is probably enough. He added to perhaps have a staff member from the cities of Suisun, Fairfield and Vacaville attend the meetings and "report back". Mr. Reagan added that it is hard to sustain community interest when everything is going well. Mr. Marianno said that recently the newspapers have been reporting on the economic generator that Travis AFB is; in the neighborhood of 1.3 to 1.6 billion dollars. The bigger picture is the retirees, and the quality of people that Travis AFB attracts.

VI. Regulatory Agency Reports

Ms. Burke (EPA) and Mr. Fries (DTSC) had no comments. Ms. Constantinescu (RWQCB) said that in addition to all the groundwater sites, she also oversees the petroleum sites known as POCO sites, and recently was assigned the Potrero Hills site (OEA Aerospace Project). The groundwater at Potrero Hills is contaminated with perchlorate from contractors that worked on that site, and it is important to this meeting because a portion of the 25 acres of Potrero Hills is owned by the Air Force. The RWQCB involvement started in 1999 when the first site cleanup order was written and approved by the board members. The cleanup order was revised in 2002, and amended in 2003. Progress had been made in the soil cleanup. The groundwater contamination plume needs further delineation because it has migrated toward Suisun Bay. Mr. Smith said that cleanup action by the Air Force at Potrero Hills has been on hold for the last 8 years pending achievement of the RWQCB cleanup requirements by the responsible contractor. At that time, Travis AFB will manage the administration of site closure or land use controls as necessary.

VII. Focus Group Reports

Mr. Smith thanked the focus group for their continued support on reviewing documents.

VIII. RAB/Public Questions

None.

IX. Set Date and Place for Next RAB Meeting

The next RAB Meeting is scheduled for **23 April 2015** at the office of the Northern Solano County Association of Realtors in Fairfield.

X. Adjournment

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

Minutes submitted by: Jeannette Cumberland, CH2M HILL

Minutes approved by: The Travis AFB RAB on 23 April 2015