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

Meeting Minutes

05 November 2015

I. Welcome and Introduction

Col Dietrick III introduced himself and thanked everyone for attending. **Mr. Smith** called to order the regular meeting of the **Travis AFB RAB** at **7 pm** on **05 November 2015** in the **classroom at the Northern Solano County Association of Realtors office**. General introductions were made. Mr. Smith thanked; Col Dietrick III, The USACE of Sacramento, the regulatory agency representatives, RAB members, and the new RAB members, and everyone else for attending.

Roll Call

The following RAB members were present:

Name	Affiliation	Present
Col George T.M. Dietrick III	USAF, Travis AFB (Air Force Co-Chair)	✓
David Marianno	Suisun City Resident (Community Co-Chair)	✓
Nadia Hollan Burke	U.S. Environmental Protection Agency (EPA)	✓
Adriana Constantinescu	SF Bay Regional Water Quality Control Board	✓
John Foster	Nat'l Association of Uniformed Services	✓
Mike Reagan	Travis Regional Armed Forces Committee	
Ben Fries	Dept. of Toxic Substances Control (DTSC)	✓
Jim Dunbar	City of Fairfield Representative	
*David M. Feinstein	Principal Planner City of Fairfield	✓
*Gale Spears	Communications Director City of Fairfield	✓
*Thomas Randall	AMC Civic Leader	✓
*Mark Pennington	Principle Scandia Elementary School	✓
*George Hicks	Dept. of Public Works City Hall	✓
*W.T. Jeanpierre	American Legion	✓
*Mayrene Bates	Solano County School Board Trustee, Dist. 4	
*Debi Tavey	President FF-SS Chamber of Commerce	
*Amit Pal	PG&E Representative	

* Denotes new RAB members.

Public Members present:

- Bill Cumberland — Citizen
- Brad Smith — Citizen

Agencies and Contractors present:

- Mark Smith — Travis AFB AFCEC/CZOW
- Glenn Anderson — Travis AFB AFCEC/CZOW
- Lonnie Duke — Travis AFB AFCEC/CZOW
- Bill Hall — Travis AFB AFCEC/CZRW
- Merrie Schilter-Lowe — Travis AFB AMW/PA
- Brian Sassaman — Travis AFB 60CES/CEANR
- Seth Merdler — Travis AFB
- Milea Franklin — Travis AFB 60CES/CEI
- Dezso Linbrunner — USACE, Omaha District
- Mike Wray — CH2M
- Tricia Carter — CH2M
- Renee Delisle — CH2M
- Jeannette Cumberland — CH2M

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 he will discuss “Performance Based Contracts (PBCs)”; Mr. Duke will discuss “Cleanup Program Status”.

Mr. Foster suggested Mr. Smith give a little background to the new RAB members on how Travis AFB became a super-funded site and how Travis AFB is nearing the end of that designation. Mr. Smith described that it began with his predecessors who started pulling in the contaminated groundwater plumes that were migrating off base; by means of groundwater extraction treatment (GETS) to treat the contaminated groundwater and from migrating any further. He then moved on to the contaminated soil sites; some sites are designated as land use controls (LUC), excavation, and corrective action management unit (CAMU). Travis AFB is still a super-funded site and there is more to be done before we can be delisted. That said we are still a lot closer to our cleanup goals.

Mr. Randall said he would like for Travis AFB to consider one RAB meeting a year, and one RAB member base tour, in lieu of the two RAB meetings per year. It was suggested that the RAB meeting be held in April, and the RAB member's base tour held in October/November. Mr. Smith asked for those in favor. The ayes have it; all RAB members supported this recommendation.

IV. Discussion Topics

a) Mr. Smith presented information on the Performance Based Contracts (PBCs).

Mr. Smith said Travis AFB first Performance Based Contract (PBC) was awarded in 2008, and gave thanks to the Army Corp of Engineer for leading the way on PBCs. Mr. Linbrunner interjected saying it was a concerted effort between Army Corp of Engineers and the Air Force in developing PBCs to save money and to speed up the cleanup process. PBCs allow the Air Force to buy measurable objectives rather than a specific set of steps to a deliverable.

An Example of a PBC contract, in simple terms. Objective: Feed the family dinner tonight.

- Statement of Work Contract: Provides specific instructions. i.e., Use a car to drive to the store, buy ingredients on the list provided, bring them home and prepare them according to the list of recipes provided.
- Performance Based Contract Concept: Dinner is for six at 6:00 pm. We want meat, pasta and a vegetable. Under a PBC, you can make use of what is in the pantry, freezer or available in the garden, saving time and money while still achieving the desired objective.

Performance Based Concept:

- Develop a statement of objectives with milestones and deliverables. What is it that I want? When do I want it? Dinner at 6 pm for six people.
- Develop a request for proposal from prospective contractors. Query qualified caterers and chefs in area.
- Receive and evaluate those proposals and make the best value selection. Compare costs, quality, details and proposed dinner menu.
- Award the PBC. Start work under the new contract. Monitor performance and milestone achievements. Pay for baseline services to start work and have winning chef provide regular updates on progress. Travis AFB receives monthly status reports from the contractor.
- Pay for performance as each milestone is achieved. If progress reports are favorable, continue incremental funding. Travis AFB awards option year and if the contractor isn't performing, their services are terminated. If progress reports are favorable the funding continues.

- The advantages of PBCs for Travis AFB: Potentially speeds up the cleanup, attracts innovative solutions and saves taxpayer dollars. They also conduct demonstration technology studies to show a better and/or faster way to cleanup.
- PBCs, hire the subject-matter experts, in our case CH2M, to achieve specific objectives by specific milestone dates. We do not tell the contractor how to do their job, but rather what we want accomplished.
- The contractor is free to develop their own proposal on how to achieve the objectives and the Air Force is able to select the technical proposal that provides the best value. Travis AFB still has to report to the "higher ups" that we are achieving milestones.

How is Travis Using a PBC?:

- We are buying down the risk. Each area of contamination that poses some risk to people, animals or plants needs to have that risk reduced to a level that is acceptable to the Air Force and the Regulatory Agencies.
- To close sites to implement or optimize an approach that shortens the time to achieve site closure. Write an optimized exit strategy. The contract Travis AFB has with CH2M is active until 2021. CH2M cannot close all the sites by that year but they can close some of the sites, implement or suggest an optimize exit strategies or new approaches that will reduce the life cycle of that site.

Funding (old process verses new process):

- Old Process: Annual Program Management Reviews (PMR): Each base identified cleanup that needs to accomplished, and how much it will cost.
- A program well managed might be able to plan five years out. A plan that is not so well managed may not have identified all areas that require cleanup.
- Requirements and cost estimates are subjective and dependent upon the capabilities of the base personnel.
- Potential existed for contamination to migrate and pose a greater risk if a project to cleanup was not funded in a timely manner.
- New (current) Process: Cleanup is centrally managed and funded.
- Allows for a standardized approach to identifying requirements, estimating annual costs and determining life cycle costs.
- Assigned teams review all requirements and one team produces all estimates.
- All environmental liabilities are identified so much better. Existing contaminated areas that require funding to perform cleanup are identified farther in advance. Ask congress for money far enough in advance to receive incremental funding.

Travis' PBC:

- The purpose of Travis AFB PBC is to implement the groundwater (GW) remedies selected in the GW Record of Decision (ROD) that was signed in June 2014. All

the sites listed in the ROD state; cleanup this site to this MCL level, implement and monitor the sites until the cleanup level in the ROD is achieved.

- Investigate and cleanup inherited sites (former Compliance Cleanup Sites). The compliance side is to police the base for any current 'potential' contamination. The Environmental Restoration Program discovered that the Compliance cleanup qualifies under our funding program. We still need to characterize those sites and that is where some of your work is; in the decisions that need to be made for the compliance cleanup sites.
- Accelerate and maximize site closeout where possible or at least come up with optimized exit strategies.
- PBC-13 Contract began in 2013 and ends in September 2021.

Challenges Associated with PBCs:

- The pace of document development and field work increases exponentially.
- Additional decisions are required to carry out the work. Characterizing site, etc.
- Achieving site closeout by the end of the contract is tight but achievable; contractor risk.

Takeaway for the RAB:

- Plenty of technical documents to review.
- Decisions still need to be made.
- Public still needs to be involved.
- Cleanup progress is accelerating.
- The job is done when Travis AFB land is freed up for the Base to use, and is free of COCs.

Mr. Marianno commented "as a neighbor of Travis AFB I am very pleased with the cleanup work that has been conducted at Travis AFB in regards to the groundwater."

V. Cleanup Program Status

Mr. Duke talked about Cleanup Program Status.

Mr. Duke discussed the end of the road to the ROD. The Air Force, EPA, DTSC, and the Water Board signed a Groundwater Record of Decision (ROD) in 2014 detailing the selected remedies for 19 groundwater sites on Travis AFB, a process that took seven years. There are seven distinct remedies that were selected depending on site specific conditions.

Alternative Remedies:

- Alternative 1: No further action is selected for groundwater underlying at Site SS041. A small plume next to the pesticide management shop and in a matter of a few years after the installing the infustructor it was cleaned up. By the time the ROD was signed this site was already cleaned up. The ROD specified that site SS041 was already cleaned up. No further actions (NFA) needed; no land use control (LUC) provisions, or constituents of concern (COC) in the groundwater.
- Alternative 2: Monitored natural attenuation (MNA), basically let "mother nature" do the cleanup. MNA is selected for COCs in groundwater at sites FT004, LF006, LF007 – subareas LF007B and LF007D, LF008, ST027B, SD031, SD033, SS035, and SD043.
- Alternative 3: Groundwater extraction and treatment (GET), is selected for COCs in groundwater at site FT005, subarea LF007C, and SS029 and SS030. Consists of continued extraction and ex situ treatment of COCs in groundwater with liquid phase granular activated carbon. Over the last few years we've extracted and treated over a billion gallons of groundwater.
- Alternative 4: A combination of a bioreactor and GET. Site SS016, treatment of the portion of the plume with the highest concentration of residual contamination with a bioreactor and with GET for the remainder of the downgradient plume.
- Alternative 5: Emulsified vegetable oil (EVO) and enhanced attenuation (EA): In situ treatment of the portion of the plume with the highest concentration of residual contamination with EVO, and EA within the remainder of the plume is selected for COCs in groundwater at sites SS015, SD036, and SD037.
- Alternative 6: Bioreactor installed at the source of the plume, phytoremediation is downgradient, EVO permeable reactive barrier (PRB), and EA. This is a very unique and specific remedy only selected for site DP039.
- Alternative 7: Passive skimming and EA. Continued passive skimming and EA of the plume is selected for COCs, Stoddard Solvent in groundwater at site SD034. Solvent was used to clean the airplanes. Stoddard solvent floats above the groundwater, and the passive skimmer collects the solvent.

Let the Implementation Begin:

- EVO injections at sites SS015, SD036, and SD037 required installation of new injection wells and some monitoring wells.
- GET at site SS030 required trenching across potential tiger salamander habitat, a protected species, which needed to be coordinated with the United States Fish and Wildlife Service (USF&WS).
- EVO PRB requires installing a line of injection wells so EVO can be injected into the subsurface. Installed at DP039 and SS016. Work at SS016, near the flighline, required coordination with many folks on base to obtain a temporary airfield construction waiver (TACW) and move the "red-line" 50 ft.

Petroleum only contamination:

- Worked on petroleum only contamination sites, also known as POCO sites.
- Travis AFB installed a new solar powered extraction well at site ST018, which is located behind the AAFES gas station. Initially had three extraction wells and installed an additional extraction well to optimize groundwater extraction.
- Collected soil gas samples at site ST032 and ST028 which is located next to runway 21R. Samples were collected on Labor Day when the runway was inactive.

Twelve Oil Water Separators (inherited from Compliance side):

- Collect samples, remove COC and infrastructure. This site required 1 CE work request, 12 dig permits, 3 FAA notification, 3 airfield waivers worksheets, 2 airfield waivers, 1 biological assessment, and 1 supplemental biological assess to USF&WS.

Looking ahead:

- We've learned over the years that new technologies or operational methods can often be used to optimize a treatment strategy.
- The bioreactors, EVO injections, and phytoremediation were originally demonstration project, used to prove concepts.

Demonstration Projects:

- While implementing our selected remedies we also began some demonstration projects.
- Gravel chimneys which are similar to a bioreactor "percolator" but installed in a line like the PRB installed at site SD031.
- Infiltration trenches like a gravel chimney laying on its side were installed at FT004.
- We wondered how far the EVO could be pulled beneath the surface at site FT005. So we are using a series of wells to pull EVO towards a well and once we see the total organic carbon (TOC) from the EVO increase, we will switch over to a different well and see if we can continue to pull the EVO along underground.
- Based on what we learn from these demonstration projects, we may in the future look to optimize our selected remedies.

Optimization is done in conjunction with the regulatory agencies.

Ms. Schilter-Lowe asked if the base came up with these demonstration projects or the contractor. Mr. Duke said it is the contractor that came up with these ideas.

Mr. Hicks asked the ranges of the depths on the extraction wells. Mr. Duke said anywhere from ten to fifty feet.

VI. Regulatory Agency Reports

Ms. Constantinescu introduced herself saying she is an engineer and geologist with San Francisco Bay Water board and that she oversees the cleanup in the groundwater plumes. My main responsibility is to review POCO groundwater plumes. There are only three POCO sites. The RWQCB has authorized closer on one of the POCO site CG508, our agency provided a no further action (NFA) letter to Travis AFB.

Ms. Burke introduced herself saying she is an environmental engineer with USEPA and my primary responsibility is to oversee the Comprehensive Environmental Compensation and Liability Act CERCLA. Ms. Burke said that they defer all petroleum sites to the Water Board. EPA looks at TCE, solvent and other contaminates; adding if petroleum is mixed with other contaminates then EPA will look at those sites. Ms. Burke said she is involved in reviewing and approving all the work plans and fieldwork at Travis AFB. Adding that she has a deep appreciation for how well the Travis AFB functions as a team, and how they work with the regulators. Travis AFB is by far one of the best installation team she works with, out of all her bases.

Mr. Fries introduced himself saying he is a chemical engineer with DTSC in Sacramento, we are part of the California environmental protection agency as well as the water board. My responsibility is to participate with the Travis AFB team regarding anything that would classify as hazardous waste. I also interface with USF&WL when Travis AFB needs biological opinion.

VII. Focus Group Reports

Mr. Smith said in the past we have had a budget for: focus groups, community relations focus group, and a technical focus group. Because of the PBC we haven't had a budget for focus groups. When we used to contest for money, sometimes the RAB and budget focus group would advocate for Travis AFB. Community relation focus group continues through the RAB, with the help of the Public Affairs Relations office, Ms. Schliter-Lowe, The Guardian, and our website: http://www.travis.af.mil/enviro/. John Foster is the sole member of the technical focus group. Mr. Smith invited the new RAB members to join the technical focus group and provided information on what it entails. Mr. Foster said he has seen a dramatic change in the focus of the documents; before, it was here is what we think we are going to do, draft plan. Now the documents have all kinds of data, site closures, or method closure, plans on how something was conducted and here are the results.

Mr. Smith thanked the focus group for their continued support on reviewing the list of documents: Annual Groundwater Remedial Implementation Status Report for 2014, SS016 Remedial Action Construction Completion Report, SS015 Remedial Action Construction Completion Report, and SD036/SD037 Remedial Action Construction Completion Report.

Mr. Smith announced his retirement and that this was his last RAB meeting. He went on to say that Mr. Duke and Mr. Anderson, with the help of Mrs. Carter Public Affairs with CH2M will be conducted/coordinating the RAB meetings and site tours.
Mr. Smith thanked all those that came before him and lead the way the groundwater and soil investigation/characterization. Mr. Smith lastly thanked Mr. Anderson for teaching him the value of "attention to detail", and Mr. Duke for the value "of maintaining a great relationship with the base. To name a few.

VIII. RAB/Public Questions

IX. Set Date and Place for Next RAB Meeting

The next RAB Meeting is scheduled for **21 April 2016** at the office of the Northern Solano County Association of Realtors in Fairfield.

X. Adjournment

Mr. Smith adjourned the meeting at **8:30 pm**.

Minutes submitted by: Jeannette Cumberland, CH2M

Minutes approved by: