

**Travis Air Force Base  
Environmental Restoration Program  
Remedial Program Manager's  
Meeting Minutes**

**01 December 2010, 0930 Hours**

Mr. Glenn Anderson, Travis Air Force Base (AFB), conducted the Remedial Program Manager's (RPM) meeting on 01 December at 0930 in the Main Conference Room, Building 570, Travis AFB, California. Attendees included:

- Glenn Anderson Travis AFB
- Lonnie Duke Travis AFB
- Merrie Schilter-Lowe Travis AFB
- Dezso Linbrunner United States Army Corp of Engineers (USACE),  
Omaha District
- Alan Friedman California Regional Water Quality Control Board  
(RWQCB)
- Jose Salcedo California Department of Toxic Substances Control  
(DTSC)
- Nadia Hollan Burke United States Environmental Protection Agency  
(USEPA)
- Rich Freitas United States Environmental Protection Agency  
(USEPA)
- Mary Snow Techlaw, Inc
- Rachel Hess ITSI
- Craig Carlson Trihydro
- Mike Wray CH2M HILL
- Doug Berwick CH2M HILL

Handouts distributed at the meeting and presentations included:

- Attachment 1 Meeting Agenda
- Attachment 2 Master Meeting and Document Schedule
- Attachment 3 SBBGWTP Monthly Data Sheet (October 2010)
- Attachment 4 CGWTP Monthly Data Sheet (October 2010)
- Attachment 5 NGWTP Monthly Data Sheet (October 2010)
- Attachment 6 Presentation: SS015 Field Implementation Plan and SD036 Field  
Implementation Plan (for EVO Injection)
- Attachment 7 Presentation: Program Update: Activities Completed, In Progress  
and Upcoming
- Attachment 8 Presentation: Field Schedule Update

## **1. ADMINISTRATIVE**

### **A. Previous Meeting Minutes**

The 21 October 2010 RPM meeting minutes were approved and finalized as written.

### **B. Action Item Review.**

Action items from October were reviewed.

Action item one still open. No change.

Action item two still open. No change.

Action item three still open. No change. Ms. Burke said that she had an opportunity to look at site closure reports from McClellan, and will forward to EPA's review team for their comment. Ms. Burke will also email McClellan's report to Travis AFB to review the formatting and style. Mr. Linbrunner asked if these reports are site specific. Ms. Burke answered yes.

## **Master Meeting and Document Schedule Review (see Attachment 2)**

The Travis AFB Master Meeting and Document Schedule (MMDS) was discussed during this meeting (see Attachment 2).

### **Travis AFB Annual Meeting and Teleconference Schedule**

— Mr. Duke asked if the RPM meetings on the 2011 calendar fit into everyone's schedule. Mr. Friedman said that he preferred consistency; having the meeting held on a particular Wednesday or on a Thursday of every month is best. Ms. Burke said she has conflicting meetings that prevents her from having the RPM meetings on a particular Wednesday or a Thursday of each month. Ms. Burke said that the dates that she and Mr. Smith selected that are currently on the MMDS calendar agrees with her schedule. Mr. Salcedo said leave the schedule as is and everyone else will work around it. Consensus was to leave the schedule as is for now and re-address at a later date if needed.

### **Travis AFB Master Document Schedule**

The 08 December 2010 RPM meeting has been changed to 01 December 2010.

— Focused Feasibility Study (FFS): No change. Ms. Burke said that the January meeting would be a good meeting to present a review of the FFS, and asked if Travis was considering doing a presentation. Mr. Anderson said that yes there would be a presentation overview. Mr. Freitas expressed concern that the Air Force was dropping the FFS report on the regulatory agencies without giving them advanced notice. Mr. Duke said it's been on the schedule for two years, and all parties have had ample time to prepare

for it. Mr. Friedman asked Mr. Freitas when he would be ready for it. Mr. Freitas said we haven't really gone through all the sites. Ms. Burke asked for the presentation to go over everything as a refresher. The focus has been on one site at a time and this document encompasses everything. It would be good to do an in depth overview of all the sites and their status. Mr. Duke reminded EPA they will have two months to review the draft document.

- Proposed Plan (PP): Public Comment Period date has been changed to coincide with the RAB meeting. Mr. Salcedo suggested to change the Public Comment Period date to a week before the RAB meeting to give the public at least a week to review the document. Ms. Schilter-Lowe suggested that she send an article/press release in the newspapers advertising the PP for public comment.
- Groundwater Record of Decision (ROD): No change.
- Comprehensive Site Evaluation Phase II: No change. Travis received comments from EPA. Both state agencies, DTSC and the Water Board, have reviewed the document and have no comment. Mr. Linbrunner added that the Military Munitions Response Program (MMRP) review is managed by the Omaha MMRP primary design center as well as the Air Force MMRP office where MMRP documents get a thorough review. The Response to Comments Meeting for this document will be rescheduled to early next year.
- Potrero Hills Annex: (FFS, PP, and ROD): No change.
- ISCO/ERD Technical Memorandum: The Response to Comments meeting was changed to coincide with the January 2011 RPM meeting. The DTSC and the Water Board are still reviewing the document. EPA has an initial set of comments and additional comments from Office of Research and Development (ORD). The agencies will try and get comments to Travis within the next two weeks.
- Site SS015 Field Implementation Plan: No Change. The RTC date will be changed to coincide with the next RPM meeting held in January 2011.
- Sites SS014 and ST032 Tier 1 POCO Evaluation Report: The date for when the Pre-draft is scheduled to go out for Air Force review was changed. Ms. Burke asked if EPA normally receives a copy for their records. Mr. Anderson said the document is for the Water Board. Mr. Duke added that when the document goes final, a copy will go in the Administrative Record (AR), and that once added to the AR, a copy is available. Ms. Burke asked if Travis would cc her when the draft is emailed to the Water Board. Mr. Duke asked for clarification if Ms. Burke wanted a copy of the draft document or wanted to know when the draft was sent. Ms. Burke said a copy of the draft was not needed; she just wants to know when the draft document goes out. Mr. Duke said the dates are in the MMDS. Mr.

Freitas said EPA wants to know what's going on at Travis. Mr. Wray said the date for the Predraft needs to be revised to 14 January 2011, and the rest of the dates will be rescheduled accordingly.

- Site ST018 POCO Field Implementation Report: No change.
- Site SD036 RPO Field Implementation Plan: This new document addresses the injection of the vegetable oil. This project already has an approved work plan.
- 2010 GWTP RPO Annual Report: This new document was added to the master document schedule. This report is specific to treatment plants, energy used, carbon use, etc. Mr. Freitas asked how this addresses extraction wells, if one goes down, or if there is a power outage. He asked how these things would affect the plumes. Mr. Duke explained this report is for the Treatment Plants only; the GSAP report addresses the groundwater data. Mr. Freidman said to look at the GWTP report for what happens above the ground and the GSAP report for what happens below the ground. Mr. Freitas said that the GSAP comes out only once a year; what if something catastrophic happens, like the treatment plant going down. Mr. Duke explained that if one of the treatment plants go down, the base repairs it. In ten years plant shutdowns have never presented a long-term impediment to groundwater cleanup. Additionally, treatment plant reports that discuss interruptions to the extraction and treatment systems are presented/provided monthly.
- Quarterly Newsletter (January 2011): Date changed to reflect the new issue date.
- 2009/2010 GSAP: Dates have changed to reflect the submission of the draft to agencies on 07 December 2010, and the date for the submission of agency comments has changed accordingly.

## **2. CURRENT PROJECTS**

### **Treatment Plant Operation and Maintenance Update**

Mr. Duke reported on the treatment plant status.

#### **South Base Boundary Groundwater Treatment Plant (see Attachment 3)**

The South Base Boundary Groundwater Treatment Plant (SBBGWTP) performed at 99.1% uptime, and 5.1 million gallons of groundwater were extracted and treated during the month of October 2010. All of the treated water was discharged to Union Creek. The average flow rate for the SBBGWTP was 99.0 gallons per minute (gpm), and electrical power usage was 13,020 kWh. Approximately 17,837 pounds of CO<sub>2</sub> were created (based on DOE calculation); approximately 1.52 pounds of volatile

organic compounds (VOCs) were removed in October. The total mass of VOCs removed since the startup of the system is 389 pounds.

Optimization Activities: Took plant off line for a couple of days to change the groundwater treatment process from air stripping to activated carbon treatment. Travis is trying to figure out why a lot of electricity is still apparently being used (according to the meter).

#### **Central Groundwater Treatment Plant (see Attachment 4)**

The Central Groundwater Treatment Plant (CGWTP) performed at 93.2% uptime with approximately 1.96 million gallons of groundwater extracted and treated during the month of October 2010. All treated water was diverted to the storm drain. The average flow rate for the CGWTP was 40.6 gpm, and electrical power usage was 71 kWh for all equipment connected to the Central plant; approximately 97 pounds of CO<sub>2</sub> were created. Approximately 5.49 pounds of VOCs were removed from groundwater in October. The total mass of VOCs removed since the startup of the system is 11,198 pounds.

The West Treatment and Transfer Plant (WTTP) remains turned off for the ongoing rebound study.

Mr. Salcedo asked if this is the first time MTBE has been found. Mr. Duke said that it was found in the previous month's sample report. Travis is not sure where it is coming from; it could possibly be as simple as an airmen who spilled a couple of gallons of gas and did not report it. Travis will continue to investigate.

#### **North Groundwater Treatment Plant (see Attachment 5)**

The North Groundwater Treatment Plant (NGWTP) performed at 100% uptime with approximately 7,400 gallons of groundwater extracted and treated during the month of October 2010. The average flow rate of the NGWTP was 0.14 gpm, and electrical power use was 282 kWh for all the equipment connected to the North plant; approximately 386 pounds of CO<sub>2</sub> were created. The amount of VOCs removed was very low and consequently difficult to measure. The total mass of VOCs removed since the startup of the system is 656 pounds.

Optimization Activities: None to report for the month of October. Mr. Duke said that as soon as the vernal pools start collecting water, the extraction wells and treatment plant will have to be shut down.

#### **ST018 Construction Update**

Mr. Duke gave an update on the ST018 construction. This is an MTBE/POCO cleanup site.

Mr. Duke started by saying the power had to be shut off at the service station so they could tie into the transformer. Mr. Berwick brought in some wire as show-and-tell: there was no cut-off switch, no disconnect, it was all hard wired. This demonstrates just some of the issues encountered during the project.

Mr. Berwick briefly explained the horizontal drilling process; the drillers would pothole around all the of marked utilities, which were quite a few, then start the directional drilling and inserting of pipe. At times they would directional drill 400 ft. from pothole to pothole to tie in the pipe. Important to note: during the trenching no underground lines were hit. Mr. Anderson added this was a very successful project. The work was non-invasive. There are a lot of new buildings with new sod and concrete, and the concrete or grass was not disturbed by using directional drilling.

The site ST018 system consists of three solar powered extraction wells that pump contaminated water through three carbon vessels, filled with virgin coconut carbon. The construction is scheduled to be completed on 02 December 2010. Travis is waiting for the Notice of Intent (NOI) permit to be signed.

### **3. Presentations**

#### **SS015 Field Implementation Plan and SD036 Field Implementation Plan (for EVO Injection) (see Attachment 6)**

Mr. Berwick gave the presentations on SS015 and SD036.

The key points made for site SS015 presentation included:

- Installed three injection wells near the existing monitoring well MW216x15. Shown on attached map.
- Installed four new monitoring wells to close data gaps for the characterization. The monitoring wells are 4 inch wells to serve as Emulsified Vegetable Oil (EVO) injection wells, if needed.
- The EVO/Water mixture injected will be 6,260 gallons, or 2,087 gallons per well (3 injection wells).
- The chase water to be injected will be 11,894 gallons or 3,965 gallons per injection well.

Mr. Berwick provided a map of site SS015 that illustrated where the new injection wells and monitoring wells are installed in relation to the high TCE concentration. Included in the presentation are cross section diagrams.

Ms. Burke asked if these are shallow wells. Mr. Berwick said yes, they are about 15 ft. deep. Mr. Wray added that bedrock daylights behind building 549. Mr. Freitas asked if the EVO will be injected into bedrock. Mr. Berwick said yes, but it is weathered/sandstone bedrock. Mr. Wray said

we are injecting where the highest concentration is. Mr. Freitas asked if this is just a treatment study. Mr. Wray confirmed it is a treatability study. Mr. Freitas asked if Vinyl Chloride was found above bedrock? Mr. Wray answered yes. He added that the groundwater flow in this area is to the northeast, which is a local anomaly; it flows with the contour of the bedrock. That only happens at a couple of places on base, as indicated in the GSAP reports.

Ms. Burke wanted clarification concerning the agency review of plans that are already implemented. Mr. Duke said these are plans that are based on the discussions that have been agreed upon in the RPM meetings, this is part of the TRIAD-style approach that the base has been using to make decisions, and this is why these meetings are so important. Ms. Burke asked if the EPA had comments or changes to the treatment process, would it be too late to make changes. Mr. Duke replied that the base would take EPA's suggestions into consideration. Ms. Burke said in conclusion that these meetings are more critical to Travis. Mr. Duke added that they have been useful for obtaining agency feedback for years. Ms. Burke said she is new to the process and is learning.

Mr. Freitas said EPA is concerned about containment. He stated that the base has to have a purpose: what is being targeted, how deep the contaminants are found (total depth), the treatment zone, and concentration levels. He asked if that information will be in the FFS. Mr. Anderson replied the FFS looks at the strengths and limitations that technology offers and applies it to site specific conditions. The detailed information EPA wants is found in the Field Implementation Plan.

Mr. Linbrunner said that is the beauty of the new concept of the Performance Based Contract (PBC). The contractors are not going to continue to investigate sites for the next 15 years. They have to perform because they only receive a certain amount of money to complete the work. It is not like the way that RI & FS work was done 15 to 20 years ago; this is a new concept. The contractors received a statement of objectives that they have to address. It is based on what has previously happened and what Travis and the regulators have decided 4 or 5 years ago. This provides the direction that Travis needs to follow.

The key points made on site SD036 presentation included.

- Installed eight injection wells in the "hot spot". No additional monitoring wells are needed.
- EVO has been delivered and is stored at Site SD036.
- For the four injection wells screened in the higher concentration, the EVO/Water mixture to be injected is 7,860 gallons or 1,965 gallons per well (of the area screened).
- The chase water to be injected is 18,324 gallons or 4,581 gallons per well

- (of the area screened).
- For the four injection wells screened in the lower concentration, the EVO/Water mixture to be injected is 15,720 gallons or 3,930 gallons per well (of the area screened).
- The chase water to be injected is 36,940 gallons or 9,235 gallons per well (of the area screened).

Mr. Berwick provided a map of Site SD036 that illustrated where the new injection wells were installed in relation to the high TCE concentration area. Cross section diagrams were included in the presentation.

#### **Program Update: Activities Completed, In Progress and Upcoming (see Attachment 7)**

Mr. Wray reported on the status of field work and documents which are completed, in progress, and upcoming. See Attachment 7 for details.

#### **Field Schedule (see Attachment 8)**

Mr. Wray reported on the 2010 Field Schedule. See attachment 8 for details.

Mr. Freitas asked what would happen in the event the treatability plans do not work. Mr. Wray said that there are contingency plans for all of the sites in the FFS.

#### **4. New Action Item Review**

There are no new action items.

#### **5. PROGRAM/ISSUES/UPDATE**

None.

#### **General Discussion**

Mr. Freitas and Ms. Burke said they wanted to see in the next RPM meeting a presentation that encompasses all sites and treatability studies. Mr. Anderson suggested a tour of the base to view the sites that are being presented. Ms. Burke liked the idea and thought it would help. Mr. Freitas said he would rather see a presentation. Mr. Anderson reminded Mr. Freitas that we just said we were going to provide a presentation in the next RPM meeting.



## 7. Action Items

Item #	Responsible	Action Item Description	Due Date	Status
1.	Travis AFB	Petition to have the Lysimeter removed.	TBD	Open
2.	Travis AFB	Research beneficial reuse of treated water and give update.	TBD	Open
3.	EPA	Review past site closure completion reports to determine if future site closure reports are necessary.	TBD	Open

TRAVIS AIR FORCE BASE  
ENVIRONMENTAL RESTORATION PROGRAM  
REMEDIAL PROGRAM MANAGER'S MEETING  
BLDG 570, Main Conference Room  
01 December 2010, 9:30 A.M.  
AGENDA

1. ADMINISTRATIVE

- A. PREVIOUS MEETING MINUTES
- B. ACTION ITEM REVIEW
- C. MASTER MEETING AND DOCUMENT SCHEDULE REVIEW

2. CURRENT PROJECTS

- A. TREATMENT PLANT OPERATION AND MAINTENANCE UPDATE (LONNIE)
- B. ST018 CONSTRUCTION UPDATE

3. PRESENTATIONS

- A. SS015 FIELD IMPLEMENTATION PLAN AND SD036 FIELD IMPLEMENTATION PLAN (FOR EVO INJECTION)
- B. PROGRAM UPDATE: ACTIVITIES COMPLETED, IN PROGRESS AND UPCOMING
- C. FIELD SCHEDULE UPDATE

4. NEW ACTION ITEM REVIEW

5. PROGRAM/ISSUES/UPDATE

## Travis AFB Master Document Schedule

### Annual Meeting and Teleconference Schedule

Monthly RPM Meeting (Begins at 9:30 a.m.)	RPM Teleconference (Begins at 9:30 a.m.)	Restoration Advisory Board Meeting (Begins at 7:00 p.m.) (Poster Session at 6:30 p.m.)
01-26-11	—	—
02-16-11	—	—
03-16-11	—	—
04-21-11 (1:00 PM)	—	04-21-11
05-26-11	—	—
06-23-11	—	—
07-20-11	—	—
08-17-11	—	—
09-21-11	—	—
10-20-11 (1:00 PM)	—	10-20-11
11-30-11	—	—
—	—	—

## Travis AFB Master Document Schedule

PRIMARY DOCUMENTS			
Life Cycle	Basewide Groundwater		
	Focused Feasibility Study Travis, Glenn Anderson CH2M Hill, Loren Krook	Proposed Plan Travis, Glenn Anderson CH2M HILL, Loren Krook	Record of Decision Travis, Glenn Anderson CH2M HILL, Tony Jaegel
<b>Scoping Meeting</b>	<b>03-30-10</b>	<b>NA</b>	<b>01-24-07</b>
Predraft to AF/Service Center	12-30-10	05-13-11	12-08-11
AF/Service Center Comments Due	01-13-11	05-27-11	01-11-12
Draft to Agencies	01-27-11	06-10-11	01-25-12
Draft to RAB	01-27-11	06-10-11	01-25-12
Agency Comments Due	03-31-11	08-09-11	03-28-12
<b>Response to Comments Meeting</b>	<b>05-04-11</b>	<b>08-17-11</b>	04-18-12
Agency Concurrence with Remedy	NA	NA	05-09-12
Public Comment Period	NA	10-20-11 to 11-21-11	NA
<b>Public Meeting</b>	<b>NA</b>	<b>*10-20-11</b>	<b>NA</b>
Response to Comments Due	06-01-11	09-01-11	05-29-12
Draft Final Due	06-01-11	09-20-11	05-29-12
Final Due	07-01-11	10-20-11	06-27-12

\*Public meeting to coincide with RAB meeting.

PRIMARY DOCUMENTS	
Life Cycle	Comprehensive Site Evaluation Phase II Travis AFB, Glenn Anderson Sky Research, Ian Roberts
	Report
Scoping Meeting	NA
Predraft to AF/Service Center	04-23-10
AF/Service Center Comments Due	05-04-10
Draft to Agencies	10-14-10
Draft to RAB	10-14-10
Agency Comments Due	11-24-10
Response to Comments Meeting	12-08-10
Agency Concurrence with Remedy	NA
Public Comment Period	NA
Public Meeting	NA
Response to Comments Due	12-21-10
Draft Final Due	12-21-10
Final Due	01-23-11

PRIMARY DOCUMENTS			
Life Cycle	Potrero Hills Annex Travis, Glenn Anderson		
	FS	Proposed Plan	ROD
<b>Scoping Meeting</b>	<b>180 days after Water Board Order Rescinded</b>	<b>+470 days</b>	<b>+735 days</b>
Predraft to AF/Service Center	+ 270 days	+530 days	+ 915 days
AF/Service Center Comments Due	+ 300 days	+560 days	+ 975 days
Draft to Agencies	+330 days	+590 days	+ 1035 days
Draft to RAB	+ 330 days	+590 days	+ 1035 days
Agency Comments Due	+390 days	+650 days	+ 1095 days
<b>Response to Comments Meeting</b>	<b>+ 405 days</b>	<b>+665 days</b>	<b>+ 1110 days</b>
Agency Concurrence with Remedy	NA	NA	+ 1130 days
Public Comment Period	NA	+735 to 765 days	NA
<b>Public Meeting</b>	<b>NA</b>	<b>+745 days</b>	<b>NA</b>
Response to Comments Due	+430 days	+695days	+ 1190 days
Draft Final Due	+430 days	+695 days	+ 1190 days
Final Due	+460 days	+725 days	+ 1250 days

SECONDARY DOCUMENTS			
Life Cycle	ISCO/ERD Technical Memorandum Travis AFB, Glenn Anderson CH2M HILL, Loren Krook	Site SS015 Field Implementation Plan Travis AFB, Lonnie Duke CH2M HILL, Loren Krook	Sites SS014 and ST032 Tier 1 POCO Evaluation Report Travis AFB, Lonnie Duke CH2M HILL, Gavan Heinrich
<b>Scoping Meeting</b>	NA	NA	NA
Predraft to AF/Service Center	08-25-10	10-13-10	12-10-10
AF/Service Center Comments Due	09-08-10 (09-10-10)	10-27-10	01-14-11
Draft to Agencies	10-06-10	11-15-10	01-28-11
Draft to RAB	10-06-10	11-15-10	01-28-11
Agency Comments Due	11-05-10	12-15-10	02-27-11
<b>Response to Comments Meeting</b>	<b>01-26-11</b>	<b>01-19-11</b>	<b>03-23-11</b>
Response to Comments Due	<b>02-09-11</b>	02-16-11	03-30-11
Draft Final Due	NA	NA	NA
Final Due	<b>02-09-11</b>	02-16-11	03-30-11
Public Comment Period	NA	NA	NA
<b>Public Meeting</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

SECONDARY DOCUMENTS			
Life Cycle	Site ST018 POCO Field Implementation Report Travis AFB, Lonnie Duke CH2M HILL, Gavan Heinrich	Site SD036 RPO Field Implementation Plan Travis AFB, Lonnie Duke CH2M HILL, Doug Berwick	2010 GWTP RPO Annual Report Travis AFB, Lonnie Duke CH2M HILL, Doug Berwick
Scoping Meeting	NA	NA	NA
Predraft to AF/Service Center	01-21-11	11-30-10	02-25-11
AF/Service Center Comments Due	02-04-11	12-10-10	03-07-11
Draft to Agencies	02-18-11	01-07-11	04-04-11
Draft to RAB	02-18-11	01-07-11	04-04-11
Agency Comments Due	03-20-11	02-06-11	05-04-11
Response to Comments Meeting	03-23-11	02-16-11	05-26-11
Response to Comments Due	04-05-11	03-02-11	06-22-11
Draft Final Due	NA	NA	NA
Final Due	04-05-11	03-02-11	06-22-11
Public Comment Period	NA	NA	NA
Public Meeting	NA	NA	NA



INFORMATIONAL DOCUMENTS		
Life Cycle	Quarterly Newsletters (January 2010) Travis, Glenn Anderson	2009/2010 Annual GSAP Travis AFB, Lonnie Duke CH2M HILL, Leslie Royer
<b>Scoping Meeting</b>	NA	NA
Predraft to AF/Service Center	NA	10-29-10
AF/Service Center Comments Due	NA	11-12-10
Draft to Agencies	01-05-11	12-07-10
Draft to RAB	NA	12-07-10
Agency Comments Due	01-19-11	01-18-11
<b>Response to Comments Meeting</b>	<b>TBD</b>	<b>01-26-11</b>
Response to Comments Due	01-26-11	02-08-11
Draft Final Due	NA	NA
Final Due	01-31-11	02-08-11
Public Comment Period	NA	NA
<b>Public Meeting</b>	NA	NA

<b>HISTORICAL</b>	
<b>Life Cycle</b>	<b>Phytostabilization Study Report Travis AFB, Glenn Anderson Parsons, Bill Plaehn</b>
<b>Scoping Meeting</b>	<b>10-09-08</b>
Predraft to AF/Service Center	04-12-10
AF/Service Center Comments Due	06-07-10
Draft to Agencies	06-16-10
Draft to RAB	06-16-10
Agency Comments Due	07-19-10 (7-30-10)
<b>Response to Comments Meeting</b>	<b>09-22-10</b>
Response to Comments Due	09-30-10
Draft Final Due	NA
Final Due	09-30-10 (9-24-10)
Public Comment Period	NA
<b>Public Meeting</b>	<b>NA</b>

# South Base Boundary Groundwater Treatment Plant

## Monthly Data Sheet

Report Number: 123

Reporting Period: 1 Oct 2010 - 5 Nov 2010

Date Submitted: 18 November 2010

This data sheet includes the following: results for the operation of the South Base Boundary Groundwater Treatment Plant (SBBGWTP), a summary of flow rates for the individual extraction wells, a brief description of any shutdowns or significant events related to the system, and a summary of analytical results for selected samples collected.

### Operations Summary – October 2010

Operating Time: **856 hours**

Percent Uptime: **99.1%**

Electrical Power Usage: **13,020 kWh (17,837 lbs CO<sub>2</sub>)**

Gallons Treated: **5.1 million gallons**

Gallons Treated Since July 1998: **712million gallons**

Volume Discharged to Union Creek: **5.1 million gallons**

VOC Mass Removed: **1.52 pounds<sup>a</sup>**

VOC Mass Removed Since July 1998: **389 pounds**

Rolling 12-Month Cost per Pound of Mass Removed : \$4,301<sup>b</sup>

Monthly Cost per Pound of Mass Removed : \$5,082<sup>b</sup>

<sup>a</sup> Calculated using October 2010 EPA Method SW8260B analytical results.

<sup>b</sup> Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the system.

### Flow Rates

Average Groundwater Total Flow Rate: 99.0 gpm<sup>a</sup>

Average Flow Rate (gpm) <sup>b</sup>							
FT005 <sup>c</sup>				SS029		SS030	
EW01x05	Off line	EW736x05	Off line	EW01x29	0.43	EW01x30	10.1
EW02x05	1.93	EW737x05	Off line	EW02x29	4.90	EW02x30	Off -pump
EW03x05	Off line	EW742x05	Off line	EW03x29	Off line <sup>d</sup>	EW03x30	3.17
EW731x05	Off line	EW743x05	Off line	EW04x29	7.03	EW04x30	24.6
EW732x05	Off line	EW744x05	Off line	EW05x29	14.2	EW05x30	9.47
EW733x05	Off line	EW745x05	Off line	EW06x29	17.1	EW06x30	Dry
EW734x05	9.50	EW746x05	Off line	EW07x29	14.2	EW711x30	10.0 <sup>e</sup>
EW735x05	2.93						
FT005 Total:		14.4		SS029 Total: 57.9		SS030 Total: 57.3	

<sup>a</sup> The average groundwater flow rate was calculated using the Union Creek Discharge Totalizer and dividing it by the operating time of the plant.

<sup>b</sup> Extraction well flow rates are based on the average of the weekly readings.

<sup>c</sup> Extraction wells at FT005 were taken off line in accordance with the 2008 Annual Remedial Process Optimization Report for the Central Groundwater Treatment Plant, North Groundwater Treatment Plant, and South Base Boundary Groundwater Treatment Plant.

<sup>d</sup> Extraction well is off line due to low VOC concentrations.

<sup>e</sup> Extraction well online, but has a faulty flow meter. Flow rate is measured at the well head.

gpm—gallons per minute

## Shutdown/Restart Summary

Location	Shutdown		Restart		Cause
	Date	Time	Date	Time	
SBBGWTP	1 October 2010	11:45	1 October 2010	12:45	Replace valve with blind flange.
	5 October 2010	10:00	5 October 2010	12:00	Containment sump high level. Closed valves to recirculation pipe and restart system.
	8 October 2010	13:30	8 October 2010	15:30	Water leaking at air stripper. Replaced valves with blind flange and restart system.
	15 October 2010	13:45	18 October 2010	17:00	Check/Test plant kWh usage.
SBBGWTP = South Base Boundary Groundwater Treatment Plant					

## Summary of O&M Activities

Monthly groundwater samples at the SBBGWTP were collected on 6 October 2010. Sample results are presented in Table 1. The total VOC concentration (35.8 µg/L) in the influent sample has decreased since the September 2010 sample (43.0 µg/L) was collected. VOCs were not detected in the effluent sample indicating good treatment efficiency.

On 15 October 2010, EW735x05 was brought back online. The problem was diagnosed as a ground short located in an electrical pull box between the motor control center (MCC) and wellhead vault. The short was repaired (spliced the wire), and EW735x05 was restarted.

From 15 October to 18 October 2010, the SBBGWTP was taken off line to examine the amount of electrical energy being used when none of the FT005, SS029, or SS030 pumps were on line. During this time, only 2 kWh registered on the electrical power meter. CH2M HILL will continue to track the source of energy consumption at the SBBGWTP, and work to efficiently minimize electrical energy consumption.

## Optimization Activities

No optimization activities occurred during October 2010.

Table 1

Summary of Groundwater Analytical Data for October 2010 – South Base Boundary Groundwater Treatment Plant

Summary of Groundwater Analytical Data for October 2010 - South Base Boundary Groundwater Treatment Plant						
Constituent	Instantaneous Maximum <sup>a</sup> (µg/L)	Detection Limit (µg/L)	N/C	6 October 2010 (µg/L)		
				Influent	Midpoint	Effluent
Halogenated Volatile Organics						
Bromodichloromethane	5.0	0.15	0	ND	ND	ND
Carbon Tetrachloride	0.5	0.14	0	ND	ND	ND
Chloroform	5.0	0.16	0	ND	ND	ND
Dibromochloromethane	5.0	0.13	0	ND	ND	ND
1,1-Dichloroethane	5.0	0.19	0	ND	ND	ND
1,2-Dichloroethane	0.5	0.15	0	ND	ND	ND
1,1-Dichloroethene	5.0	0.19	0	ND	ND	ND
cis-1,2-Dichloroethene	5.0	0.19	0	2.1	ND	ND
trans-1,2-Dichloroethene	5.0	0.33	0	ND	ND	ND
Methylene Chloride	5.0	0.66	0	ND	ND	ND
Tetrachloroethene	5.0	0.21	0	ND	ND	ND
1,1,1-Trichloroethane	5.0	0.14	0	ND	ND	ND
1,1,2-Trichloroethane	5.0	0.20	0	ND	ND	ND
Trichloroethene	5.0	0.19	0	33.7	ND	ND
Vinyl Chloride	0.5	0.18	0	ND	0.20 J	ND
Non-Halogenated Volatile Organics						
Benzene	1.0	0.17	0	ND	ND	ND
Ethylbenzene	5.0	0.22	0	ND	ND	ND
Toluene	5.0	0.14	0	ND	ND	ND
Xylenes	5.0	0.23 – 0.5	0	ND	ND	ND
Other						
Total Petroleum Hydrocarbons – Gasoline	50	8.5	0	NM	NM	ND
Total Petroleum Hydrocarbons – Diesel	50	50	0	NM	NM	ND
Total Suspended Solids (mg/L)	NE	1.0	0	10 J	NM	NM
<sup>a</sup> In accordance with Appendix B of the <i>Travis AFB South Base Boundary Groundwater Treatment Plant Operations and Maintenance Manual</i> (CH2M HILL, 2004).						
J	=	analyte concentration is considered an estimated value				
mg/L	=	milligrams per liter				
N/C	=	number of samples out of compliance with discharge limits				
ND	=	not detected				
NE	=	not established				
NM	=	not measured				
µg/L	=	micrograms per liter				

# Central Groundwater Treatment Plant Monthly Data Sheet

Report Number: 135

Reporting Period: 1 Oct 2010 - 5 Nov 2010

Date Submitted: 18 November 2010

This data sheet includes the following: results for the operation of the Central Groundwater Treatment Plant (CGWTP) and West Treatment and Transfer Plant (WTTP). A summary of flow rates for the CGWTP, WTTP, and extraction wells EW01x16, EW02x16, EW03x16, EW605x16, and EW610x16, a brief description of any shutdowns or significant events related to the systems, and a summary of analytical results for selected samples collected are also included on this data sheet.

## Operations Summary – October 2010

Operating Time:

**CGWTP:** 805 hours

**WTTP:** Water: 0 hours

Vapor: 0 hours

Percent Uptime:

**CGWTP:** 93.19%

**WTTP:** Water: 0%

Vapor: 0%

Electrical Power Usage:

**CGWTP:** 71 kWh (97 lbs CO<sub>2</sub>)

**WTTP:** 0 kWh

Gallons Treated: **1.96 million gallons**

Gallons Treated Since January 1996: **434.9 million gallons**

VOC Mass Removed:

VOC Mass Removed Since January 1996:

**5.49 lbs<sup>a</sup> (groundwater only)**

**2,512 lbs from groundwater**

**0 lbs (vapor only)**

**8,686 lbs from vapor**

Rolling 12-Month Cost per Pound of Mass Removed: \$1,099<sup>b</sup>

Monthly Cost per Pound of Mass Removed: \$1,982<sup>b</sup>

<sup>a</sup> Calculated using October 2010 EPA Method SW8260B analytical results.

<sup>b</sup> Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the CGWTP and WTTP.

## Flow Rates

Average Groundwater Flow Rate: **40.6 gpm<sup>a</sup>**

Location	Average Flow Rate	
	Groundwater (gpm)	Soil Vapor (scfm) <sup>b</sup>
EW01x16	22.5	Off line
EW02x16	7.30	Off line
EW03x16	5.80	Off line
EW605x16	12.7	Off line
EW610x16	4.30	Off line
WTTP	Off line	Off line

<sup>a</sup> Measured by the effluent discharge to the storm drain divided by the operating time during the month

<sup>b</sup> No vapor was treated in October 2010

gpm = gallons per minute

NA = not applicable/not available

scfm = standard cubic feet per minute

Average Flow Rate from the WIOU Extraction Wells <sup>a</sup> (gpm)							
SD037/ SD043				SD033/SD034		SD036	
EW599x37	Off line	EW705x37	Off line	EW501x33	Off line	EW593x36	Off line
EW700x37	Off line	EW706x37	Off line	EW503x33	Off line	EW594x36	Off line
EW701x37	Off line	EW707x37	Off line	EW01x34	Off line	EW595x36	Off line
EW702x37	Off line	EW510x37	Off line	EW03x34	Off line		
EW703x37	Off line	EW511x37	Off line				
EW704x37	Off line	EW555x43	Off line				
<sup>a</sup> Extraction wells are offline due to the ongoing rebound study in the WIOU. gpm—gallons per minute NA – not available / not recorded							

## Shutdown/Restart Summary

Location	Shutdown		Restart		Cause
	Date	Time	Date	Time	
CGWTP (Groundwater)					
CGWTP	2 October 2010	12:30	4 October 2010	16:45	Electrical power outage
WTTP (Vapor)					
WTTP	24 August 2009				SVE system shutdown for rebound study
CGWTP = Central Groundwater Treatment Plant					
WTTP = West Transfer Treatment Plant					

### **Summary of O&M Activities**

Monthly groundwater samples at the CGWTP were collected on 6 October 2010. Sample results are presented in Table 1. The total VOC concentration (336 µg/L) in the influent sample has decreased since the September 2010 sample (389 µg/L) was collected.

No VOCs were detected in the effluent sample indicating good treatment efficiency. In the following months, Travis AFB will continue to monitor the effluent sample to ensure treated water remains in compliance with discharge requirements.

The WIOU vapor extraction system rebound study is ongoing.

### **Optimization Activities**

Horizontal well EW03x16 was returned to service on 25 October 2010. The well's extraction system was reconfigured to pump water to the Site SS016 bioreactor for treatment. Well EW03x16 was reconfigured to use a solar pump with solar panels, thus operating entirely "off the grid." Well EW03x16 parameters will continue to be collected, with results being discussed in future monthly data sheets.

The WTPP remained off line since being shut down in April 2010 for the ongoing rebound study.

No additional optimization activities occurred at the CGWTP in October 2010.



Table 1  
Summary of Groundwater Analytical Data for October 2010 – Central Groundwater Treatment Plant

Summary of Groundwater Analytical Data for October 2010 - Central Groundwater Treatment Plant							
			6 October 2010 (µg/L)				
Constituent	Instantaneous Maximum <sup>a</sup> (µg/L)	Detection Limit (µg/L)					
			N/C	Influent	After Carbon 1 Effluent	After Carbon 2 Effluent	System Effluent
Halogenated Volatile Organics							
Bromodichloromethane	5.0	0.15	0	ND	ND	ND	ND
Carbon Tetrachloride	0.5	0.14	0	ND	ND	ND	ND
Chloroform	5.0	0.16	0	ND	ND	ND	ND
MTBE	1.0	0.5	0	3.6	ND	ND	ND
1,2-Dichlorobenzene	5.0	0.08	0	ND	ND	ND	ND
1,3-Dichlorobenzene	5.0	0.15	0	0.55	ND	ND	ND
1,4-Dichlorobenzene	5.0	0.15	0	ND	ND	ND	ND
1,1-Dichloroethane	5.0	0.15	0	ND	ND	ND	ND
1,2-Dichloroethane	0.5	0.15	0	ND	ND	ND	ND
1,1-Dichloroethene	5.0	0.19	0	0.79	ND	ND	ND
cis-1,2-Dichloroethene	5.0	0.19	0	73.4	ND	ND	ND
trans-1,2-Dichloroethene	5.0	0.33	0	2.8	ND	ND	ND
Methylene Chloride	5.0	0.66	0	ND	ND	ND	ND
Tetrachloroethene	5.0	0.21	0	0.76	ND	ND	ND
1,1,1-Trichloroethane	5.0	0.14	0	ND	ND	ND	ND
1,1,2-Trichloroethane	5.0	0.2	0	ND	ND	ND	ND
Trichloroethene	5.0	1.9	0	253	ND	ND	ND
Vinyl Chloride	0.5	0.18	0	0.72	ND	ND	ND
Non-Halogenated Volatile Organics							
Benzene	1.0	0.17	0	ND	ND	ND	ND
Ethylbenzene	5.0	0.22	0	ND	ND	ND	ND
Toluene	5.0	0.14	0	ND	ND	ND	ND
Total Xylenes	5.0	0.5 – 0.23	0	ND	ND	ND	ND

<sup>a</sup> In accordance with Appendix G of the *Travis AFB Central Groundwater Treatment Plant Operations and Maintenance Manual* (URS Group, Inc., 2002).

J = analyte concentration is considered an estimated value  
N/C = number of samples out of compliance with discharge limits  
ND = not detected  
µg/L = micrograms per liter

# North Groundwater Treatment Plant Monthly Data Sheet

Report Number: 110

Reporting Period: 1 Oct 2010 - 5 Nov 2010

Date Submitted: 18 November 2010

This data sheet includes the following: data collected during operation of the groundwater extraction system, a summary of flow rates for the individual extraction wells, a brief description of any shutdowns or significant events related to the systems, and a summary of analytical results for samples collected during the reporting period.

## Operations Summary – October 2010

Operating Time: **Water:** 864 hours

Percent Uptime: **Water:** 100%

Electrical Power Usage: **282 kWh (386 lbs CO<sub>2</sub>)**

Gallons Treated: **7,400**

Gallons Treated Since March 2000: **82.5 million gallons**

Volume Discharged to Duck Pond: **7,400**

Volume Discharged to Storm Drain: **0**

Percentage of Treated Water to Beneficial Use: **100%**

VOC Mass Removed:

VOC Mass Removed Since March 2000:

**<0.01 lb<sup>a</sup>**

**174.3 lbs from groundwater**

Rolling 12-Month Cost per Pound of Mass Removed: **NM**

Monthly Cost per Pound of Mass Removed: **NM**

<sup>a</sup> Low influent VOC concentrations resulted in no significant VOC mass removed

## Flow Rates

Average Groundwater Total Flow Rate: **0.14 gpm**

Location	Average Flow Rate (gpm)
EW614x07	NM <sup>a</sup>
EW615x07	NM <sup>a</sup>

<sup>a</sup> Individual flow rates were not recorded in October 2010  
gpm = gallons per minute

## Shutdown/Restart Summary

Location	Shutdown		Restart		Cause
	Date	Time	Date	Time	
NGWTP (water)					No system shutdowns during October 2010

NGWTP = North Groundwater Treatment Plant

## **Summary of O&M Activities**

Monthly groundwater sampling at the NGWTP was performed on 6 October 2010. The total VOC concentration (5.8 µg/L) was a slight decrease from the September 2010 concentration (6.9 µg/L). The only VOCs detected in the influent samples were Trichloroethene (5.3 µg/L) and cis-1-2,dichloroethene (0.50 J µg/L). No VOCs were detected in the effluent sample.

## **Optimization Activities**

No additional optimization activities were performed at the NGWTP in October 2010.

Table 1

Summary of Groundwater Analytical Data for October 2010 – North Groundwater Treatment Plant

Summary of Groundwater Analytical Data for October 2010 - North Groundwater Treatment Plant					
Constituent	Instantaneous Maximum <sup>a</sup> (µg/L)	Detection Limit (µg/L)	N/C	6 October 2010 (µg/L)	
				Influent	Effluent
<b>Halogenated Volatile Organics</b>					
Bromodichloromethane	5.0	0.18	0	ND	ND
Bromoform	5.0	0.10	0	ND	ND
Carbon Tetrachloride	0.5	0.22	0	ND	ND
Chloroform	5.0	0.17	0	ND	ND
Dibromochloromethane	5.0	0.10	0	ND	ND
1,3-Dichlorobenzene	5.0	0.13	0	ND	ND
1,4-Dichlorobenzene	5.0	0.10	0	ND	ND
1,1-Dichloroethane	5.0	0.19	0	ND	ND
1,2-Dichloroethane	0.5	0.22	0	ND	ND
1,1-Dichloroethene	5.0	0.24	0	ND	ND
cis-1,2-Dichloroethene	5.0	0.16	0	0.50 J	ND
trans-1,2-Dichloroethene	5.0	0.21	0	ND	ND
Methylene Chloride	5.0	0.27	0	ND	ND
Tetrachloroethene	5.0	0.16	0	ND	ND
1,1,1-Trichloroethane	5.0	0.20	0	ND	ND
1,1,2-Trichloroethane	5.0	0.14	0	ND	ND
Trichloroethene	5.0	0.50	0	5.3	ND
Vinyl Chloride	0.5	0.19	0	ND	ND
<b>Non-Halogenated Volatile Organics</b>					
Benzene	1.0	0.12	0	ND	ND
Ethylbenzene	5.0	0.10	0	ND	ND
Toluene	5.0	0.14	0	ND	ND
Xylenes	5.0	0.10 – 0.21	0	ND	ND
<b>Other</b>					
Total Petroleum Hydrocarbons – Gasoline	50	50	0	NM	ND
Total Petroleum Hydrocarbons – Diesel	50	100	0	NM	ND

<sup>a</sup> In accordance with Appendix G of the *Travis AFB North Groundwater Treatment Plant Operations and Maintenance Manual*, Sites FT004, SD031, and LF007 Area C (URS Group, Inc., 2005).

J = analyte concentration is considered an estimated value  
N/C = number of samples out of compliance with discharge limits  
ND = not detected  
NM = not measured  
µg/L = micrograms per liter

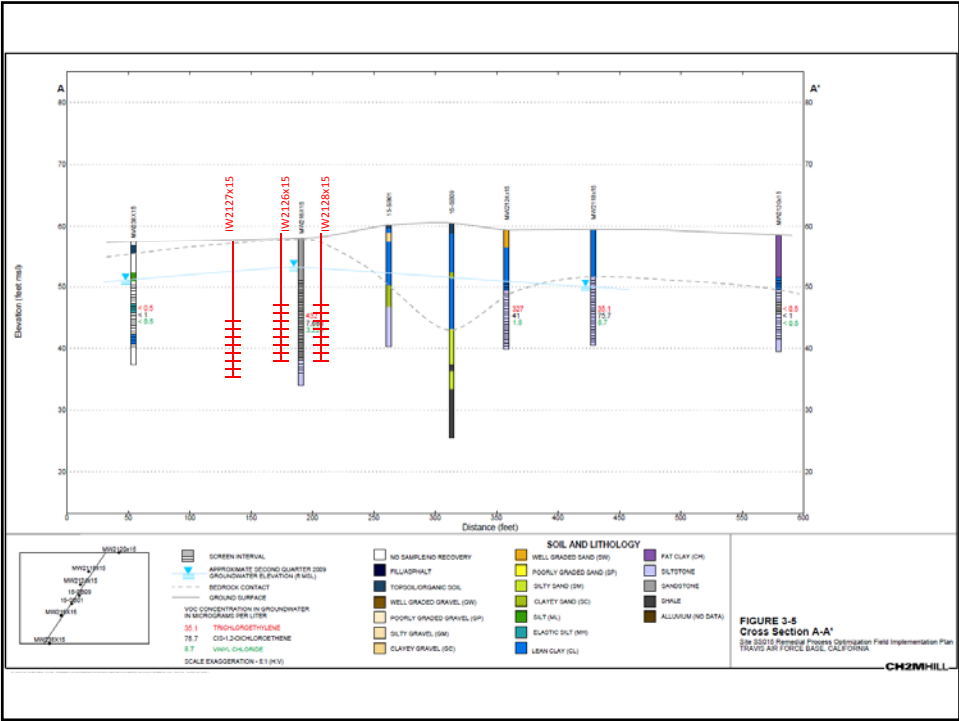
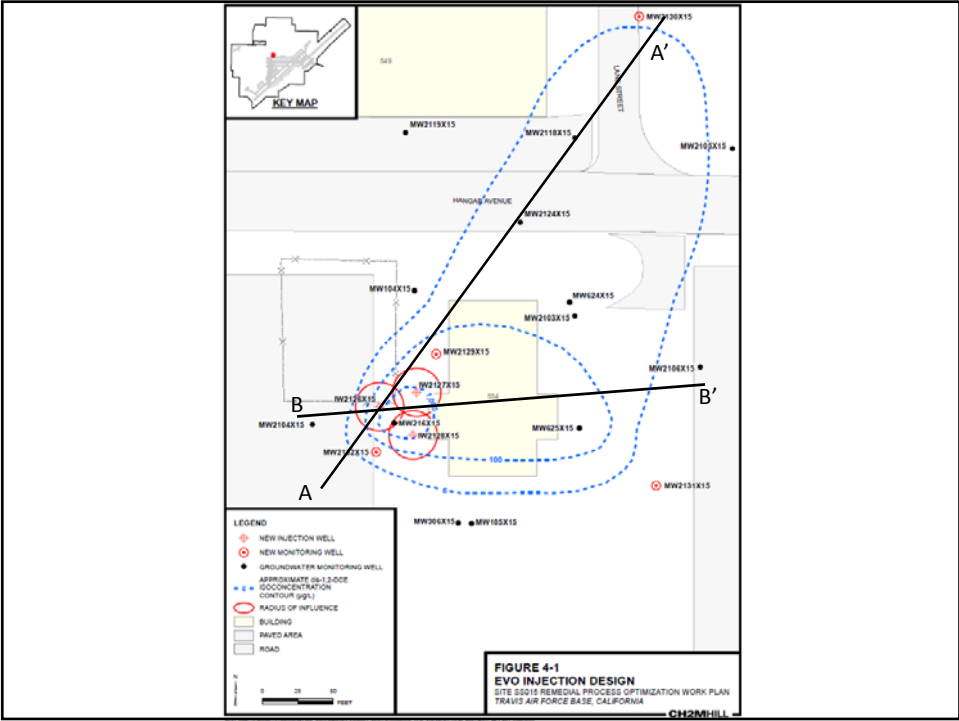
## Field Implementation Plans

Site SS015

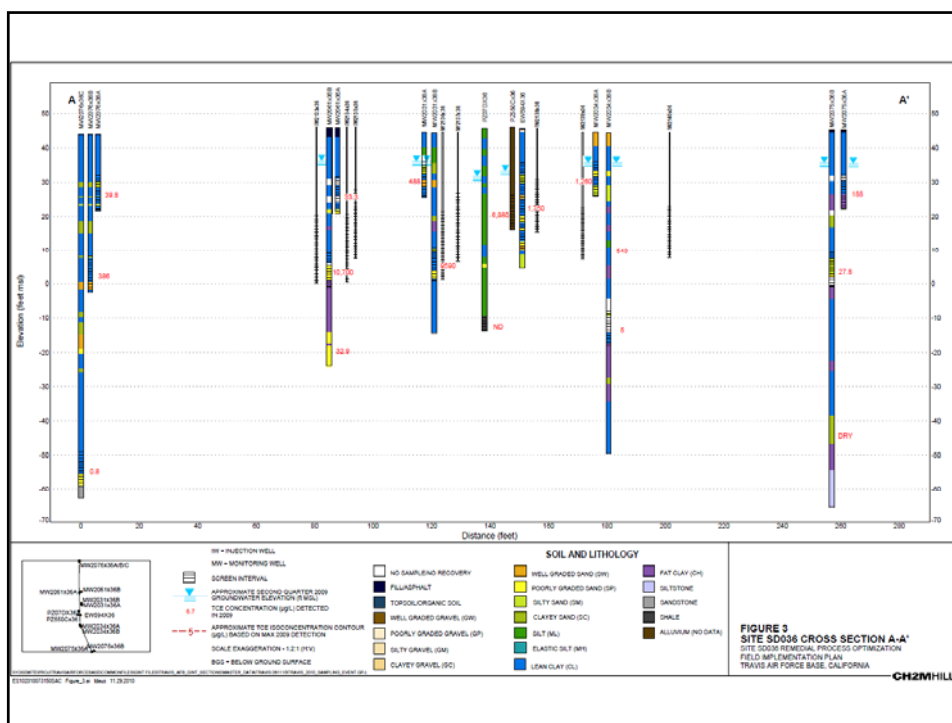
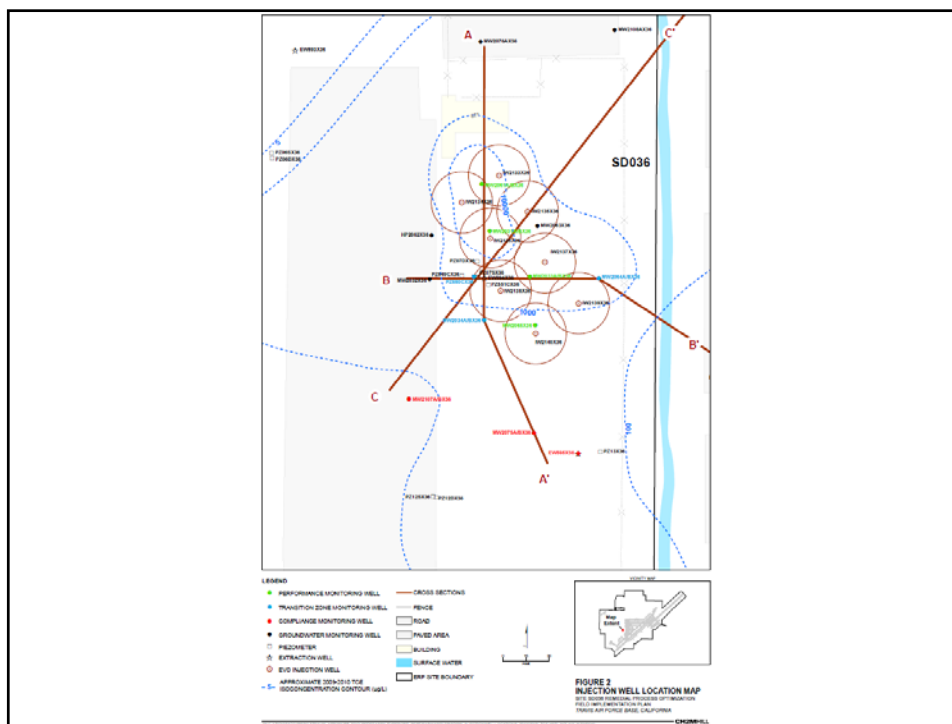
Site SD036

### Site SS015

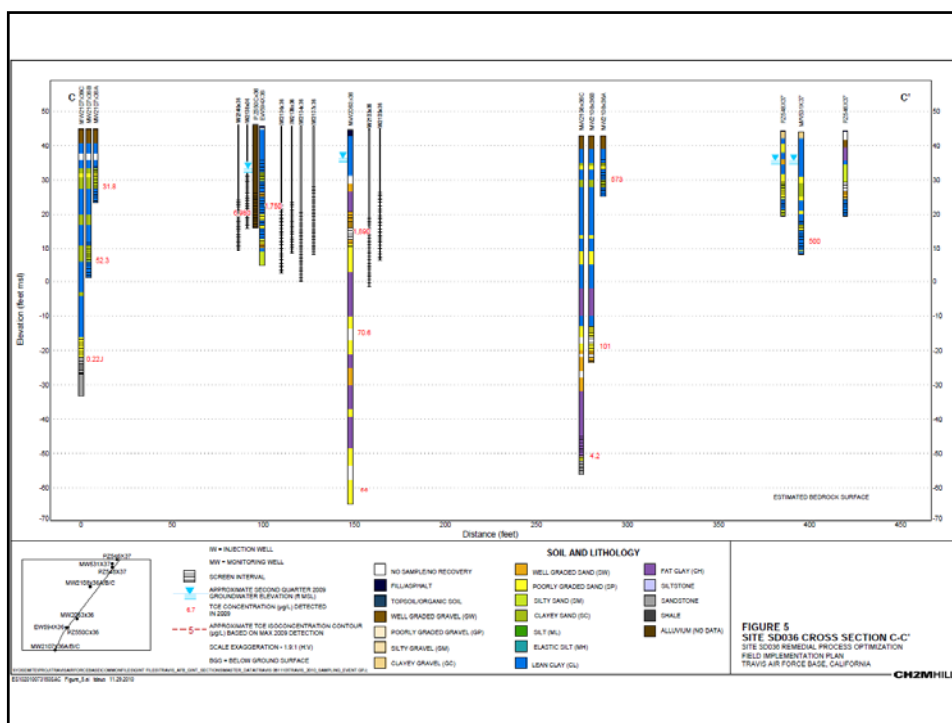
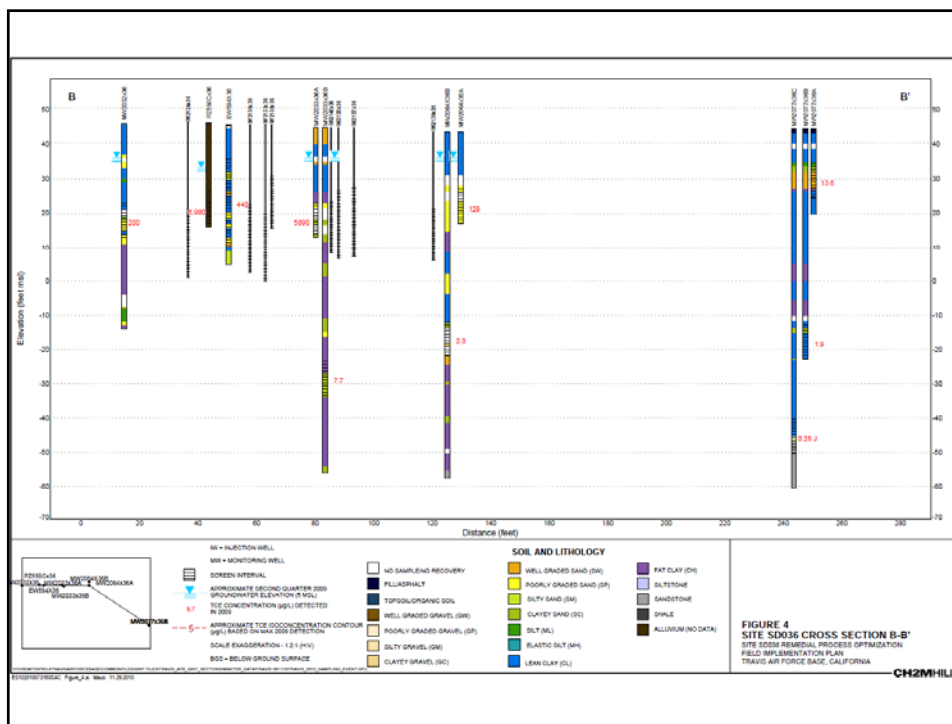
- Installation of injection and monitoring wells complete
- EVO delivered to Site SS015 and stored on Site
- EVO/water mixture injected = 6,260 gallons, or 2,087 gallons per well (3 injection wells)
- Chase water injected = 11,894 gallons or 3,965 gallons per well (3 injection wells)



- Installation of injection wells complete
- EVO delivered to Site SD036 and stored on Site
- EVO/water mixture injected = 7,860 gallons, or 1,965 gallons per well (4 injection wells, higher concentration area)
- Chase water injected = 18,324 gallons or 4,581 gallons per well (4 injection wells, higher concentration area)
- EVO/water mixture injected = 15,720 gallons, or 3,930 gallons per well (4 injection wells, lower concentration area)
- Chase water injected = 36,940 gallons or 9,235 gallons per well (4 injection wells, lower concentration area)







# Travis AFB Groundwater Program

## Management Overview Briefing

RPM Meeting  
December 01, 2010

## Completed Documents

### Documents

- Basewide Health & Safety Plan (HSP)
- Action Plan
- 2007/2008 GSAP Annual Report
- LF007C RPO Work Plan
- LF008 Rebound Study Work Plan
- SS014 Tier 1 POCO Evaluation WP
- ST027B Site Characterization WP
- SS030 RPO Work Plan
- ST032 POCO Technical Memo
- DP039 Bioreactor Work Plan
- 2008 Annual GWTP RPO Report
- Passive Diffusion Bag (PDB) Technical Memo
- RD/RA QAPP Update
- ST032 Tier 1 POCO Evaluation WP
- Phytostabilization Demonstration Tech Memo
- Model QAPP
- LF008 Rebound Test Tech Memo

### Documents

- Comprehensive Site Evaluation Phase II Work Plan
- Field Sampling Plan (FSP)
- SS016 RPO Work Plan
- ST018 POCO RA Work Plan
- Vapor Intrusion Assessment Report
- GSAP 2008/2009 Annual Report
- FT005 Data Gap Work Plan
- First and Second Site DP039 Sustainable Bioreactor Demonstration Progress Reports
- DP039 RPO Work Plan
- SD036/SD037 RPO Work Plan
- ST027B Site Characterization Report
- 2009 GWTP RPO Annual Report
- Natural Attenuation Assessment Report (NAAR)
- Union Creek Sites SD001 & SD033 Remedial Action Report
- CAMU 2008-2009 Monitoring Annual Report
- Phytostabilization Study Report

## Completed Field Work

- ST027B Gore Sorber Survey – Ph 1
- ST027B Field Sampling – Phase 2
- GSAP 2008 Semi-annual Event
- ST027B Installation of Wells – Phase 3
- SS014 Site Characterization
- LF008 Rebound Study
- GSAP Annual Sampling Event - 2009
- SS030 Site Characterization – Ph 1
- ST027 Site Characterization -Ph 3
- ST014 Monitor Well Install - Subsite 3
- SD001/SD033 Sediment RA
- SS016 Site Characterization (OSA source area)
- ST018 Site Characterization
- SS030 Site Characterization (Off-base VOC Plume)
- DP039 Site Characterization (for Biobarrier Placement)
- SS014 & ST032 Q1 2010 MNA Sampling (2<sup>nd</sup> of 4 quarterly events)
- SD036 Additional Site Characterization (north & east)
- Therm/Ox System Removal
- SS016 Monitoring Well Installation
- SD037 EVO Injection Well Installation
- DP039 Monitoring Well & Injection Well Installation
- DP039 EVO Injection
- SD037 Monitoring Well Installation
- GSAP 2010 Annual Sampling Event
- SD037 EVO Injection
- SS015 Site Characterization
- South Plant GAC Change-out
- FT005 Data Gap Investigation
- SS016 Position Survey of EW03
- SS016 Bioreactor Installation
- **SS016 Bioreactor Baseline Sampling**
- **DP039 Biobarrier Quarterly Performance Sampling**
- **DP039 Bioreactor Quarterly Performance Sampling**
- **SD037 EVO Quarterly Performance Sampling**
- **SS015 EVO Baseline Sampling**
- **SD036 EVO Baseline Sampling**
- **SS016 Bioreactor Startup**
- **SD036 Injection Well Installation**
- **SS015 Injection Well Installation**

3

## In-Progress Documents & Field Work

### Documents

- Comprehensive Site Evaluation Phase II Report
- ISCO/ERD Tech Memo
- **2010 Annual GSAP Report**
- **SS015 Remedy Optimization Field Implementation Plan**

### Field Work

- **ST018 GETS Installation**
- **SD036 EVO Injection**
- **Semiannual GSAP**

4

## Upcoming Documents

- |   |            |
|---|------------|
| • Focused Feasibility Study (FFS)                     | Jan        |
| • Sites SS014 and ST032 Tier 1 POCO Evaluation Report | Jan        |
| • Site ST018 POCO Field Implementation Report         | Feb        |
| • <b>2010 GWTP RPO Annual Report</b>                  | <b>Apr</b> |
| • FT005 Data Gap Investigation Report                 | TBD        |

5

## Upcoming Field Work

- |   |     |
|---|-----|
| • ST018 GETS Startup                                      | Dec |
| • SS015 EVO Injection                                     | Dec |
| • SS016 Bioreactor Initial Quarterly Performance Sampling | Jan |
| • LF007C Site Characterization (Wetlands)                 | TBD |

6

# Travis Field Schedule

December 2010

01 December 2010

## December 2010 Field Schedule – Travis PBC

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
			GSAP Semiannual Sampling, Including Rebound Sampling (sites FT004, SD031, LF008, FT005, & WIOU)			
			SD036 EVO Injection			
			ST018 GETS Construction			
5	6	7	8	9	10	11
	SD036 EVO Injection					
12	13	14	15	16	17	18
	SD036 EVO Injection					
19	20	21	22	23	24	25
	SD036 EVO Injection					
	ST018 Startup					
26	27	28	29	30		
	SS015 EVO Injection					