

**Travis Air Force Base
Environmental Management
Building 570, Travis AFB, California
Environmental Restoration Program
Remedial Program Managers
Meeting Minutes**

12 September 2007, 0930 Hours, Teleconference

Mr. Mark Smith, Travis Air Force Base (AFB), conducted the Remedial Program Managers (RPM) meeting on 12 September 2007 at 0930 via teleconference. Attendees included:

- Mark Smith Travis AFB
- Lonnie Duke Travis AFB
- Wilford Day Travis AFB
- Greg Parrott Travis AFB
- Glenn Kistner U.S. Environmental Protection Agency (USEPA)
- Jose Salcedo Department of Toxic Substances Control (DTSC)
- Tom Barry Shaw Engineering and Infrastructure (Shaw E&I)
- Bob Hulet Shaw Engineering and Infrastructure (Shaw E&I)
- Alan Friedman California Regional Water Quality Control Board (CRWQCB)
- John Kaiser California Regional Water Quality Control Board (CRWQCB)
- Allen Mason EQM
- Mike Wray CH2M Hill

Handouts distributed throughout the meeting included:

- Attachment 1 Meeting Agenda
- Attachment 2 Master Meeting, Teleconference, and Document Schedules
- Attachment 3 SBBGWTP Monthly Data Sheet (August 2007)
- Attachment 4 CGWTP Monthly Data Sheet (August 2007)
- Attachment 5 NGWTP Monthly Data Sheet (August 2007)

1. ADMINISTRATIVE

A. Previous Meeting Minutes

The August 2007 RPM meeting minutes were approved and finalized.

B. Action Item Review

Mr. Smith is working with EPA to provide them with emission information on the heavy equipment being used on base.

C. Master Meeting and Document Schedule

The Travis AFB Master Meeting, Teleconference, and Document Schedules were not changed during this meeting (see Attachment 2).

Travis AFB Annual Meeting and Teleconference Schedule

— Page 1, Mr. Smith stated that Mr. Settle of the Air Mobility Command (AMC) will be issuing an invitation to the agencies about the Senior Partnering Meeting.

2. OPERABLE UNIT UPDATE

A. Travis AFB Soil Cleanup Status Report

Mr. Duke presented the update in Mr. Anderson's absence. SD045 (former small arms range) excavation and backfill is complete. All excavated soil has been placed in the CAMU; the only task left at SD045 is hydroseeding. The type of seeds (native grasses) are presented in the work plan. Fencing is down also. It will be a nice cattle grazing management unit when done.

FT003 excavation is complete and awaiting confirmation results. All excavated material has been placed in the CAMU.

The burrowing owls have been relocated by a wildlife biologist at FT004, and excavation has resumed. Excavated materials are currently being transported to the CAMU.

The large AST at FT005 has been removed and recycled. Clearing and grubbing has begun to prepare the area for excavation.

Mr. Salcedo asked about the schedule for SD001 and SD033. Mr. Duke answered that the schedule is still under review; concentration has been on the larger sites, as these are smaller sites. They should go quickly once they are set up. The treatment plants will be shut down once these sites are started.

B. Soil Remedial Action Report

One report to be done at the end of all the remedial actions, as discussed at the previous meeting.

3. CURRENT PROJECTS

A. Treatment Plant Operation and Maintenance Update

Mr. Duke reported that he visited all the sites on Monday (10 Sept 2007). All were operating well, and all routine maintenance was occurring. The Remedial Process Optimization (RPO) Technical Memo is under senior review. Based on the outcome of this review, some extraction wells are expected to be shut down. Others are anticipated to be shut down possibly for a rebound study. FT004 and site SD031 have met original design goals. The ThermOx rebound study is awaiting results on the sampling.

1. South Base Boundary Groundwater Treatment Plant

The South Base Boundary Groundwater Treatment Plant (SBBGWTP) performed at 98.9% uptime, and 3.54 million gallons of groundwater were extracted and treated during the month of August 2007. The average flow rate for the SBBGWTP was 80.2 gallons per minute (gpm). Approximately 2.2 pounds of volatile organic compounds (VOCs) was removed during August 2007. The total mass of VOCs removed since the startup of the system is 315 pounds (see Attachment 3).

There was an electrical power outage on August 25. The flow transmitter was replaced in EW734x05 on August 7; additionally, a spring-loaded check valve was installed at the pump discharge on August 13.

A total of 118,000 gallons of treated water was collected from the South Base Boundary Plant to be used for dust suppression at the soil remedial action sites.

A RPO Work Plan is currently being developed that will present shut down and optimization recommendations for several groundwater extraction wells at Site FT005.

2. Central Groundwater Treatment Plant

The Central Groundwater Treatment Plant (CGWTP) performed at 80.1% uptime with approximately 2.96 million gallons of groundwater extracted and treated during the month of August 2007. The average flow rate for the CGWTP was 82.7 gpm. Approximately 10.8 pounds of VOCs were removed during August 2007, which was from groundwater and vapor. The total mass of VOCs removed since the startup of the system is 10,534 pounds. (see Attachment 4).

The plant was down infrequently during the month of August 2007 for routine maintenance activities. The CGWTP system was down on two occasions (11 and 25 August) due to a power outage.

The WIOU soil vapor extraction (SVE) system was turned on 10 July 2007; eight WIOU wells were turned on and the SVE system restarted. The WTTP SVE

system continued to treat soil vapor from DP039 wells EW563x39 and EW782x39 during August 2007.

The thermal oxidation (Th/Ox) system is turned off for a 3-month rebound study. The system will be re-started and sampled for rebound in September 2007.

A total of 30,000 gallons of treated water was collected from the Central Plant to be used for dust suppression at the soil remedial action sites.

3. North Groundwater Treatment Plant

The North Groundwater Treatment Plant (NGWTP) performed at 98.9% uptime with approximately 480,000 gallons of groundwater extracted and treated during the month of August 2007. The average flow for the NGWTP was 10.8 gpm. Less than a pound of VOCs was removed during August 2007, which was from groundwater and vapor. The total mass of VOCs removed since the startup of the system is 5,413 pounds (see Attachment 5).

There was an electrical power outage on August 25. A broken pipe on treated discharge occurred on August 3.

A total of 88,000 gallons of the treated groundwater from the plant was used for dust suppression at Travis AFB soil removal sites.

B. Petroleum Only Contamination (POCO) Status

Mr. Duke gave an update on the Petroleum Only Contamination (POCO) status.

The Monitored Natural Attenuation (MNA) project is awaiting laboratory results from last round of sampling. Next quarter sampling is scheduled for the end of October/beginning of November. The wells at the C17 maintenance training facility are being inspected frequently, making sure the contractor is aware of the wells in construction area. Construction project will be wrapping up in the next month. This project will now be collecting data and will not have much to report until after one year of data has been collected.

4. Program/Issues/Update

A. General Discussion

Mr. Smith restated that Mr. Settle will be sending out an official invitation for the Senior Partnering Meeting on October 17th. Mr. Smith also has sent an email describing what the meeting is about; he asked the regulatory agencies to have representatives attend.

Mr. Kaiser complimented the group on the information presented on the public Travis website. Very informative and well presented.

Mr. Kistner asked to be removed from all distribution lists, and to make sure to add James Chang.

5. Action Items

ITEM	RESPONSIBLE	ACTION ITEM	DUE DATE	STATUS
1.	Air Force	To provide emissions data from Heavy Equipment used in the Soil RA work, to EPA.	9/28/07	Closed.
2.				
3.				
4.				

TRAVIS AIR FORCE BASE
ENVIRONMENTAL RESTORATION PROGRAM
REMEDIAL PROGRAM MANAGER'S
PARTNERING MEETING
12 September 2007, 9:30 A.M.
AGENDA

This meeting will be held as a teleconference. Call in number is (707) 424-8811

1. ADMINISTRATIVE
 - A. PREVIOUS MEETING MINUTES (ALL)
 - B. ACTION ITEM REVIEW (ALL)
 - C. MEETING DATES AND MASTER DOCUMENT SCHEDULE REVIEW (ALL)

2. OPERABLE UNIT UPDATE
 - A. TRAVIS AFB SOIL CLEANUP STATUS REPORT (GLENN A)
 - B. SOIL REMEDIAL ACTION REPORT (GLENN A)

3. CURRENT PROJECTS
 - A. TREATMENT PLANT OPERATION AND MAINTENANCE UPDATE (LONNIE)
 - B. PETROLEUM ONLY CONTAMINATION (POCO) STATUS (LONNIE)

4. PROGRAM/ISSUES/UPDATE

5. NEW ACTION ITEM REVIEW

2007

Travis AFB Annual Meeting and Teleconference Schedule

Suppliers Teleconference (8:30 a.m. - 10:00 a.m.)	Monthly RPM Meeting (Begins at 9:30 a.m.)	Monthly RPM Teleconference (Begins at 9:30 a.m.)	Restoration Advisory Board Meeting (Begins at 6:30 p.m.)
1-23-07	1-24-07 ¹	1-10-07	—
2-6-07	2-7-07	2-21-07	—
3-13-07	3-14-07	3-28-07	—
4-10-07 (Cancelled)	4-4-07	4-25-07 (Mark out)	4-19-07
5-8-07	5-9-07	5-23-07	—
6-12-07	6-13-07	6-27-07 (EPA out)	—
7-10-07	7-11-07 (Jose out)	7-25-07 (Alan out)	Base Tour
8-14-07	8-15-07	8-29-07	—
9-11-07	9-12-07 (telecon)	9-26-07	—
10-16-07	10-17-07 ²	—	10-25-07
—	—	11-7-07	—
12-11-07	12-12-07	—	—

¹ – RPM meeting on the 24th of Jan will be followed by a Groundwater ROD scoping meeting from 1pm to 4pm with the regulatory agencies.

² – Senior Partnering Meeting

**Travis AFB Master Document Schedule
(Continued)**

	PRIMARY DOCUMENTS	
	Basewide Travis, Glenn Anderson	Potrero Hills Annex Travis, Glenn Anderson
Life Cycle	Groundwater ROD	Potrero Hills ROD
Scoping Meeting	1-24-07	180 days after Water Board Order Rescinded
Predraft to AF/Service Center	2-01-09	+ 360 days
AF/Service Center Comments Due	4-01-09	+ 420 days
Draft to Agencies	6-15-09	+ 480 days
Draft to RAB	6-15-09	+ 480 days
Agency Comments Due	8-15-09	+ 540 days
Response to Comments Meeting	9-01-09	+ 555 days
Agency Concurrence with Remedy	9-15-09	+ 570 days
Draft Proposed Plan to Agencies	12-01-09	+ 600 days
Issue Proposed Plan	1-15-10	+ 615 days
Public Comment Period	1-15-10 to 2-15-10	+ 615 to 645 days
Public Meeting	1-28-10	+ 625 days
Response to Comments Due	3-01-10	+ 640 days
Draft Final Due	3-01-10	+ 640 days
Final Due	5-01-10	+ 700 days

**Travis AFB Master Document Schedule
(Continued)**

SECONDARY DOCUMENTS	
Life Cycle	2007 GSAP Annual Report Travis, Lonnie Duke; CH2M Hill, Mike Wray
Scoping Meeting	NA
Predraft to AF/Service Center	10-19-07
AF/Service Center Comments Due	11-02-07
Draft to Agencies	11-16-07
Draft to RAB	11-16-07
Agency Comments Due	01-18-08
Response to Comments Meeting	02-20-08
Response to Comments Due	03-05-08
Draft Final Due	03-05-08
Final Due	03-05-08
Public Comment Period	NA
Public Meeting	NA

**Travis AFB Master Document Schedule
(Continued)**

INFORMATIONAL DOCUMENTS	
Life Cycle	Quarterly Newsletters (Oct 2007) Travis, Mark Smith
Scoping Meeting	NA
Predraft to AF/Service Center	NA
AF/Service Center Comments Due	NA
Draft to Agencies	9-27-07
Draft to RAB	NA
Agency Comments Due	10-11-07
Response to Comments Meeting	TBD
Response to Comments Due	10-17-07
Draft Final Due	TBD
Final Due	10-18-07
Public Meeting	NA

**Travis AFB Master Document Schedule
(Continued)**

INFORMATIONAL DOCUMENTS				
Life Cycle	Groundwater Treatment Plant O&M Reports Travis, Lonnie Duke; CH2M Hill, Mike Wray			
	Groundwater Treatment Plants Annual Reports Fiscal Year 2007	Groundwater Treatment Plants First Quarter Report Fiscal Year 2007	Groundwater Treatment Plants Second Quarter Report Fiscal Year 2007	Groundwater Treatment Plants Third Quarter Report Fiscal Year 2007
Scoping Meeting	NA	NA	NA	NA
Predraft to AF/Service Center	1-21-08	4-13-07	7-13-07	10-12-07
AF/Service Center Comments Due	1-25-08	4-20-07	7-20-07	10-19-07
Draft to Agencies	NA	NA	NA	NA
Draft to RAB	NA	NA	NA	NA
Agency Comments Due	NA	NA	NA	NA
Response to Comments Meeting	NA	NA	NA	NA
Response to Comments Due	NA	NA	NA	NA
Draft Final Due	NA	NA	NA	NA
Final Due	1-31-08	4-27-07	7-27-07	10-26-07
Public Comment Period	NA	NA	NA	NA
Public Meeting	NA	NA	NA	NA

**Travis AFB Master Document Schedule
(Continued)**

	HISTORICAL DOCUMENTS					
	Remedial Design Travis, Glenn Anderson; URS, Adam Harvey	Remedial Design Travis, Glenn Anderson; CH2M Hill, Mike Wray				
Life Cycle	SD001	SD033	FT003	FT004	FT005	LF007
Scoping Meeting	8-23-06	8-23-06	5-07-04	5-10-06	6-01-06	9-28-06
Predraft to AF/Service Center	11-15-06	11-15-06	5-28-04	5-31-06	7-03-06	10-30-06
AF/Service Center Comments Due	12-08-06	12-08-06	6-25-04	6-20-06	7-31-06	11-27-06
Draft to Agencies	12-22-06	12-22-06	7-16-04	9-29-06	11-24-06	01-30-07
Draft to RAB	12-22-06	12-22-06	7-16-04	9-29-06	11-24-06	01-30-07
Agency Comments Due	(2-02-07) 3-1-07	(2-02-07) 3-1-07	8-16-04	10-30-06	12-29-06	3-01-07
Response to Comments Meeting	2-14-07	2-14-07	8-23-04	11-08-06	1-10-07	3-7-07
Response to Comments Due	(2-28-07) 3-14-07	(2-28-07) 3-14-07	9-29-04	NA**	NA**	(3-23-07) 4-27-07
Draft Final Due	(2-28-07) 3-14-07	(2-28-07) 3-14-07	9-29-04	NA**	NA**	(3-23-07) 4-27-07
Final Due	(3-30-07) 4-13-07	(3-30-07) 4-13-07	9-21-06*	11-13-06	1-16-07	(4-23-07) 6-01-07
Public Comment Period	NA	NA	NA	NA	NA	NA
Public Meeting	NA	NA	NA	NA	NA	NA

* The FT003 Soil Remedial Design Package was produced in 2004 and finalized after the NEWIOU Soil, Sediment and Surface Water ROD was signed.

** These design packages were not produced as Draft Final, because their regulatory agency reviews did not result in comments and requested revisions to the Draft version.
(Original Date) Actual Date

South Base Boundary Groundwater Treatment Plant Monthly Data Sheet

Report Number: 85 Reporting Period: 1 – 31 August 2007 Date Submitted: 7 August 2007

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 – August 2007

Operating Time: **736 hours** Percent Uptime: 98.9%

Gallons Treated: **3.54 million gallons** Gallons Treated Since July 1998: **574.7 million gallons**

Volume Discharged to Union Creek: **3.42 million gallons**

Volume Used for Dust Suppression: **0.12 million gallons**

VOC Mass Removed: **2.2 pounds^a** VOC Mass Removed Since July 1998: **315 pounds**

Rolling 12-Month Cost per Pound of Mass Removed: \$4,207^b

Monthly Cost per Pound of Mass Removed: \$4,939^b

^a Calculated using August 2007 EPA Method SW8260B analytical results.

^b Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the system. High costs are due to low influent concentrations

Flow Rates

Average Groundwater Total Flow Rate: **80.2^a**

Average Flow Rate from SCADA (gpm) ^b							
FT005				SS029		SS030	
EW01x05	1.4	EW736x05	3.3	EW01x29	4.5	EW01x30	5.5
EW02x05	1.3	EW737x05	3.1	EW02x29	7.7	EW02x30	1.3
EW03x05	2.7	EW742x05	4.5	EW03x29	Off line ^e	EW03x30	Off line ^e
EW731x05	0.5 ^c	EW743x05	Off line ^d	EW04x29	8.8	EW04x30	16.1
EW732x05	3.9	EW744x05	2.1	EW05x29	8.7	EW05x30	Off line ^d
EW733x05	0.4	EW745x05	5.0	EW06x29	10.2	EW06x30	3.7 ^c
EW734x05	3.4	EW746x05	4.9	EW07x29	Off line ^e	EW711x30	4.3
EW735x05	3.0						
FT005 Total:		39.5		SS029 Total:		39.9	
				SS030 Total:		30.9	

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

^b Average extraction well flow rates measured by each extraction well totalizer divided by the operating time. Flow rates are based on data collected between 1 and 24 August 2007

^c Extraction well was operational for less than 1 hour in August 2007.

^d Extraction well was off line during August 2007.

^e Extraction well was off line due to low VOC concentrations.

gpm—gallons per minute

Shutdown/Restart Summary

Location	Shutdown		Restart		Cause
	Date	Time	Date	Time	
SBBGWTP	25 August 2007	07:00	25 August 2007	15:00	Plant electrical power outage.
SBBGWTP = South Base Boundary Groundwater Treatment Plant					

Summary of O&M Activities

Monthly groundwater sampling at the SBBGWTP was performed on 2 August 2007. Sample results are presented in Table 1. The total VOC concentration (73.8 µg/L) in the influent sample has increased since the July 2007 sample (52.8 µg/L). Note that the influent concentration for 1,2-dichloroethane (1,2-DCA) was 0.38 J µg/L, which is below the instantaneous maximum of 0.5 µg/L. There were no VOCs detected in the effluent sample.

On 7 August 2007, the flow transmitter was replaced in EW734x05. In addition on 13 August 2007, a spring-loaded check valve was installed at the pump discharge.

In August 2007, approximately 118,000 gallons of treated water from the SBBGWTP was used for dust suppression at Travis AFB.

Optimization Activities

A Remedial Process Optimization Work Plan is currently being developed that will present shut down and optimization recommendations for several groundwater extraction wells at Site FT005.

Table 1

Summary of Groundwater Analytical Data for August 2007 – South Base Boundary Groundwater Treatment Plant

Constituent	Instantaneous Maximum ^a (µg/L)	Detection Limit (µg/L)	N/C	2 August 2007 (µg/L)	
				Influent	Effluent
Halogenated Volatile Organics					
Bromodichloromethane	0.5	0.17	0	ND	ND
Carbon Tetrachloride	0.5	0.19	0	ND	ND
Chloroform	5	0.16	0	ND	ND
Dibromochloromethane	0.5	0.17	0	ND	ND
1,1-Dichloroethane	5	0.16	0	ND	ND
1,2-Dichloroethane	0.5	0.13	0	0.38 J	ND
1,1-Dichloroethene	5	0.14	0	ND	ND
cis-1,2-Dichloroethene	5	0.15	0	5.4	ND
trans-1,2-Dichloroethene	5	0.15	0	ND	ND
Methylene Chloride	5	0.32	0	ND	ND
Tetrachloroethene	5	0.20	0	ND	ND
1,1,1-Trichloroethane	5	0.16	0	ND	ND
1,1,2-Trichloroethane	5	0.32	0	ND	ND
Trichloroethene	5	0.16 – 0.32	0	68	ND
Vinyl Chloride	0.5	0.38	0	ND	ND
Non-Halogenated Volatile Organics					
Benzene	1.0	0.16	0	ND	ND
Ethylbenzene	5.0	0.16	0	ND	ND
Toluene	5.0	0.17	0	ND	ND
Xylenes	5.0	0.34	0	ND	ND
Other					
Total Petroleum Hydrocarbons – Gasoline	50	4.9	0	NM	ND
Total Petroleum Hydrocarbons – Diesel	50	32	0	NM	ND
Total Suspended Solids (mg/L)	NE	1.1	0	8.8	NM
^a 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: 98 Reporting Period: 1 – 31 August 2007 Date Submitted: 7 September 2007

This data sheet includes the following: results for the operation of the Central Groundwater Treatment Plant (CGWTP), West Treatment and Transfer Plant (WTTP), and thermal oxidation (ThOx) system (previously referred to as the two-phase extraction [TPE] system); a summary of flow rates for the CGWTP, WTTP, ThOx, 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.

Operations Summary – August 2007

Operating Time:	Percent Uptime:
CGWTP: 596 hours	CGWTP: 80.1%
WTTP: Water: 568.5 hours Vapor: 558.5 hours	WTTP: Water: 76.4% Vapor: 75.1%
ThOx: 0 hours	ThOx: Currently shutdown for rebound
Gallons Treated: 2.96 million gallons	Gallons Treated Since January 1996: 356 million gallons
Volume Used for Dust Suppression: 0.03 million gallons	
VOC Mass Removed:	VOC Mass Removed Since January 1996:
9.0 lbs (groundwater only)^a	2,212 lbs from groundwater
1.8 lbs (vapor only)^b	8,322 lbs from vapor
UV/Ox DRE: 100%	ThOx DRE: NA
Rolling 12-Month Cost per Pound of Mass Removed: \$1,782 ^c	
Monthly Cost per Pound of Mass Removed: \$3,873 ^c	

^a Calculated using August 2007 EPA Method SW8260B analytical results.

^b Total VOC vapor mass removed was calculated using June 2007 EPA Method TO-14 analytical results for the DP039 extraction wells. The next quarterly sampling event is scheduled in September 2007.

^c Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the system. High monthly costs are due to low vapor influent concentrations.

DRE = destruction removal efficiency

UV/Ox = ultraviolet oxidation

Flow Rates

Average Groundwater Flow Rate: **82.7 gpm^a**

Location	Average Flow Rate	
	Groundwater (gpm) ^b	Soil Vapor (scfm)
EW01x16	22.4	NA
EW02x16	5.3 ^c	NA
EW03x16	Off line ^d	NA
EW605x16	14.2	NA
EW610x16	2.1	NA
WTTP	37.6 ^f	223
ThOx	NA	NA ^g

^a as measured by the effluent discharge to the storm drain divided by the operating time.

^b as measured by extraction well totalizer divided by the operating time.

^c EW02x16 (water) was turned on 21 June 2007.

^d EW03x16 (water) was taken off line in September 2002 due to a significant decrease in flow rates.

^f as measured by the effluent groundwater pumped to the CGWTP divided by the operating time.

^g flow rate not measured; ThOx is currently offline for rebound study.

gpm = gallons per minute

NA = not applicable

scfm = standard cubic feet per minute

Shutdown/Restart Summary

Location	Shutdown		Restart		Cause
	Date	Time	Date	Time	
CGWTP:					
CGWTP	11 August 2007	04:15	13 August 2007	13:45	Plant electrical power outage.
CGWTP	15 August 2007	17:00	16 August 2007	15:30	PLC backup battery failed.
CGWTP	20 August 2007	16:30	21 August 2007	14:00	UV lamp #1 high amp alarm.
CGWTP	25 August 2007	07:00	25 August 2007	12:45	Plant electrical power outage.
CGWTP	26 August 2007	14:00	27 August 2007	07:45	UV/Ox system high current alarm.
CGWTP	29 August 2007	13:30	30 August 2007	12:30	T-301 High level alarm. High temperature alarm.
WTP (GW):					
WTP	11 August 2007	05:00	13 August 2007	14:30	Alarm interlocks with CGWTP.
WTP	15 August 2007	17:00	16 August 2007	15:30	Alarm interlocks with CGWTP.
WTP	20 August 2007	16:30	21 August 2007	14:00	Alarm interlocks with CGWTP.
WTP	25 August 2007	07:00	25 August 2007	13:00	Alarm interlocks with CGWTP.
WTP	26 August 2007	14:00	27 August 2007	13:00	Alarm interlocks with CGWTP.
WTP	29 August 2007	12:00	31 August 2007	09:00	Water level sensor malfunction.
WTP (Vapor):					
WTP (SVE)	11 August 2007	05:00	13 August 2007	15:00	Alarm interlocks with CGWTP.
WTP (SVE)	15 August 2007	17:00	16 August 2007	15:30	Alarm interlocks with CGWTP.
WTP (SVE)	20 August 2007	16:30	21 August 2007	14:00	Alarm interlocks with CGWTP.
WTP (SVE)	25 August 2007	07:00	25 August 2007	15:30	Alarm interlocks with CGWTP.
WTP (SVE)	26 August 2007	14:00	27 August 2007	16:00	Alarm interlocks with CGWTP.
WTP (SVE)	29 August 2007	12:00	31 August 2007	13:00	Water level sensor malfunction.
ThOx (vapor):					
ThOx	5 June 2007	12:10			System off-line for 3-month rebound study. ThOx will be restarted in September 2007.
CGWTP = Central Groundwater Treatment Plant SVE = Soil Vapor Extraction ThOx = Thermal Oxidation System WTP = West Treatment and Transfer Plant					

Summary of O&M Activities

Monthly groundwater sampling at the CGWTP was performed on 2 August 2007. Groundwater sample results are summarized in Table 1. The total VOC concentration (365 µg/L) in the August 2007 influent groundwater sample has increased since the July 2007 sample (274 µg/L). Chloroform, cis-1,2-dichloroethene (DCE), and trichloroethene (TCE) were present in groundwater samples collected within the liquid carbon treatment system. TCE, chloroform and cis-1,2-DCE were detected in the system effluent, but at low concentrations, and below the respective effluent limits. The detections in these samples may be attributed to desorption from the granular activated carbon (GAC). In August 2007, the lead carbon unit was taken off-line and bypassed. The system performance will continue to be monitored in the upcoming months.

In August 2007, routine maintenance activities were performed at the CGWTP, WTTP, and extraction wells. These activities included replacing the backup battery, the uninterruptible power supply (UPS), for the CGWTP PLC and repairing a failed PVC fitting located on the eductor discharge pipe from EW700x37.

On 10 July 2007, the WIOU soil vapor extraction (SVE) system was turned on. The vapor extraction component for eight WIOU wells were turned on and the SVE system was re-started. The WTTP SVE system continued to treat soil vapor from DP039 wells EW563x39 and EW782x39 during August 2007.

Field measurements were collected in August 2007 at the WIOU, DP039, and WTTP extraction wells to monitor ongoing SVE operations. Field measurements will continue to be collected from all WTTP extraction wells on a monthly basis. The WTTP system readings will continue to be monitored weekly.

In August 2007, approximately 30,000 gallons of treated water from the CGWTP was use for dust suppression at the soil remedial action sites.

Optimization Activities

The ThOx system was shutdown on 5 June 2007 for a 3-month rebound study. The system will be re-started and sampled for rebound in September 2007.

Table 1

Summary of Groundwater Analytical Data for August 2007 – Central Groundwater Treatment Plant

Constituent	Instantaneous Maximum ^a (µg/L)	Detection Limit (µg/L)	N/C	2 August 2007 (µg/L)					
				Influent	After UV/OX	After Carbon 1 Effluent ^b	After Carbon 2 Effluent	After Carbon 3 Effluent	System Effluent
Halogenated Volatile Organics									
Bromodichloromethane	5.0	0.15 – 0.34	0	ND	ND	NS	ND	ND	ND
Carbon Tetrachloride	0.5	0.19 – 0.38	0	ND	ND	NS	ND	ND	ND
Chloroform	5.0	0.16 – 0.32	0	0.32 J	0.27 J	NS	0.33J	0.42 J	0.32 J
Dibromochloromethane	5.0	0.19 – 0.34	0	ND	ND	NS	ND	ND	ND
1,2-Dichlorobenzene	5.0	0.13 – 0.26	0	ND	ND	NS	ND	ND	ND
1,3-Dichlorobenzene	5.0	0.16 – 0.32	0	ND	ND	NS	ND	ND	ND
1,4-Dichlorobenzene	5.0	0.16 – 0.32	0	ND	ND	NS	ND	ND	ND
1,1-Dichloroethane	5.0	0.12 – 0.32	0	ND	ND	NS	ND	ND	ND
1,2-Dichloroethane	0.5	0.17 – 0.26	0	ND	ND	NS	ND	ND	ND
1,1-Dichloroethene	5.0	0.14 – 0.28	0	2.4	ND	NS	ND	ND	ND
cis-1,2-Dichloroethene	5.0	0.15 – 0.30	0	69	ND	NS	1.0	1.8	1.3
trans-1,2-Dichloroethene	5.0	0.15 – 0.30	0	2.6	ND	NS	ND	ND	ND
Methylene Chloride	5.0	0.12 – 0.64	0	ND	ND	NS	ND	ND	ND
Tetrachloroethene	5.0	0.20 – 0.40	0	0.99 J	ND	NS	ND	ND	ND
1,1,1-Trichloroethane	5.0	0.13 – 0.32	0	ND	ND	NS	ND	ND	ND
1,1,2-Trichloroethane	5.0	0.23 – 0.64	0	ND	ND	NS	ND	ND	ND
Trichloroethene	5.0	0.16 – 3.20	0	290	ND	NS	2.2	0.62	0.41 J
Vinyl Chloride	0.5	0.17 – 0.34	0	ND	ND	NS	ND	ND	ND
Non-Halogenated Volatile Organics									
Benzene	1.0	0.18 – 0.32	0	ND	ND	NS	ND	ND	ND
Ethylbenzene	5.0	0.11 – 0.32	0	ND	ND	NS	ND	ND	ND
Toluene	5.0	0.12 – 0.34	0	ND	ND	NS	ND	ND	ND
Total Xylenes	5.0	0.36 – 0.68	0	ND	ND	NS	ND	ND	ND

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

^b The lead carbon unit was taken off-line and bypassed. The system is currently running w/o the lead carbon unit.

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

North Groundwater Treatment Plant Monthly Data Sheet

Report Number: 87 Reporting Period: 1 – 31 August 2007 Date Submitted: 7 September 2007

This data sheet includes the following: results for the operation of the groundwater extraction and soil vapor extraction (SVE) systems; 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 selected samples collected.

Operations Summary – August 2007

Operating Time: Water: 735.5 hours	Percent Uptime: Water: 98.9%
Vapor: 0 ^a	Vapor: 0% ^a
Gallons Treated: 0.48 million gallons	Gallons Treated Since March 2000: 76.4 million gallons
Volume Discharged to Duck Pond: 0.39 million gallons	Volume Used for Dust Suppression: 0.088 million gallons
Volume Discharged to Storm Drain: 0 gallons	
Percentage of Treated Water to Beneficial Use: 96.2%	
VOC Mass Removed:	VOC Mass Removed Since March 2000:
0.06 lbs (groundwater only)^b	173.21 lbs from groundwater
0 lbs (vapor only)^a	5,240 lbs from vapor^c
VGAC Removal Efficiency: NA	
Rolling 12-Month Cost per Pound of Mass Removed: \$34,210 ^{de}	
Monthly Cost per Pound of Mass Removed: \$164,183 ^d	

^a The SVE system was shut down on 12 October 2006 due to low vapor VOC concentrations.

^b Calculated using August 2007 EPA Method SW8260B analytical results.

^c Cumulative total VOC vapor mass removed includes 4,860 pounds of petroleum hydrocarbon VOC mass removed and treated by a portable catalytic oxidizer system between 15 July and 17 September 2003.

^d Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the system. High costs are due to low influent groundwater concentrations and low flow rates.

^e The rolling 12-month cost per pound of mass removed is calculated by the sum of the monthly cost over the past 12 months divided by the sum of pounds removed during the same period.

Flow Rates

Average Groundwater Total Flow Rate: **10.8 gpm^a**

Location	Flow Rate on 31 August 2007	
	Groundwater (gpm)	Soil Vapor (scfm) ^b
EW565x31	0.6	Off line
EW566x31	0.5	Off line
EW567x31	1.5	NA
EW576x04	1.0	Off line
EW577x04	2.0	Off line
EW578x04	1.0	Off line
EW579x04	0.5	NA
EW580x04	1.5	NA
EW621x04	1.8	NA
EW622x04	0.6	NA
EW623x04	1.5	NA
EW614x07	1.1 ^c	NA
EW615x07	1.2 ^c	NA
SVE System	NA	Off line

^a The flow rate was calculated using the effluent discharge totalizer divided by the operating time of the plant.

^b The SVE system was shut down on 12 October 2006 due to low vapor VOC concentrations.

^c LF007 wells were turned on for the dry season on 5 April 2007. During the dry season, these submersible pumps are solar powered, and only operate during day light hours.

gpm = gallons per minute

scfm = standard cubic feet per minute

Shutdown/Restart Summary

Location	Shutdown		Restart		Cause
	Date	Time	Date	Time	
NGWTP (water)	03 August 2007	08:30	03 August 2007	09:30	Broken pipe on treated discharge.
NGWTP (water)	25 August 2007	07:00	25 August 2007	14:30	Plant electrical power outage.
NGWTP = North Groundwater Treatment Plant					

Summary of O&M Activities

Monthly groundwater sampling at the NGWTP was performed on 2 August 2007. Sample results are presented in Table 1. The total VOC concentration (14.02 µg/L) in the influent sample has decreased since the July 2007 sample (16.22 µg/L). Note that the influent concentration for 1,1-dichloroethene (1,1-DCE) was 1.1 µg/L, which is below the instantaneous maximum of 5 µg/L. 1,1-DCE is the indicator chemical for Site SD031. There were no VOCs detected in the effluent sample.

In August 2007, approximately 88,000 gallons of treated water from the NGWTP was used for dust suppression at Travis AFB soil removal sites.

Optimization Activities

A work plan for optimization activities at Sites SD031 and FT004 is in preparation.

Table 1

Summary of Groundwater Analytical Data for August 2007 – North Groundwater Treatment Plant

Constituent	Instantaneous Maximum ^a (µg/L)	Detection Limit (µg/L)	N/C	2 August 2007 (µg/L)	
				Influent	Effluent
Halogenated Volatile Organics					
Bromodichloromethane	0.5	0.17	0	ND	ND
Carbon Tetrachloride	0.5	0.19	0	ND	ND
Chloroform	5.0	0.16	0	ND	ND
Dibromochloromethane	0.5	0.17	0	ND	ND
1,1-Dichloroethane	5.0	0.16	0	ND	ND
1,2-Dichloroethane	0.5	0.13	0	ND	ND
1,1-Dichloroethene	5.0	0.14	0	1.1	ND
cis-1,2-Dichloroethene	5.0	0.15	0	0.32 J	ND
trans-1,2-Dichloroethene	5.0	0.15	0	ND	ND
Methylene Chloride	5.0	0.32	0	ND	ND
Tetrachloroethene	5.0	0.20	0	ND	ND
1,1,1-Trichloroethane	5.0	0.16	0	0.60 J	ND
1,1,2-Trichloroethane	5.0	0.32	0	ND	ND
Trichloroethene	5.0	0.16	0	12	ND
Vinyl Chloride	0.5	0.38	0	ND	ND
Non-Halogenated Volatile Organics					
Benzene	1.0	0.16	0	ND	ND
Ethylbenzene	5.0	0.16	0	ND	ND
Toluene	5.0	0.17	0	ND	ND
Xylenes	5.0	0.34	0	ND	ND
Other					
Total Petroleum Hydrocarbons – Gasoline	50	4.9	0	NM	ND
Total Petroleum Hydrocarbons – Diesel	50	32	0	NM	ND

^a 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
µg/L = micrograms per liter