Final

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

17 October 2007, 0930 Hours

Mr. Mark Smith, Travis Air Force Base (AFB), conducted the Remedial Program Manager's (RPM)/Senior Partnering meeting on 17 October 2007 at 0930 in the Environmental Flight Conference Room, Building 570, Travis AFB, California. Attendees included:

• Mark Smith	Travis AFB
• Lonnie Duke	Travis AFB
• Glenn Anderson	Travis AFB
• Greg Parrott	Travis AFB
• James Chang	U.S. Environmental Protection Agency (USEPA), Region 9
• Claire Trombadore	U.S. Environmental Protection Agency (USEPA), Region 9
• Jose Salcedo	Department of Toxic Substances Control (DTSC)
• Charlie Ridenour	Department of Toxic Substances Control (DTSC)
• Tony Landis	Department of Toxic Substances Control (DTSC)
• Alan Friedman	California Regional Water Quality Control Board (CRWQCB)
• John Kaiser	California Regional Water Quality Control Board (CRWQCB)
• Kerry Settle	AMC/A7AN
• Richard Burnette	MacDill/AMC

Regrets were received from:

• Michael Montgomery	U.S. Environmental Protection Agency (USEPA), Region 9
• Bill Barry	AMC/Asset Management Division

Handouts distributed throughout the meeting included:

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

1. ADMINISTRATIVE

A. Previous Meeting Minutes

The September 2007 RPM meeting minutes were approved and finalized.

B. Action Item Review

Mr. Smith has provided the EPA 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).

There is a change of location for the Restoration Advisory Board Meeting for October. The meeting will be in the Larkspur room at the Hilton Garden Inn Fairfield.

2. OPERABLE UNIT UPDATE

A. Travis AFB Soil Cleanup Status Report

Mr. Anderson presented the soil cleanup update. All seven (7) soil cleanup actions are described in the NEWIOU Soil ROD. Mr. Anderson offered Mr. Chang (and any other interested regulators) a tour to see the sites.

B. Soil Remedial Action Report

1. SD045, FT004 and FT003 (RA Status)
   Travis AFB has achieved residential cleanup levels at these sites. There was more soil excavated than anticipated. The CAMU is much larger in size than originally anticipated. Backfilling is complete at SD045 and still in process at the FT sites. Hydroseeding remains to be done.

2. SD001, SD033 and LF007 (RA Progress)
   LF007is the closed landfill and has PCB contamination. The base moved up the work at this site due to the potential for inclement weather. Earlier rains also raised concerns about conducting the two creek cleanup actions (SD001 and SD033). It would be a challenge to drain the sites prior to excavating.

3. FT005 (RA Deferred)
   Work at FT005 has been temporarily deferred. It was a business decision to reschedule this fieldwork to a future construction season. The location is furthest away from the CAMU, and the base was concerned about the level of effort to complete this action and still have time to close the CAMU.

3. CURRENT PROJECTS

A. Treatment Plant Operation and Maintenance Update

Mr. Duke presented the treatment plant update. The amount of water that has been treated is over one billion gallons. A few comments from the Water Board have been received for the Remedial Process Optimization (RPO) Technical Memo. EPA had no comments, and waiting on response from DTSC. Based on the outcome of this review, some extraction wells associated with the North and South treatment plants are expected to be shut down. Others are anticipated to be shut down possibly for a rebound study.

Mr. Kaiser asked about treated water re-use. As much as possible, treated water was used for dust suppression at the remedial sites and filling the duck pond during the summer months.

1. South Base Boundary Groundwater Treatment Plant

The South Base Boundary Groundwater Treatment Plant (SBBGWTP) performed at 100% uptime, and 3.13 million gallons of groundwater were extracted and treated during the month of September 2007. The average flow rate for the SBBGWTP was 75.5 gallons per minute (gpm). Approximately 2.0 pounds of volatile organic compounds (VOCs) was removed during September 2007. The total mass of VOCs removed since the startup of the system is 317 pounds (see Attachment 3).

A total of 4,000 gallons of treated water was collected from the South Base Boundary Plant to be used for dust suppression at the soil remedial action sites.

2. Central Groundwater Treatment Plant

The Central Groundwater Treatment Plant (CGWTP) performed at 96.8% uptime with approximately 3.14 million gallons of groundwater extracted and treated during the month of September 2007. The average flow rate for the CGWTP was 75.0 gpm. Approximately 57.7 pounds of VOCs were removed during September 2007, which was from groundwater and vapor. The total mass of VOCs removed since the startup of the system is 10,592 pounds. (see Attachment 4).

The plant was down infrequently during the month of September 2007 for routine maintenance activities. The CGWTP system was down on 3 September due to T-901 tank level sensor malfunction (overheat). The WTTP system was down on 20 September due to an electrical power surge/voltage spike.

The WTTP SVE system continued to treat soil vapor from the EW563x39 and EW782x39.

The ThOx system was shutdown on 5 June 2007 for a 3-month rebound study. The system was re-started and sampled for rebound on 4 September 2007.

3. North Groundwater Treatment Plant

The North Groundwater Treatment Plant (NGWTP) performed at 100% uptime with approximately 520,000 gallons of groundwater extracted and treated during the month of September 2007. The average flow for the NGWTP was 12.1 gpm. Less than a pound of VOCs was removed during September 2007, which was from groundwater. The total mass of VOCs removed since the startup of the system is 5,413 pounds (see Attachment 5).

In September 2007, approximately 24,000 gallons of treated water from the NGWTP was used for dust suppression at Travis AFB soil removal sites. However, recent measurements have shown the dissolved oxygen (DO) levels in the Duck Pond to be very low (for unrelated reasons). Therefore, as of 20 September 2007, all the treated water from the NGWTP was diverted to the Duck Pond in attempt to raise the DO concentration. The treated water was no longer used for the construction sites after 20 September 2007.

B. Petroleum Only Contamination (POCO) Status

Mr. Duke gave an update on the Petroleum Only Contamination (POCO) status. The project is half way through the one year study for monitored natural attenuation of the sites. Third quarter sampling will occur next month.

4. Program/Issues/Updates

A. Centralization of the Air Forces Environmental Restoration Program

Mr. Settle presented the Air Force restructuring process.

Currently, the new structure is half-staffed. The MAJCOMs will be pared down to two to three personnel. All Project Managers will be located at the AFCEE Program Management Office (PMO). The PMs at the PMO will be in communication with the base RPM (i.e., Mr. Smith). Headquarters will be taking more of a liaison position. Headquarters responsibilities will include 1) support for PMO and installation; 2) funding (TDY and supplies); and 3) overseeing manpower for installations. Benefits of the restructuring are one central location for all information, going directly to PMO, then on to headquarters (the Pentagon). There will be an advocate for air staff on the corporate board. The corporate board (CB) is to meet once a year.

Mr. Kaiser commented that this seems to be modeled after a civilian corporate board structure. This is exactly the case – Air Force representatives met with Fortune 500 companies to identify process improvement opportunities.

Fiscal Year (FY) 08 will be funded by AMC. FY09 will be funded by PMO.

Mr. Landis asked who will be on the CB. All PMs from active bases will be on the CB. BRAC bases will not participate.

Mr. Ridenour asked who will have ROD signature authority. The Wing CC will have signature authority for the Air Force.

Ms. Trombadore asked who is on the Dispute Resolution Committee (DRC). All current contacts shall be maintained. The intent is to maintain continuity with staff. No major changes are anticipated before April 2008.

B. Travis Out Year Manpower Projections

Mr. Smith presented the future plans for manpower at Travis AFB. The Air Force is requiring the drawdown in Restoration personnel. Mr. Smith will be transferring to Base Energy, but will still support the program through most of FY08 – same desk, same phone number! As for timeline, the program should be able to meet drawdown goals. The plan is to reduce to three people in Travis group by September 2008, two by September 2009 and one by September 2010.

C. Travis FY08 GW PBC

Mr. Settle stated that Performance Based Contracting (PBC) is now mandated by law.

Mr. Burnette presented his experience with PBC at MacDill AFB. Twenty-one sites were taken to construction complete in three years. A successful PBC needs to have a model Statement of Objectives (SOOs), and have all objectives approved (equivalent to a ROD). They use contractor-proposed solutions to reach cleanup objectives.

Communication and regulatory buy-in are extremely important. There is a misconception that PBC transfers responsibility from the base to the contractor. This isn't true.

Concern was expressed by Ms. Trombadore that the Federal Facilities Agreement (FFA) was signed with the Air Force, not a contractor.

Travis AFB currently has a PBC in place for the POCO sites.

The PBC process can take six to eight months. Regulatory involvement is crucial early in the process. Additionally, once proposals have been received, contractor selection can be a week-long process. Regulatory agencies need to be involved in site visits, and in developing SOOs, not in the selection process. And possible before the final award – agencies may have input at that point too.

In the final selection, the contractors' abilities, experience, and meeting schedules must be considered. The focus is on best value, not necessarily the lowest bidder.

The Air Force still maintains liability and oversight of the contract. A team will be developed, and RPM meetings will continue.

Air Force goals:

FY07 thru 08: Remedial Investigations
FY10: ROD in place
FY12: Remedy in place (RIP) at all sites

Ms. Trombadore commented that five year reviews are due in FY08. These would include construction completion and ready for anticipated use. Mr. Chang asked if a separate contractor would be used for the five year review; the answer was yes.

Mr. Burnette pointed out that PMO is looking at all AMC sites, determining what types of contracts should be in place. Basewide or not, etc. There is a contractor assisting in developing SOOs. Mr. Settle described Newfields: Daphne Williams is very familiar with PBC and environmental science. She will be assisting in developing the SOOs, gathering information and data for each installation.

The missing link in the process – who is going to watch the contractor? QA/QC of execution of the contract, providing surveillance oversight. Mr. Burnette described LRS Federal as a company that provides site assessment to determine type of contract that is best for each installation. The Air Force learns from their past mistakes.

Communication is the key. It was acknowledged that FFA dates will change and an amendment will be necessary but that the contractor will need to be able to support the schedule. The PBC will be awarded for a five year period. The contractor selects the process, schedule, etc.

Concern was expressed that conflicts may arise between agency schedules and contractors' schedule.

The FFA is still in effect. The onus is on the contractor to get the job done. The Air Force is not walking away from the project. Mr. Chang verified this is also what he was told at a PBC training session. Mr. Settle expressed there will be growing pains, of course – but it should be a positive growth.

Mr. Smith said there are 23 groundwater sites; four of them are POCO sites, which leaves 19 to be included in this PBC to RIP. All these are currently under two IRODs. Progress should be:

FFS – PP – ROD – RD – RA = RIP (some sites may go straight to RIP)

One contractor will be selected. When SOOs are done the RFP will be issued. The latest the GW PBC should be awarded is September 2008. The GSAP will be looked at for data collected to date. A lot of sites are at non-detect (ND). Based on the RPO, some wells will be shut off.

Mr. Settle pointed out that the reuse of treated water is part of asset management.

Mr. Smith said that information has been provided to Ms. Williams (Newfields). Her response is expected soon on the SOOs.

5. Action Items

ITEM	RESPONSIBLE	ACTION ITEM	DUE DATE	STATUS
1.	Air Force	Identify chain of dispute resolution.		Ongoing.

TRAVIS AIR FORCE BASE
ENVIRONMENTAL RESTORATION PROGRAM
REMEDIAL PROGRAM MANAGER'S/
SENIOR PARTNERS MEETING
17 October 2007, 9:30 A.M.
AGENDA

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)
      (1). SD045, FT004 AND FT003 (RA STATUS)
      (2). SD001, SD033 AND LF007 (RA PROGRESS)
      (3). FT005 (RA DEFERRED)

3. CURRENT PROJECTS

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

PROGRAM/ISSUES/UPDATES

   A. CENTRALIZATION OF THE AF'S ER PROGRAM
   B. TRAVIS OUT YEAR MANPOWER PROJECTIONS
   C. TRAVIS' FY08 GW PBC
      (1). IMPORTANCE OF REGULATORY BUY-IN
      (2). IMPACT ON REGULATORY CORRESPONDENSE/WORKLOAD
      (3). FFA SCHEDULE CHANGES
   D. FY08-12 ER PROGRAM FUNDING
   E. AF'S NEW ASSET MANAGEMENT DIVISION

5. SCHEDULE NEXT MEETING

6. 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				
	Groundwater Treatment Plant O&M Reports **Travis, Lonnie Duke;** **CH2M Hill, Mike Wray**			
Life Cycle	**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; URS, Adam Harvey**	**Remedial Design Travis, Glenn Anderson; URS, Adam Harvey**	**Remedial Design Travis, Glenn Anderson; URS, Adam Harvey**	**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: 86 **Reporting Period: 1 – 30 September 2007** **Date Submitted: 11 October 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 – September 2007

Operating Time: **720 hours** Percent Uptime: 100**%**

Electrical Power Usage: 17,580 kWh

Gallons Treated: **3.13 million gallons** Gallons Treated Since July 1998: **577.8 million gallons**

Volume Discharged to Union Creek: **3.13 million gallons**

Volume Used for Dust Suppression: **0.004 million gallons**

VOC Mass Removed: **2.0 pounds**[a] VOC Mass Removed Since July 1998: **317 pounds**

Rolling 12-Month Cost per Pound of Mass Removed: $3,998[b]

Monthly Cost per Pound of Mass Removed: $4,579[b]

[a] Calculated using September 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: **75.5**[a]

Average Flow Rate (gpm)							
FT005[c]				**SS029**		**SS030**	
EW01x05	0.8	EW736x05	3.3	EW01x29	6.5	EW01x30	5.5
EW02x05	2.3	EW737x05	3.5	EW02x29	5.3	EW02x30	1.2
EW03x05	3.0	EW742x05	4.4	EW03x29	Off line[e]	EW03x30	Off line[e]
EW731x05	0.8	EW743x05	Off line[d]	EW04x29	10.1	EW04x30	17.4
EW732x05	3.5	EW744x05	4.8	EW05x29	9.9	EW05x30	Off line[d]
EW733x05	0.7	EW745x05	5.0	EW06x29	9.8	EW06x30	0.0
EW734x05	3.3	EW746x05	4.5	EW07x29	Off line[e]	EW711x30	4.0
EW735x05	3.1						
FT005 Total:		**43.0**		**SS029 Total:**	**41.6**	**SS030 Total:**	**28.1**

[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.
[c] The FT005 wells were off-line (except EW01x05, EW02x05, and EW03x05) due to communication failure from 4 – 12 September 2007.
[d] Extraction well was off line during September 2007 due to pump failure.
[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 (water)	NA	NA	NA	NA	No shutdowns during the month of September 2007

NA = not applicable
SBBGWTP = South Base Boundary Groundwater Treatment Plant

Summary of O&M Activities

Monthly groundwater sampling at the SBBGWTP was performed on 4 September 2007. Sample results are presented in Table 1. The total VOC concentration (78.5 µg/L) in the influent sample has increased slightly since the August 2007 sample (73.8 µg/L). TCE was detected in the effluent sample at a concentration of 0.38 J µg/L, which is less than 10% of the instantaneous maximum. 1,2-DCA, the indicator chemical for Site FT005, was not detected in the influent sample at the SBBGWTP in September 2007.

In September 2007, approximately 4,000 gallons of treated water from the SBBGWTP was used for dust suppression at Travis AFB.

Optimization Activities

The Work Plan for Remedial Process Optimization (RPO) Actions at Sites SD031, FT004, and FT005 (Technical Memorandum, CH2M HILL, September 26, 2007) was submitted to the regulatory agencies for approval. The optimization activities in the work plan included shutting down several groundwater extraction wells at FT005 for rebound testing.

Table 1
Summary of Groundwater Analytical Data for September 2007 – South Base Boundary Groundwater Treatment Plant

Constituent	Instantaneous Maximum[a] (µg/L)	Detection Limit (µg/L)	N/C	4 September 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	ND	ND
1,1-Dichloroethene	5	0.14	0	ND	ND
cis-1,2-Dichloroethene	5	0.15	0	5.5	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 – 0.43	0	73	0.38 J
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 B of the *Travis AFB South Base Boundary Groundwater Treatment Plant Operations and Maintenance Manual* (CH2M HILL, 2004).

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

Central Groundwater Treatment Plant Monthly Data Sheet

Report Number: 99 **Reporting Period: 1 – 30 September 2007** **Date Submitted: 11 October 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 – September 2007

Operating Time:		Percent Uptime:		Electrical Power Usage:	
CGWTP:	697 hours	**CGWTP:**	96.8%	**CGWTP:**	7,480 kWh
WTTP:	Water: 537.5 hours	**WTTP:**	Water: 74.7%	**WTTP:**	18,177 kWh
	Vapor: 537.5 hours		Vapor: 74.7%		
ThOx:	639 hours	**ThOx:**	88.8%	**ThOx:**	18,847 kWh

Gallons Treated: **3.14 million gallons**

Gallons Treated Since January 1996: **359 million gallons**

Volume Used for Dust Suppression: **0 gallons**

VOC Mass Removed:

11.4 lbs (groundwater only)[a]

46.3 lbs (vapor only)[b]

VOC Mass Removed Since January 1996:

2,224 lbs from groundwater

8,368 lbs from vapor

UV/Ox DRE: 99.4%

ThOx DRE: NA

Rolling 12-Month Cost per Pound of Mass Removed: $1,317[c]

Monthly Cost per Pound of Mass Removed: $340[c]

[a] Calculated using September 2007 EPA Method SW8260B analytical results.
[b] Total VOC vapor mass removed was calculated using September 2007 EPA Method TO-14 analytical results for the DP039 extraction wells and the ThOx.
[c] Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the system.

DRE = destruction removal efficiency UV/Ox = ultraviolet oxidation

Flow Rates

Average Groundwater Flow Rate: **75.0 gpm**[a]

Location	Average Flow Rate	
	Groundwater (gpm)[b]	Soil Vapor (scfm)
EW01x16	24.4	NA
EW02x16	5.2[c]	NA
EW03x16	Off line[d]	NA
EW605x16	18.6	NA
EW610x16	3.7	NA
WTTP	35.1[f]	217
ThOx	NA	52.9

[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.

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	2 September 2007	13:30	3 September 2007	12:30	T-901 Tank level sensor malfunctioned (overheat)
WTTP (GW):					
WTTP	2 September 2007	13:30	3 September 2007	12:30	Alarm interlocks with CGWTP.
WTTP	20 September 2007	03:00	20 September 2007	08:30	Electrical power surge/voltage spike.
WTTP	24 September 2007	12:00	30 September 2007	20:00	Repair leak on supply pipe.
WTTP (Vapor):					
WTTP (SVE)	2 September 2007	13:30	3 September 2007	12:30	Alarm interlocks with CGWTP.
WTTP (SVE)	20 September 2007	03:00	20 September 2007	08:30	Electrical power surge/voltage spike.
WTTP (SVE)	24 September 2007	12:00	30 September 2007	20:00	Repair leak on supply pipe.
ThOx (vapor):					
ThOx	5 June 2007	12:10	4 September 2007	09:00	System off-line for 3-month rebound study.

CGWTP = Central Groundwater Treatment Plant
SVE = Soil Vapor Extraction
ThOx = Thermal Oxidation System
WTTP = West Treatment and Transfer Plant

Summary of O&M Activities

Monthly groundwater sampling at the CGWTP and quarterly groundwater sampling at the ThOx and WTTP were performed on 4 September 2007. Groundwater sample results are summarized in Table 1. In addition, quarterly vapor samples were collected at the ThOx unit and the WTTP SVE system on 4 September 2007. Vapor results are presented in Tables 2 and 3. Vapor samples were also collected from the three influent vapor lines (V-202, V-203, and V-204) prior to entering the manifold at the WTTP SVE system. The V-202 line collects vapors from EW563x39 and EW782x39; V-203 collects vapors from EW593x36, EW594x36, EW595x36, EW510x37, and EW700x37; and V-204 collects vapors from EW599x37, EW704x37, and EW707x37. The analytical results are presented in Table 4.

The total VOC concentration (438 µg/L) in the September 2007 CGWTP influent groundwater sample has increased since the August 2007 sample (365 µg/L). Chloroform and trichloroethene (TCE) were present in all the groundwater samples collected within the liquid carbon treatment system. TCE and chloroform were detected in the system effluent, but at low concentrations, and less than their respective effluent limits. The detections in these samples may be attributed to desorption from the granular activated carbon (GAC). In addition, cis-1,2-dichloroethene (DCE) and ethylbenzene were detected after the UV/Ox, but concentrations were less than the effluent limits. The lead carbon was taken off-line and bypassed in July 2007 due to erratic performance. The system is currently running without the lead carbon. The carbon change-out for the GAC vessel is on-hold while CH2M HILL evaluates optimization options for the entire treatment system. The system performance will continue to be monitored in the upcoming months.

The ThOx system was shutdown on 5 June 2007 for a 3-month rebound study. The system was re-started and sampled for rebound on 4 September 2007. Quarterly/rebound vapor samples collected in September 2007 indicated a significant increase in total VOC concentrations from 3.6 ppbv in March 2007 to 28,750 ppbv in June 2007 to 75,250 ppbv in September 2007. Influent concentrations will continue to be monitored. Vapor results are shown in Table 2.

The WTTP SVE system continued to treat soil vapor from the EW563x39 and EW782x39. Quarterly vapor samples collected in September 2007 indicated a decrease in total VOC concentrations from 760 ppbv in June 2007 to 455 ppbv in September 2007. Vapor results are shown in Table 3.

Optimization Activities

The ThOx system was shutdown on 5 June 2007 for a 3-month rebound study. The system was re-started and sampled for rebound on 4 September 2007. Results of the rebound study will be discussed in the annual LTO report. An evaluation of the GAC system at the CGWTP to determine the optimum configuration of the treatment system (GAC and UV-Ox) is in progress, with results expected in October.

Table 1
Summary of Groundwater Analytical Data for September 2007 – Central Groundwater Treatment Plant

Constituent	Instantaneous Maximum[a] (µg/L)	Detection Limit (µg/L)	N/C	4 September 2007 (µg/L) WTTP Effluent	TPE Effluent	Influent	After UV/OX	After Carbon 1 Effluent	After Carbon 2 Effluent	After Carbon 3 Effluent	System Effluent
Halogenated Volatile Organics											
Bromodichloromethane	5.0	0.17	0	ND	ND	ND	ND	NS	ND	ND	ND
Carbon Tetrachloride	0.5	0.19	0	ND	ND	ND	ND	NS	ND	ND	ND
Chloroform	5.0	0.16	0	0.44 J	ND	0.20 J	0.21 J	NS	0.25 J	0.26 J	0.23 J
Dibromochloromethane	5.0	0.17	0	ND	ND	ND	ND	NS	ND	ND	ND
1,2-Dichlorobenzene	5.0	0.13	0	ND	14	0.22 J	ND	NS	ND	ND	ND
1.3-Dichlorobenzene	5.0	0.16	0	ND	ND	0.24 J	ND	NS	ND	ND	ND
1,4-Dichlorobenzene	5.0	0.16	0	ND	7.5 J	ND	ND	NS	ND	ND	ND
1,1-Dichloroethane	5.0	0.16	0	ND	ND	ND	ND	NS	ND	ND	ND
1,2-Dichloroethane	0.5	0.13	0	ND	ND	ND	ND	NS	ND	ND	ND
1,1-Dichloroethene	5.0	0.14	0	2.2	ND	1.1	ND	NS	ND	ND	ND
cis-1,2-Dichloroethene	5.0	0.15	0	11	8,600	53	ND	NS	ND	1.3	ND
trans-1,2-Dichloroethene	5.0	0.15	0	1.4	12 J	2.3	ND	NS	ND	ND	ND
Methylene Chloride	5.0	0.32	0	ND	ND	ND	ND	NS	ND	ND	ND
Tetrachloroethene	5.0	0.20	0	0.92	ND	0.93	ND	NS	ND	ND	ND
1,1,1-Trichloroethane	5.0	0.16	0	ND	ND	ND	ND	NS	ND	ND	ND
1,1,2-Trichloroethane	5.0	0.32	0	ND	ND	ND	ND	NS	ND	ND	ND
Trichloroethene	5.0	0.16 – 3.2	0	240	290	380	2.5	NS	2.9	0.89	0.95
Vinyl Chloride	0.5	0.17	0	ND	40	ND	ND	NS	ND	ND	ND
Non-Halogenated Volatile Organics											
Benzene	1.0	0.16	0	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5.0	0.16	0	ND	ND	ND	ND	ND	ND	ND	0.24 J
Toluene	5.0	0.17	0	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	5.0	0.19 – 0.34	0	ND	ND	ND	ND	ND	ND	ND	ND
Other											
Total Dissolved Solids (mg/L)	NE	4.7	0	NM	NM	NM	NM	NM	NM	830	NM

[a] 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
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

TABLE 2
Soil Vapor Analytical Data for September 2007 – Central Groundwater Treatment Plant

Constituent	4 September 2007 (ppbv)	
	ThOx Influent	ThOx Effluent[a]
Volatile Organics		
Benzene	ND (68)	NS
Carbon Tetrachloride	ND (46)	NS
Chloromethane	ND (200)	NS
cis-1,2-Dichloroethene	33,000	NS
1,2-Dichlorobenzene	ND (85)	NS
1,3-Dichlorobenzene	ND (79)	NS
1,4-Dichlorobenzene	ND (78)	NS
1,2-Dichloroethane	ND (57)	NS
Ethylbenzene	ND (83)	NS
Freon 11	ND (29)	NS
Freon 12	ND (83)	NS
Freon 113	ND (38)	NS
Methylene Chloride	75 J	NS
Methyl Ethyl Ketone (2-Butanone)	ND (240)	NS
Tetrachloroethene	ND (49)	NS
Toluene	71 J	NS
trans-1,2-Dichloroethene	ND (61)	NS
1,2,4-Trimethylbenzene	ND (77)	NS
1,3,5-Trimethylbenzene	ND (79)	NS
Trichloroethene	40,000	NS
Vinyl Chloride	2,100	NS
Xylenes, m,p-	ND (150)	NS
Xylene, o-	ND (74)	NS

[a] The ThOx effluent vapor sample was lost; therefore, it was re-sampled in October 2007.

J = analyte concentration is considered an estimated value
ND = not detected
NS = not sampled
ppbv = parts per billion by volume
ThOx = thermal oxidation system
( ) = detection limit

Table 3
Soil Vapor Analytical Data for September 2007 – West Transfer and Treatment Plant

Constituent	4 September 2007 (ppbv)		
	SVE Influent	SVE Mid-Treatment	SVE Effluent
Volatile Organics			
Benzene	0.22	ND (0.056)	ND (0.074)
Bromodichloromethane	0.10 J	ND (0.044)	ND (0.059)
Carbon Tetrachloride	0.47	ND (0.038)	ND (0.051)
Chloroethane	ND (0.035)	0.57	ND (0.047)
Chloroform	1.8	0.32	ND (0.051)
Chloromethane	1.0	0.81	0.48 J
1,4-Dichlorobenzene	0.26	ND (0.064)	ND (0.085)
cis-1,2-Dichloroethene	21	5.6	ND (0.080)
trans-1,2-Dichloroethene	0.88	ND (0.050)	ND (0.066)
1,1-Dichloroethane	0.51	0.70	ND (0.035)
1,2-Dichloroethane	0.20	ND (0.047)	ND (0.063)
1,1-Dichloroethene	40	26	43
Ethylbenzene	ND (0.068)	ND (0.068)	ND (0.090)
Freon 11	0.28	0.22	0.34
Freon 12	0.46	0.55	0.70
Freon 22	0.31	0.25	0.24 J
Freon 113	0.085 J	0.063 J	ND (0.041)
Methylene Chloride	0.86	0.39 J	1.2
Methyl Ethyl Ketone (2-Butanone)	0.63 J	3.3	3
Tetrachloroethene	2.0	ND (0.040)	ND (0.053)
Toluene	0.27	0.17 J	0.10 J
1,1,1-Trichloroethane	3.3	0.20	ND (0.040)
1,1,2-Trichloroethane	0.14 J	ND (0.054)	ND (0.072)
Trichloroethene	380	ND (0.036)	0.051 J
Vinyl Chloride	ND (0.071)	ND (0.071)	ND (0.094)
Xylenes, m,p-	0.12 J	ND (0.12)	ND (0.16)
Xylene, o-	ND (0.061)	ND (0.061)	ND (0.081)

J = analyte concentration is considered an estimated value
ND = not detected
ppbv = parts per billion by volume
SVE = soil vapor extraction
( ) = detection limit

Table 4
Soil Vapor Analytical Data for September 2007 – West Transfer and Treatment Plant

Constituent	4 September 2007 (ppbv)		
	WTTPV-202	WTTPV-203	WTTPV-204
Volatile Organics			
Benzene	0.12 J	0.25	ND (0.11)
Bromodichloromethane	0.088 J	ND (0.044)	0.20 J
Carbon Tetrachloride	0.12 J	0.074 J	1.1
Chloroform	1.1	0.36	4.2
Chloromethane	0.34	0.49 J	ND (0.32)
cis-1,2-Dichloroethene	26	16	9.8
trans-1,2-Dichloroethene	0.29	1.2	0.76
1,1-Dichloroethane	1.1	ND (0.026)	ND (0.051)
1,2-Dichloroethane	0.41	ND (0.047)	ND (0.093)
1,1-Dichloroethene	120	0.24	0.16 J
Ethylbenzene	ND (0.068)	ND (0.068)	ND (0.13)
Freon 11	0.30	0.24	0.26 J
Freon 12	0.45	0.35	0.42
Freon 22	0.30	0.22	0.24 J
Freon 113	0.097 J	0.058 J	ND (0.061)
Methylene Chloride	1.9	1.0	0.37 J
Methyl Ethyl Ketone (2-Butanone)	0.24 J	0.49 J	0.90 J
Tetrachloroethene	0.14 J	4.2	0.67
Toluene	0.32	0.65	ND (0.11)
1,1,1-Trichloroethane	7.2	ND (0.030)	ND (0.059)
1,1,2-Trichloroethane	0.36	ND (0.054)	ND (0.11)
Trichloroethene	680	190	110
1,2,4-Trimethylbenzene	0.075 J	0.11 J	ND (0.12)
Vinyl Chloride	ND (0.071)	ND (0.071)	ND (0.14)
Xylenes, m,p-	0.22	0.16 J	ND (0.24)
Xylene, o-	0.078 J	0.067 J	ND (0.12)

J = analyte concentration is considered an estimated value
ND = not detected
ppbv = parts per billion by volume
( ) = detection limit

North Groundwater Treatment Plant Monthly Data Sheet

Report Number: 88 **Reporting Period: 1 – 30 September 2007** **Date Submitted: 11 October 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 – September 2007

Operating Time: **Water:** 720 hours
Vapor: 0[a]

Percent Uptime: **Water:** 100%
Vapor: 0%[a]

Electrical Power Usage: **13,926 kWh**

Gallons Treated: **0.52 million gallons**

Gallons Treated Since March 2000: **76.9 million gallons**

Volume Discharged to Duck Pond: **0.5 million gallons**

Volume Used for Dust Suppression: **0.024 million gallons**

Volume Discharged to Storm Drain: **0 gallons**

Percentage of Treated Water to Beneficial Use: 96.3%

VOC Mass Removed:
0.09 lbs (groundwater only)[b]
0 lbs (vapor only)[a]

VOC Mass Removed Since March 2000:
173.3 lbs from groundwater
5,240 lbs from vapor[c]

Rolling 12-Month Cost per Pound of Mass Removed: $34,256[de]

Monthly Cost per Pound of Mass Removed: $84,132[d]

[a] The SVE system was shut down on 12 October 2006 due to low vapor VOC concentrations.
[b] Calculated using September 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: **12.1 gpm**[a]

Location	Flow Rate on 30 September 2007	
	Groundwater (gpm)	Soil Vapor (scfm)[b]
EW565x31	0.3	Off line
EW566x31	0.4	Off line
EW567x31	1.6	NA
EW576x04	1.0	Off line
EW577x04	2.2	Off line
EW578x04	0.9	Off line
EW579x04	0.7	NA
EW580x04	1.3	NA
EW621x04	1.5	NA
EW622x04	1.9	NA
EW623x04	1.0	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)	NA	NA	NA	NA	No shutdowns during the month of September 2007

NA = Not applicable
NGWTP = North Groundwater Treatment Plant

Summary of O&M Activities

Monthly groundwater sampling at the NGWTP was performed on 4 September 2007. Sample results are presented in Table 1. The total VOC concentration (21.16 µg/L) in the influent sample has increased since the August 2007 sample (14.02 µg/L). Note that the influent concentration for 1,1-dichlororethene (1,1-DCE) was 0.16 J µg/L, which is significantly less than 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 September 2007, approximately 24,000 gallons of treated water from the NGWTP was used for dust suppression at Travis AFB soil removal sites. However, recent measurements have shown the dissolved oxygen (DO) levels in the Duck Pond to be very low (for unrelated reasons). Therefore, as of 20 September 2007, all the treated water from the NGWTP was diverted to the Duck Pond in attempt to raise the DO concentration. The treated water was no longer used for the construction sites after 20 September 2007.

Optimization Activities

The Work Plan for Remedial Process Optimization (RPO) Actions at Sites SD031, FT004, and FT005 (Technical Memorandum, CH2M HILL, September 26, 2007) was submitted to the regulatory agencies for approval. The optimization activities in the work plan included shutting down the SD031 groundwater extraction system for rebound testing, and shutting down several groundwater extraction wells at FT004 for rebound testing.

Table 1
Summary of Groundwater Analytical Data for September 2007 – North Groundwater Treatment Plant

Constituent	Instantaneous Maximum[a] (µg/L)	Detection Limit (µg/L)	N/C	4 September 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	0.16 J	ND
cis-1,2-Dichloroethene	5.0	0.15	0	ND	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	ND	ND
1,1,2-Trichloroethane	5.0	0.32	0	ND	ND
Trichloroethene	5.0	0.16	0	21	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 Dissolved Solids (mg/L)	NE	4.7	0	NM	1,400

[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
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