Final

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

23 April 2015, 1400 Hours

Mr. Mark Smith, of the Air Force Civil Engineer Center (AFCEC) Restoration Installation Support Team (IST), conducted the Restoration Program Manager's (RPM) meeting, on 23 April 2015 at 1400 hours, in Building 248 at Travis AFB, California. Attendees included:

• Mark Smith	AFCEC/CZOW
• Glenn Anderson	AFCEC/CZOW
• Lonnie Duke	AFCEC/CZOW
• Erin Hernandez	Travis AFB 60 AMW/JA
• Dezso Linbrunner	USACE-Omaha
• William Hall	AFCEC/CZRW
• Adriana Constantinescu	California Regional Water Quality Control Board (RWQCB)
• Ben Fries	California Department of Toxic Substances Control (DTSC)
• Nadia Hollan Burke	United States Environmental Protection Agency (USEPA)
• Mike Wray	CH2M HILL

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Handouts distributed at the meeting, discussions and presentations included:

• Attachment 1	Meeting Agenda
• Attachment 2	Master Meeting and Document Schedule
• Attachment 3	SBBGWTP Monthly Data Sheet (March 2015)
• Attachment 4	CGWTP Monthly Data Sheet (March 2015)
• Attachment 5	ST018 Monthly Data Sheet (March 2015)
• Attachment 6	Presentation: Program Update: Activities Completed, In Progress and Upcoming

1. ADMINISTRATIVE

A. Previous Meeting Minutes

The 18 March 2015 RPM meeting minutes were approved and finalized as modified with two corrections provided by Ms. Burke; page 2, action item 7 change "no updates" to "29 May 2015". Same page, first paragraph under the

Master Meeting and Document Schedule, last sentence. Add “Ms. Burke will check with EPAs Quality Assurance Office”.

B. Action Item Review.

Action items from February were reviewed.

Action item 1 will remain open: AFCEC’s Travis Restoration Support Team and Travis AFB will continue to pursue opportunities for the beneficial reuse of treated water. Due date will remain TBD to ensure this action item remains visible. 23 April 2015: No updates. Ms. Burke suggested removing the sentence “AFCEC is in agreement with using Defense Environmental Restoration Account (DERA) funds under the authority of a “new-zero” energy policy for the Air Force for the beneficial reuse of treated groundwater.” stating it is redundant to action item 3. All agreed sentenced removed.

Action item 2 is open: Mr. Hall to determine the time requirements and signature process for getting the AFCEC signature on the upcoming ROD Amendments. 23 April 2015: No updates.

Action item 3 is open: Mr. Hall to ask if we can use DERA funds for the beneficial reuse of treated groundwater under AFCEC’s “net-zero energy policy”. 23 April 2015: No updates.

Action item 4 is open: Mr. Smith to provide updates on PFOS and PFOA as he becomes aware of them. 23 April 2015: Due date changed to TBD.

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

The next RPM meeting will be a teleconference, and held on Wednesday, 27 May 2015 at 0930. Some of the monthly face-to-face and teleconference times were revised to accommodate conflicts with the agencies schedules. The Master Meeting and Document Schedule will be updated to reflect the agreed upon changes at the next RPM meeting.

Travis AFB Master Document Schedule

— Site SD036 Remedial Design/Remedial Action Work Plan: Response to comments (RTC) date was changed to 20 April 2015 to reflect the actual date, the rest of the dates were changed accordingly.

— Site SS016 GW Remedial Design/Remedial Action Work Plan: The RTC due date was changed to 20 March 2015, the rest of the dates were changed accordingly.

— Site SS015 GW Remedial Design/Remedial Action Work Plan: The RTC due date was changed to 16 April 2015 to reflect the actual date, the rest of the dates were changed accordingly.

— Community Involvement Plan: All new dates.

— Site DP039 Remedial Design/Remedial Action Work Plan: The RTC meeting was changed to 23 April 2015, the rest of the dates were changed accordingly. Travis AFB is working on EPA's comments. Ms. Constantinescu said there would be no comments from the RWQCB.

— Proposed Plan for the Amendment to the NEWIOU Soil, Sediment, and Surface Water Record of Decision (ROD): The public comment period now opened; 15 April 2015 to 15 May 2015.

— Amendment to the NEWIOU Soil, Sediment, and Surface Water Record of Decision: Predraft to AF/Service Center date changed to 22 May 2015, due to a conflict with a holiday.

— Proposed Plan for the Amendment to the Soil Record of Decision for the WABOU: The public comment period now opened; 15 April 2015 to 15 May 2015.

— Amendment to the Soil Record of Decision for the WABOU: Predraft to AF/Service Center date changed to 22 May 2015, due to a conflict with a holiday.

— Potrero Hills Annex (FS, PP, and ROD): No change to the schedule.

— Site SD034 Data Gap Investigation: RTC and final due date changed to 16 April 2015 to reflect the actual date.

— Site SS014 POCO Technology Demonstration Work Plan: RTC and final dates changed to 6 May 2015.

— POCO Investigation Work Plan for Oil Water Separators: RTC and final due changed to 1 April 2015 to reflect actual date.

— Old Skeet Range PAH Delineation Report: Response to comments meeting and final due dates were changed to TDB. Travis AFB received tentative responses from the contractor. Mr. Anderson said that the skeet range does not fit the normal contamination pattern of a skeet range. Mr. Smith said that they want to extrapolate as much information from the investigation conducted by the previous contractors that did the investigation before investing more money into additional site characterization.

— Site FT005 Technology Demonstration Work Plan: Predraft to AF/Service Center was updated to reflect the actual date; no other changes made to the schedule.

— POCO Site ST032 Soil Excavation Work Plan: No change to the schedule.

— Site CG508 Site Investigation/Site Closure Request Report: Draft to Water Board date changed to 22 April 2015 to reflect the actual date; the rest of the dates were changed accordingly.

— Site ST028 POCO Work Plan: Draft to Water Board date changed to 22 April 2015 to reflect the actual dates.

— Quarterly Newsletter (April 2015): Final due date changed to 4 April 2015 to reflect the actual date.

— 2014 Annual CAMU Monitoring Report: Draft to agencies dates was changed to 15 April 2015 to reflect actual date, the rest of the dates were changed accordingly.

— 2014 Annual GRISR: Predraft to AF/Service Center was changed to 24 April 2015 to allow more time to write the document. The rest of the dates were changed accordingly.

— Site SD031 Technology Demonstration Construction Completion Report: Predraft to AF/Service Center date changed to 23 April 2015. The rest of the dates changed accordingly. This report will include the baseline sample data.

— Sites SD036 and SD037 Remedial Action Construction Completion Report: No change was made to the schedule.

— Site ST018 POCO Construction Completion Report: No change was made to the schedule.

— Travis Air Force Base Uniform Federal Policy-Quality Assurance Project Plan (UFP-QAPP): Moved to History.

— Site DP039 Lead Excavation Technical Memorandum: Moved to History.

2. CURRENT PROJECTS

Treatment Plant Operation and Maintenance Update

South Base Boundary Groundwater Treatment Plant, March 2015 (see Attachment 3)

The South Base Boundary Groundwater Treatment Plant (SBBGWTP) performed at 100% uptime, and 3.6 million gallons of groundwater were extracted and treated during the month of March 2015. All of the treated water was discharged to Union Creek. The average flow rate for the SBBGWTP was 75.33 gallons per minute (gpm). Electrical power usage was 8,760 kWh, and approximately 12,001 pounds of CO_2 were created (based on DOE calculation). Approximately 1.29 pounds of volatile organic compounds (VOCs) were removed in March. The total mass of VOCs removed since startup of the system is 458.6 pounds.

Optimization Activities: No optimization activities are reported for the month of March.

Central Groundwater Treatment Plant, March 2015 (see Attachment 4)

The Central Groundwater Treatment Plant (CGWTP) performed at 100% uptime with approximately 1.43 million gallons of groundwater extracted and treated during the month of March 2015. All treated water was discharged to the storm drain. The average flow rate for the CGWTP was 29.4 gpm. Electrical power usage was 2,807 kWh for all equipment connected to the Central Plant, and approximately 3,846 pounds of CO_2 were generated. Approximately 3.55 pounds of VOCs were removed from groundwater by the treatment plant in March. The total mass of VOCs removed since the startup of the system is 11,400 pounds.

Optimization Activities for CGWTP: No optimization activities are reported for the month of March.

LF007C Groundwater Treatment Plant, March 2015

The LF007C Groundwater Treatment Plant was offline as of 2 December 2014, in accordance with the Biological Opinion from the US Fish and Wildlife Service, due to the presence of standing water in the vernal pools. Because the extraction system remains off, waiting for the vernal pool to dry, a monthly report was not prepared.

Site ST018 Groundwater (MTBE) Treatment Plant, March 2015 (see Attachment 5)

The Site ST018 (MTBE) Treatment Plant (ST018 GWTP) performed at 100% uptime with approximately 236,530 gallons of groundwater extracted and treated during the month of March 2015. All treated water was diverted to the sanitary sewer. The average flow rate for the ST018 GWTP was 4.97 gpm. Electrical power usage for the month was 144 kWh for all equipment connected to the ST018 GWTP, which equates to the creation of approximately 197 pounds of CO_2. Approximately 0.09 pounds of BTEX, MTBE and TPH were removed from groundwater in March from the treatment plant. Approximately 0.09 pounds of MTBE were removed from groundwater. The total BTEX, MTBE and TPH mass removed since the startup of the system is 31.2 pounds. And the total MTBE mass removed since startup of the system is 7.0 pounds.

Note: Electrical power use at the ST018 GWTP is only for the alarm system and a pump that pushes water through the GAC vessels for treatment. The extraction pumps in the system are all solar powered.

Optimization Activities for ST018: No optimization activities to report for the month of March.

Ms. Burke requested a distinction in the monthly reports when an extraction well is reported offline to indicate if it is due to repairs needed or, by design.

Program Update: Activities Completed, In Progress and Upcoming (see Attachment 6)

Mr. Wray reported on the status of field work and documents which are completed, in progress, and upcoming. Updates from the briefing this month included:

Newly Completed Documents: Proposed Plan for ROD Amendment to WABOU Soil ROD, Proposed Plan for ROD Amendment to NEWIOU Soil, Sediment, and Surface Water ROD, SD034 Data Gap Investigation Work Plan, POCO Investigation Work Plan for Oil-Water Separators.

Newly Completed Field Work: SS015 Well Installation, SS016 Well Installation, Well Development (SD036 & SD037).

In-Progress Documents (CERCLA): TS060 Old Skeet Range PAH Delineation Report, SD036 RD/RA Work Plan, SS016 GW RD/RA Work Plan, SS015 GW RD/RA Work Plan, Sediment, & Surface Water ROD, DP039 RD/RA Work Plan, FT005 Technology Demonstration Work Plan, 2014 Annual CAMU Monitoring Report.

In-Progress Documents (POCO): SS014 POCO Technology Demonstration Work Plan, POCO Investigation Work Plan for Oil-Water Separators, ST032 POCO Soil Excavation Work Plan, ST028 POCO Work Plan.

In-Progress Field Work: SD036 Well Installation, Well Development (SS015, SS016), Baseline Sampling (SS015, SS016), SS014 Data Gap Investigation.

Upcoming Documents (CERCLA): Community Involvement Plan, 2014 GRISR, SD031 Technology Demonstration Construction Completion Report, Sites SD036 and SD037 Remedial Action Construction Completion Report.

Upcoming Documents (POCO): GC508 Site Investigation/Site Closure Request Report, ST018 POCO Construction Completion Report.

Field Work Planned (CERCLA): SD037 EVO Injection (April), SD034 Data Gaps Investigation (April), GRIP Sampling, annual (May), FT004 Well Installation (May), SS015 EVO Injection (May), SS016 EVO Injection (May), TA500 Data Gaps Investigation (May), FT005 Injection Well Installation (May), FT004 Trench/Conveyance/Power Installation (June), DP039 Well Installation (June), FT004 EVO Injection (June), SS030 Trench/Conveyance/Power Installation (June).

Field Work Planned (POCO): ST018 Well/Trench Installation (April), Oil Water Separators Site Investigations (April).

4. New Action Item Review

None

5. PROGRAM/ISSUES/UPDATE

None

6. Action Items

Item #	Responsible	Action Item Description	Due Date	Status
1.	Travis AFB	AFCEC's Travis Restoration Team and Travis AFB will continue to pursue opportunities for the beneficial reuse of treated water. Current possibilities include: Rerouting treated water from the central plant to the duck pond or as irrigation as an energy reduction project with the intent of reducing on-base water usage. Due date will remain TBD to ensure this action item remains visible.	TBD	Open
2.	William Hall	Mr. Hall to determine the time requirements and signature process for getting the AFCEC signature on the upcoming ROD Amendments.	TBD	Open
3.	William Hall	Mr. Hall to ask if we can use DERA funds for the beneficial reuse of treated groundwater under AFCEC's "net-zero energy policy".	TBD	Open
4.	Mark Smith	Mr. Smith to provide updates on PFOS and PFOA as he becomes aware of them.	TDB	Open

TRAVIS AIR FORCE BASE
ENVIRONMENTAL RESTORATION PROGRAM
RESTORATION PROGRAM MANAGER'S MEETING
BLDG 248 Conference Room
23 April 2015, 2:00 P.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
   B. FIELD WORK UPDATE (FIELD MANAGER PERSPECTIVE)

3. PRESENTATIONS

   A. PROGRAM UPDATE:
      DOCUMENTS & ACTIVITIES COMPLETED, IN PROGRESS AND UPCOMING

4. NEW ACTION ITEM REVIEW

5. PROGRAM/ISSUES/UPDATE

   A. MEETING SCHEDULE

NOTES: NONE

(2015)
Annual Meeting and Teleconference Schedule

Monthly RPM Meeting[1] (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.)
01-21-15	—	—
02-18-15	—	—
—	03-18-15	—
04-23-15 (Thursday 2:00 PM)	—	04-23-15
—	05-27-15	—
06-17-15	—	—
—	07-15-15	—
08-19-15	—	—
—	09-16-15	—
10-22-15 (Thursday 2:00 PM)	—	10-22-15
—	11-18-15	—
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[1] Note: Meetings will be held the third Wednesday of each month unless otherwise noted.

As of : 04-23-2015

Travis AFB Master Meeting and Document Schedule

PRIMARY DOCUMENTS		
Life Cycle	**Site SD036 Remedial Design/Remedial Action Work Plan Travis AFB, Glenn Anderson CH2M HILL, Leslie Royer**	**Site SS016 GW Remedial Design/Remedial Action Work Plan Travis AFB, Glenn Anderson CH2M HILL, Leslie Royer**
Scoping Meeting	NA	**NA**
Predraft to AF/Service Center	08-23-14	10-31-14
AF/Service Center Comments Due	09-05-14	11-17-14
Draft to Agencies	01-16-15	12-03-14
Draft to RAB	01-16-15	12-03-14
Agency Comments Due	02-16-15	01-08-15
Response to Comments Meeting	**02-18-15**	**01-21-15**
Agency Concurrence with Remedy	NA	NA
Public Comment Period	NA	NA
Public Meeting	**NA**	**NA**
Response to Comments Due	04-20-15	03-20-15
Draft Final Due	04-20-15	03-20-15
Final Due	05-20-15	05-08-15

Travis AFB Master Meeting and Document Schedule

PRIMARY DOCUMENTS			
Life Cycle	**Site SS015 GW Remedial Design/Remedial Action Work Plan** **Travis AFB, Glenn Anderson** **CH2M HILL, Leslie Royer**	**Community Involvement Plan** **Travis AFB, Mark Smith** **CH2M HILL, Tricia Carter**	**Site DP039 Remedial Design/Remedial Action Work Plan** **Travis AFB, Glenn Anderson** **CH2M HILL, Leslie Royer**
Scoping Meeting	**NA**	**NA**	**NA**
Predraft to AF/Service Center	11-20-14	NA	01-15-14
AF/Service Center Comments Due	12-08-14	NA	01-29-15
Draft to Agencies	01-20-15	05-29-15	03-03-15
Draft to RAB	01-20-15	05-29-15	03-03-15
Agency Comments Due	02-20-15	06-29-15	04-02-15
Response to Comments Meeting	**02-26-15**	**07-15-15**	**04-23-15**
Agency Concurrence with Remedy	NA	NA	NA
Public Comment Period	NA	NA	NA
Public Meeting	**NA**	**NA**	**NA**
Response to Comments Due	04-16-15	07-29-15	04-30-15
Draft Final Due	04-16-15	07-29-15	04-30-15
Final Due	05-18-15	08-28-18	06-01-15

Travis AFB Master Meeting and Document Schedule

PRIMARY DOCUMENTS				
Life Cycle	**Proposed Plan for the Record of Decision Amendment to the NEWIOU Soil, Sediment, and Surface Water Record of Decision Travis AFB, Glenn Anderson CH2M HILL, Tricia Carter**	**Record of Decision Amendment to the NEWIOU Soil, Sediment, and Surface Water Record of Decision Travis AFB, Glenn Anderson CH2M HILL, Loren Krook**	**Proposed Plan for the Record of Decision Amendment to the Soil Record of Decision for the WABOU Travis AFB, Glenn Anderson CH2M HILL, Tricia Carter**	**Record of Decision Amendment to the Soil Record of Decision for the WABOU Travis AFB, Glenn Anderson CH2M HILL, Loren Krook**
Scoping Meeting	**NA**	**TBD**	**NA**	**TBD**
Predraft to AF/Service Center	11-05-14	05-22-15	11-05-14	05-22-15
AF/Service Center Comments Due	11-26-14	06-24-15	11-26-14	06-24-15
Draft to Agencies	12-19-14	07-08-15	12-19-14	07-08-15
Draft to RAB	12-19-14	07-08-15	12-19-14	07-08-15
Agency Comments Due	01-19-15	08-07-15	01-19-15	08-07-15
Response to Comments Meeting	**01-21-15**	**08-19-15**	**01-21-15**	**08-19-15**
Agency Concurrence with Remedy	NA	10-02-15	NA	10-02-15
Public Comment Period	4-15-15 to 5-15-15	NA	4-15-15 to 5-15-15	NA
Public Meeting	**4-23-15**	**NA**	**4-23-15**	**NA**
Response to Comments Due	03-17-15	09-02-15	03-17-15	09-02-15
Draft Final Due	03-17-15	09-02-15	03-17-15	09-02-15
Final Due	04-16-15	10-02-15	04-16-15	10-02-15

Travis AFB Master Meeting and Document Schedule

PRIMARY DOCUMENTS			
	Potrero Hills Annex Travis, Glenn Anderson		
Life Cycle	**FS**	**Proposed Plan**	**ROD**
Scoping Meeting	**180 days after Water Board Order Rescinded**	**+470 days**	**+735 days**
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
Response to Comments Meeting	**+ 405 days**	**+665 days**	**+ 1110 days**
Agency Concurrence with Remedy	NA	NA	+ 1130 days
Public Comment Period	NA	+735 to 765 days	NA
Public Meeting	**NA**	**+745 days**	**NA**
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

Travis AFB Master Meeting and Document Schedule

SECONDARY DOCUMENTS				
Life Cycle	**Site SD034 Data Gap Investigation Work Plan Travis AFB, Lonnie Duke CH2M HILL, Leslie Royer**	**Site SS014 POCO Technology Demonstration Work Plan Travis AFB, Lonnie Duke CH2M HILL, Leslie Royer**	**POCO Investigation Work Plan for Oil Water Separators Travis AFB, Lonnie Duke CH2M HILL, Ashley Shaddy**	**Old Skeet Range PAH Delineation Report Travis AFB, Glenn Anderson Bay West, Steve Thornton**
Scoping Meeting	**NA**	**NA**	**NA**	**NA**
Predraft to AF/Service Center	10-01-14	12-05-14	01-05-15	11-24-14
AF/Service Center Comments Due	10-15-14	12-19-14	01-19-15	12-02-14
Draft to Agencies	11-06-14	02-04-15	02-06-15	01-13-15
Draft to RAB	11-06-14	02-04-15	02-06-15	01-13-15
Agency Comments Due	12-05-14	03-06-15	03-09-15	02-12-15
Response to Comments Meeting	**12-19-14**	**03-18-15**	**03-18-15**	**02-18-15**
Response to Comments Due	04-16-15	05-06-15	04-01-15	TBD
Draft Final Due	NA	NA	NA	NA
Final Due	04-16-15	05-06-15	04-01-15	TBD
Public Comment Period	NA	NA	NA	NA
Public Meeting	**NA**	**NA**	**NA**	**NA**

Travis AFB Master Meeting and Document Schedule

SECONDARY DOCUMENTS				
Life Cycle	**Site FT005 Technology Demonstration Work Plan** **Travis AFB, Glenn Anderson** **CH2M HILL, Leslie Royer**	**POCO Site ST032 Soil Excavation Work Plan** **Travis AFB, Lonnie Duke** **CH2M HILL, Doug Berwick**	**Site CG508 POCO Site Investigation/Site Closure Request Report** **Travis AFB, Lonnie Duke** **CH2M HILL, Ashley Shaddy**	**POCO Site ST028 Data Gap Investigation Work Plan** **Travis AFB, Lonnie Duke** **CH2M HILL, Doug Berwick**
Scoping Meeting	**NA**	**NA**	**NA**	**NA**
Predraft to AF/Service Center	02-19-15	02-03-15	03-25-15	03-18-15
AF/Service Center Comments Due	03-05-15	02-17-15	04-08-15	04-01-15
Draft to Agencies	03-17-15	03-12-15	04-22-15	04-22-15
Draft to RAB	03-17-15	03-12-15	04-22-15	04-22-15
Agency Comments Due	04-16-15	04-13-15	05-22-15	05-22-15
Response to Comments Meeting	**04-23-15**	**04-23-15**	**05-27-15**	**05-27-15**
Response to Comments Due	05-07-15	05-12-15	06-16-15	06-12-15
Draft Final Due	NA	NA	NA	NA
Final Due	05-07-15	05-12-15	06-16-15	06-12-15
Public Comment Period	NA	NA	NA	NA
Public Meeting	**NA**	**NA**	**NA**	**NA**

Travis AFB Master Meeting and Document Schedule

INFORMATIONAL DOCUMENTS			
Life Cycle	**Quarterly Newsletters (April 2015) Travis, Glenn Anderson**	**2014 Annual CAMU Monitoring Report Travis AFB, Lonnie Duke CH2M HILL, Ashley Shaddy**	**2014 Annual GRISR Travis AFB, Lonnie Duke CH2M HILL, Leslie Royer**
Scoping Meeting	**NA**	**NA**	**NA**
Predraft to AF/Service Center	NA	03-17-15	04-24-15
AF/Service Center Comments Due	NA	03-31-15	05-08-15
Draft to Agencies	03-24-15	04-15-15	05-22-15
Draft to RAB	NA	04-15-15	05-22-15
Agency Comments Due	04-10-15	05-15-15	07-21-15
Response to Comments Meeting	**TBD**	**05-27-15**	**08-19-15**
Response to Comments Due	04-04-15	06-10-15	09-02-15
Draft Final Due	NA	NA	NA
Final Due	04-04-15	06-10-15	09-22-15
Public Comment Period	NA	NA	NA
Public Meeting	**NA**	**NA**	**NA**

Travis AFB Master Meeting and Document Schedule

INFORMATIONAL DOCUMENTS			
Life Cycle	Site SD031 Technology Demonstration Construction Completion Report Travis AFB, Lonnie Duke CH2M HILL, Ashley Shaddy	Sites SD036 and SD037 Remedial Action Construction Completion Report Travis AFB, Glenn Anderson CH2M HILL, Ashley Shaddy	Site ST018 POCO Construction Completion Report Travis AFB, Lonnie Duke CH2M HILL, Ashley Shaddy
Scoping Meeting	**NA**	**NA**	**NA**
Predraft to AF/Service Center	04-23-15	06-17-15	06-01-15
AF/Service Center Comments Due	05-07-15	07-01-15	06-15-15
Draft to Agencies	05-21-15	07-15-15	06-29-15
Draft to RAB	05-21-15	07-15-15	06-29-15
Agency Comments Due	06-22-15	08-17-15	07-29-15
Response to Comments Meeting	**07-15-15**	**09-02-15**	**08-19-15**
Response to Comments Due	07-29-15	09-16-15	09-04-15
Draft Final Due	NA	NA	NA
Final Due	07-29-15	09-16-15	09-04-15
Public Comment Period	NA	NA	NA
Public Meeting	**NA**	**NA**	**NA**

Travis AFB Master Meeting and Document Schedule

HISTORY	
Life Cycle	Travis Air Force Base Uniform Federal Policy-Quality Assurance Project Plan Travis, Glenn Anderson CH2M HILL, Bernice Kidd
Scoping Meeting	**NA**
Predraft to AF/Service Center	**05-30-14**
AF/Service Center Comments Due	06-13-14
Draft to Agencies	07-22-14
Draft to RAB	07-22-14
Agency Comments Due	08-20-14
Response to Comments Meeting	**10-23-14**
Agency Concurrence with Remedy	NA
Public Comment Period	NA
Public Meeting	**NA**
Response to Comments Due	11-14-14
Draft Final Due	11-14-14
Final Due	03-11-15

Travis AFB Master Meeting and Document Schedule

HISTORY	
Life Cycle	**Site DP039 Lead Excavation Technical Memorandum** **Travis AFB, Glenn Anderson** **CH2M HILL, Loren Krook**
Scoping Meeting	**NA**
Predraft to AF/Service Center	06-02-14
AF/Service Center Comments Due	06-16-14
Draft to Agencies	07-01-14
Draft to RAB	07-01-14
Agency Comments Due	07-31-14
Response to Comments Meeting	**10-23-14**
Response to Comments Due	02-26-15
Draft Final Due	NA
Final Due	02-26-15
Public Comment Period	NA
Public Meeting	**NA**

South Base Boundary Groundwater Treatment Plant Monthly Data Sheet

Report Number: 175 **Reporting Period: 27 February 2015 – 01 April 2015** **Date Submitted: 21 April 2015**

This monthly data sheet presents information regarding the South Base Boundary Groundwater Treatment Plant (SBBGWTP) and associated remedial process optimization (RPO) activities.

System Metrics

Table 1 presents operational data from the March 2015 reporting period.

Table 1 – Operations Summary – March 2015

Initial Data Collection:	02/27/2015 12:30	**Final Data Collection:**	04/01/2015 13:20
Operating Time: **SBBGWTP:**	793 hours	Percent Uptime: **SBBGWTP:**	100%
Electrical Power Usage: **SBBGWTP:**	8,760 kWh (12,001 lbs CO_2 generated[a])		
Gallons Treated: **3.6 million gallons**		Gallons Treated Since July 1998: **885 million gallons**	
Volume Discharged to Union Creek: **3.6 million gallons**			
VOC Mass Removed: **1.29 lbs**[b]		VOC Mass Removed Since July 1998: **458.6 lbs**	
Rolling 12-Month Cost per Pound of Mass Removed: $3,880[c]			
Monthly Cost per Pound of Mass Removed: $2,630			

lbs = pounds

[a] Based on Department of Energy estimate that 1 kilowatt hour generated produces 1.37 pounds of GHG.

[b] Calculated using March 2015 EPA Method SW8260B analytical results.

[c] Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the system.

Table 2 presents individual extraction well flow rates along with the average system flow during the monthly reporting period.

Table 2 – SBBGWTP Average Flow Rate (gpm)[a,b]

FT005[b]				SS029		SS030	
EW01x05	Offline	EW736x05	Offline	EW01x29	1.7	EW01x30	14.2
EW02x05	1.9	EW737x05	Offline	EW02x29	2.7	EW02x30	3.6
EW03x05	Offline	EW742x05	Offline	EW03x29	2.0	EW03x30	2.2
EW731x05	Offline	EW743x05	Offline	EW04x29	8.7	EW04x30	11.6
EW732x05	Offline	EW744x05	Offline	EW05x29	2.9	EW05x30	1.6
EW733x05	Offline	EW745x05	Offline	EW06x29	4.7	EW06x30	Dry
EW734x05	Offline	EW746x05	Offline	EW07x29	1.1	EW711x30	2.7
EW735x05	0.0						
FT005 Total:	**1.9**			**SS029 Total:**	**23.8**	**SS030 Total:**	**35.9**

SBBGWTP Average Monthly Flow[c]: 75.33 gpm

[a] Extraction well flow rates are based on instantaneous weekly readings collected at the end of the month.
[b] Most extraction wells at FT005 were taken offline 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.*
[c] The average SBBGWTP groundwater flow rate was calculated using the Union Creek Discharge Totalizer and dividing it by the total time in the reporting period.
[d] Transmission issues, flowrate not recorded
gpm – gallons per minute
SBBGWTP – South Base Boundary Groundwater Treatment Plant

Table 3 presents a summary of system shutdowns during the monthly reporting period.

Table 3 – Summary of System Shutdowns

Location	Shutdown[a]		Restart[a]		Cause
	Date	Time	Date	Time	
SBBGWTP	NA	--	NA	--	

-- = Time not recorded
[a] Shutdown and restart times estimated based on field notes.
NA = not applicable
SBBGWTP = South Base Boundary Groundwater Treatment Plant

Summary of O&M Activities

Analytical data from the March 2015 sampling event are presented in Table 4. The total VOC concentration (43.3 µg/L) in the influent sample increased from the February 2015 sample results (36.15 µg/L). Cis-1,2-DCE (2.5 µg/L) and TCE (40.8 µg/L) were detected at the influent sampling location and at the midpoint sampling location (3 µg/L) and TCE (1 µg/L); no other contaminants were detected in the midpoint sample. The concentration of cis-1,2-DCE has increased at the midpoint location since the December 2014 sampling event (from 2.3 µg/L). The detections of cis-1,2-DCE at the midpoint location are indicative of approaching breakthrough conditions. A carbon change out of the primary carbon vessel is scheduled to be completed on 8 April 2015. No contaminants were detected at the effluent sample location.

Figure 1 presents a plot of influent concentrations and average flow at the SBBGWTP over the past twelve (12) months. The average flow rate at the SBBGWTP decreased slightly in March 2015 to 75.33 gpm from the February 2015 flowrate of 75.78 gpm.

Extraction well EW04x30 has been offline since November 2014 due to a failure of the well pump. Troubleshooting in February 2015 included verifying the integrity of the power wiring, locating the problem area, and re-splicing power wiring connections. Extraction well EW04x30 was brought back on line in March 2015.

Well EW734x05 was off line for most of March 2015 due to a repeatedly tripped circuit breaker for that extraction well pump. The breaker was switched out, but continued to trip. Further troubleshooting will continue in April 2015 to identify and fix the problem and maintain consistent run-time.

Optimization Activities

No optimization activities were performed in March 2015.

Sustainability

Travis AFB is committed to decreasing the amount of GHG produced directly (waste streams discharging GHG) or indirectly (GHG produced as related to electrical energy consumption) from all systems across Travis AFB. Travis AFB continues to optimize each treatment plant to reduce the amount of electrical energy consumed, and to implement sustainable treatment plant optimization programs, such as taking extraction pumps off line that are no longer necessary for contaminant plume capture.

Figure 2 presents the historical GHG production from the SBBGWTP. The SBBGWTP produced approximately 12,001 pounds of GHG during March 2015. This amount is typical for the SBBGWTP with uptime at or around 100 percent; 8,549 pounds of GHG was produced in February 2015, which also had an uptime of 100 percent.

TABLE 4
Summary of Groundwater Analytical Data For March 2015 – South Base Boundary Groundwater Treatment Plant

Constituent	Instantaneous Maximum* (µg/L)	Detection Limit (µg/L)	N/C	March 2015 (µg/L)		
				Influent	Midpoint	Effluent
Halogenated Volatile Organics						
Carbon Tetrachloride	0.5	0.14	0	ND	ND	ND
Chloroform	5.0	0.16	0	0.24 J	0.2 J	ND
1,1-Dichloroethane	5.0	0.50	0	ND	ND	ND
1,2-Dichloroethane	0.5	0.15	0	0.41 J	0.6	ND
1,1-Dichloroethene	5.0	0.19	0	ND	ND	ND
cis-1,2-Dichloroethene	5.0	0.19	0	2.1	2.3	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	33.4	0.44 J	ND
Vinyl Chloride	0.5	0.18	0	ND	ND	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	6 J	NM	NM

* In accordance with Appendix B of the Travis AFB South Base Boundary Groundwater Treatment Plant Operations and Maintenance Manual (CH2M HILL, 2004).

Notes:

J = analyte concentration is considered an estimated value due to a detected concentration value between the reporting limit and method detection limit for the contaminant
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

Figure 1
SBBGWTP Total VOC Influent Concentrations and Average Flowrate
Twelve Month History
Travis Air Force Base, California

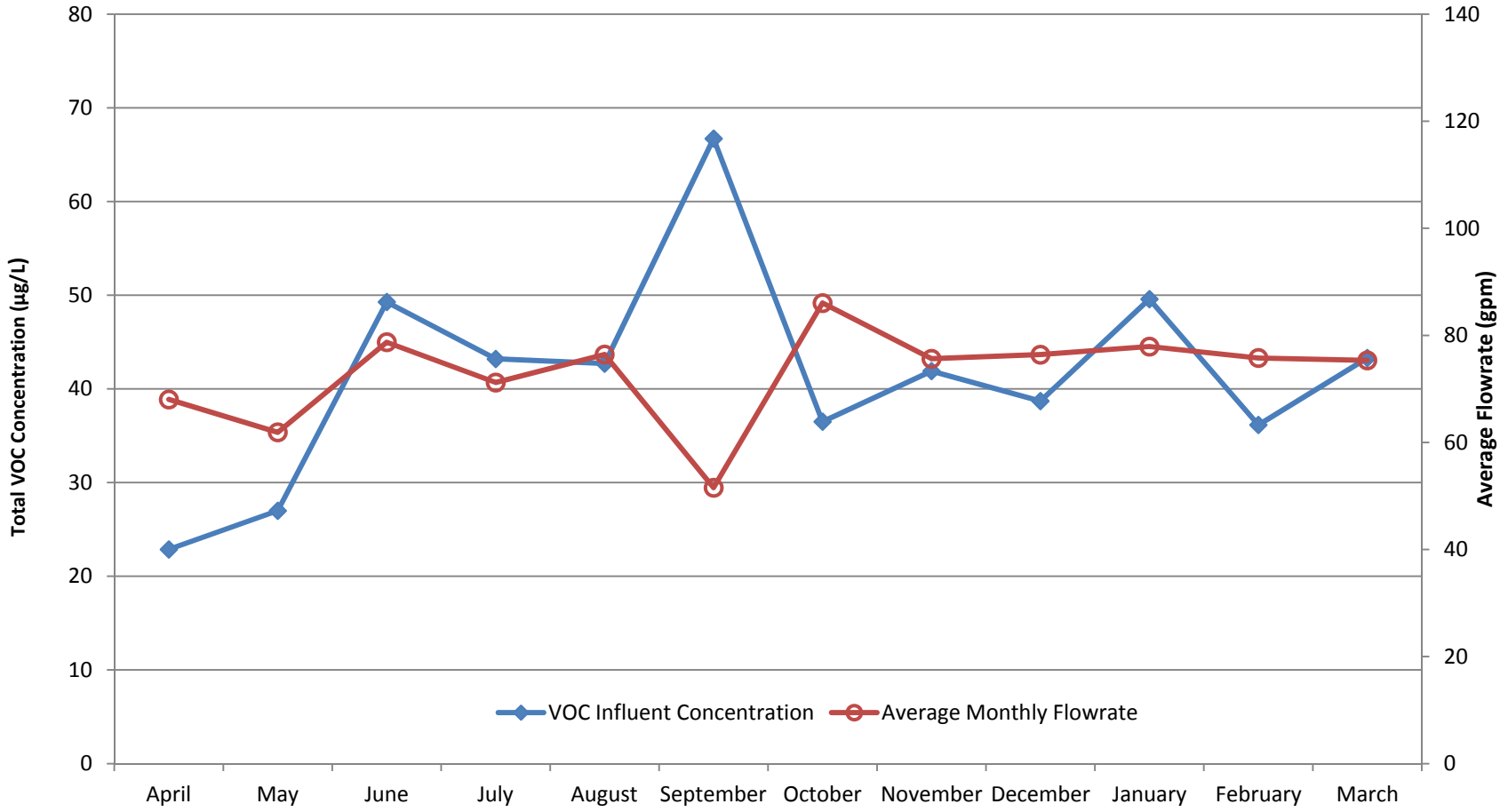
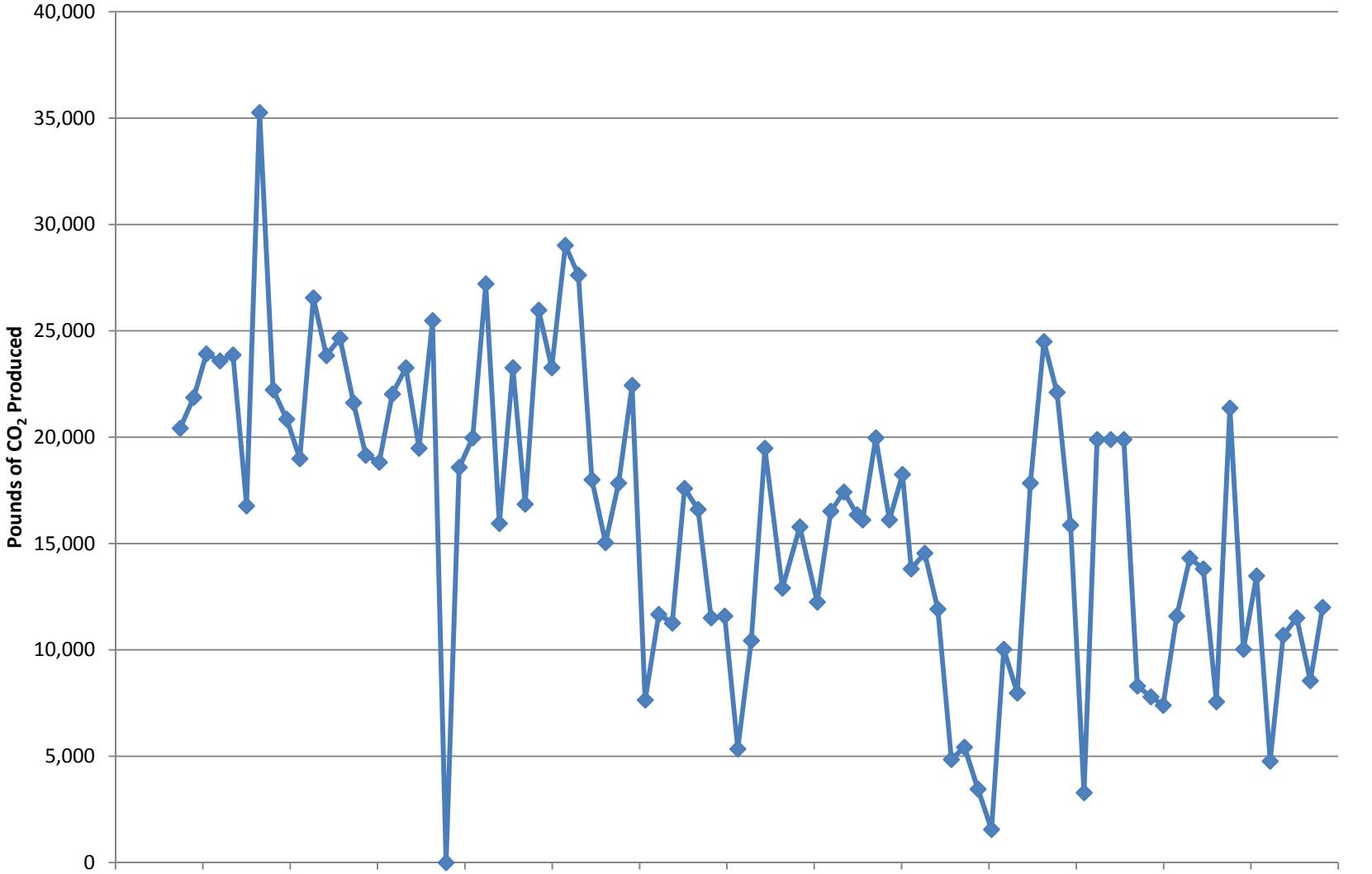


Figure 2

Equivalent Pounds of CO2 Produced by the South Base Boundary Groundwater Treatment Plant



Central Groundwater Treatment Plant Monthly Data Sheet

Report Number: 188 **Reporting Period: 27 February 2015 – 01 April 2015** **Date Submitted: 21 April 2015**

This monthly data sheet presents information regarding the Central Groundwater Treatment Plant (CGWTP) and its associated technology demonstrations. The ongoing technology demonstrations related to the CGWTP include various emulsified vegetable oil (EVO) injections and two (2) bioreactor treatability studies.

System Metrics

Table 1 presents operational data from the March 2015 reporting period.

Table 1 – Operations Summary – March 2015

Initial Data Collection:	2/27/2015 13:30	**Final Data Collection:**	4/01/2015 14:30		
Operating Time:		Percent Uptime:		Electrical Power Usage:	
CGWTP:	793 hours	**CGWTP:**	100%	**CGWTP:**	2,807 kWh (3,846 lbs CO_2 generated[a])
WTTP:	Water: 0 hours Vapor: 0 hours	**WTTP:**	Water: 0% Vapor: 0%	**WTTP:**	0 kWh

Gallons Treated: **1.43 million gallons**

Gallons Treated Since January 1996: **509 million gallons**

VOC Mass Removed:

3.55 lbs[b] (groundwater only)

0 lbs (vapor only)

VOC Mass Removed Since January 1996:

2,714 lbs from groundwater

8,686 lbs from vapor

Rolling 12-Month Cost per Pound of Mass Removed: $1,128[c]

Monthly Cost per Pound of Mass Removed: $841

[a] Based on Department of Energy estimate that 1 kilowatt hour generated produces 1.37 pounds of GHG.
[b] Calculated using March 2015 EPA Method SW8260B analytical results.
[c] Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the CGWTP and are reported based on the calendar month.

Table 2 presents individual extraction well flow rates during the monthly reporting period.

Table 2 – CGWTP Average Flow Rates[a]

Location	Average Flow Rate	
	Groundwater (gpm)	Soil Vapor (scfm) [b]
EW01x16	16.7[c]	Offline
EW02x16	6.9[c]	Offline
EW03x16	1.0[d]	Offline
EW605x16	6.8[d]	Offline
EW610x16	3.0[c]	Offline
CGWTP	29.4	--
WTTP	--[e]	Offline

[a] Flow rates calculated by dividing total gallons processed by system operating time for the month.
[b] No soil vapor was treated in March 2015.
[c] Flow rate based on instantaneous, end of the month reading for March 2015.
[d] Flow rate estimated. Flow rate not being transmitted to SCADA, or pump not running at the time of system reads, though the wells are operational.
[e] Groundwater extraction at sites feeding into the WTTP is shut down in accordance with the GW Record of Decision (ROD).
gpm = gallons per minute
-- = not applicable/not available
scfm = standard cubic feet per minute

Table 3 presents a summary of shutdowns during the monthly reporting period.

Table 3 – Summary of System Shutdowns

Location	Shutdown[a]		Restart[a]		Cause
	Date	Time	Date	Time	
CGWTP (Groundwater)					
	NA	--			
WTTP					
	NA	--			

-- = Time not recorded
[a] Shutdown and restart times estimated based on field notes
CGWTP = Central Groundwater Treatment Plant
NA = not applicable
WTTP = West Transfer Treatment Plant

Summary of O&M Activities

Monthly groundwater samples were collected at the CGWTP on 17 March 2015. Sample results are presented in Table 4. The total VOC concentration (297.10 µg/L) in the March 2015 influent sample has increased slightly since the February 2015 sample (295.33 µg/L) was collected. Concentrations of cis-1,2-DCE (56.4 µg/L), trans-1,2-DCE (2.7 µg/L), and TCE (238 µg/L) were detected at the influent sampling location. None of these constituents were detected at the midpoint or effluent sampling locations.

Vinyl chloride has been detected below the effluent limitation of 0.5 µg/L in all sampling locations in the past few months. However, no vinyl chloride was detected in any CGWTP sampling location during the March sampling event. The total dissolved solids (TDS) concentration increased from 7 J mg/L in February 2015 to 828 mg/L in March 2015.

Figure 1 presents a plot of influent concentrations (total VOCs) and the influent flow rate at the CGWTP versus time for the past twelve (12) months. The average flow rate through the treatment plant decreased slightly in March 2015 from the flowrate measured in February 2015 (from 30.45 gpm to 30.12 gpm).

The Site DP039 bioreactor continues to operate in a "pulsed mode" in order to improve the rate of remediation and to preserve the amount of total organic carbon being produced within the bioreactor. The "pulsed mode" operation lapsed in March 2015 due to the system being inadvertently left operational. The extraction well feeding the bioreactor remained online on 27 March 2015 and was taken off line on 27 March 2015. The "pulsed mode" operation will resume its normal schedule in April 2015.

Optimization Activities

No optimization activities occurred at the CGWTP in March 2015.

Sustainability

Travis AFB is committed to decreasing the amount of GHG produced directly (waste streams discharging GHG) or indirectly (GHG produced as related to electrical energy consumption) from all systems across Travis AFB. Travis AFB continues to optimize each treatment plant to reduce the amount of electrical energy consumed, and to implement sustainable treatment plant optimization programs, such as bioreactors and EVO injection well networks.

Figure 2 presents the historical GHG production from the systems associated with the CGWTP. The CGWTP produced approximately 3,846 pounds of GHG during March 2015. This is a decrease from the amount produced in February 2015 (approximately 4,107 pounds) which is the consistent with the decreased system runtime.

TABLE 4
Summary of Groundwater Analytical Data for March 2015 – Central Groundwater Treatment Plant

Constituent	Instantaneous Maximum* (µg/L)	Detection Limit (µg/L)	N/C	17 March 2015 (µg/L)			
				Influent	After Carbon 1 Effluent	After Carbon 2 Effluent	System Effluent
Halogenated Volatile Organics							
Carbon Tetrachloride	0.5	0.14	0	ND	ND	ND	ND
Chloroform	5.0	0.16	0	ND	ND	ND	ND
cis-1,2-Dichloroethene	5.0	0.19	0	56.4	ND	ND	ND
1,1-Dichloroethane	5.0	0.5	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	ND	ND	ND	ND
Methylene Chloride	5.0	0.66	0	ND	ND	ND	ND
MTBE	1.0	0.5	0	ND	ND	ND	ND
Tetrachloroethene	5.0	0.21	0	ND	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	0.19	0	238	ND	ND	ND
trans-1,2-Dichloroethene	5.0	0.33	0	2.7	ND	ND	ND
Vinyl Chloride	0.5	0.18	0	ND	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	0.23 – 0.5	0	ND	ND	ND	ND
Other							
Total Dissolved Solids (mg/L)	NA	10	0	828	NM	NM	NM

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

Notes:

J = analyte concentration is considered an estimated value due to a detected concentration value between the reporting limit and method detection limit for the contaminant

N/C = number of samples out of compliance with discharge limits

ND = not detected

NM = not measured

µg/L = micrograms per liter

mg/L = milligrams per liter

Table 5 presents a twelve month summary of the Site DP039 bioreactor recirculation well pulsing dates.

Table 5 – Summary of DP039 Bioreactor "Pulsed Mode" Operations

Location	Pulse On Start Date	Pulse Off Start Date
MW750x39	14 March 2014	28 March 2014
	22 April 2014	28 April 2014
	12 May 2014	12 May 2014
	6 June 2014	20 June 2014
	3 July 2014	24 July 2014
	01 August 2014	15 August 2014
	01 September 2014	12 September 2014
	26 September 2014	30 September 2014[a]
	24 October 2014	7 November 2014
	21 November 2014	4 December 2014
	19 December 2014	January 2, 2015
	16 January 2015	29 January 2015
	13 February 2015	27 March 2015

[a] = DP039 Bioreactor turned off on 30 September 2014 to replace hose.
CGWTP = Central Groundwater Treatment Plant
MW = Monitoring Well

Figure 1
CGWTP Total VOC Influent Concentrations and Average Flowrate
Twelve Month History
Travis Air Force Base, California

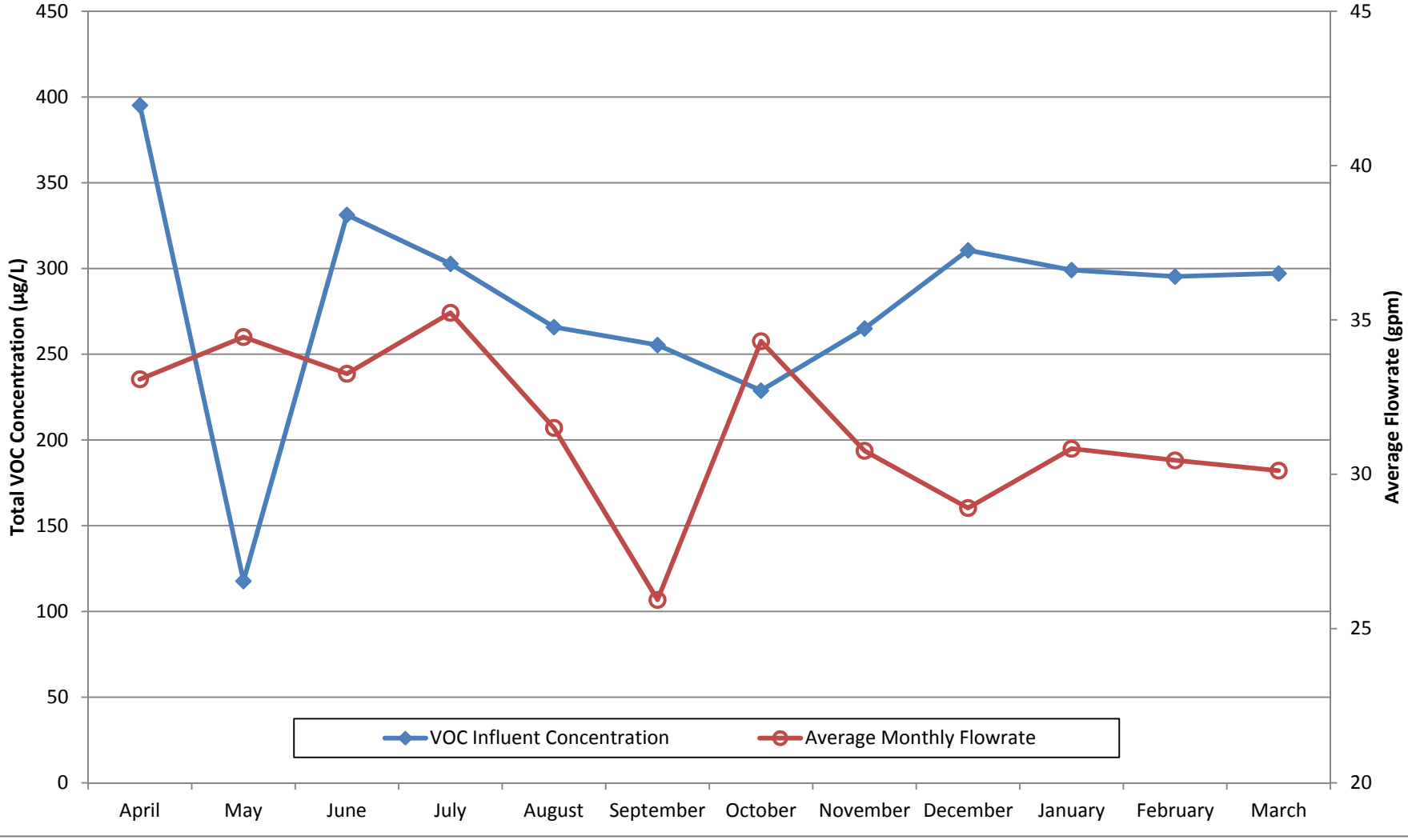
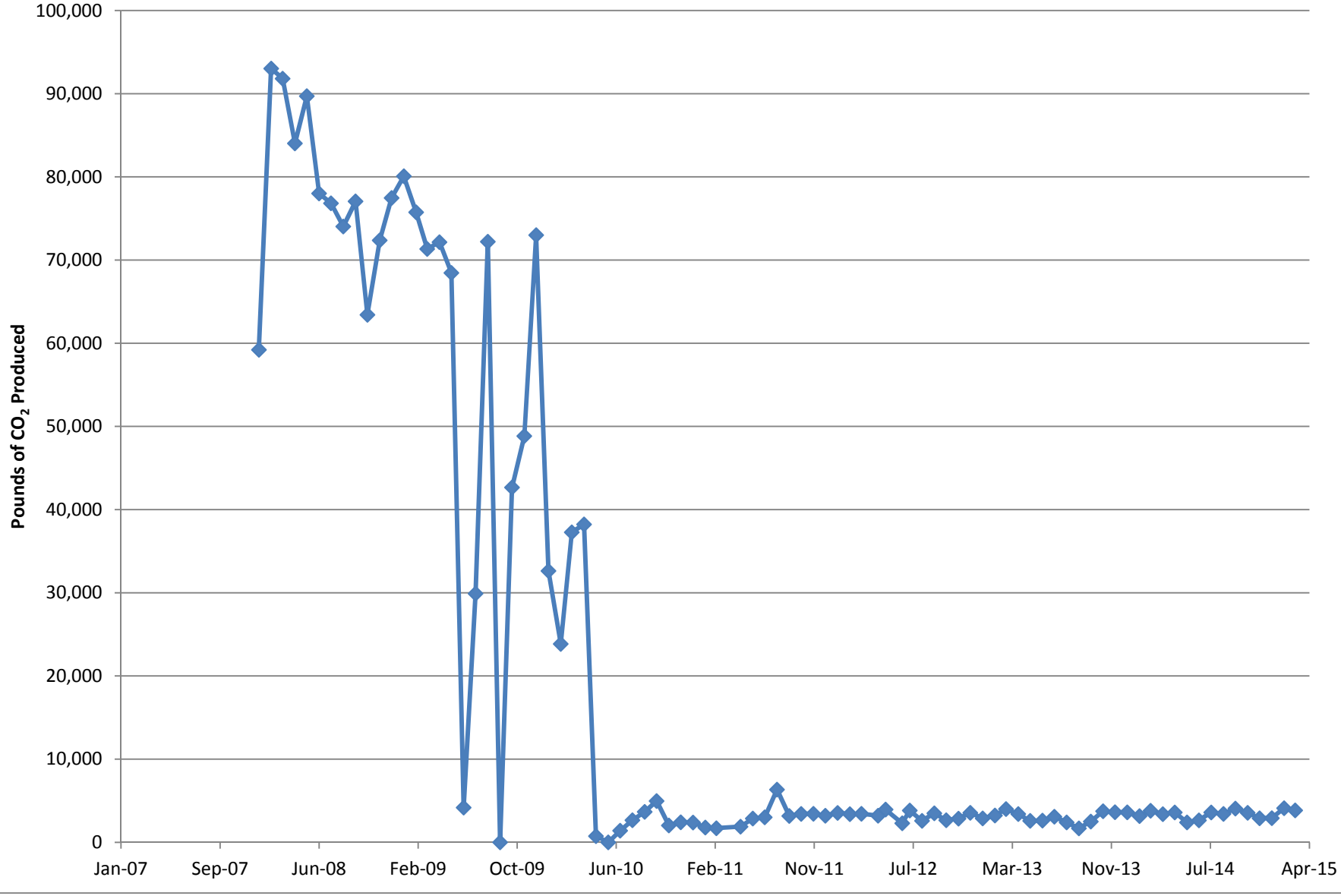


Figure 2

Equivalent Pounds of CO2 Produced by the Central Groundwater Treatment Plant



Site ST018 Groundwater Treatment Plant Monthly Data Sheet

Report Number: 049 **Reporting Period: 26 February 2015 – 01 April 2015** **Date Submitted: 21 April 2015**

This monthly data sheet presents information regarding the Site ST018 Groundwater Treatment Plant (ST018GWTP).

System Metrics

Table 1 presents operation data from the March 2015 reporting period.

Table 1 – Operations Summary – March 2015

Initial Data Collection:	02/26/2015 15:30	**Final Data Collection:**	04/01/2015 13:20
Operating Time:		Percent Uptime:	Electrical Power Usage:
ST018GWTP: 793 hours		**ST018GWTP:** 100%	**ST018GWTP:** 144 kWh (197 lbs CO_2 generated[a])
Gallons Treated: **236,530 gallons**		Gallons Treated Since March 2011: **6.93 million gallons**	
Volume Discharged to Sanitary Sewer: **236,530 gallons**		Final Totalizer Reading: **7,052,630 gallons**	
BTEX, MTBE, TPH Mass Removed: **0.09 lbs**[b]		BTEX, MTBE, TPH Mass Removed Since March 2011: **31.2 lbs**	
MTBE (Only) Removed: **0.09 lbs**[b]		MTBE (Only) Mass Removed Since March 2011: **7.0 lbs**	
Rolling 12-Month Cost per Total Pounds of Mass Removed: $7,824[c]			
Monthly Cost per Pound of Mass Removed: $30,003[d]			

[a] Based on Department of Energy estimate that 1 kilowatt hour generated produces 1.37 pounds of GHG.

[b] Calculated using March 2015 effluent EPA Method SW8260B analytical results.

[c] Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the system.

[d] Value slightly inflated due to small influent concentration in the denominator when determining the cost per pound of mass removed.

lbs = pounds

Table 2 presents individual extraction well flow rates along with the average system flow during the monthly reporting period.

Table 2 – ST018GWTP Average Flow Rates

Location	Average Flow Rate Groundwater (gpm)[a]	Hours of Operation
EW2014x18	2.4	793
EW2016x18	2.8	793
EW2019x18	2.9	793
Site ST018 GWTP	4.97	793

[a] Flow rates calculated by dividing total gallons processed by the hours of operation, from the totalizer and hour meter at each location.
gpm = gallons per minute
ST018GWTP = Site ST018 Groundwater Treatment Plant

Table 3 presents a summary of shutdowns during the monthly reporting period.

Table 3 – Summary of System Shutdowns

Location	Shutdown[a]		Restart[a]		Cause
	Date	Time	Date	Time	
ST018GWTP	N/A	--			

[a] Shutdown and restart times estimated based on field notes
-- = time not known
NA = not applicable
ST018GWTP = Site ST018 Groundwater Treatment Plant

Summary of O&M Activities

Monthly groundwater treatment samples were collected at the ST018GWTP on 16 March 2015. Results are presented in Table 4. The complete March 2015 laboratory data report is available upon request.

The influent concentration for MTBE during the March 2015 sampling was 47.30 µg/L, which is a decrease from the February 2015 sample (53.1 µg/L). No other contaminants were detected at the influent sample location during the sampling event and no contaminants were detected at the midpoint or effluent locations.

Figure 1 presents plots of flow rate and influent total contaminant (TPH-g, TPH-d, MTBE, and BTEX) and MTBE concentrations at the ST018GWTP versus time.

As shown on Figure 1, the average flow rate through the ST018GWTP has been seasonally variable with a slight increasing trend since the battery upgrade in 2013. TPH-g, TPH-d and TPH-mo were not detected in the March 2015 influent sample. March 2015 represents the second-highest amount of groundwater treated and discharged by the ST018GWTP. This increase is likely due to consistent run-time throughout the month as well as to seasonal rains.

Optimization Activities

No optimization activities were performed in March 2015.

Sustainability

Travis AFB is committed to decreasing the amount of GHG produced directly (waste streams discharging GHG) or indirectly (GHG produced as related to electrical energy consumption) from all systems across Travis AFB. Travis AFB continues to optimize each treatment plant to reduce the amount of electrical energy consumed, and to implement sustainable treatment plant optimization programs, such as the solar arrays employed to power the ST018GWTP system.

The ST018GWTP produced 197 pounds of GHG during March 2015, which was an increase of GHG produced in February 2015 (97 pounds). The amount of water treated in March 2015 was much higher than that of the February 2015 treatment (116,100 gallons in February 2015 and 236,530 gallons in March 2015). The amount of GHG produced during March was representative of typical values observed during normal operation. Figure 2 presents the historical GHG production from the ST018GWTP. The overall GHG generation has been decreasing since a 2014 peak in March, and remains considerably lower than traditional GWTPs since the system is predominantly powered by solar arrays. The previous increasing GHG production reflected an inverse relationship between solar exposure in the fall and winter relative to GHG production.

TABLE 4

Summary Of Groundwater Analytical Data for March 2015 – Site ST018 Groundwater Treatment Plant

Constituent	Instantaneous Maximum* (µg/L)	Detection Limit (µg/L)	N/C	16 March 2015 (µg/L)			
				Influent	After Carbon 1	After Carbon 2	System Effluent
Fuel Related Constituents							
MTBE	5	0.5	0	47.3	NM	ND	ND
Benzene	5	0.17	0	ND	NM	ND	ND
Ethylbenzene	5	0.22	0	ND	NM	ND	ND
Toluene	5	0.14	0	ND	NM	ND	ND
Total Xylenes	5	0.23 – 0.5	0	ND	NM	ND	ND
Total Petroleum Hydrocarbons – Gasoline	50	8.5	0	ND	ND	NM	ND
Total Petroleum Hydrocarbons – Diesel	50	50	0	ND	ND	NM	ND
Total Petroleum Hydrocarbons – Motor Oil	--	160	--	ND	ND	NM	ND

* In accordance with the National Pollutant Discharge Elimination System (NPDES) Effluent Limitations

Laboratory data available on request

µg/L = micrograms per liter
N/C = number of samples out of compliance with discharge limits
ND = not detected above method detection limit
NM = not measured this month

Figure 1
ST18GWTP Total VOC and MTBE Influent Concentrations
Quarterly History
Travis Air Force Base, California

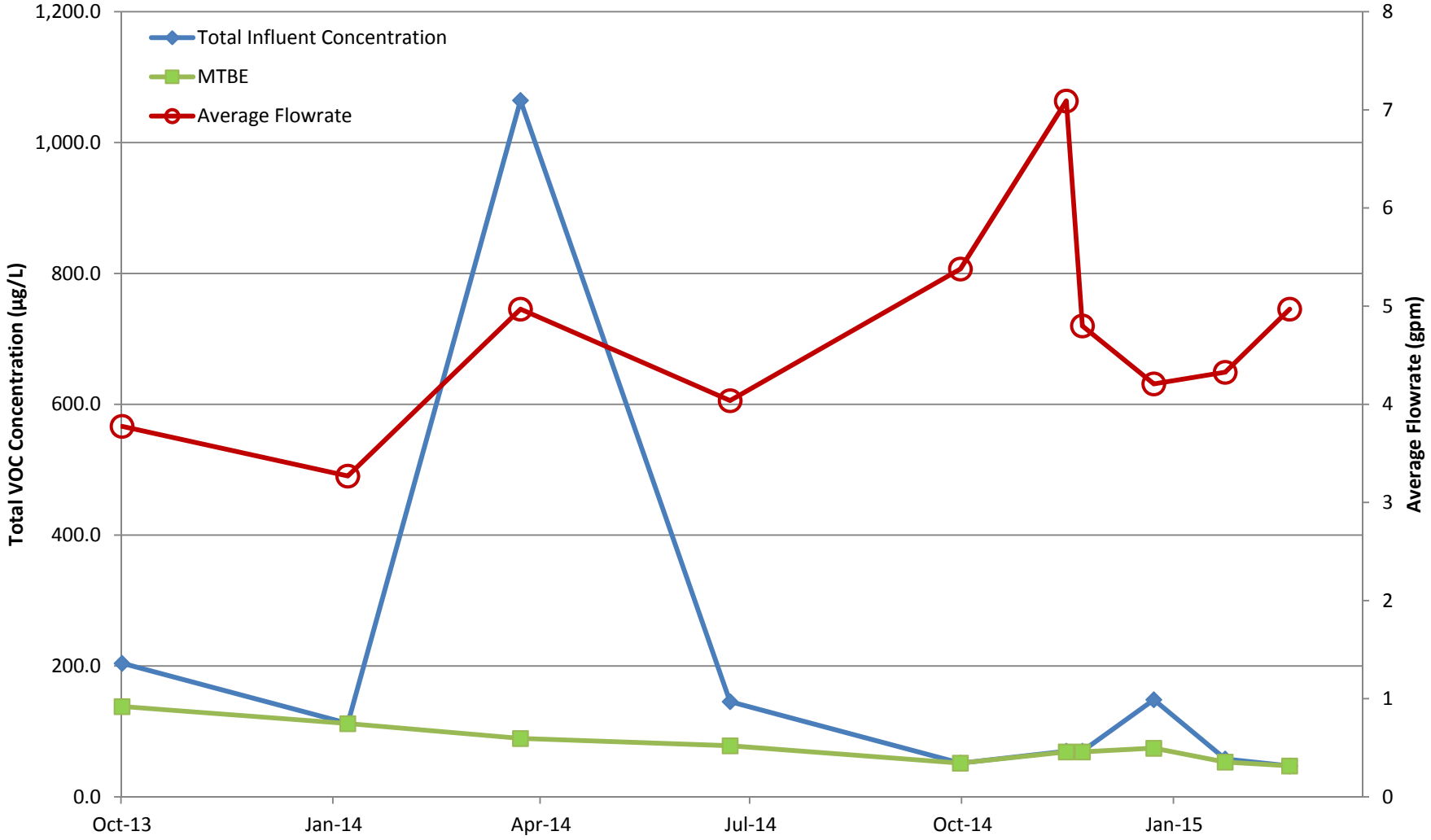
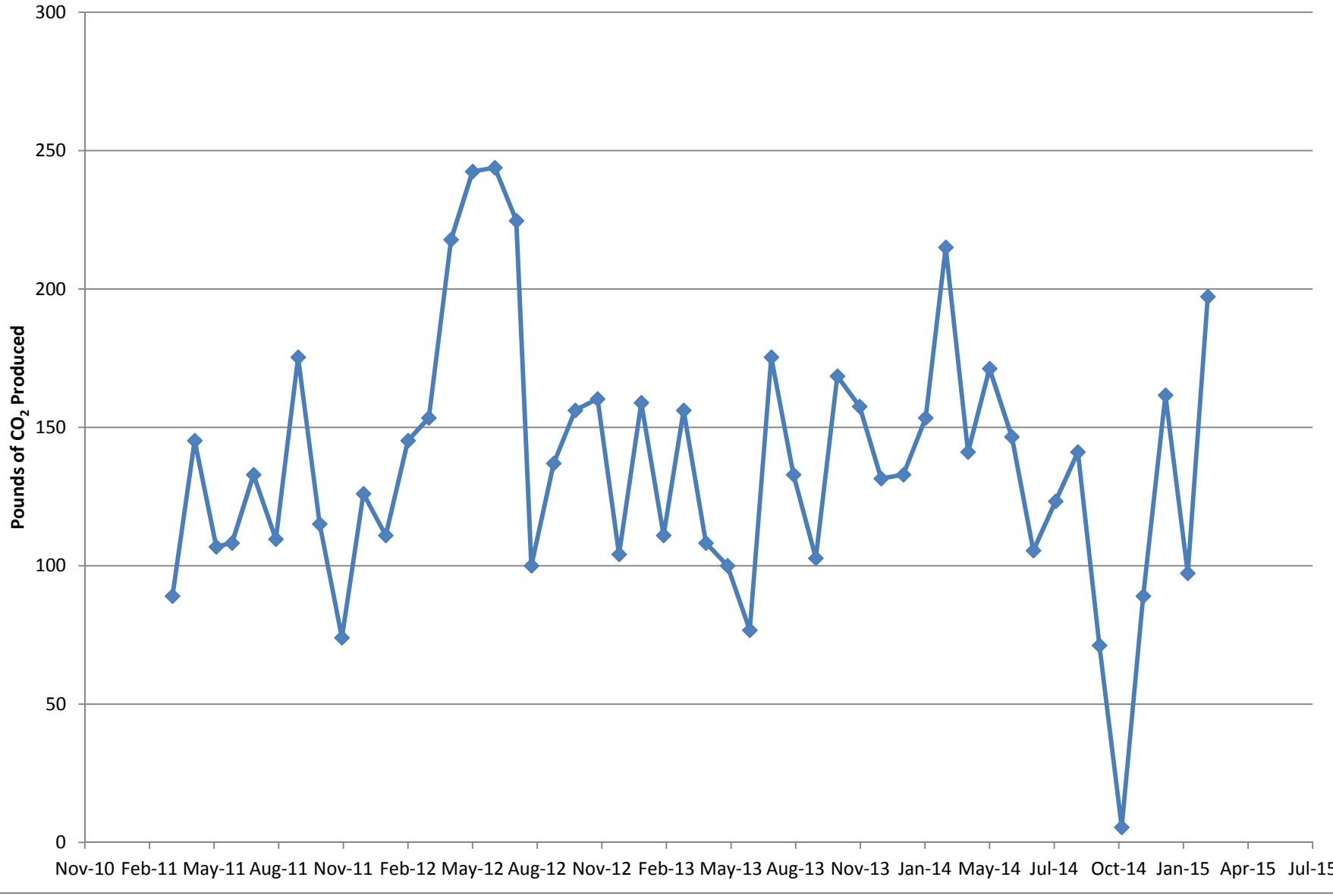


Figure 2

Equivalent Pounds of CO2 Produced by the Site ST018 Groundwater Treatment Plant



Travis AFB
Restoration Program

Program Overview

RPM Meeting

April 23, 2015

Completed Documents

- Vapor Intrusion Assessment Update Technical Memorandum
- 2012 CAMU Annual Report
- Old Skeet Range Action Memorandum
- 3rd Five-Year Review
- 2012 Annual Groundwater Remediation Implementation Status Report (GRISR)
- Subarea LF007C and Site SS030 Remedial Process Optimization Work Plan
- Pre-Design Site Characterization of SS029 Report
- Old Skeet Range Removal Action Work Plan
- 2013 CAMU Inspection Annual Report
- Groundwater Record of Decision (ROD)
- CG508 POCO Work Plan
- 2013 Annual GRISR
- FT004 Technology Demonstration Work Plan
- Kinder Morgan LF044 Land Use Control Report
- SD031 Technology Demonstration Work Plan
- TA500 Data Gap Investigation Work Plan
- ST018 POCO Work Plan Addendum
- SD037 GW RD/RA Work Plan
- Travis AFB UFP-QAPP
- DP039 Lead Excavation Technical Memo

Completed Documents (cont'd)

- ***Proposed Plan for ROD Amendment to WABOU Soil ROD***
- ***Proposed Plan for ROD Amendment to NEWIOU Soil, Sediment, & Surface Water ROD***
- ***SD034 Data Gap Investigation Work Plan***
- ***POCO Investigation Work Plan for Oil-Water Separators***

Completed Field Work

- Replace battery banks at ST018 Groundwater Treatment Plant
- Annual Groundwater Remediation Implementation Program (GRIP) Sampling event
- Well Decommissioning (9 Wells)
- Electrical repairs to FT005 extraction system (well EW01x05)
- Electrical repairs to Site SS029 extraction system
- Site ST018 carbon vessels upgrade
- 2014 GRIP Semiannual Sampling Event
- Pump repairs to Site SS016 well (EW610x16)
- Subsite LF007C optimization upgrades
- 2014 Annual GRIP Sampling Event
- Biological Resource Assessment
- Site CG508 Site Investigation
- Old Skeet Range Characterization Sampling
- 4Q Semiannual GRIP Sampling Event
- SD031 Technology Demonstration Well Installation
- SD037 Well Installation
- SD031 Trench/Conveyance/Power Installation
- SD031 EVO Injection
- ST018 Well Installation
- ***SS015 Well Installation***
- ***SS016 Well Installation***
- ***Well Development (SD036, SD037)***

Documents In-Progress

CERCLA

- Old Skeet Range PAH Delineation Report
- SD036 RD/RA Work Plan
- SS016 GW RD/RA Work Plan
- SS015 GW RD/RA Work Plan
- DP039 RD/RA Work Plan
- FT005 Technology Demonstration Work Plan
- ***2014 Annual CAMU Monitoring Report***

Documents In-Progress

POCO

- SS014 POCO Technology Demonstration Work Plan
- ST032 POCO Soil Excavation Work Plan
- ***ST028 POCO Work Plan***

Field Work In-Progress

- SD036 EVO Injection
- Well Development (SS015, SS016)
- ***Baseline Sampling (SS015, SS016)***
- ***SS014 Data Gap Investigation***

Documents Planned

CERCLA

- Community Involvement Plan — May
- 2014 Annual GRISR — May
- SD031 Technology Demonstration Construction Completion Report — May
- Sites SD036 and SD037 Remedial Action Construction Completion Report — July

POCO

- CG508 Site Investigation/Site Closure Request Report — May
- ST018 POCO Construction Completion Report — Jun

Field Work Planned

CERCLA

• SD037 EVO Injection	Apr
• SD034 Data Gaps Investigation	Apr
• GRIP Sampling (annual)	May
• FT004 Injection Well Installation	May
• SS015 EVO Injection	May
• SS016 EVO Injection	May
• TA500 Data Gaps Investigation	May
• ***FT005 Injection Well Installation***	***May***
• FT004 Trench/Conveyance/Power Installation	Jun
• DP039 Well Installation	Jun
• ***FT004 EVO Injection***	***Jun***
• ***SS030 Trench/Conveyance/Power Installation***	***Jun***

Note: Contact Lonnie Duke if you would like to observe planned field work events

Field Work Planned

POCO

- ST018 Trench/Conveyance/Power Installation Apr
- Oil Water Separators Site Investigation Apr

Note: Contact Lonnie Duke if you would like to observe planned field work events

Completed Documents (Historical1)

- 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 Work Plan
- ST027B Site Characterization Work Plan
- 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 Work Plan
- Phytostabilization Demonstration Technical Memo
- Model QAPP
- LF008 Rebound Test Technical Memo
- 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, Second, & Third 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

Completed Documents (Historical 2)

- Phytostabilization Study Report
- 2009/2010 Annual GSAP Report
- SS015 Remedy Optimization Field Implementation Plan
- Sites SS014 and ST032 Tier 1 POCO Evaluation Report
- SD036 Remedy Optimization Field Implementation Plan
- 2010 Annual CAMU Inspection Report
- Site ST018 POCO Baseline Implementation Report
- FT005 Data Gaps Investigation Report
- Comprehensive Site Evaluation Phase II Report
- 2010 Groundwater RPO Annual Report
- Focused Feasibility Study (FFS)
- Site ST027-Area B Human Health Risk Assessment
- Site ST027-Area B Ecological Risk Assessment
- Work Plan for Assessment of Aerobic Chlorinated Cometabolism Enzymes
- 2010/2011 Annual GSAP Report
- Baseline Implementation Report (Sites SS015, SS016, SD036, SD037, and DP039)
- 2011 CAMU Annual Report
- Technical and Economic Feasibility Analysis (TEFA)
- Work Plan for RPO of Sites SS016 and SS029
- Site LF007C Data Gaps Investigation Technical Memorandum
- Technical Memorandum for Assessment of Aerobic Chlorinated Cometabolism Enzymes
- Old Skeet Range Engineering Evaluation/Cost Analysis
- 2011 Groundwater Treatment RPO Annual Report
- Groundwater Proposed Plan (PP)
- FT005 Remedial Action Completion Report
- 2012 GSAP Technical Memorandum

Completed Field Work (Historical1)

- ST027B Gore Sorber Survey–Phase 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–Phase 1
- ST027 Site Characterization -Phase 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 (2nd 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

Completed Field Work (Historical 2)

- DP039 Bioreactor Quarterly Performance Sampling
- SD037 EVO Quarterly Performance Sampling
- SS015 EVO Baseline Sampling
- SD036 EVO Baseline Sampling
- SS016 Bioreactor Startup
- SD036 Injection Wells Installation
- SS015 Injection Wells Installation
- ST018 GETS Installation
- SD036 EVO Injection
- 2010 Semiannual GSAP
- SS015 EVO Injection
- Quarterly RPO Performance Monitoring (Feb 2011)
- ST018 GETS Startup
- Quarterly RPO Performance Monitoring (May 2011)
- 2011 Annual GSAP Sampling
- SS029 GET Shutdown Test (System Optimization analysis)
- Quarterly RPO Performance Monitoring (Aug 2011)
- Quarterly RPO Performance Monitoring (Nov 2011)
- 2011 Semiannual GSAP Sampling
- LF007C Site Characterization (Wetlands)
- FT005 Soil Remedial Action
- Performance Monitoring SS015 (4^{th} Quarterly event)
- Sampling for Assessment of Aerobic Chlorinated Cometabolism Enzymes (Feb 21-22)
- 2012 Annual GSAP Sampling
- CAMU Lysimeter Removal
- LF007C GET System Optimization
- SS029/SS016 System Optimization Analysis
- GSAP Semiannual Sampling Event
- Replace electrical wiring for well field at Site SS030