Final

Travis Air Force Base
Environmental Restoration Program
Restoration Program Manager's
Meeting Minutes
15 April 2021, 0930 Hours

Mr. Lonnie Duke of the Air Force Civil Engineer Center (AFCEC) Restoration Installation Support Section (ISS) conducted the Restoration Program Manager's (RPM) teleconference on 15 April at 1400 hours.

Effective 27 January 2021, the 60 AMW/CC at Travis Air Force Base (AFB) directed Health Protection Condition (HPCON) Bravo + (changed from HPCON Charlie) in response to the evolving COVID-19 public health situation in the local area. The base continues to encourage teleworking and virtual meetings in place of in-person meetings. Essential missions will continue, and visitors are permitted with an approved base pass.

All attendees participated via telephone or Microsoft TEAMS due to increased teleworking measures meant to reduce the number of employees on the base at one time. Attendees included:

Lonnie Duke	AFCEC/CZOW
Chet Storrs	AFCEC/CZOW
Gene Clare	AFCEC/CZOW
Mobashir Ahmad	AFCEC/CZOW
Dave Leeson	AFCEC/CZRW
Kurt Grunawalt	Travis AFB 60 AMW/JA
Louis Briscese	Travis AFB 60 AMW/PA
Sarah Miller	USACE-Omaha
Brian Boccellato	USACE-Omaha
Alan Soicher	USACE-SPA
Nadia Hollan Burke	EPA
Adriana Constantinescu	RWQCB
Kimiye Touchi	DTSC
David Kremer	DTSC
Li Wang	DTSC
Megan Duley	SRS
Diane Escobedo	SRS
Michael Fedorenko	SRS
David Parse	AECOM
Dan Schultz	AECOM
Leslie Royer	CH2M/Jacobs
Jill Dunphy	CH2M/Jacobs

Handouts distributed prior to the meeting included:

Attachment 1	Meeting Agenda
Attachment 2	Master Meeting and Document Schedule
Attachment 3	SBBGWTP Monthly Data Sheet (March 2021)
Attachment 4	CGWTP Monthly Data Sheet (March 2021)
Attachment 5	LF007C GWTP Monthly Data Sheet (March 2021)
Attachment 6	ST018 GWTP Monthly Data Sheet (March 2021)
Attachment 7	Presentation: Program Update (April 2021)
Attachment 8	Travis AFB LUC Sites Update (April 2021)
Attachment 9	Travis AFB PFOS/PFOA Update (April 2021)
Attachment 10	Presentation: SRS Phase 1 RI of AFFF Sites

I. JACOBS PBR CONTRACT UPDATES

A. ADMINISTRATIVE

1. Agenda and Introductions

Mr. Duke reviewed the agenda for the meeting. He also officially introduced Mobashir Ahmad of the Travis Installation Support Section to the team.

2. Previous Meeting Minutes

There were no Environmental Protection Agency (EPA) or Department of Toxic Substances Control (DTSC) comments on the content of the March 2021 RPM Meeting Minutes. Ms. Constantinescu of the Regional Water Quality Control Board (RWQCB) requested that her agency be referred to as the Regional Water Quality Control Board, or RWQCB, or Regional Water Board.

3. Action Item Review

Action items from February 2020 were reviewed.

Action Item 1 is ongoing: Include the progress of the optimized Emulsified Vegetable Oil (EVO) delivery via solar-powered organic

carbon (SPOC) injection system pilot test during future monthly program updates. April 2021 update: This has become a regular and ongoing topic discussed as part of the monthly Program Update; therefore, it no longer needs to be discussed as part of the action items. This action item is now closed.

4. 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

NOTE: All upcoming meetings will be held as MS Teams teleconferences until California meets the requirements for the "green phase" of COVID-19 reopening. The MMDS will continue to list in-person meetings and teleconferences, and teammates will be notified when in-person meetings are safe to resume.

The next RPM meeting is scheduled for 0930 on 19 May 2021, via MS Teams.

Travis AFB Master Document Schedule

There is limited capability for producing document hard copies and CDs due to ongoing COVID-19 restrictions. For now, electronic versions of small documents will be emailed, and larger versions will be distributed via DOD SAFE. Hard copies and CDs cannot be made at the present time due to the CH2M/Jacobs offices being closed for COVID-19, with no access to reproduction equipment.

— Travis AFB PFAS Remedial Investigation Work Plan: The Draft to Agencies due date was changed to 26 March 2021 to reflect actual submittal date; the rest of the dates were changed accordingly.

— Travis AFB PFAS Remedial Investigation Quality Assurance Program Plan (QAPP): The Draft to Agencies due date was changed to 26 March 2021 to reflect actual submittal date; the rest of the dates were changed accordingly.

— Site FT004 POCO Soil Corrective Action Completion Report (CACR): The response to comments and Draft Final due dates were changed to 19 March 2021, and the Final due date was changed to 9 April 2021, to reflect actual submittal dates.

— Quarterly Newsletter (April 2021): The Final due date was changed to 12 April 2021 to reflect publication date. The next newsletter is

scheduled for October 2021 and will fall under the Optimized Remediation Contract (ORC) contractor's responsibilities; however, this may change if the ORC contract award is delayed.

— 2020 Annual Groundwater Remedy Implementation Status Report (GRISR): There were no changes to the schedule.

— Technology Demonstration Technical Memorandum: There were no changes to the schedule.

— Site SD031 and FT004 Groundwater Sampling Results Technical Memorandum: The Draft to Agencies and RAB due date was changed to 14 April 2021 to reflect actual submittal; the remainder of the dates were changed accordingly. This document is essentially a data dump to ensure the most recent data were available to all bidders on the ORC since the GRISR will not be available until after the ORC proposal due date.

— Vapor Intrusion Assessment Report: This is a new document. The Travis AFB document lead will be Chet Storrs. The CH2M/Jacobs document lead will be Stephanie Curtis. The Predraft to AF/Service Center was assigned a due date of 14 July 2021; all other dates were assigned accordingly. Dates may change again depending on when the field work can be conducted.

— 2020 Annual Site LF007 CAMU Monitoring Report: This is a new document. The Travis AFB document lead will be Mobashir Ahmad. The CH2M/Jacobs document lead will be Levi Pratt. All dates are TBD at this time.

— Site SD031B POCO Additional Site Investigation Report: The Draft to Agencies/RAB due date was changed to 21 April 2021. The Agency Comments due date was changed to 21 May 2021. The rest of the schedule remained unchanged. The RWQCB noted that they will be the only agency to review and comment on this document, and requested a 60-day review period to account for the large area and amount of information that will be in this report.

— Potrero Hills Annex (FS, PP, and ROD): There were no updates to the schedule.

— Community Relations Plan (CRP) Update: There was no change to the schedule. This document will be updated as a priority in the upcoming Optimized Remediation Contract.

— MOVED TO HISTORY:

  — Site LF008 Remedial Infrastructure Decommissioning Technical Memorandum

B. CURRENT PROJECTS

1. Treatment Plant Operation and Maintenance Update

South Base Boundary Groundwater Treatment Plant, March 2021 (Attachment 3)

The South Base Boundary Groundwater Treatment Plant (SBBGWTP) performed at 100% uptime, and 5.858 million gallons of groundwater were extracted and treated in March 2021. All treated water was discharged to Union Creek. The average flow rate for the SBBGWTP was 135.6 gallons per minute (gpm). Electrical power usage was 17.003 kilowatt hours (kWh), and approximately 14,182 pounds of CO2 were created (based on DOE calculation). Approximately 1.00 pounds of volatile organic compounds (VOCs) were removed in March. The total mass of VOCs removed since startup of the system is 535.1 pounds.

Troubleshooting was performed on five extraction wells in March 2021; details can be found in Attachment 3.

No optimization activities were conducted in March 2021.

Central Groundwater Treatment Plant, March 2021 (Attachment 4)

The Central Groundwater Treatment Plant (CGWTP) performed at 100% uptime with approximately 986,375 gallons of groundwater extracted and treated in March 2021. All treated water was discharged to the storm sewer system which discharges to Union Creek. The average flow rate for the CGWTP was 23.0 gpm. Electrical power usage was 1,150 kWh for all equipment connected to the Central Plant, and approximately 1,739 pounds of CO2 were generated. Approximately 1.86 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 11,566 pounds.

The Site SS016 subgrade biogeochemical reactor (SBGR) and the Site DP039 SBGR continued operating in March 2021.

No optimization activities were conducted in March 2021.

LF007C Groundwater Treatment Plant, March 2021 (Attachment 5)

The Subarea LF007C Groundwater Treatment Plant (LF007C GWTP) performed at 100% uptime with approximately 106,016 gallons of groundwater extracted and treated in March 2021. All treated water was

discharged to Northgate Pond (formerly known as the Duck Pond) for beneficial reuse. The average flow rate was 2.5 gpm. Approximately 7.77 x 10^{-4} of a pound of VOCs was removed from groundwater by the treatment plant in March. The total mass of VOCs removed since the startup of the system is 174.4 pounds. There was no electrical power usage statistics because this plant operates on solar power only.

As noted above, the Duck Pond has officially been renamed Northgate Pond. The vegetation surrounding the pond was recently trimmed.

No optimization activities were conducted in March 2021.

ST018 Groundwater (MTBE) Treatment Plant, March 2021 (Attachment 6)

Site ST018 (MTBE) Treatment Plant (ST018 GWTP) performed at 100% uptime with approximately 86,405 gallons of groundwater extracted in March 2021. All groundwater was discharged to the Fairfield – Suisun Sewer District. The average flow rate for the ST018 GWTP was 1.9 gpm. Electrical power usage for the month was 54 kWh for all equipment connected to the ST018 GWTP. The total CO2 discharge equivalent equates to approximately 40 pounds. Approximately 0.12 of a pound of MTBE, BTEX, VOCs, and TPH was removed in March by the treatment plant, and 0.01 of a pound of MTBE-only was removed from groundwater. The total BTEX, MTBE and TPH mass removed since the startup of the system is 49.9 pounds, and the total MTBE mass removed since startup of the system is 12.2 pounds.

Note: Electrical power use at the ST018 GWTP is only for the alarm system and a pump that pushes influent tank water to the Fairfield-Suisun Sanitary Sewer line. The four groundwater extraction pumps in the system are all solar powered.

No optimization activities were conducted in March 2021.

C. PRESENTATIONS

1. Program Update – April 2021 (see Attachment 7)

Ms. Royer reported on the status of fieldwork and documents that have been completed, are in progress, or are upcoming. Please refer to Attachment 7 for the full briefing.

D. NEW ACTION ITEM REVIEW

Mr, Duke will change the schedule for the Site SD031B POCO Additional Site Investigation Report to include a 60-day Agency review period.

E. PROGRAM ISSUES/UPDATE

Mr. Duke announced that Mark BonSavage has been hired as the new Section Chief for the ISS. He also announced that Gene Clare will be retiring. With the other recent retirements, this is a loss of over 125 years of collective knowledge and experience that will take time to rebuild. The base is filling another vacancy and hopes to have it filled in time to announce at the May meeting.

Mr. Duke addressed the topic of returning to an office environment. He said that the base is making an effort to reduce office square footage and equipment such as desks, and that there will be an emphasis on more teleworking in the future based on responses to a basewide poll sent out. He added that he hopes to resume in-person RPM meetings and that the October RAB meeting can be held in-person, but is awaiting further direction. The agencies and contractors are also evaluating the future of work and are in the process of making similar decisions.

F. ACTION ITEMS

Item #	Responsible	Action Item Description	Due Date	Status
1.	Mr. Duke	Mr. Duke will change the schedule for the Site SD031B POCO Additional Site Investigation Report to include a 60-day Agency review period.	19 May 2021	Open

II. TRAVIS AFB UPDATES

A. Land Use Control Sites, April 2021 (Attachment 8)

Mr. Duke reported on the status of the KC-46 hangar construction. Please refer to Attachment 8 for the full briefing. Mr. Duke shared photos and reported on the details of the vapor barrier installation. Seams are sealed with a black material to a specified thickness which is measured to ensure compliance with the requirements. Smoke tests are performed by multiple people after each section of the vapor barrier is sealed; if any leaks are detected, they are sealed immediately. It was discovered that monitoring well MW266x16 is in the footprint of the new hangar and will need to be decommissioned and replaced with a new monitoring well located outside the hangar and associated utility corridor. Decommissioning monitoring wells and installation of new monitoring wells is covered in the RD/RA Work Plan, so a separate work plan will not be provided for these

activities. The EPA suggested including an addendum or technical memorandum to include a site map with the location of the replacement monitoring well.

B. PFOS/PFOA PROGRAM STATUS, April 2021 (Attachment 9)

Mr. Storrs reported on the status of the PFOS/PFOA Program at Travis AFB. Please see Attachment 9 for the full briefing.

III. SRS PFOS/PFOA CONTRACT

A. ADMINISTRATIVE

All administrative topics were discussed earlier in the RPM meeting.

B. PRESENTATIONS

1. Travis AFB Phase I RI of AFFF Sites (Attachment 10)

Ms. Duley provided an update on the Phase I RI of AFFF Sites. Please refer to Attachment 10 for the full briefing. The Draft WP and UFP-QAPP were submitted on 26 March 2021 and are currently under regulatory review. Comments are due on 26 May 2021. Ms. Burke noted that she may submit some preliminary comments.

C. NEW ACTION ITEM REVIEW

No new action items identified.

D. PROGRAM ISSUES/UPDATE

None

E. ACTION ITEMS

Item #	Responsible	Action Item Description	Due Date	Status
1	Megan Duley/Diane Escobedo	Send meeting minutes to Travis AFB	22 April 2021	Completed 16 April 2021

TRAVIS AIR FORCE BASE
ENVIRONMENTAL RESTORATION PROGRAM
RESTORATION PROGRAM MANAGER'S MEETING

The RPM Teleconference is scheduled for 2:00 PM PST on 15 April 2021. **The call-in number will be provided in the MS Teams meeting invite and also in the same email that the meeting materials are provided in. If you are able to participate via MS Teams meeting, you will see the shared documents that will be viewable by all participants.**

AGENDA

A. JACOBS PBR CONTRACT

1. ADMINISTRATIVE

    a. INTRODUCTIONS
    b. PREVIOUS MEETING MINUTES
    c. ACTION ITEM REVIEW
    d. MASTER MEETING AND DOCUMENT SCHEDULE REVIEW

2. CURRENT PROJECTS

    TREATMENT PLANT OPERATION AND MAINTENANCE UPDATE

3. PRESENTATIONS

    PROGRAM UPDATE:
        DOCUMENTS & ACTIVITIES COMPLETED, IN PROGRESS & PLANNED

4. NEW ACTION ITEM REVIEW

5. PROGRAM/ISSUES/UPDATE

B. TRAVIS UPDATES

1. CURRENT PROJECTS

    a. LUC SITES
    b. PFOS / PFOA

C. SRS PFAS RI CONTRACT

1. ADMINISTRATIVE

    a. INTRODUCTIONS
    b. PREVIOUS MEETING MINUTES
    c. ACTION ITEM REVIEW
    d. MASTER MEETING AND DOCUMENT SCHEDULE REVIEW

2. CURRENT PROJECTS

3. PRESENTATIONS

    PROGRAM UPDATE

4. NEW ACTION ITEM REVIEW

5. PROGRAM/ISSUES/UPDATE

NOTES: AFTER THE RPM TELECONFERENCE, BASED ON THE DISCUSSION DURING THE REVIEW OF THE MASTER MEETING AND DOCUMENT SCHEDULE, WE WILL ALLOW TIME TO HOLD A SEPARATE SPLINTER MEETING TO DISCUSS RESPONSES TO AGENCY COMMENTS ON THOSE DOCUMENTS THAT ARE IN PROGRESS, OR OTHER ISSUES IF NEEDED. ALL PARTICIPANTS ARE WELCOME TO PARTICIPATE.

2021
Annual Meeting and Teleconference Schedule

Monthly RPM Meeting[1] (Begins at time noted)	RPM Teleconference (Begins at time noted)	Restoration Advisory Board Meeting (Begins at 7:00 p.m.) (Poster Session at 6:30 p.m.)
—	01-20-21	—
—	02-17-21	—
—	03-17-21	—
—	04-15-21 (Thursday 2:00 PM)	—
—	05-19-21	—
06-16-21	—	—
—	07-21-21	—
08-18-21	—	—
—	09-15-21	—
—	10-21-21 (Thursday 2:00 PM)	10-21-21
—	11-17-21	—
—	—	—

[1] Note: Meetings and teleconferences will be held at 09:30 AM on the third Wednesday of each month unless otherwise noted.

Travis AFB Master Meeting and Document Schedule

PRIMARY DOCUMENTS		
Life Cycle	**Travis AFB PFAS RI Work Plan[2] Travis AFB, Chet Storrs SRS, Megan Duley**	**Travis AFB PFAS RI QAPP[2] Travis AFB, Chet Storrs SRS, Megan Duley**
Scoping Meeting	**NA**	**NA**
Predraft to AF/Service Center	10-27-20	10-27-20
AF/Service Center Comments Due	12-08-20	12-08-20
Draft to Agencies / RAB	03-26-21	03-26-21
Agency Comments Due	05-26-21	05-26-21
Response to Comments Meeting	---	---
Agency Concurrence with Remedy	NA	NA
Public Comment Period	NA	NA
Public Meeting	**NA**	**NA**
Response to Comments Due	06-15-21	06-15-21
Draft Final Due	06-30-21	06-30-21
Final Due	07-30-21	07-30-21

[2] Note: SRS documents will be discussed during the afternoon meeting session.

Travis AFB Master Meeting and Document Schedule

PRIMARY DOCUMENTS	
Life Cycle	Site FT004 POCO Soil Corrective Action Completion Report Travis AFB, Gene Clare CH2M, Doug Berwick CAPE, Meg Greenwald
Scoping Meeting	**NA**
Predraft to AF/Service Center	11-16-20
AF/Service Center Comments Due	12-17-20
Draft to Agencies / RAB	01-07-21
Agency Comments Due	03-08-21
Response to Comments Meeting	03-17-21
Agency Concurrence with Remedy	NA
Public Comment Period	NA
Public Meeting	**NA**
Response to Comments Due	03-19-21
Draft Final Due	03-19-21
Final Due	04-30-21(04-09-21)

Travis AFB Master Meeting and Document Schedule

	INFORMATIONAL DOCUMENTS		
Life Cycle	**Quarterly Newsletter (April 2021) Travis, Lonnie Duke**	**2020 Annual GRISR Travis AFB, Chet Storrs CH2M, Levi Pratt**	**Technology Demonstration Technical Memorandum Travis AFB, Lonnie Duke CH2M, Tony Chakurian**
Scoping Meeting	**NA**	**NA**	**NA**
Predraft to AF/Service Center	02-24-21	04-27-21	01-13-21
AF/Service Center Comments Due	02-26-21	05-27-21	03-02-21
Draft to Agencies / RAB	03-01-21	06-11-21	03-16-21
Agency Comments Due	03-15-21	07-12-21	04-15-21
Response to Comments Meeting	**03-17-21**	07-21-21	**05-06-21**
Response to Comments Due	04-02-21	08-06-21	05-20-21
Draft Final Due	NA	NA	NA
Final Due	04-12-21	08-06-21	05-20-21
Public Comment Period	NA	NA	NA
Public Meeting	**NA**	NA	**NA**

Travis AFB Master Meeting and Document Schedule

INFORMATIONAL DOCUMENTS			
Life Cycle	Site SD031 and FT004 Groundwater Sampling Results Technical Memorandum Travis AFB, Chet Storrs CH2M, Tony Chakurian	Vapor Intrusion Assessment Report Travis AFB, Chet Storrs CH2M, Stephanie Curtis	2020 Annual Site LF007 CAMU, Monitoring Report Travis AFB, Mobashir Ahmad CH2M HILL, Levi Pratt
Scoping Meeting	**NA**	**NA**	**NA**
Predraft to AF/Service Center	01-22-21	07-14-21	TBD
AF/Service Center Comments Due	03-10-21	07-28-21	TBD
Draft to Agencies / RAB	04-14-21	08-11-21	TBD
Agency Comments Due	05-14-21	08-25-21	TBD
Response to Comments Meeting	**05-19-21**	**09-08-21**	**TBD**
Response to Comments Due	06-16-21	09-22-21	TBD
Draft Final Due	NA	NA	NA
Final Due	06-16-21	09-22-21	TBD
Public Comment Period	NA	NA	NA
Public Meeting	**NA**	**NA**	**NA**

Travis AFB Master Meeting and Document Schedule

INFORMATIONAL DOCUMENTS	
Life Cycle	SD031B POCO Additional Site Investigation Report Travis AFB, Chet Storrs CH2M, Levi Pratt
Scoping Meeting	**NA**
Predraft to AF/Service Center	01-28-21
AF/Service Center Comments Due	03-17-21
Draft to Agencies / RAB	04-21-21
Agency Comments Due	05-21-21
Response to Comments Meeting	**06-16-21**
Response to Comments Due	06-30-21
Draft Final Due	NA
Final Due	06-30-21
Public Comment Period	NA
Public Meeting	**NA**

Travis AFB Master Meeting and Document Schedule

PRIMARY DOCUMENTS			
	Potrero Hills Annex Travis, Lonnie Duke		
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

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL20299915

Travis AFB Master Meeting and Document Schedule

PRIMARY DOCUMENTS	
Life Cycle	**Community Relations Plan Update[3] Travis AFB,TBD ORC Contractor TBD**
Scoping Meeting	**NA**
Predraft to AF/Service Center	08-23-16
AF/Service Center Comments Due	09-07-16
Draft to Agencies / RAB	09-28-16 (03-22-18)
Agency Comments Due	10-28-16 (04-27-18)
Response to Comments Meeting	**TBD**
Agency Concurrence with Remedy	NA
Public Comment Period	NA
Public Meeting	**NA**
Response to Comments Due	TBD
Draft Final Due	TBD
Final Due	TBD

[3] Note: The Community Relations Plan Update will be finalized in the first year of the ORC contract.

Travis AFB Master Meeting and Document Schedule

HISTORY - INFORMATIONAL DOCUMENTS	
Life Cycle	Site LF008 Remedial Infrastructure Decommissioning Technical Memorandum Travis AFB, Chet Storrs CH2M, Tony Chakurian
Scoping Meeting	**NA**
Predraft to AF/Service Center	10-02-20
AF/Service Center Comments Due	11-02-20
Draft to Agencies / RAB	12-11-20
Agency Comments Due	01-15-21
Response to Comments Meeting	**01-20-21**
Response to Comments Due	02-26-21 (02-25-21)
Draft Final Due	NA
Final Due	02-26-21 (02-25-21)
Public Comment Period	NA
Public Meeting	**NA**

South Base Boundary Groundwater Treatment Plant Monthly Data Sheet

Report Number: 245 **Reporting Period: 1 March 2021 – 31 March 2021** **Date Submitted: 9 April 2021**

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 2021 reporting period.

Table 1 – Operations Summary – March 2021

Initial Data Collection:	3/1/2021 13:00	**Final Data Collection:**	3/31/2021 13:15
Operating Time:	Percent Uptime:	Electrical Power Usage:	
SBBGWTP: 720 hours	**SBBGWTP:** 100%	**SBBGWTP:**	17,003 kWh (14,182 lbs CO_2 generated[a])
Gallons Treated: **5.858 million gallons**		Gallons Treated Since July 1998: **1.251 billion gallons**	
Volume Discharged to Union Creek: **5.858 million gallons**		Gallons Treated from Other Sources: **0 gallons**	
VOC Mass Removed: **1.00 lbs**[b]		VOC Mass Removed Since July 1998: **535.1 lbs**	
Rolling 12-Month Cost per Pound of Mass Removed: **$24,953**[c]			
Monthly Cost per Pound of Mass Removed: **$17,668**[c]			

lbs = pounds
[a] SiteWise™ estimate that 1 kilowatt hour generated produces 0.74 pounds of GHG. Value also includes approximately 1,600 pounds of GHG from GAC change out services averaged to a per month basis.
[b] Calculated using March 2021 EPA Method SW8260C analytical results.
[c] Costs include operations and maintenance, carbon change out, 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) – March 2021

FT005[a]				SS029		SS030	
EW01x05	Offline	EW743x05	Offline	EW01x29	Offline[b]	EW01x30	5.5
EW02x05	Offline	EW744x05	4.2	EW02x29	Offline[b]	EW02x30	Offline[c]
EW03x05	Offline	EW745x05	11.4	EW03x29	3.2	EW03x30	14.9
EW731x05	7.4	EW746x05	Offline	EW04x29	6.0	EW04x30	11.9
EW732x05	Offline	EW2291x05	8.4	EW05x29	Offline	EW05x30	6.4
EW733x05	Offline	EW2782x05	5.9	EW06x29	13.1	EW2174x30	4.1
EW734x05	6.9	EW2783x05	1.8	EW07x29	10.1	EW711x30	4.0
EW735x05	7.6	EW2784x05	11.0			MW269x30	Offline
EW736x05	Offline	EW2785x05	Offline[c]				
EW737x05	Offline	EW2786x05	9.7				
EW742x05	Offline						
FT005 Total: 74.3				**SS029 Total: 32.4**		**SS030 Total: 46.7**	

SBBGWTP Average Monthly Flow[d]: 135.6 gpm

[a] 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.*
[b] Extraction wells taken off line because of persistent fouling of the well pumps and associated discharge piping.
[c] Extraction wells were operational; however, well was recharging.
[d] The average SBBGWTP groundwater flow rate was calculated using the Union Creek Discharge Totalizer and dividing it by the total time the system was operational.

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	None	--	--	--	

[a] Shutdown and restart times estimated based on field notes
SBBGWTP = South Base Boundary Groundwater Treatment Plant

Summary of O&M Activities

Monthly groundwater treatment samples were collected at the SBBGWTP on 3 March 2021. Sample results are presented in Table 4. The total VOC concentration (20.4 µg/L) in the influent sample decreased from the February 2021 sample results (24.6 µg/L). TCE was the primary VOC detected in the influent sample at a concentration of 19 µg/L. No VOCs were detected in the midpoint and effluent sampling locations.

The influent and effluent samples were also analyzed for TPH-g, TPH-d, and TPH-mo. TPH-d was detected in the influent (72 J µg/L) and the effluent (29 J µg/L) samples; however, the effluent concentration was less than the discharge limit of 50 µg/L.

Figure 1 presents a plot of influent VOC concentrations and average flow at the SBBGWTP over the past twelve (12) months. VOC concentrations have been seasonally variable; however, over the last 12 months the trend has increased. An overall decreasing flow rate trend was also observed in the past 12 months.

In March 2021 troubleshooting was performed on five extraction wells. The following list presents the maintenance activities and status of those extraction wells:

- EW744x05 – The pressure transducer was replaced. Well is currently on line.
- EW745x05 – A damaged power wire was replaced. Well is currently on line.
- EW04x29 – The flow sensor and paddlewheel were replaced. Well is currently on line.
- EW05x29 – The motor needs to be replaced. Well is currently off line.
- EW711x30 – The motor was replaced. Well is currently on line.

Optimization Activities

No optimization activities occurred at the SBBGWTP in March 2021.

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. In March 2021, the SBBGWTP produced approximately 14,182 pounds of GHG, which includes approximately 1,600 pounds of GHG generated from GAC change out services averaged to a per month basis.

TABLE 4
Summary of Groundwater Analytical Data for March 2021 – South Base Boundary Groundwater Treatment Plant

Constituent	Instantaneous Maximum[a] (µg/L)	Detection Limit (µg/L)	N/C	3 March 2021 (µg/L)		
				Influent	Midpoint	Effluent[b]
Halogenated Volatile Organics						
Acetone	NA	1.9	0	ND	ND	ND
Bromodichloromethane	NA	0.17	0	ND	ND	ND
Chloroform	1.9	0.16	0	ND	ND	ND
Chloromethane	NA	0.30	0	ND	ND	ND
1,1-Dichloroethane	0.50	0.22	0	ND	ND	ND
1,2-Dichloroethane	0.50	0.13	0	ND	ND	ND
1,1-Dichloroethene	0.50	0.23	0	ND	ND	ND
cis-1,2-Dichloroethene	0.50	0.15	0	1.4	ND	ND
trans-1,2-Dichloroethene	0.50	0.11	0	ND	ND	ND
Dichlorodifluoromethane	NA	0.31	0	ND	ND	ND
Tetrachloroethene	0.50	0.20	0	ND	ND	ND
1,1,1-Trichloroethane	0.50	0.16	0	ND	ND	ND
1,1,2-Trichloroethane	0.50	0.27	0	ND	ND	ND
Trichloroethene	0.65	0.16	0	19	ND	ND
Vinyl Chloride	0.90	0.10	0	ND	ND	ND
Non-Halogenated Volatile Organics						
Benzene	0.50	0.13	0	ND	ND	ND
Ethylbenzene	0.50	0.15	0	ND	ND	ND
Toluene	0.50	0.25	0	ND	ND	ND
Xylenes	0.50	0.10 – 0.18	0	ND	ND	ND
Other						
Total Petroleum Hydrocarbons – Gasoline	50	10	0	ND	NM	ND
Total Petroleum Hydrocarbons – Diesel	50	25	0	72 J	NM	29 J
Total Petroleum Hydrocarbons – Motor Oil	100	32	0	ND	NM	ND

[a] In accordance with current National Pollutant Discharge Elimination System permit number CAG912002, Order number R2-2017-0048.

[b] Concentrations in **bold** exceeded discharge limits.

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.
NA = not applicable

N/C = number of samples out of compliance with discharge limits.
ND = not detected
NM = not measured
µg/L = micrograms per liter

Figure 1

SBBGWTP Total VOC Influent Concentrations and Average Flowrate Twelve Month History

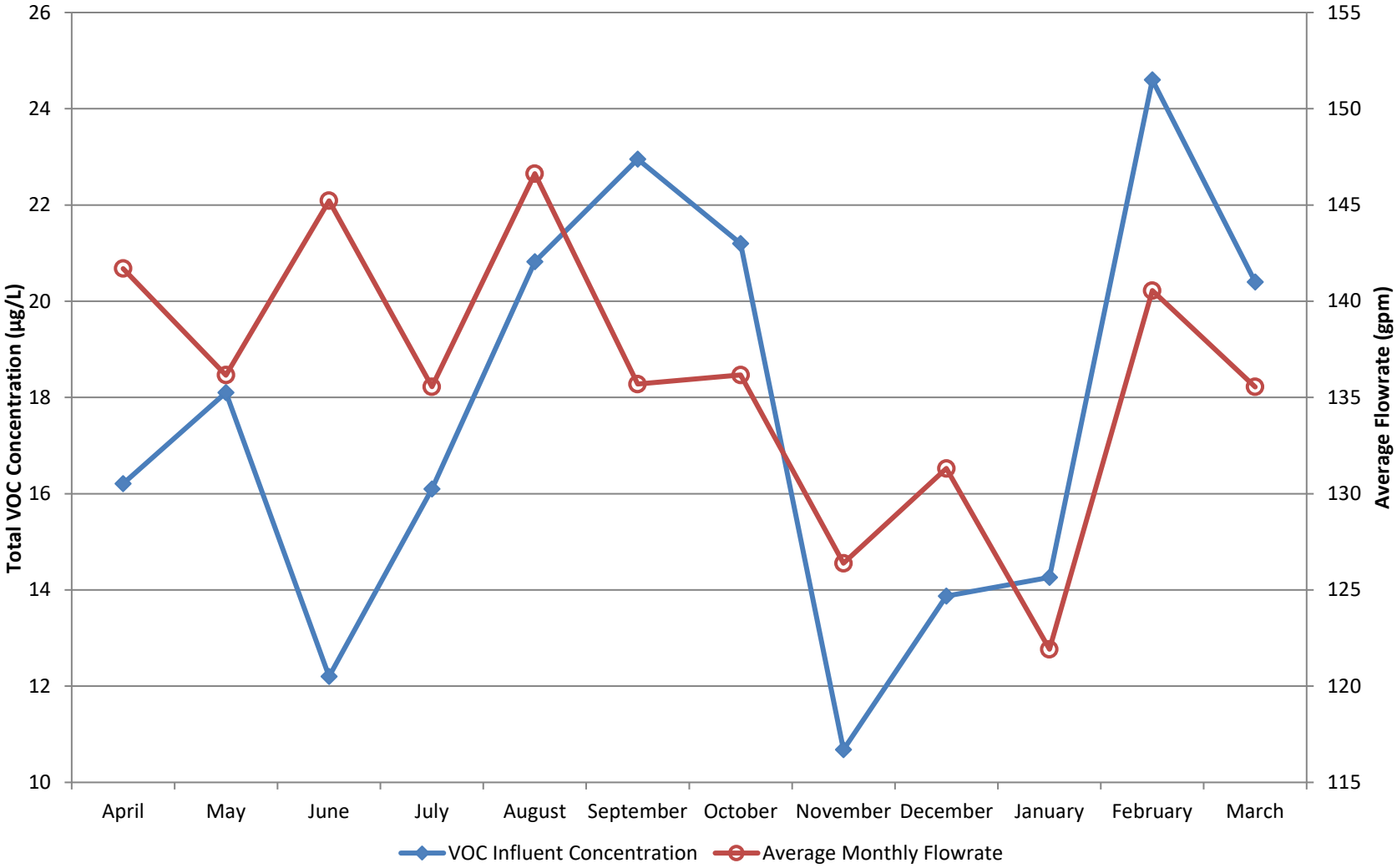
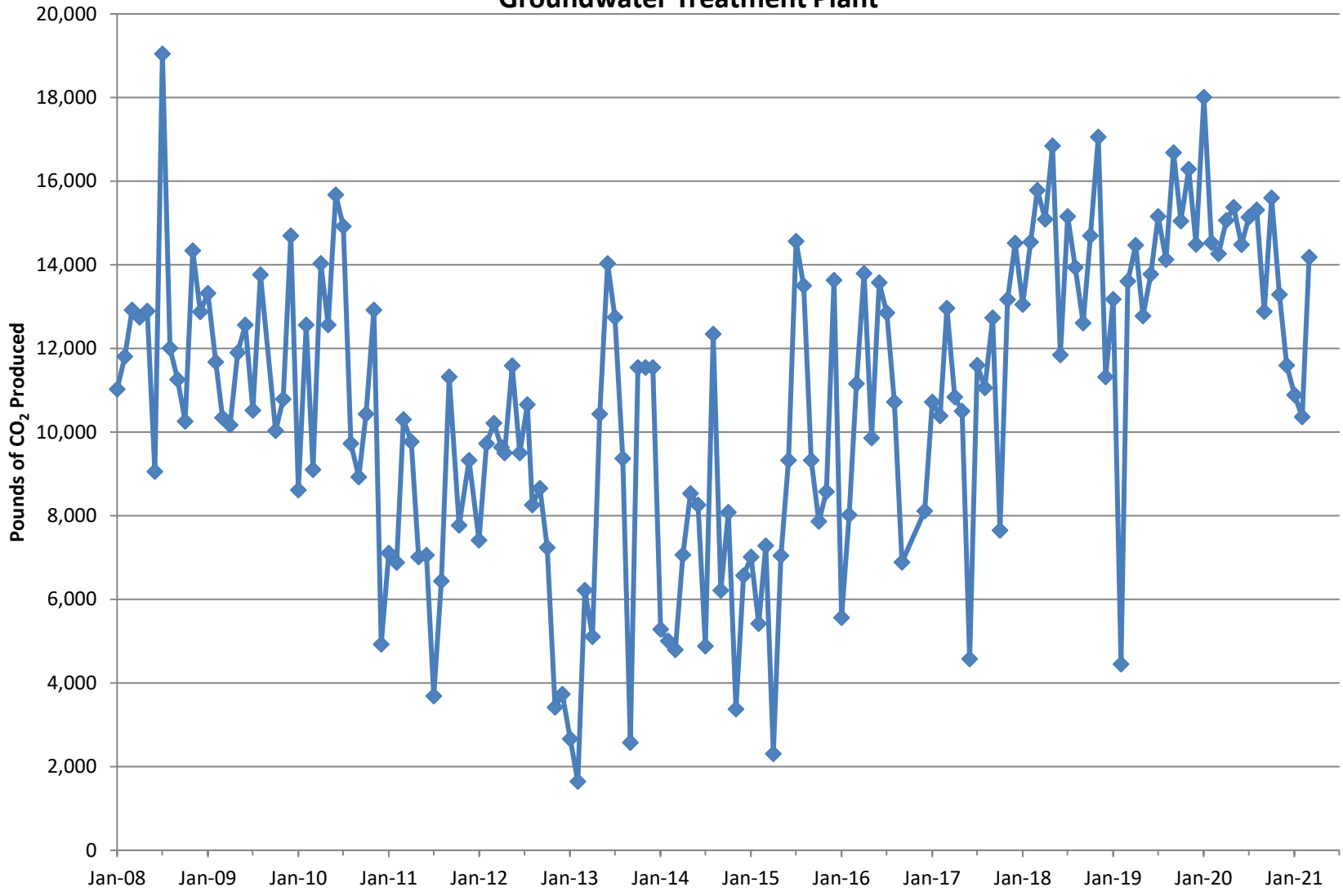


Figure 2

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



Central Groundwater Treatment Plant Monthly Data Sheet

Report Number: 260 **Reporting Period: 2 March 2021 – 1 April 2021** **Date Submitted: 9 April 2021**

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 2021 reporting period.

Table 1 – Operations Summary – March 2021

Initial Data Collection:	3/2/2021 13:00	**Final Data Collection:**	4/1/2021 9:00		
Operating Time:		Percent Uptime:		Electrical Power Usage:	
CGWTP:	716 hours	**CGWTP:**	100%	**CGWTP:**	1,150 kWh (1,739 lbs CO_2 generated[a])

Gallons Treated (discharge to storm sewer): **986,375 gallons**

Gallons Treated Since January 1996: **592.0 million gallons**

VOC Mass Removed from groundwater: **1.86 lbs**[b]

VOC Mass Removed Since January 1996: **2,880 lbs from groundwater**; **8,686 lbs from vapor**

Rolling 12-Month Cost per Pound of Mass Removed: $2,939[c]

Monthly Cost per Pound of Mass Removed: $2,695[c]

[a] SiteWise™ estimate that 1 kilowatt hour generated produces 0.74 pounds of GHG. Value also includes approximately 888 pounds of GHG from GAC change out services averaged to a per month basis.
[b] Calculated using March 2021 EPA Method SW8260C analytical results.
[c] Costs include operations and maintenance, carbon change out, reporting, analytical laboratory, project management, and utility costs related to operation of the system.

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

Table 2 – CGWTP Average Flow Rates[a] – March 2021

Location	Average Flow Rate Groundwater (gpm)
EW001x16	10.3
EW002x16	5.6
EW003x16[b]	0.0
EW605x16	NM[c]
EW610x16	NM[c]
CGWTP	23.0

[a] Flow rates calculated by dividing total gallons processed by system operating time for the month or the average of the instantaneous readings.
[b] Extracted groundwater from EW003x16 is treated in Site SS016 bioreactor. This well has experienced intermittent down time due to hangar construction activities in the OSA.
[c] Extraction wells are operational. No current access available to the wellhead totalizers because of construction activities
gpm = gallons per minute
NM = not measured

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

Table 3 – Summary of System Shutdowns

Location	Shutdown[a]		Restart		Cause
	Date	Time	Date	Time	
CGWTP	None	--	--	--	

-- = Date/Time not recorded
[a] Shutdown and restart times estimated based on field notes
CGWTP = Central Groundwater Treatment Plant

Summary of O&M Activities

Monthly groundwater treatment samples were collected at the CGWTP on 3 March 2021. Sample results are presented in Table 4. The total VOC concentration (226.78 µg/L) in the March 2021 influent sample has decreased from the February 2021 sample ((244.72 µg/L). TCE was the primary VOC detected in the influent sample at a concentration of 180 µg/L. No VOCs were detected in the samples collected after the first and second carbon vessels nor in the effluent sample. The influent and effluent samples were also analyzed for TPH-g, TPH-d, and TPH-mo. TPH-d was detected (66 J µg/L) in the influent sample; however, no TPH was detected in the effluent sample. Travis AFB will continue to monitor influent, midpoint, and effluent concentrations at the CGWTP for carbon breakthrough.

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 influent concentrations have been seasonally variable; however, over the last 12 months the trend has increased. An overall flat flow rate trend was also observed in the past 12 months.

The Site SS016 subgrade biogeochemical reactor (SBGR), also known as the bioreactor and the Site DP039 bioreactor, continued operating in March 2021.

A 3-bay aircraft hangar is being constructed over much of the Oil Spill Area (OSA) source area (former Buildings 16 and 18 area). This project is scheduled to be constructed over at least the next year or so. Every attempt will be made to keep all extraction wells and the Site SS016 bioreactor in operation. However, there may be times when extraction needs to be shutdown to avoid spills of extracted groundwater or to change out electrical equipment. In addition, the horizontal well (EW003x16) is being replaced, which will necessitate significant down-time for this well.

Optimization Activities

No optimization activities occurred at the CGWTP in March 2021.

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 1,739 pounds of GHG during March 2021.

TABLE 4
Summary of Groundwater Analytical Data for March 2021 – Central Groundwater Treatment Plant

Constituent	Instantaneous Maximum[a] (µg/L)	Detection Limit (µg/L)	N/C	3 March 2021 (µg/L) Influent	After Carbon 1 Effluent	After Carbon 2 Effluent	System Effluent[b]
Halogenated Volatile Organics							
Acetone	NA	1.9 – 3.8	0	ND	ND	ND	ND
Bromomethane	5.0	0.21 – 0.42	0	ND	ND	ND	ND
Carbon disulfide	5.0	0.17	0	ND	ND	ND	ND
Chloroform	1.9	0.16 – 0.32	0	ND	ND	ND	ND
Chloromethane	NA	0.30 – 0.60	0	ND	ND	ND	ND
1,2-Dichlorobenzene	5.0	0.15 – 0.30	0	0.33 J	ND	ND	ND
1,3-Dichlorobenzene	5.0	0.13 – 0.26	0	0.44 J	ND	ND	ND
1,4-Dichlorobenzene	5.0	0.16 – 0.32	0	0.23 J	ND	ND	ND
1,1-Dichloroethane	0.50	0.22 – 0.44	0	ND	ND	ND	ND
1,2-Dichloroethane	0.50	0.13 – 0.26	0	ND	ND	ND	ND
1,1-Dichloroethene	0.50	0.23 – 0.46	0	0.61 J	ND	ND	ND
cis-1,2-Dichloroethene	0.50	0.15 – 0.30	0	42	ND	ND	ND
trans-1,2-Dichloroethene	0.50	0.15 – 0.30	0	2.6	ND	ND	ND
Tetrachloroethene	0.50	0.20 – 0.40	0	0.57 J	ND	ND	ND
1,1,1-Trichloroethane	0.50	0.16 – 0.32	0	ND	ND	ND	ND
1,1,2-Trichloroethane	0.50	0.27 – 0.54	0	ND	ND	ND	ND
Trichloroethene	0.65	0.16 – 0.32	0	180	ND	ND	ND
Vinyl Chloride	0.90	0.10 – 0.20	0	ND	ND	ND	ND
Non-Halogenated Volatile Organics							
Benzene	0.50	0.16 – 0.32	0	ND	ND	ND	ND
Ethylbenzene	0.50	0.16 – 0.32	0	ND	ND	ND	ND
Toluene	0.50	0.17 – 0.34	0	ND	ND	ND	ND
Total Xylenes	0.50	0.15 – 0.38	0	ND	ND	ND	ND
Other							
Total Petroleum Hydrocarbons – Gasoline (C6 – C10)	50	10	0	ND	NM	NM	ND
Total Petroleum Hydrocarbons – Diesel (C10 – C28)	50	24 – 27	0	66 J	NM	NM	ND
Total Petroleum Hydrocarbons – Motor Oil (C28 – C40)	100	24 – 27	0	ND	NM	NM	ND

[a] In accordance with current National Pollutant Discharge Elimination System permit number CAG912002, Order number R2-2017-0048.

[b] Concentrations in **bold** exceeded discharge limits

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.

NA = not applicable

NM = not measured

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

µg/L = micrograms per liter

ND = not detected

Figure 1

CGWTP Total VOC Influent Concentrations and Average Flowrate Twelve Month History

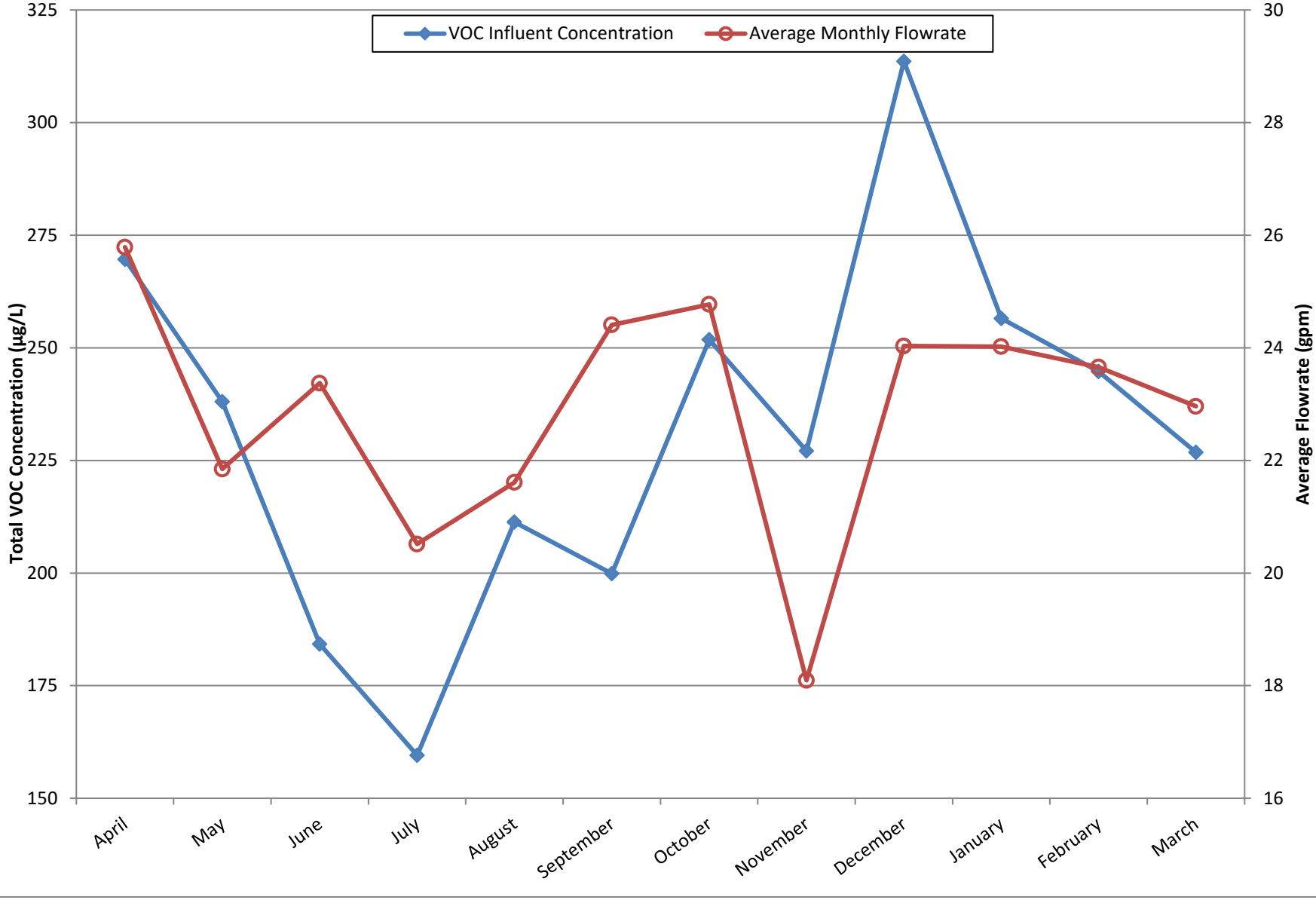
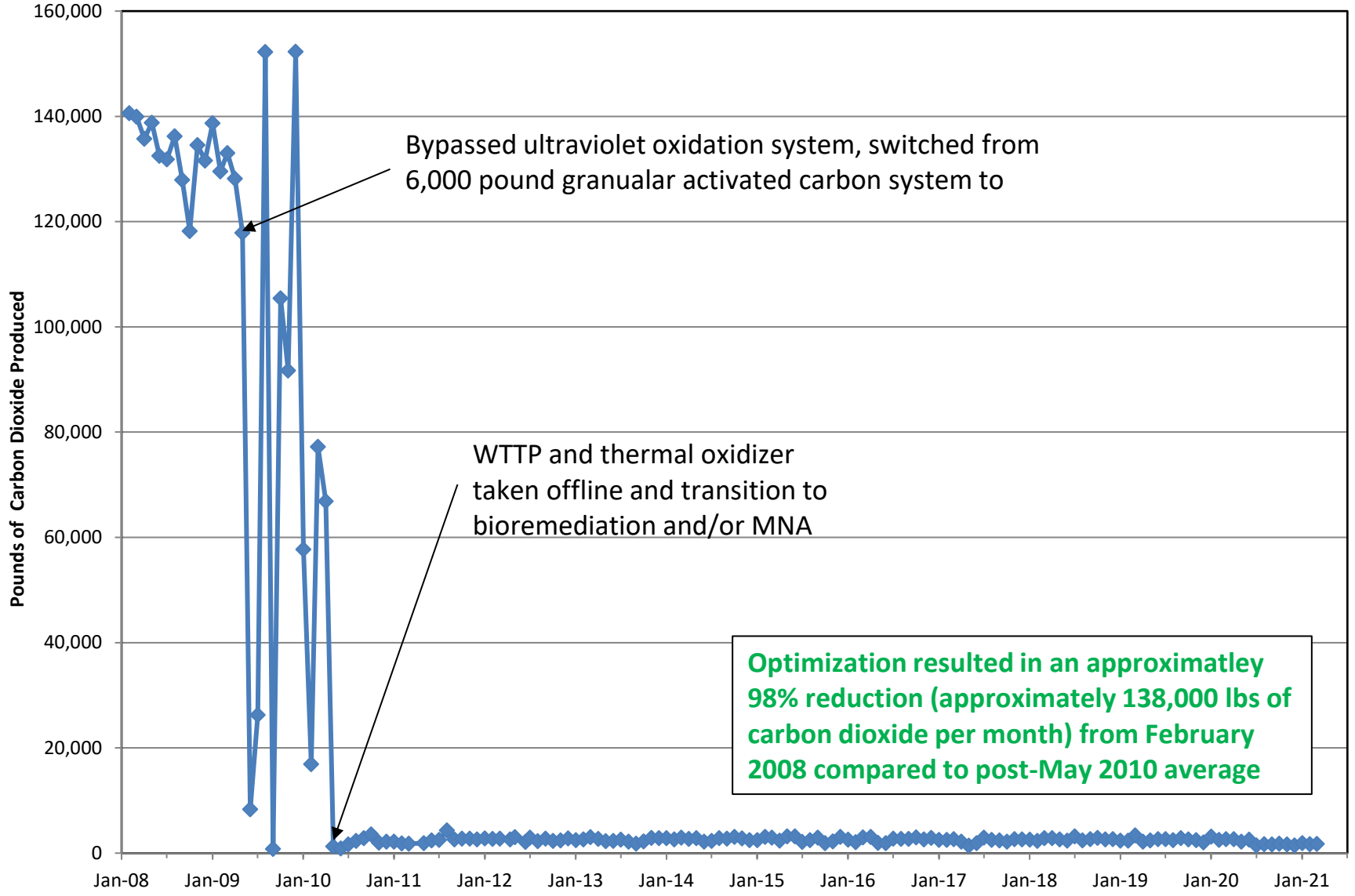


Figure 2

Equivalent Pounds of Carbon Dioxide Produced by the Central Groundwater Treatment Plant



Subarea LF007C Groundwater Treatment Plant Monthly Data Sheet

Report Number: 199 **Reporting Period: 2 March 2021 – 31 March 2021** **Date Submitted: 9 April 2021**

This monthly data sheet presents information regarding the Subarea LF007C Groundwater Treatment Plant (LF007C GWTP) and associated remedial process optimization (RPO) activities.

System Metrics

Table 1 presents operational data from the March 2021 reporting period:

Table 1 – Operations Summary – March 2021

Initial Data Collection:	3/2/2021 8:30			**Final Data Collection:**	3/31/2021 13:00
Operating Time:		Percent Uptime:		Electrical Power Usage[a]:	
LF007C GWTP:	700.5 hours	**LF007C GWTP**	100%	**LF007C GWTP:**	0 kWh
Gallons Treated: **106,016 gallons**				Gallons Treated Since March 2000: **91.5 million gallons**	
Volume Discharged to Duck Pond: **106,016 gallons**					
VOC Mass Removed: **7.77×10^{-4} pounds**[b]				VOC Mass Removed Since March 2000: **174.4 pounds (Groundwater)**	
Rolling 12-Month Cost per Pound of Mass Removed: **Not Measured**[c]					
Monthly Cost per Pound of Mass Removed: **Not Measured**[c]					

[a] The LF007C GWTP operates on solar power only.
[b] VOCs from March 2021 influent sample detected by EPA Method SW8260C.
[c] Value not calculated since measurement does not accurately represent the cost effectiveness of the system.

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

Table 2 – LF007C GWTP Average and Total Flow Rates – March 2020

Location	Average Flow Rate (gpm)[a]	Total Gallons Processed (gallons)
EW614x07	2.2	90,423
EW615x07	0.5	20,505
LF007C GWTP	**2.5**	**106,016**

[a] Flow rates calculated by dividing total gallons processed by system operating time for the month or the average of the instantaneous readings.
gpm = gallons 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	
LF007C GWTP	None	--	--	--	

-- = Time not recorded
[a] Shutdown and restart times estimated based on field notes
LF007C GWTP = Subarea LF007C Groundwater Treatment Plant

Summary of O&M Activities

Monthly groundwater samples were collected at the LF007C GWTP on 3 March 2021. Sample results are presented in Table 4. The total VOC concentration in the March 2021 influent sample was 0.88 J µg/L. TCE was the only VOC detected at the influent sample location. In addition, TCE was detected in the midpoint sampling location at a concentration of 0.34 J µg/L. No VOCs were detected in the effluent sample location.

Figure 1 presents a chart of influent concentrations (total VOCs) at the LF007C GWTP versus time for the past twelve (12) months. VOC concentrations, primarily TCE, have been seasonally variable; however, over the last 12 months the trend has increased. The average flow rate through the LF007C GWTP has gradually decreased over the last 12 months due to typical seasonal variation.

Optimization Activities

No optimization activities occurred at the LF007C GWTP in March 2021.

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 system.

Figure 2 presents the historical GHG production from the systems associated with the NGWTP and LF007C GWTP. The LF007C GWTP is a solar-only operated treatment system and does not generate GHG, with exception of a small amount of GHG generated from changing out the GAC averaged to a per month basis.

TABLE 4
Summary of Groundwater Analytical Data for March 2021 – Subarea LF007C Groundwater Treatment Plant

Constituent	Instantaneous Maximum[a] (µg/L)	Detection Limit (µg/L)	N/C	3 March 2021 (µg/L)		
				Influent	After Carbon 1	Effluent[b]
Halogenated Volatile Organics						
Acetone	NA	1.9	0	ND	ND	ND
Bromodichloromethane	5.0	0.17	0	ND	ND	ND
Bromoform	5.0	0.46	0	ND	ND	ND
2-Butanone	5.0	2.0	0	ND	ND	ND
Carbon Tetrachloride	0.5	0.19	0	ND	ND	ND
Chloroform	1.9	0.16	0	ND	ND	ND
Chloromethane	NA	0.30	0	ND	ND	ND
Dibromochloromethane	5.0	0.17	0	ND	ND	ND
1,3-Dichlorobenzene	5.0	0.13	0	ND	ND	ND
1,4-Dichlorobenzene	5.0	0.16	0	ND	ND	ND
1,1-Dichloroethane	0.50	0.22	0	ND	ND	ND
1,2-Dichloroethane	0.50	0.13	0	ND	ND	ND
1,1-Dichloroethene	0.50	0.23	0	ND	ND	ND
cis-1,2-Dichloroethene	0.50	0.15	0	ND	ND	ND
trans-1,2-Dichloroethene	0.50	0.15	0	ND	ND	ND
Methylene Chloride	5.0	0.94	0	ND	ND	ND
Tetrachloroethene	0.50	0.20	0	ND	ND	ND
1,1,1-Trichloroethane	0.50	0.16	0	ND	ND	ND
1,1,2-Trichloroethane	0.50	0.27	0	ND	ND	ND
Trichloroethene	0.65	0.16	0	0.88 J	0.34 J	ND
Vinyl Chloride	0.90	0.10	0	ND	ND	ND
Non-Halogenated Volatile Organics						
Benzene	0.50	0.16	0	ND	ND	ND
Ethylbenzene	0.50	0.16	0	ND	ND	ND
Toluene	0.50	0.17	0	ND	ND	ND
Xylenes	0.50	0.15 – 0.19	0	ND	ND	ND

[a] In accordance with current National Pollutant Discharge Elimination System permit number CAG912002, Order number R2-2017-0048.
[b] Concentrations in **bold** exceeded discharge limits

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.
NA = not applicable
N/C = number of samples out of compliance with discharge limits.
ND = not detected
µg/L = micrograms per liter

Figure 1

LF007CGWTP Total VOC Influent Concentrations and Average Flowrate Twelve Month History

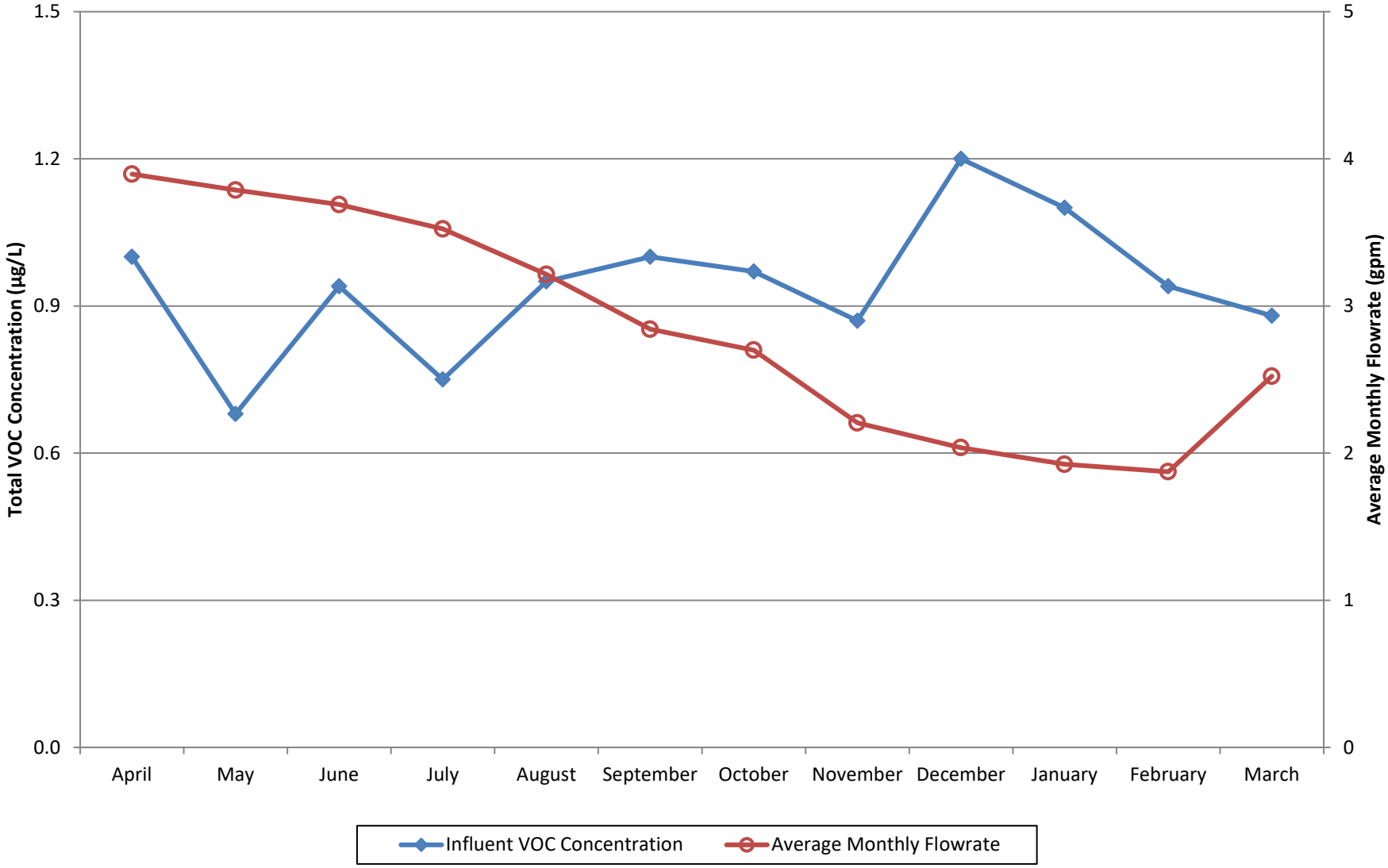
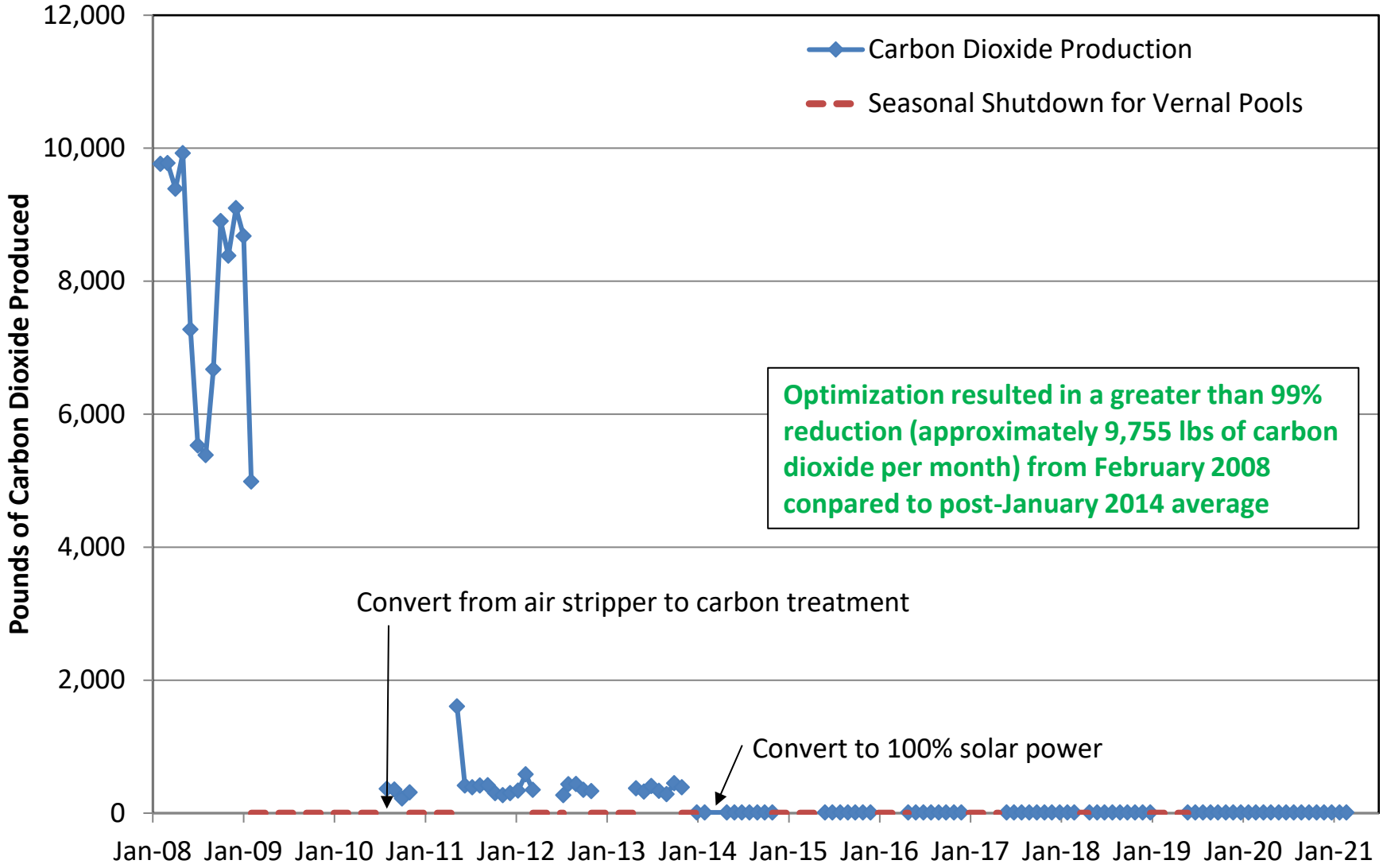


Figure 2

Equivalent Pounds of Carbon Dioxide Produced by the NGWTP/LF007C GWTP



Note: Dashed line represents seasonal shutdowns due to the presence of vernal pools at Site LF007C during which no carbon dioxide production occurred.

Site ST018 Groundwater Treatment Plant Monthly Data Sheet

Report Number: 121 **Reporting Period: 1 March 2021 – 1 April 2021** **Date Submitted: 9 April 2021**

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

System Metrics

Table 1 presents operation data from the March 2021 reporting period.

Table 1 – Operations Summary – March 2021

Initial Data Collection: 3/1/2021 11:00	**Final Data Collection:**	4/1/2021 8:00
Operating Time:	Percent Uptime:	Electrical Power Usage:
ST018GWTP: 741 hours	**ST018GWTP: 100**%	**ST018GWTP:** 54 kWh (40 lbs CO_2 generated[a])
Gallons Extracted: **86,405 gallons**	Gallons Extracted Since March 2011: **20.0 million gallons**	
Volume Discharged to Sanitary Sewer: **86,405 gallons**	Final Totalizer Reading: **20,044,814 gallons**	
Cumulative Volume Discharged to Sanitary Sewer since 1 November 2014: **13.5 million gallons**		
MTBE, BTEX, VOC, TPH Mass Removed: **0.12 lbs**[b]	MTBE, BTEX, VOC, TPH Mass Removed Since March 2011: **49.9 lbs**	
MTBE (Only) Removed: **0.01 lbs**[b]	MTBE (Only) Mass Removed Since March 2011: **12.2 lbs**	
Rolling 12-Month Cost per Total Pounds of Mass Removed: $74,789[bc]		
Monthly Cost per Pound of Mass Removed: $40,376[bc]		

[a] SiteWise™ estimate that 1 kilowatt hour generated produces 0.74 pounds of GHG.
[b] Calculated using March 2021 EPA Method SW8260C and SW8015B analytical results.
[c] Costs include operations and maintenance, reporting, analytical laboratory, project management, and utility costs related to operation of the system.
kWh = kilowatt hour
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 – March 2021

Location	Average Flow Rate Groundwater (gpm)[a]	Hours of Operation
EW2014x18	1.1	741
EW2016x18	1.0	741
EW2019x18	0.0	Offline[b]
EW2333x18	1.6	741
ST018GWTP	1.9	741

[a] Flow rates calculated by dividing total gallons processed by amount of operating time of the pump/system. The extraction pumps take in air from the subsurface, which alters the flow and totalizer.
[b] Extraction well was turned off with regulatory approval on 25 November 2019 because of low MTBE concentrations.

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	None	--	--	--	

-- = Time not recorded
[a] Shutdown and restart times estimated based on field notes
ST018GWTP = Site ST018 Groundwater Treatment Plant

Summary of O&M Activities

Monthly groundwater discharge samples were collected at the ST018GWTP on 3 March 2021. Because the extracted groundwater is no longer treated with carbon prior to discharge to the sanitary sewer, only discharge samples are now collected, rather than influent and effluent samples. Results are presented in Table 4. The complete March 2021 laboratory data report is available upon request. The MTBE discharge concentration during the March 2021 sampling event was 18 µg/L, which is a decrease from the February 2021 sample result of 22 J µg/L. TPH-g, benzene, and 1,2-DCA were also detected in the system discharge sample and are listed in Table 4.

The Fairfield-Suisun Sewer District does not currently have a discharge limit for MTBE, but a limit of 6,400 µg/L is advised based on worker health and safety. Travis AFB will continue to monitor discharge contaminant concentrations to maintain compliance with the Fairfield-Suisun Sewer District discharge permit.

Figure 1 presents plots of the average flow rate and total extracted contaminants (MTBE, TPH-g, TPH-d, TPH-mo, BTEX, and VOCs) and extracted MTBE concentrations at the ST018GWTP over the past twelve (12) months. The average flow rate through the ST018GWTP has been cyclical with typical flow rates decreasing during the dry season (summer and fall) and increasing during the rainy season (winter and spring). The overall average flow rates in the past 12 months show a decreasing trend as expected. The extracted MTBE

concentrations and extracted total concentrations have exhibited overall increasing trends over the past 12 months.

Optimization Activities

No optimization activities occurred at the ST018GWTP in March 2021.

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 a majority of the ST018GWTP system.

Figure 2 presents the historical GHG production from the ST018GWTP. The ST018GWTP produced 40 pounds of GHG during March 2021 and removed 86,405 gallons of water. The amount of GHG produced is directly attributed to the amount of water removed through the system because the only line-power electrical use is for a transfer pump to push the water from the system to the sanitary sewer.

TABLE 4
Summary of Groundwater Analytical Data for March 2021 – Site ST018 Groundwater Treatment Plant

Constituent	Instantaneous Maximum[a] (µg/L)	Detection Limit (µg/L)	N/C	3 March 2021 (µg/L)
				System Discharge[b]
Fuel Related Constituents				
Methyl tert-Butyl Ether	6,400	0.25	0	18
Benzene	25,000[c]	0.16	0	1.6
Ethylbenzene	25,000[c]	0.16	0	ND
Toluene	25,000[c]	0.17	0	ND
Total Xylenes	25,000[c]	0.19 – 0.34	0	ND
Total Petroleum Hydrocarbons – Gasoline	50,000[d]	10	0	150 J+
Total Petroleum Hydrocarbons – Diesel	50,000[d]	15	0	ND
Total Petroleum Hydrocarbons – Motor Oil	100,000	160	0	ND
Other				
Acetone	NA	1.9	0	ND
2-Butanone (MEK)	NA	2.0	0	ND
1,2-Dichloroethane	20	0.13	0	0.57 J
Isopropylbenzene	NA	0.19	0	ND
Naphthalene	NA	0.22	0	ND
N-Propylbenzene	NA	0.16	0	ND

[a] In accordance with the Fairfield-Suisun Sewer District Discharge Limitations

[b] Concentrations in **bold** exceeded discharge limits

[c] The limit of 25,000 µg/L is a combined limit for BTEX.

[d] The limit of 50,000 µg/L is a combined limit for TPH-g and TPH-d.

µg/L = micrograms per liter
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.
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, biased high.
NA = not applicable
N/C = number of samples out of compliance with discharge limits.
ND = not detected above method detection limit.

Figure 1

ST018GWTP Total Influent and MTBE Concentrations and Average Flowrate Twelve Month History

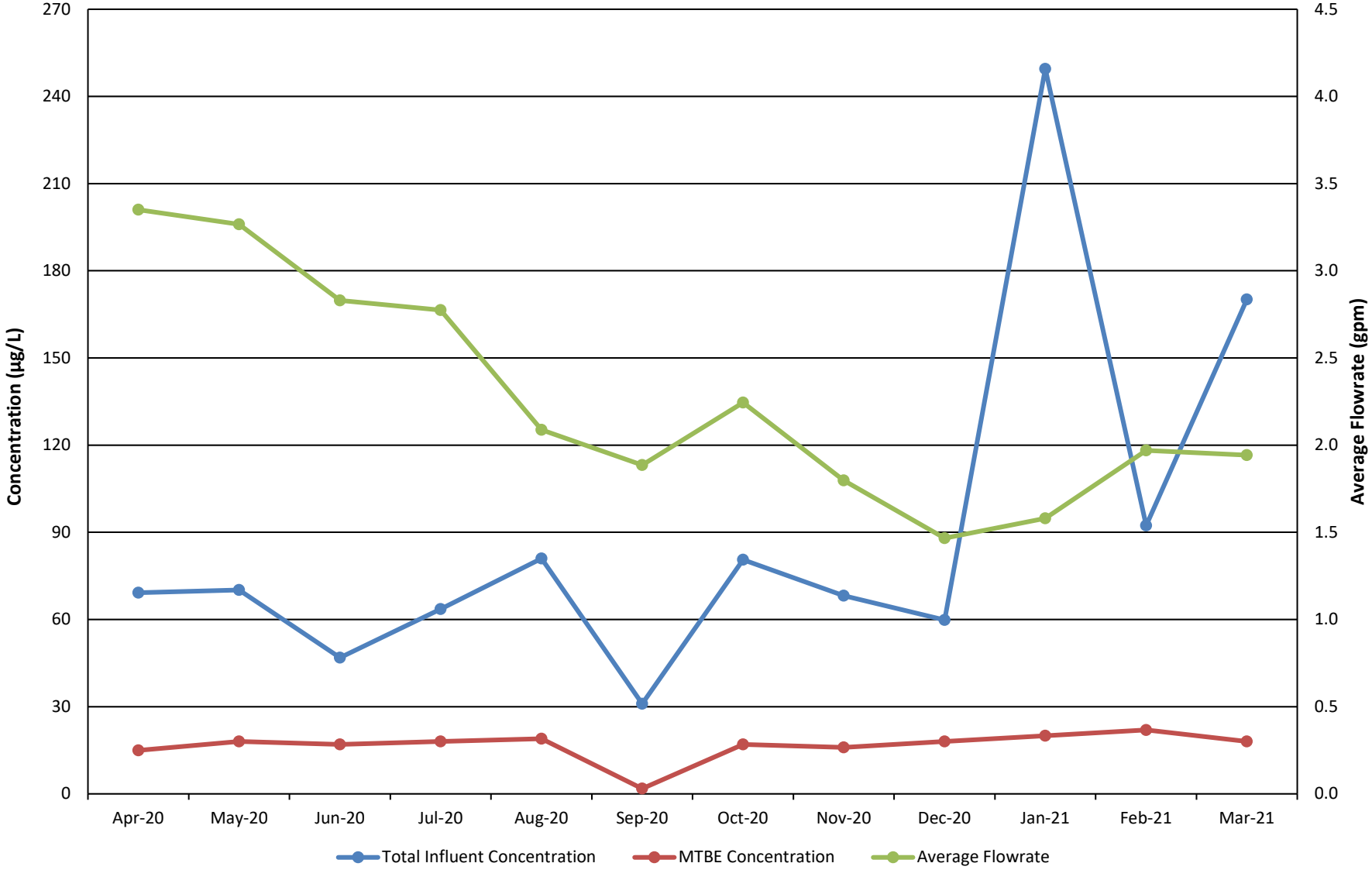
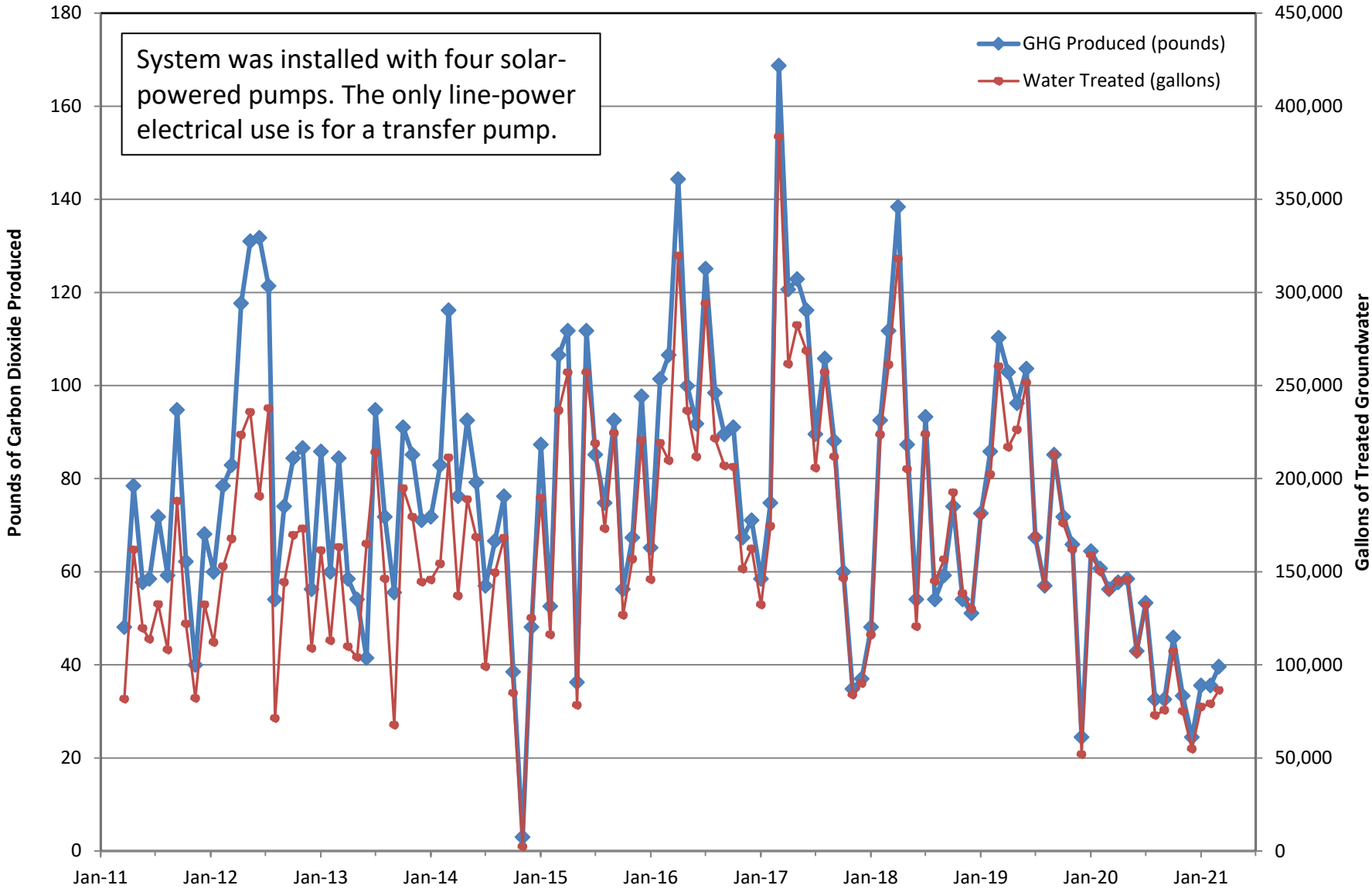


Figure 2

Equivalent Pounds of Carbon Dioxide Produced by the Site ST018 Groundwater Treatment Plant



Travis AFB
Restoration Program

Program Update

RPM Meeting April, 2021

Completed Documents (1)

- 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 (2)

- 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
- ST032 POCO Soil Excavation Work Plan
- SD036 GW RD/RA Work Plan
- SS016 GW RD/RA Work Plan
- SS015 GW RD/RA Work Plan
- FT005 Technology Demonstration Work Plan
- 2014 Annual CAMU Monitoring Report
- Old Skeet Range PAH Delineation Report
- ST028 POCO Work Plan
- SS014 POCO TD Work Plan
- CG508 Site Investigation/Site Closure Request Report
- 2014 Annual CAMU Monitoring Report
- DP039 GW RD/RA Work Plan
- SD031 TDCCR
- ST018 POCO CCR
- Site SS030 Groundwater RA CCR
- Sites SD036 and SD037 Groundwater RACCR
- Site SS016 Groundwater RACCR
- Site SS015 Groundwater RACCR
- 2014 Annual GRISR
- Site CG508 Well Decommissioning Work Plan

Completed Documents (3)

- Data Gap Investigation TM for Soil Sites SD033, SD043, & SS046
- Site FT004 Technology Demonstration Construction Completion Report
- Site SD031 Soil Remedial Investigation Work Plan
- Corrective Action Plan for DERA-Funded Oil Water Separators
- Site ST032 POCO Completion Report
- Site ST028 POCO Completion Report
- 2015 Annual CAMU Monitoring Report
- Site SD031 Remedial Investigation Work Plan
- Site SD034 Technology Demonstration Work Plan
- Site SS016 Soil Data Gaps Investigation Work Plan
- Multi-Site Bioaugmentation Technology Demonstration Work Plan
- Sites ST028 and ST032 POCO Well Decommissioning Work Plan
- Site TS060 Action Memorandum
- 2015 Annual GRISR
- FT005 Technology Demonstration Construction Completion Report
- Site CG508 POCO Well Decommissioning and Site Closeout Technical Memorandum
- Site DP039 Remedial Action Construction Completion Report
- ST028 POCO Well Decommissioning/Site Closeout Technical Memorandum
- Site TS060 Removal Action Work Plan

Completed Documents (4)

- Multisite Technology Demonstration Construction Completion Report
- SS014 POCO Technology Demonstration Construction Completion Report
- Site LF044 Investigation Work Plan
- Site FT004 POCO Soil Data Gap Investigation Work Plan
- SD034 Technology Demonstration Construction Completion Report
- POCO Evaluation/Closeout Report for DERA-funded oil/water separators OW051, OW053, and OW054
- ST032 POCO Well Decommissioning and Site Closeout Technical Memorandum
- 2016 Annual CAMU Monitoring Report
- Work Plan for Fourth Five-year Review
- 2016 Annual GRISR
- Data Gap Investigation Results, Technical Memorandum for Soil, Sites SD033, SD043, SS046
- TS060 Removal Action Completion Report
- SS035 Site Closure Report
- AOC TA500 Data Gaps Investigation and Closure Report
- Site TS060 No Further Action Proposed Plan
- POCO Evaluation/Closure Report for DERA-funded Oil/Water Separators OW040, OW047, OW048, OW049, OW050, OW052, OW055, OW056, and OW057

Completed Documents (5)

- Data Gap Investigation Results, Technical Memorandum for Soil Site SS016
- LF006, SS030, SD031 Aquifer Test Activities Technical Memorandum
- SS015 Soil Sampling Plan
- Monitoring Well Installation Tech Memo for Site DP039, Addendum to the RACCR
- FT005 Extraction System Optimiz-ation Tech Memo
- 2017 Annual CAMU Monitoring Report
- LF044 Sediment Sampling Report
- SD043 RD/RA Work Plan
- SS046 RD/RA Work Plan
- Amendment to the WABOU Soil ROD for sites DP039, SD043, and SS046
- EVO Sites FT004, SS015, SD031, & SD036 Optimization Injections Tech Memo
- LF006 Technology Demonstration Work Plan
- AOC TA500 Well Decommissioning and Site Closeout Tech Memo
- SS015 Soil Sampling Results Tech Memo
- LF006 Technology Demonstration Construction Completion Report
- Subarea LF007C TPH Chromatogram Review TM
- 2017 Annual GRISR
- SS014 POCO Subsites 2, 4, and 5 Closure Evaluation Report
- Addendum to the Site SS016 Groundwater RD/RA Work Plan

Completed Documents (6)

- SD043 Remedial Action Completion Report
- NFA ROD for Old Skeet Range (TS060/TS060A MRA)
- 2018 Annual GRISR
- SS046 Remedial Action Completion Report and Well Decommissioning Work Plan
- 2018 LF007 CAMU Inspection, Monitoring, and Maintenance Report
- Amendment to the NEWIOU Soil ROD for Sites SS016 and SD033
- SS016 RD/RA Work Plan
- 4th Five Year Review Report for Multiple Groundwater, Soil, and Sediment Sites
- SD043 Site Closure Report
- SS046 Well Decommissioning and Site Closeout Tech Memo
- LF008 Remedial Action Evaluation Report
- SD031B POCO Additional Site Investigation Work Plan
- Initial Passive Vent Systems Sampling Work Plan Tech Memo
- Optimization Activities Tech Memo for SD034 and SD037
- SD043 Well Decommissioning and Site Closeout Tech Memo
- FT004 POCO Corrective Action Plan
- 2019 GRISR
- 2019 CAMU Monitoring Report
- SD031 Soil RI/FS

Completed Documents (7)

- SS016 Soil RACR
- Addendum to the Initial Passive Vent System Sampling Work Plan
- Site LF008 Remedial Infrastructure Decommissioning TM
- ***Site FT004 POCO Soil Corrective Action Completion Report***

Completed Field Work (1)

- 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)
- ST018 Trench/Conveyance/Power Installation
- SD036 EVO Injection
- Well Development (SS015, SS016)
- Baseline Sampling (SS015, SS016)
- SS014 Data Gap Investigation
- SS016 EVO Injection
- TA500 Data Gaps Investigation

Completed Field Work (2)

- 2015 Annual GRIP Sampling
- SD037 EVO Injection
- SD034 Data Gaps Investigation
- SS015 EVO Injection
- FT005 Injection Well Installation
- OWS 47, 48, 49 Site Investigations
- SS030 Trench/Conveyance/Power Installation
- FT005 Trench Installation
- FT005 Well Development
- FT004 Well Installation, Well Development, Baseline Sampling
- FT005 Baseline Sampling
- DP039 Well Installation, Well Development, Baseline Sampling
- FT004 EVO Injection
- FT004 Trench/Conveyance/Power Installation
- DP039 Infiltration Trench Installation
- TA500 Groundwater Sampling
- FT005 EVO Injection
- 2016 Q2 GRIP Sampling
- Data Gap Inv. for Soil Sites (SD043, SS046)
- SD031 Remedial Investigation Step-out Sampling (2nd round)
- DP039 EVO Injection
- CG508 Well Decommissioning
- SD033 Soil Sampling
- Multi-site Bioaugmentation Well Installation
- SD034 Technology Demonstration Well Installation
- SS014 Bioreactor Installation
- ST028 & ST032 Well Decommissioning

Completed Field Work (3)

- SS016 Soil Data Gaps Investigation
- SD031 Remedial Investigation Soil Sampling (3rd round)
- Oil Water Separators Step-out Drilling
- OW055 Close-in-place
- Q4 2016 GRIP Sampling
- OW040 Soil Excavation/Surface Restoration
- OW057 Soil Excavation/Surface Restoration
- Multi-site Bioaugmentation & EVO Injection
- SD034 Technology Demonstration Bioreactor Installation
- OW050 Soil Sampling at Former Location of OWS
- OW055 Sidewalk Repairs
- SD031 Finish Soil Delineation (NE portion of site)
- Q2 2017 GRIP Sampling Event
- SS015 Optimization: Injection Well Installation
- DP039 Down-gradient Monitoring Well Installation (1st round)
- SD036 Optimization: Injection Well Installation
- SD031 Optimization: Injection Well Installation
- OW056 Site Excavation/Closure
- Well Re-development
- TS060 Removal Action

Completed Field Work (4)

- FT004 POCO Soil Data Gaps Investigation
- LF044 Sediment Sampling
- FT004 EVO Optimization
- DP039 Install downgradient monitoring wells (2nd round)
- FT005 – Install Extraction Wells
- DP039 Repair SBGR distribution headers
- Q4 2017 GRIP Sampling
- SD036 EVO Optimization
- SS015 EVO Optimization
- SD031 EVO Optimization
- FT005 Installation of Pumps and Controls in 5 New Extraction Wells
- Q1 2018 GRIP Sampling
- SD037 EVO reinjection
- Q2 2018 GRIP Sampling
- SS015 Soil sampling
- TA500 Well Decommissioning
- FT005 EVO injection
- FT004 POCO Soil Investigation
- 3Q 2018 GRIP Sampling
- LF006 Well Installations and Injections
- 4Q 2018 GRIP Sampling
- SD043 Soil excavation
- 1Q 2019 GRIP Sampling
- 2019 Annual LUC Inspections
- SS046 Soil excavation
- 2Q 2019 GRIP Sampling Event
- Well Re-development (11 wells)
- SD037 Injection Well Installation
- SS046 Well Decommissioning

Completed Field Work (5)

- 3rd Quarter 2019 GRIP Sampling
- SD034 O_2 Enhancement
- SS016 SBGR Repairs
- SD037 EVO Re-injection
- 4th Quarter 2019 GRIP Sampling
- SD031B POCO Additional Investigation (Gore Sorber Round 1)
- SD043 Well and GETS Decommissioning
- SS016 Soil excavation
- SS015 SPOC system installation
- SD031B POCO Additional Investigation (Gore Sorber Round 2)
- Annual CAMU Gas Monitoring
- SS015 SPOC Sampling
- 2Q20 GRIP Sampling
- DP039 Bioreactor Rejuvenation
- SD031B Phase 2 Soil, Vapor, & Groundwater Sampling
- DP039 Phytoremediation Trench extension
- Sampling Offbase LF007C wells
- LF008 Well Decommissioning
- Passive Vent Systems Sampling
- FT004 Soil Excavation
- SD031B Phase 3 MW Installation & GW Sampling
- PFAS Pilot Test

Completed Field Work (6)

- 4Q20 GRIP
- CAMU Topographic Survey
- SBBGWTP SCADA Upgrade
- Winter 2021 Vapor Intrusion Sampling Event

Documents In-Progress

CERCLA

- Technology Demonstration TM
- ***Site SD031 and FT004 Groundwater Sampling Results TM***

POCO

None

Field Work In-Progress

CERCLA

None

POCO

None

Documents Planned

CERCLA

- 2020 GRISR — June
- ***Vapor Intrusion Assessment Report*** — ***August***
- ***CAMU Report*** — ***TBD***

POCO

- Site SD031B POCO Additional Site Investigation Report — April

Field Work Planned

CERCLA

- 2Q GRIP Event — May
- Summer 2021 VI Sampling Event — May

POCO

None

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

Completed Documents (Historical 1)

- 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 (Historical 1)

- 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 (4th 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

Travis AFB
RPM Meeting
15 April 2021

Land Use Control Sites
Status/Update

KC-46 Hangar Vapor Barrier Installation

KC-46 Hangar Vapor Barrier Installation

KC-46 Hangar Vapor Barrier Installation

KC-46 Hangar Vapor Barrier Installation

KC-46 Hangar Vapor Barrier Installation

KC-46 Hangar Vapor Barrier Installation

KC-46 Hangar Vapor Barrier Installation

KC-46 Hangar Vapor Barrier Installation

Land Use Control Sites
KC-46 Hangar

- Underground utility work going slowly; several unidentified utilities discovered, most had been abandoned in place
- EW conveyance piping may need to be re-routed; still don't know yet
- MW226X16 will have to be decommissioned
- Replacement well will be installed West of hangar in an area away from utilities

Passive Vent & Vapor Intrusion Sampling

- An in depth presentation will be made at the 19 May RPM meeting.
  Below is an overview of the Winter 2021 results.
- Bldg. 38 Fire Station
  - The only indoor air exceedances were benzene and chloroform with the highest benzene concentration in the engine bay where fire trucks idle.
  - The chloroform we suspect is because of the extensive cleaning regimen.
  - Indoor air concentrations of both were higher than subslab or outdoor air, which suggests an indoor source.
- Bldgs. 549 and 554; no indoor air exceedances.
- Bldg. 837 had 1 exceedance of naphthalene but the same concentration was found in the ambient air sample.

PFOS/PFOA Updates

*AFFF RI updates will be provided by SRS in the following section.

Off-Base Point-Of-Entry-Treatment-Systems (two mile radius)

- Fri-Sat Apr 9-10; demo of existing shed at Property 2 with new shed construction beginning 12 Apr.
- Delivery of Tuff Sheds to Properties 1 and 3 expected on 14 Apr.

Property 1

Existing shed housing well and pressure tank.
The AF is not responsible for removing this shed.

Property 1

Existing well, ancillary connections and pressure tank.

Property 1

New 8’ x 10’ slab for POETS and Tuff Shed. The pressure tank will be moved adjacent to the POETS with subsurface lines connecting to the well.

Property 2

Existing shed housing well and pressure tank.
The AF will remove and replace this shed.

Property 2

Post demo of shed.

Property 3

Existing well and pressure tank. There was no well shed at this location.

New 8’ x 10’ slab for POETS and Tuff Shed.

Expanded Site Inspection (four mile radius)

- Notification letters from the 5 Jan sampling event were mailed to property owners on 19 Mar.
  - With the exception of one very low “J-flagged” PFOA result of 0.0052 ug/L, all results were non-detect.
- No further sampling of private drinking watering wells is planned.

FY21 NDAA Section 335 Notification

- 30 Mar; notification letters were mailed to 17 property owners within one mile of the base who are registered for agricultural use with the USDA; mailing addresses were provided by the USDA.

- TISS received as inquiry from a property manager representing a company that owns multiple properties near the base:
  - The property manager asked for the address and the Assessor's Parcel Number (APN) for the property that was identified using tract and farm numbers.
  - After confirming the APN, the property manager asked for an explanation of the contents of the letter which was provided.

Travis Air Force Base
Phase I Remedial Investigation of AFFF Sites

Presented by
Megan Duley, PM
ONEIDA Sustainment and Restoration Services

15 April 2021

Remedial Investigation Project

- RI Contract awarded 29 July 2020

- Project objective: Conduct remedial investigation of 16 AFFF areas to delineate the extent of PFOS/PFOA/PFBS in the environment in support of future remedial actions or proposal of no further action response action planned.

- Period of Performance through 28 July 2025 for completion of all RI tasks.

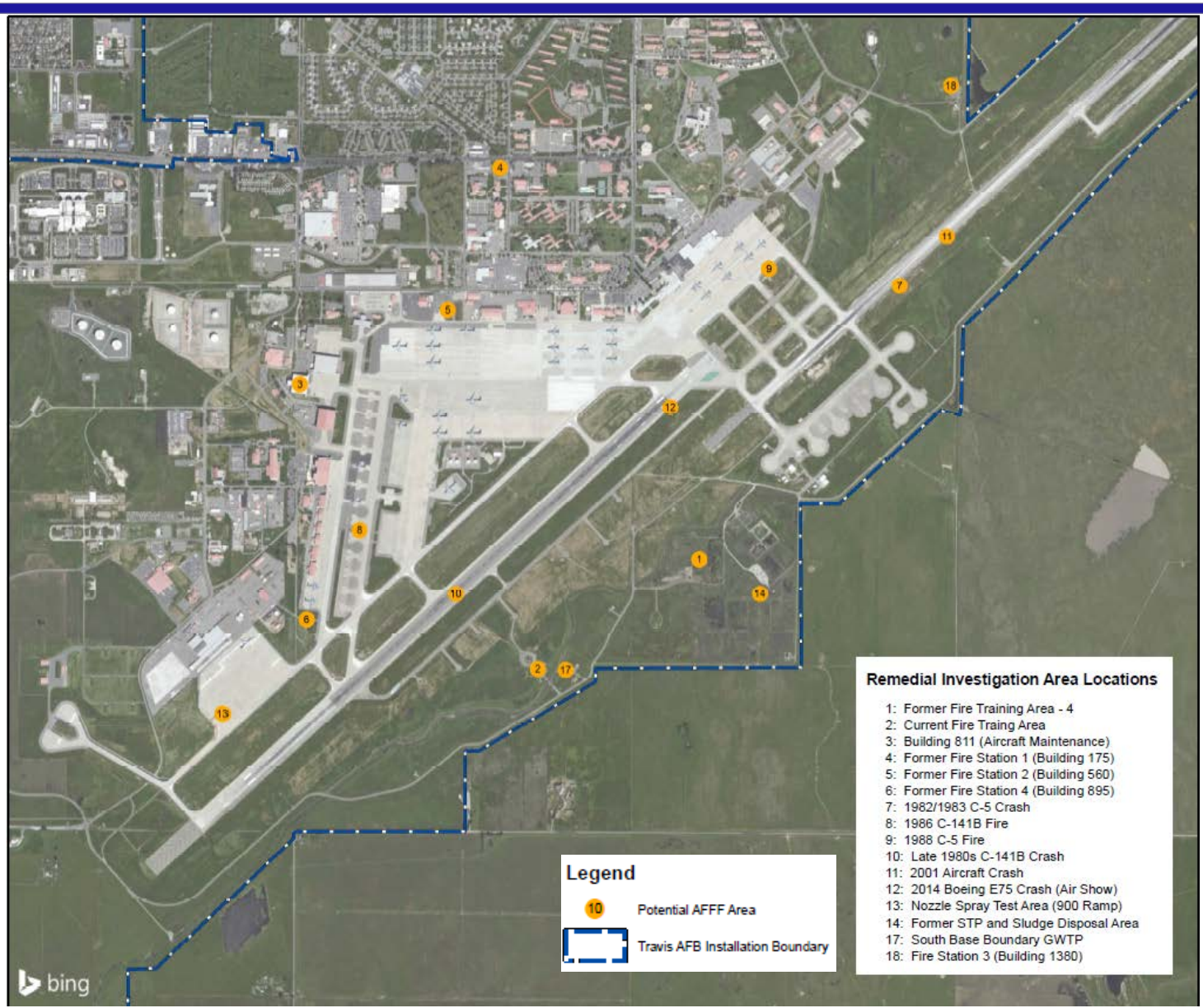
Project WP and UFP-QAPP

- Phase I RI WP and UFP-QAPP Introduction Meeting held 25 March 2021
- Oneida Team updated figures per DTSC request 25-26 March 2021
- Draft documents submitted electronically 26 March 2021
- Hard copy documents sent as requested
- Regulatory comments due 26 May 2021
- Draft Final documents targeted 30 June 2021
- Initial field activities targeted Aug/Sept 2021

AFFF and Remedial Investigation Areas

AFFF / Remedial Investigation Area	EESOH-MIS Site IDs	Site Area Name	Possible Pathway
AFFF Area 1	FT005P-SUB	Former Fire Training Area 4	Discharge
AFFF Area 2	SS030P-SUB	Current Fire Training Area	Spill and Discharge
AFFF Area 3	SD034P-SUB	Hangar Building 811	Effluent Discharge
AFFF Area 4	SS209P	Former Fire Station 1 (Bldg 175)	Storage, Effluent Discharge and Spill
AFFF Area 5	SS205P	Former Fire Station 2 (Bldg 560)	Storage, Effluent Discharge and Spill
AFFF Area 6	SS202P	Former Fire Station 4 (Bldg 895)	Effluent Discharge
AFFF Area 7	SS208P	1982/1983 C-5 Crash	Direct Spray
AFFF Area 8	SS203P	1986 C-141B Accident	Direct Spray
AFFF Area 9	SS207P	1988 C-5 Fire	Direct Spray
AFFF Area 10	SS204P	Late 1980s C-141B Accident	Direct Spray
AFFF Area 11	SS208P	2001 Aircraft Crash	Direct Spray
AFFF Area 12	SS206P	2014 Boeing E75 Air Show Crash	Direct Spray
AFFF Area 13	SS201P	Nozzle Spray Test Area (900 Ramp)	Discharge
AFFF Area 14	ST100P	Former Sewage Treatment Plant and Sludge Disposal Area	Effluent Discharge
AFFF Area 17	SS030P	South Base Boundary Groundwater Treatment Plant	Discharge
Remedial Investigation Area 18	n/a	Fire Station 3 (Bldg 1380)	Storage, Effluent Discharge and Spill

AFFF and Remedial Investigation Areas




AIR FORCE CIVIL ENGINEER CENTER