

**Travis Air Force Base
Environmental Restoration Program
Restoration Program Manager's
Meeting Minutes
16 October 2019, 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) meeting on 16 October 2019 at 0930 hours in Building 248 at Travis AFB, California. Attendees included:

Lonnie Duke	AFCEC/CZOW
Glenn Anderson	AFCEC/CZOW
Monika O'Sullivan	AFCEC/CZOW
Angel Santiago	AFCEC/CZOW
Milton 'Gene' Clare	AFCEC/CZOW
Rachel Brinegar	Travis AFB/PA
Kurt Grunawalt	Travis AFB/Legal
Brian Boccellato (via telephone)	USACE-Omaha
Nadia Hollan Burke	EPA
Adriana Constantinescu	RWQCB
Dominique Forrester (via telephone)	DTSC
Amanda Rohrbaugh (via telephone)	TechLaw, Inc.
Leslie Royer	CH2M/Jacobs
Tony Chakurian	CH2M/Jacobs
Jeff Gamlin (via telephone)	CH2M/Jacobs
Jill Dunphy (via telephone)	CH2M/Jacobs
Jeannette Cumberland	CH2M/Jacobs

Handouts distributed prior to or at the meeting, discussions, and presentations included:

Attachment 1	Meeting Agenda
Attachment 2	Master Meeting and Document Schedule
Attachment 3	SBBGWTP Monthly Data Sheet (September 2019)
Attachment 4	CGWTP Monthly Data Sheet (September 2019)
Attachment 5	LF007C Monthly Data Sheet (September 2019)
Attachment 6	ST018 Monthly Data Sheet (September 2019)
Attachment 7	SS015 Optimized EVO Delivery via Solar-Powered Organic Carbon
Attachment 8	LF008 Remedial Action Completion Report
Attachment 9	Fourth Five Year Review
Attachment 10	Program Update
Attachment 11	TRIAD Discussion: Recently Identified POCO Investigation Near Closed Site OW050

1. ADMINISTRATIVE

A. Previous Meeting Minutes

September 2019 Draft Meeting Minutes were accepted as Final with no changes.

B. Action Item Review

Action items from September 2019 were reviewed.

Action Item 1 is ongoing: Ms. O’Sullivan to provide updates on perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). October 2019 update: Ms. O’Sullivan informed the team that the Draft Quality Assurance Project Plan (QAPP) will be delayed. There was a substantial change in process related to required notifications within the Air Force and to congressional representatives before the QAPP can be submitted to the regulators.

Action Item 2 is ongoing: Mr. Duke will continue to provide design and construction information for the new KC-46 Hangar construction project. October

2019 update: Mr. Duke said that the design for the building has been approved, and the Remedial Design and Remedial Action (RD/RA) work plan to relocate the horizontal extraction well has been finalized and provided to the construction team. A little background work is needed to make sure the contractor will comply with environmental needs. We are still waiting on the final ROD amendment. The soil excavation must be completed first before the contract is awarded so it does not impact the construction project. Ms. Burke asked how will they determine the soil remediation work has been completed? Mr. Duke said confirmation sample collection and analyses will be used to verify that cleanup standards have been met.

C. 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 held on 20 November 2019 at 0930. This will be the final meeting for 2019.

The 2020 Meeting Schedule has been provided so that attendees can start planning ahead for next year.

Travis AFB Master Document Schedule

- Community Relations Plan Update (CRP): There was no change to the schedule. This document will be finished as soon as the other higher-priority documents are completed, will resume in early 2020.
- Amendment to the NEWIOU Soil, Sediment, and Surface Water Record of Decision (ROD) for the Travis AFB ERP Sites SS016 and SD033: Draft Final Due date was changed to reflect the actual submittal date, Final Due changed accordingly. EPA attorney is supposed to finish their review today and will forward to supervisor for final signature; hopefully this week. The Water Board mentioned a minor error on the Water Board RTC table header; it names DTSC instead of the Water Board. DTSC said the RTCs addressed their concerns, and that the DTSC attorney is reviewing and will confirm with EPA. EPA and the Water Board are on schedule to submit signatures by 6 November 2019. A PDF of the signed copy is acceptable to be followed with “wet signature”. Travis AFB is waiting to hear from US Fish and Wildlife Service (USFWS) on their request to conduct field work during the rainy season; have a verbal okay from USFWS, and are expecting to receive an official letter.

- Site SS016 Remedial Design/Remedial Action Work Plan: The final due date was changed to 6 November 2019 so that the document can be revised in accordance with relevant changes in the final NEWIOU ROD Amendment. This excavation project is located within the footprint of the future new KC-46 hangar, so **this document is critical and is delayed due to excessive delays on the Amendment to the NEWIOU Soil, Sediment and Surface Water ROD.**
- Site SD031 Soil Remedial Investigation/Feasibility Study (RI/FS): Ms. Constantinescu inquired if the agency comments due date could be moved from 11/11/2019 (a Federal holiday) to 11/12/2019. The Air Force agreed to change the document schedule. **This document is important and although not time-critical, must be completed during the current contract.**
- Potrero Hills Annex (FS, PP, and ROD): No change was made to the schedule; Ms. Constantinescu said they are making progress according to the work plan; additional soil and groundwater samples were collected downgradient to support the risk assessment. The Water Board has not made a final decision regarding the request for No Further Action (NFA) for the upland areas.
- Quarterly Newsletter (October 2019): Draft to Agencies date changed to 8 October 2019, the rest of the dates were changed accordingly. Mr. Anderson thanked Ms. Burke for her viewpoint contribution, and said that next year the newsletter will be published semi-annually while transitioning between contracts.
- Fourth Five-Year Review Report for Multiple Groundwater, Soil, and Sediment Sites: Document was moved from ‘Primary Documents’ to ‘Informational Documents’ in Master Meeting and Document Schedule (MMDS). No change was made to the schedule; the Responses to Comments, Draft Final, and Final due dates remain TBD. **This document is very important but not critical.**
- Site SS046 Remedial Action Completion Report and Well Decommissioning Work Plan: No changes were made to the schedule; the document will be moved to the History section next month.
- 2018 Annual Site LF007 Corrective Action Management Unit Inspection, Monitoring, and Maintenance Report: Response to Comments Due and Final Due were changed to reflect the submittal date; there were no comments from the agencies.
- Site LF008 Remedial Action Completion Report: No changes were made to the schedule. EPA may request more review time.
- Site SD043 Site Closure Report: No changes were made to the schedule. Travis AFB is in the process of responding to regulator comments.
- Site SS046 Well Decommissioning and Site Closeout Tech Memo: The Draft to Agencies and RAB date was changed to 15 October 2019. The Agency Comments Due date was changed accordingly. The rest of the schedule remained unchanged.

- Recently Identified POCO Investigation Near Closed Site OW050 Work Plan: This is a new document and the name is temporary. Ms. Constantinescu said that OW050 was already closed in Geotracker and requested the document name be changed. Mr. Duke said they discussed calling it SD031B. Ms. Constantinescu approved the SD031B name change.
- MOVED TO HISTORY:
 - No Further Action Soil ROD for Old Skeet Range (TS060 MRA)
 - 2018 Annual GRISR

2. CURRENT PROJECTS

Treatment Plant Operation and Maintenance Update

South Base Boundary Groundwater Treatment Plant, September 2019 (see Attachment 3)

The South Base Boundary Groundwater Treatment Plant (SBBGWTP) performed at 99.8% uptime, and 7.8 million gallons of groundwater were extracted and treated in September 2019. All treated water was discharged to Union Creek. The average flow rate for the SBBGWTP was 160.9 gallons per minute (gpm). Electrical power usage was 20,384 kilowatt hours (kWh), and approximately 16,684 pounds of CO₂ were created (based on DOE calculation). Approximately 0.9 pound of volatile organic compounds (VOCs) was removed in September. The total mass of VOCs removed since startup of the system is 520.4 pounds.

Troubleshooting activities were performed on three extraction wells. The backwash transfer pump was disassembled and cleaned, the pump impeller was also cleaned. Neither resulted in system downtime.

No optimization activities were conducted in September 2019.

Central Groundwater Treatment Plant, September 2019 (see Attachment 4)

The Central Groundwater Treatment Plant (CGWTP) performed at 99.9% uptime with approximately 1,319,490 gallons of groundwater extracted and treated in September 2019. All treated water was discharged to the storm sewer system which discharges to Union Creek. The average flow rate for the CGWTP was 27.2 gpm. Electrical power usage was 2,658 kWh for all equipment connected to the Central Plant, and approximately 2,855 pounds of CO₂ were generated. Approximately 2.4 pounds of

VOCs were removed from groundwater by the treatment plant in September. The total mass of VOCs removed since the startup of the system is 11,531 pounds.

A new float switch was installed in the Oil Spill Area (OSA) vault. Extraction wells remained operational. The Site DP039 subgrade biogeochemical reactor continued to operate in September 2019.

No optimization activities occurred at the CGWTP in September 2019.

LF007C Groundwater Treatment Plant, September 2019 (Attachment 5)

The Subarea LF007C Groundwater Treatment Plant (LF007C GWTP) performed at 100% uptime with approximately 205,782 gallons of groundwater extracted and treated in September 2019. All treated water was discharged to the Duck Pond for beneficial reuse. The average flow rate was 4.3 gpm. Approximately 7.4×10^{-4} pound of VOCs was removed from groundwater by the treatment plant in September 2019. 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.

No optimization activities are reported for the month of September 2019.

Mr. Duke noted that while the LF007C GWTP and extraction systems are still accessible for O&M, the monitoring wells located offbase are not currently accessible because the Air Force's LF007 easement has expired. The Air Force is working on getting a new easement, which has been complicated by a change of land ownership. Ms. Burke and Ms. Constantinescu offered regulatory agency support for getting access to the sites for sampling and groundwater elevation measurements if the Air Force continues to encounter difficulties in purchasing an access agreement.

ST018 Groundwater (MTBE) Treatment Plant, September 2019 (see Attachment 6)

Site ST018 (MTBE) Treatment Plant (ST018 GWTP) performed at 97.4% uptime with approximately 213,000 gallons of groundwater extracted in September 2019. All groundwater was discharged to the Fairfield – Suisun Sewer District. The average flow rate for the ST018 GWTP was 4.7 gpm. Electrical power usage for the month was 115 kWh for all equipment connected to the ST018 GWTP. The total CO₂ discharge equivalent equates to approximately 85 pounds. Approximately 0.01 pound of MTBE, BTEX, VOCs, and TPH was removed in September by the treatment plant, and approximately 0.01 pound of MTBE-only was removed from groundwater. The total BTEX, MTBE and TPH mass removed since the startup of the system is 48.4 pounds, and the total MTBE mass removed since startup of the system is 11.8 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.

The pump from one extraction well was replaced due to damage. A cracked fitting was also replaced. The system shut down on 30 September due to a malfunctioning pressure sensor, which was recalibrated. The system restarted with no issue.

No optimization activities are reported for the month of September 2019.

Ms. Constantinescu noted that the cost per pound of MTBE removal was getting quite high and suggested the Air Force consider looking at transitioning the site to MNA.

3. Presentations:

A) Site SS015 Optimized EVO Delivery via Solar-powered Organic Carbon Injection System (see Attachment 7)

Mr. Gamlin presented a reprise of his overview of an optimized emulsified vegetable oil (EVO) delivery method using a solar-powered organic carbon injection method. Please refer to Attachment 7 for the full briefing; highlights from this month's presentation and discussion are as follows:

- Ms. Constantinescu asked what the residence time is; Mr. Gamlin responded approximately 5 days for 4 drums. He noted that total organic carbon can be included as part of the monitoring, and it can be sampled between the drums and tracked over the course of the injections.
- Ms. Constantinescu said that research has shown that warming the water enhanced bacterial growth and suggested considering warming the water as part of the design. Mr. Gamlin agreed and noted that he had employed a few low cost methods (such as wrapping black material around the tubing and/or increasing tubing length to prolong sun exposure) to use thermal absorption to increase injection water temperature. He added that warming the water will also improve total organic carbon solubility and therefore performance.
- Ms. Burke and Ms. Constantinescu asked if this change in design (not remedy) needs to be documented. Mr. Gamlin replied that it will be evaluated and reported in the 2019 GRISR. He added that the ROD didn't specify use of a specific delivery method because there are many kinds of pumps and many ways to complete the injections depending on the amendment used. The delivery method is the only change; it's not a fundamental change in design, so it really is only a field adjustment.
- EPA, the Water Board, and DTSC all agreed with going forward with performing a pilot test of this injection method at Site SS015. Ms. Royer took the action item to include progress of this pilot test in future meetings during the program update.

B) Site LF008 Remedial Action Completion Report (see Attachment 8)

Ms. Royer provided an overview of the Site LF008 Remedial Action Completion Report (RACR) in support of the document that is currently in regulatory review. Please refer to Attachment 8 for the full briefing.

C) Fourth Five-Year Review Report Status (see Attachment 9)

Mr. Anderson reported on the status of the Fourth Five-Year Review (FYR) Report and the proposed path forward. Please refer to Attachment 9 for the full briefing; highlights from the discussion are summarized as follows:

- The agencies still don't agree with several of the Air Force's responses to their comments.
- There is a need to get the document to the public.
- There is limited time and funds remaining in the Tetra Tech and Jacobs contracts to come to agreement on what sampling must be conducted, completing the agreed-upon sampling, and receiving meaningful results that can be reported on to adequately respond to agency comments, and incorporate into a final document to be released to the public.
- The Air Force proposes completing the limited amount of sampling recommended in the draft FYR to evaluate if vapor intrusion mitigation systems continue to be protective of human health and the environment, and see if any future action is needed.
- The next contract will be an Optimized Remediation Contract (ORC). AFCEC is soliciting regulatory agency input into these contracts, and scoping for the Travis AFB is to be scheduled in the second or third quarter of 2020. Feedback will be used to develop the statement of objectives, a key component for the Request for Proposal. Mr. Duke and Mr. Anderson are proposing that the more encompassing comments and requests for sampling in the FYR be reserved for this scoping discussion so that they can be included in the ORC RFP, and that there is ample time and funding to address all outstanding Five-Year Review concerns.
- Ms. Burke agreed that there is a need to get a document to the public that incorporates whatever the Air Force is willing to incorporate at this time, and is amenable to finding a way agreeable to the Air Force and other agencies to state that not all concerns were addressed but will be resolved prior to the 5th FYR.
- Ms. Constantinescu asked if the Air Force plans to indicate which proposed actions address which specific comments, or if they will just state what they are planning to do. Mr. Anderson noted that typically comments are responded to in the next Five-Year Review; right now the Air Force is proposing work that addresses the protectiveness of the VI remedies, which is not responding to a specific comment received. He said that the Air Force can develop a cover letter that states that the agencies provided comments but as of yet, not all of them have been adequately responded to, but that this version of the report is a first step in the resolution. Ms. Burke noted that an addendum to the Five-Year Review Report may be needed.

- Ms. Burke noted that EPA and likely other agencies will need an agreement on responding to agency recommendations before they can bring specific recommendations to the ORC scoping meeting.
- The tentative plan of action resulting from this discussion is as follows:
 - 1- Agree on what work needs to be completed, or at least a summary of work that is agreed is necessary and where disagreements remain.
 - 2- Publish a version of the document to the public to fulfill requirements, post it to the website and indicate what comments are still outstanding or not addressed.
 - 3- Prioritize the work to be conducted under the current PBR vs the forthcoming ORC. Prepare a work plan and schedule for the first phase of field work, which will be conducted under the current PBR contract.
 - 4- Conduct the work.
- The Air Force will begin developing a cover letter with a schedule itemizing work that will be conducted under the current PBR, work that will be conducted later under the ORC, and a timeline for addressing outstanding comments.

D) Program Update: Activities Completed, In Progress, and Upcoming (see Attachment 10)

Ms. Royer reported on the status of fieldwork and documents that have been completed, are in progress, or upcoming. Please refer to Attachment 10 for the full briefing.

E) Triad Discussion of Gore Sorber Survey Near Former OW050 Location (see Attachment 11)

Mr. Chakurian reported on the investigation planned for the recently identified POCO site near closed Site OW050 (which meeting attendees agreed during the MMDS discussion, would be referred to in the future as Site SD031B). Please refer to Attachment 11 for the full briefing. Highlights of the discussion are as follows:

- The objective of the presentation was to gain Water Board concurrence to complete the first of three planned phases of field work ahead of work plan submittal to ensure sufficient time remained in the contract to perform all of the planned fieldwork. The Gore Sorbers will be used as a screening tool to select quantitative sample collection locations.
- The investigation will be conducted in three phases:
 - Phase 1: two rounds of Gore Sorber surveys
 - 50 samples biased towards potential sources
 - Up to 50 samples to determine the likely extent of the hot spot areas identified in Round 1

- Phase 2: drilling to collect soil, soil gas, and grab groundwater samples from areas identified as hot spots during the Gore Sorber sampling
- Phase 3: install and sample monitoring wells based on Phase 2 results.
- Ms. Constantinescu agreed that the Water Board can expedite their review of the proposed Round 1 Gore Sorber locations, and suggested sending a cover letter with the presentation and a figure stating that a work plan will be send to the Agency for review following completion of the Round 1 Gore Sorber field work. She agreed the Water Board can review the proposed Round 1 Gore Sorber locations in two weeks if she receives it within a week.
- Ms. Constantinescu and Mr. Chakurian discussed relocating proposed sample GS-7 to the west, where historical detections of petroleum along an inactive jet fuel line were found during the EIOU RI.
- Ms. Constantinescu also suggested placing a sample where the sanitary sewer bends (near GS-23).
- Mr. Duke noted that the Air Force has already requested USFWS approval to conduct the work outside of the normal field season.

4. New Action Item Review

1. Mr. Wray or Ms. Royer to include the progress of the optimized EVO delivery via solar-powered organic carbon injection system pilot test at Site SS015 during future monthly program updates.
2. Air Force to develop a cover letter discussing a proposed schedule for additional phases of sampling for the Fourth Five Year Review, and planned path forward for comment resolution.
3. Mr. Chakurian to provide the Water Board with the figure presented during the Triad discussion, showing updated sampling locations, as well as the cover letter for the planned work, by 6 November 2019.

5. PROGRAM ISSUES/UPDATE

Ms. Merrie Schilter-Lowe will be retiring at the end of the month. For now, Lt Rachel Brinegar will serve as the Base Public Affairs Officer (PAO) and her duties currently include the PA support of the Environmental Restoration Program.

6. Action Items

Item #	Responsible	Action Item Description	Due Date	Status
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1.	Monika O'Sullivan	Ms. O'Sullivan to provide updates on PFOS and PFOA as she becomes aware of them.	Ongoing	Open
2.	Lonnie Duke	Mr. Duke will continue to provide design and construction information for the KC-46 Hangar for agency input ahead of the Air Force/Civil Engineering awarding the construction contract.	Ongoing	Open
3.	Mr. Wray and Ms. Royer	Mr. Wray or Ms. Royer to include the progress of the optimized EVO delivery via solar-powered organic carbon injection system pilot test at Site SS015 during future monthly program updates.	Ongoing	Open
4.	Mr. Duke and Mr. Anderson	Mr. Duke and Mr. Anderson to develop a cover letter discussing a proposed schedule for additional phases of sampling for the Fourth Five Year Review, and planned path forward for comment resolution.	4 November 2019	Open
5.	Mr. Chakurian	Mr. Chakurian to provide the Water Board with the figure presented during the Triad discussion, showing updated sampling locations, as well as the cover letter for the planned work, by 6 November 2019.	6 November 2019	Open