Final

Travis Air Force Base
Environmental Restoration Program
Restoration Program Manager's
Meeting Minutes
18 September 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) teleconference on 18 September 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
Merrie Schilter-Lowe	Travis AFB/PA
Haekyung Kim (via telephone)	AFCEC/CZRW
Sarah Miller (via telephone)	USACE-Omaha
Paul Gedbaw (via telephone)	USACE-Omaha
Brian Boccellato (via telephone)	USACE-Omaha
Nadia Hollan Burke (via telephone)	EPA
Nikki Thomsen (via telephone)	TechLaw, Inc.
Mike Wray	CH2M/Jacobs
Leslie Royer	CH2M/Jacobs
Jeff Gamlin (via telephone)	CH2M/Jacobs
Jill Dunphy (via telephone)	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 (August 2019)
Attachment 4	CGWTP Monthly Data Sheet (August 2019)
Attachment 5	LF007C Monthly Data Sheet (August 2019)
Attachment 6	ST018 Monthly Data Sheet (August 2019)
Attachment 7	New EVO Delivery Method
Attachment 8	Program Update

1. ADMINISTRATIVE

A. Previous Meeting Minutes

EPA, DTSC and the Water Board had no changes to the August 2019 RPM Meeting Minutes.

B. Action Item Review

Action items from August 2019 were reviewed.

Action Item 1 is ongoing: Ms. O'Sullivan to provide updates on perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). September 2019 update: Ms. O'Sullivan informed the team that the Draft Quality Assurance Project Plan (QAPP) should be submitted to the regulators for review next week. Sampling will likely begin in December 2019. Mr. Duke noted that he has included this work in the joint execution plan (JEP) to request funding for DSMOA funding for 2020-2022. Mr. Duke submitted the JEP to the State for review.

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

September 2019 update: Mr. Duke said that the design for the building has been approved, and the work plan to relocate the monitoring well has been finalized and provided to the construction team. The construction contract should be awarded in December, and work is scheduled to begin in January 2020. The Air Force needs to remove the 100 cubic yards of soil prior to that, and we are still working on the Amendment to the NEWIOU Soil, Sediment and Surface Water Record of Decision that will allow the soil excavation. He asked for a prompt review of the redline strikeout version so that the Draft Final version could be submitted next week. Mr. Duke added that Mr. Sherman has sent a request to the EPA, DTSC, and Water Board legal counsel to review the recently crafted language.

Action Item 3: Air Force or Jacobs to send Outlook invitations to the regulators for future meetings. September 2019 Update: Mr. Wray has sent an Outlook invitation for the remainder of the 2019 meetings to the Water Board, DTSC, and EPA. This action item is now closed.

Action Item 4: Ms. O'Sullivan to request a base pass for Mr. Forrester. September 2019 Update: Ms. O'Sullivan will coordinate a base pass for Mr. Forrester ahead of his next in-person visit. This action item is now closed.

Action Item 5: Ms. Royer to look into ways to make the Groundwater Remediation Implementation Status Report (GRISR) a smaller, more easily reviewable document. September 2019 Update: Mr. Duke, Mr. Wray, and Ms. Royer agreed that upon review for this action item, the document has been streamlined as much as possible; however, agreed that moving the summary from the beginning to the end of the document sections to make it flow better. Ms. Royer added that the document authors will monitor for unnecessary repetition as they write forthcoming versions. This action item is now closed, but it will remain on the meeting summary in order to update the Water Board at the October meeting.

Action Item 6: Mr. Duke and Ms. O'Sullivan to include PFAS in the DSMOA funding. September 2019 Update: PFAS has now been added to DSMOA funding. This action item is now closed.

Action Item 7: The Water Board will issue an NFA letter for Site ST032 before the end of August. The NFA letter has been issued. This action item is now closed.

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 held on Wednesday, 16 October 2019, at 0930.

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, but not likely in 2019.

— Amendment to the NEWIOU Soil, Sediment, and Surface Water Record of Decision (ROD) for the Travis AFB ERP Sites SS016 and SD033: The Response to Comments date was changed to 16 September 2019; the Draft Final due date was changed to 30 September 2019, and the Final due date was changed to 30 October 2019. Mr. Duke asked everyone to keep pushing to get this finalized and signed. Because this supports the planned KC-46 hangar construction, we need to be in the field in November; therefore he considers this **the most critical document on the schedule**, and it has been **delayed for almost a year**.

— No Further Action (NFA) ROD for Old Skeet Range (TS060 and TS060A Munitions Response Sites): The Final due date was changed to 11 September 2019 to reflect actual signature date. The electronic version is ready and will be submitted once the paper copy is in the local administrative record,

— Site SS016 Remedial Design/Remedial Action Work Plan: The final due date was changed to 30 October 2019 so that the document can be revised in accordance with relevant changes in the final NEWIOU ROD Amendment. The revised draft-final will be submitted for regulatory review as a red line/strikeout version. 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): There was no change to the schedule. **This document is important and although not time-critical, must be completed during the current contract**.

— Fourth Five-Year Review Report for Multiple Groundwater, Soil, and Sediment Sites: No change was made to the schedule; the Responses to Comments, Draft Final, and Final due dates remain TBD. The Water Board has approved the Air Force responses to their comments. The Air Force is still working on responses to EPA and DTSC comments. **This document is very important but not critical**.

— Potrero Hills Annex (FS, PP, and ROD): No change was made to the schedule; Mr. Anderson noted that the Water Board is reviewing contractor responses to their comments on the Nurse Slough Property Supplemental Soil and Groundwater Investigation Work Plan.

— Quarterly Newsletter (October 2019): There was no change to the schedule. Mr. Anderson requested input from Ms. Burke for the Viewpoint article in this issue, regarding the EPA transition to electronic data storage and reduction in paper.

— 2018 Annual Groundwater Remediation Implementation Status Report (GRISR): The Responses to Comments and Final due dates were changed to 4 September 2019, to reflect actual completion date. The document will be submitted electronically; one hard copy will be produced for the Administrative Record. Mr. Anderson thanked everyone for the quick turnaround needed to get this document finalized by the end of the fiscal year.

— Site SS046 Remedial Action Completion Report and Well Decommissioning Work Plan: The Response to Comments and Final due dates were changed to 20 September 2019 to reflect actual submittal dates. Mr. Anderson thanked everyone for the quick turnaround.

— 2018 Annual Site LF007 Corrective Action Management Unit Inspection, Monitoring, and Maintenance Report: There was no change to the schedule; the Air Force may be able to finalize this document earlier than scheduled.

— Site LF008 Remedial Action Completion Report: The Draft to Agencies due date was changed to 7 October 2019 to allow additional review time to higher priority documents; the rest of the schedule was changed accordingly.

— Site SD043 Site Closure Report: The Agency Comment due date was changed to 7 October 2019 to allow additional review time for higher priority documents; the rest of the schedule was changed accordingly.

— Site SS046 Well Decommissioning and Site Closeout Tech Memo: The Predraft to Air Force/Service Center due dates were changed to 4 September 2019 and 18 September 2019. The rest of the schedule remained unchanged.

— MOVED TO HISTORY:

— Addendum to the Site SS016 Groundwater Remedial Design/Remedial Action (RD/RA) Work Plan (WP).

— Site SD043 Remedial Action Completion Report

— Site SS014 POCO Subsites 2, 4, and 5 Closure Evaluation Report

2. CURRENT PROJECTS

Treatment Plant Operation and Maintenance Update

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

The South Base Boundary Groundwater Treatment Plant (SBBGWTP) performed at 94.9% uptime, and 6.4 million gallons of groundwater were extracted and treated in August 2019. All treated water was discharged to Union Creek. The average flow rate for the SBBGWTP was 172.2 gallons per minute (gpm). Electrical power usage was 16,926 kilowatt hours (kWh), and approximately 14,125 pounds of CO_2 were created (based on DOE calculation). Approximately 0.9 pound of volatile organic compounds (VOCs) was removed in August. The total mass of VOCs removed since startup of the system is 519.5 pounds.

In August 2019, several system upgrade activities were completed. Details can be found in Attachment 3. Mr. Duke expressed his appreciation to Doug Berwick and his field crew for anticipated efficiencies that will result from these upgrades.

No optimization activities were conducted in August 2019.

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

The Central Groundwater Treatment Plant (CGWTP) performed at 100% uptime with approximately 1,070,170 gallons of groundwater extracted and treated in August 2019. All treated water was discharged to the storm sewer system which discharges to Union Creek. The average flow rate for the CGWTP was 27.3 gpm. Electrical power usage was 2,163 kWh for all equipment connected to the Central Plant, and approximately 2,489 pounds of CO_2 were generated. Approximately 2.5 pounds of VOCs were removed from groundwater by the treatment plant in August. The total mass of VOCs removed since the startup of the system is 11,528 pounds.

A faulty 24-volt power supply was discovered and replaced in August 2019, and a new power supply was installed. All extraction wells remained operational.

Optimization Activities for CGWTP: The DP039 bioreactor continues to operate in August 2019. No other optimization activities are reported for the month of August 2019.

LF007C Groundwater Treatment Plant, August 2019 (Attachment 5)

The Subarea LF007C Groundwater Treatment Plant (LF007C GWTP) performed at 78.2% uptime with approximately 129,152 gallons of groundwater extracted and treated in August 2019. All treated water was discharged to the Duck Pond for beneficial reuse. The average flow rate was 4.2 gpm. Approximately 3.3×10^{-4} pound of VOCs was removed from groundwater by the treatment plant in August 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.

The LF007C GWTP was shut down on 21 August 2019 to prepare for, and complete, changeout of both carbon vessels. The system was restarted on 26 August 2019, but

shut down again due to high pressures. The system was purged of trapped air on 27 August 2019 and restarted.

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

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

Site ST018 (MTBE) Treatment Plant (ST018 GWTP) performed at 100% uptime with approximately 141,870 gallons of groundwater extracted in August 2019. All groundwater was discharged to the Fairfield – Suisun Sewer District. The average flow rate for the ST018 GWTP was 3.8 gpm. Electrical power usage for the month was 77 kWh for all equipment connected to the ST018 GWTP. The total CO_2 discharge equivalent equates to approximately 57 pounds. Approximately 0.12 pound of MTBE, BTEX, VOCs, and TPH was removed in August by the treatment plant, and approximately 0.05 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 volume of water extracted from extraction well EW2014x18 was unusually low in August and will be inspected in September.

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

3. Presentations:

A) Site SD043 Site Closure Report (see Attachment 7)

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

- Traditional EVO delivery methods are labor-intensive, requiring around-the-clock oversight due to the need to move totes and work with pressurized lines

- EVO injections can take up to several months to complete, particularly at sites with low-permeability aquifers

- This is not always practical at some areas of the base, such as the flightline.

- The solar-powered organic carbon (SPOC) delivery method uses one well with a solar-powered pump, and connects to a series of 55-gallon drums loaded with the EVO

- The solar battery operates a peristaltic pump with a float switch that will shut the system down if the water level gets too high. This system can operate without continual oversight.

- Mulch or various amendments can be added without issue

- The traditional delivery system involves hydraulic fracturing to force water into the subsurface, which may create preferential pathways if the force is too high, rather than allowing the EVO to flow where it naturally wants and needs to go.

- This SPOC delivery method is more sustainable since there is no need to move and/or recycle the totes, the drums can be moved with a drum dolly, and it eliminates waste

- This delivery method is an improvement in sustainability, because it uses native groundwater from the site, potentially increasing the effectiveness of the remedy and any associated amendments, while also reducing the potential for daylighting and eliminating the use of potable water.

- This will be tested at Site SS015 at Travis AFB. It is a low-permeability site where the injections aren't producing the optimal result, so enhancements will be obvious. It is close to the office so it can be monitored easily, and any unanticipated issues can be addressed in a timely manner.

- If the Air Force chooses to utilize this method of delivery for future EVO injections, it is not considered a change in the remedies specified in the RODs; it is considered an enhancement of the current remedy – it is more efficient, safer, and more sustainable/environmentally friendly. The remedy specifies EVO injections, but not the details of the delivery method.

B) Program Update: Activities Completed, In Progress, and Upcoming (see Attachment 8)

Mr. Wray reported on the status of fieldwork and documents that have been completed, are in progress, or upcoming. Please refer to Attachment 8 for the full briefing.

4. New Action Item Review

None

5. PROGRAM ISSUES/UPDATE

None

6. Action Items

Item #	Responsible	Action Item Description	Due Date	Status
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.	Ms. Royer	Ms. Royer to look into ways to make the GRISR a smaller, more easily reviewable document.	18 September 2019	Closed, but leaving as update for Water Board in October