

**Travis Air Force Base  
Environmental Restoration Program  
Restoration Program Manager's  
Meeting Minutes  
20 July, 0930 Hours**

Mr. Lonnie Duke, of the Air Force Civil Engineer Center (AFCEC) Restoration Installation Support Team (IST) conducted the Restoration Program Manager's (RPM) teleconference meeting on 20 July 2016 at 0930 hours in Building 248 at Travis AFB, California. Attendees included:

Lonnie Duke	AFCEC/CZOW
Glenn Anderson	AFCEC/CZOW
Angel Santiago Jr.	AFCEC/CZOW
William Hall (via telephone)	AFCEC/CZRW
Merrie Schilter-Lowe	Travis AFB 60 AMW/PA
Dezso Linbrunner	USACE-Omaha
Adriana Constantinescu (via telephone)	California Regional Water Quality Control Board (RWQCB)
Nadia Hollan Burke (via telephone)	USEPA
Indira Balkissoon (via telephone)	Techlaw, Inc
Tony Chakurian	CH2M
Mike Wray	CH2M

Handouts distributed at the meeting, discussions and presentations included:

Attachment 1	Meeting Agenda
Attachment 2	Master Meeting and Document Schedule
Attachment 3	SBBGWTP Monthly Data Sheet (June 2016)
Attachment 4	CGWTP Monthly Data Sheet (June 2016)
Attachment 5	LF007C Monthly Data Sheet (June 2016)
Attachment 6	ST018 Monthly Data Sheet (June 2016)
Attachment 7	Presentation: SD031 Field Investigation Update Presentation
Attachment 8	Presentation: Documents and Activities Completed, In Progress and Planned

## 1. ADMINISTRATIVE

### A. Previous Meeting Minutes

The 20 June 2016 RPM meeting minutes were approved and finalized as written with the following exception. In the action item review update (1B), Ms. Burke suggested to include the author, title, and date of the CD that Mr. Duke handed out during the 20 June 2016 RPM meeting.

### B. Action Item Review.

Action items from June 2016 were reviewed.

Action item 1 is ongoing: Mr. Duke to provide updates on perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) as he becomes aware of them. 20 July 2016 update: Mr. Duke said there was a teleconference with the contractor that has been selected to perform the site inspection and the Travis AFB biologist. An informal consultation is being considered as the work being performed will not damage endangered species habitat. The inspection could take place this year but will likely be accomplished during the next dry season.

### 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 face-to-face meeting, which will be held on Wednesday, 17 August, at 0930. Mr. Linbrunner requested a 2017 RPM meeting schedule. Mr. Duke will take this request as an action item. Mr. Duke asked the agencies if they would like to take a tour after the 17 August 2016 meeting to see fieldwork being conducted. Ms. Constantinescu, Ms. Burke and Ms. Balkissoon all said yes.

#### Travis AFB Master Document Schedule

- Community Involvement Plan (CIP): Predraft to AF/Service Center date changed to 17 August 2016, the rest of the dates were changed accordingly.
- Site SD031 Remedial Investigation Work Plan: Final Due date changed to 21 July 2016, when the document is scheduled to go final.
- Action Memorandum Non-Time Critical Removal Action at Site TS060 (Old Skeet Range): Public Comment Period date was added: 7 July 2016 to 7 August 2016. Ms. Burke is working on RTCs and hopes to have them submitted next week.

- Potrero Hills Annex (FS, PP, and ROD): No change to the schedule. Ms. Constantinescu said that Yemia Hashimoto/RWQCB made progress with a draft order and will issue a revised site cleanup order based on the findings from the 2015 subsurface investigation report.
- Corrective Action Plan for DERA-Funded Oil Water Separators (POCO): Response to Comments due and the Final due date were changed to 12 July 2016 to reflect the actual date.
- Site SD034 Technology Demonstration Work Plan: No change to the schedule. Travis AFB received comments from EPA. Ms. Constantinescu said no comments from RWQCB.
- Site TS060 Removal Action Work Plan: Agencies Comments Due date was changed to 27 July 2016. Ms. Burke requested additional review time.
- Multi-Site Bioaugmentation Technology Demonstration Work Plan: No change to the schedule.
- Site SS016 Soil Data Gap Investigation Work Plan: Response to Comments Due and Final Due date was changed to 10 August 2016. Travis AFB is working on EPAs RTCs.
- Site FT004 POCO Soil Data Gap Investigation Work Plan: Draft to Agencies was changed to 19 July 2016 to reflect the actual date, the rest of the dates were changed accordingly.
- Site LF044 Investigation Work Plan: No change to the schedule. Travis AFB received comments from the RAB document review team.
- Sites ST028 and ST032 Well Decommissioning Work Plan (POCO): New document, all dates are to be determined (TBD).
- Quarterly Newsletter (July 2016): Draft to Agencies dates was changed to 13 July 2016 to reflect the actual date, the rest of the dates were changed accordingly. Ms. Burke suggested to add the public comment period (PCP) for site TS060. Mr. Anderson said he will try and find space to add a sentence regarding the PCP.
- 2015 Annual GRISR: Draft to Agencies date was changed to 7 July 2016, to reflect the actual date. Agency Comments Due date was changed to 10 August 2016.
- Site ST032 POCO Completion Report: Response to Comments due date and Final Due date changed on 20 July 2016, to reflect the actual date.
- Site ST028 POCO Completion Report: Response to Comments Due date and Final Due date changed to 26 July 2016.
- 2015 Annual CAMU Monitoring Report: Response to Comments and Final Due dates changed to 22 July 2016.
- Site FT005 Technology Demonstration Construction Completion Report: Predraft to AF/Service Center date was changed to 30 June 2016, to reflect the actual date, the rest of the dates were changed accordingly.

- Site DP039 Remedial Action Construction Completion Report: predraft to AF/Service Center was changed to 27 July 2016, the rest of the dates were changed accordingly.
- Site FT004 Groundwater Technology Demonstration Construction Completion Report: Moved to History.

## **2. CURRENT PROJECTS**

### **Treatment Plant Operation and Maintenance Update**

#### **South Base Boundary Groundwater Treatment Plant, June 2016 (see Attachment 3)**

The South Base Boundary Groundwater Treatment Plant (SBBGWTP) performed at 99.5% uptime, and 3.7 million gallons of groundwater were extracted and treated during the month of June 2016. All of the treated water was discharged to Union Creek. The average flow rate for the SBBGWTP was 97.3 gallons per minute (gpm). Electrical power usage was 17,265 kWh, and approximately 12,776 pounds of CO<sub>2</sub> were created (based on DOE calculation). Approximately 1.8 pounds of volatile organic compounds (VOCs) were removed in June. The total mass of VOCs removed since startup of the system is 479.6 pounds.

Optimization Activities for SBBGWTP: No optimization activities are reported for the month of June 2016.

#### **Central Groundwater Treatment Plant, June 2016 (see Attachment 4)**

The Central Groundwater Treatment Plant (CGWTP) performed at 57.3% uptime with approximately 640,545 gallons of groundwater extracted and treated during the month of June 2016. All treated water was discharged to the storm drain. The average flow rate for the CGWTP was 24.7 gpm. Electrical power usage was 1,377 kWh for all equipment connected to the Central Plant, and approximately 1,907 pounds of CO<sub>2</sub> were generated. Approximately 1.35 pounds of VOCs were removed from groundwater by the treatment plant in June. The total mass of VOCs removed since the startup of the system is 11,435 pounds.

Optimization Activities for CGWTP: No optimization activities are reported for the month of June 2016.

Ms. Constantinescu asked about table 5: Summary of DP039 Bioreactor Pulsed Mode Operations. She was not clear on the pulsed mode schedule of two weeks on two weeks off, and why it was decided to operate the bioreactor in the pulsed mode. Mr. Duke said DP039 transitioned to a pulsed mode based on performance monitoring data to help conserve the small amounts of total organic carbon (TOC) being generated by the bioreactor. This was the first bioreactor constructed on Travis AFB and fresh, immature mulch was used during construction. It has since been determined that older mulch is

much more effective in releasing TOC. Ms. Constantinescu said she agrees with the pulsed mode, and wondered if it was ever considered to change the pulsed mode to one week on and one week off to see if you receive more benefit, while monitoring TOC. Mr. Wray said he would look into altering the pulsed mode schedule to optimize the bioreactor. Ms. Burke commented will these types of optimization activities be reported in the ‘optimization section’ of the GRISR. Mr. Duke confirmed.

### **LF007C Groundwater Treatment Plant, June 2016 (see Attachment 5)**

The treatment plant was brought back online on 27 May 2016 when the seasonal vernal pools at Site LF007C were observed to be dry.

Subarea LF007C Treatment Plant (LF007CGWTP) performed at 72% uptime with approximately 222,326 gallons of groundwater extracted and treated during the month of June 2016. The average flow rate at the NGWTP was 4.29 gpm, and electrical power use was 0 kWh for all the equipment connected to the LF007C plant; and 0 pounds of CO<sub>2</sub> was generated; this system is 100 percent off of the power grid. Approximately 3.46x10<sup>-3</sup> pounds of VOCs were removed from the groundwater in June. The total mass of VOCs removed since the startup of the system is 174.36 pounds.

Optimization Activities for LF007CGWTP: In June 2016, extraction well EW615x07 was retrofitted with a new solar pump and new solar panel. The well was brought on line on 27 June 2016 with an approximate flow rate of 1.5 gpm when the sun is shining, as no batteries are attached to EW615x07.

Ms. Burke questioned why “volume discharge to storm drain: 0 gallons” is written on table 1. Doesn’t all the treated groundwater get discharged to the duck pond? Mr. Duke said that was an option when the monthly report was referencing the old North Groundwater Treatment Plant (NGWTP) and no longer applies, and that it will be removed from future reports.

### **ST018 Groundwater (MTBE) Treatment Plant, June 2016 (see Attachment 6)**

Site ST018 (MTBE) Treatment Plant (ST018 GWTP) performed at 100% uptime with approximately 211,640 gallons of groundwater extracted and treated during the month of June 2016. All treated water was diverted to the sanitary sewer. The average flow rate for the ST018 GWTP was 5.2 gpm. Electrical power usage for the month was 124 kWh for all equipment connected to the ST018 GWTP, which equates to approximately 492 pounds of CO<sub>2</sub>. Approximately 0.39 pounds of BTEX, MTBE and TPH were removed from groundwater in June by the treatment plant. Approximately 0.10 pound of MTBE was removed from groundwater. The total BTEX, MTBE and TPH mass removed since the startup of the system is 38.3 pounds, and the total MTBE mass removed since startup of the system is 9.2 pounds.

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

Optimization Activities for ST018GWTP: No optimization activities to report for the month of June 2016.

## **Presentations:**

### **Presentation: Site SD031 Soil Remedial Investigation Update – Triad Update (see Attachment 7)**

Mr. Chakurian gave a presentation on the Site SD031 Soil Remedial Investigation – Triad Update. For details, including maps and figures, see attachment 7.

#### Field Work/Initial Results:

- Drilling and soil sampling were performed from 16 May through 27 May. Drilled 29 soil borings which included the primary and the first set of step-outs. Stained soil was observed in all 29 borings.
- Product and some gravel was observed in boring SB247x31 at about 5 feet below ground surface (bgs). Note: the NAPL was found in soil several feet above the groundwater table.
- Analytical results indicated that each of the soil borings had concentrations of at least one compound that were greater than their respective screening levels.
- Contamination was generally found from 2 to 5 feet bgs, with the highest concentrations generally at 5 feet bgs. In a couple of the borings soil contamination was found as deep as the smear zone at approximately 14 feet bgs.
- Slide 4 shows a map of site SD031 that shows the area of the soil contamination as indicated from the investigation. All sides of the plume still need to be bounded.

#### Step-out Sample Plan:

- The purpose of the next round of sampling will be to delineate the lateral extent of the soil contamination in the vadose zone.
- Drill up to 40 step-outs borings, down to 5 feet bgs, using a hand auger. Mr. Wray added that the footprint of the soil contamination is a lot larger than anticipated. We have about 10 more direct push borings left in the budget. By drilling the 5 ft. borings using a hand auger, it will allow a visual indication of where the soil staining is, and hopefully approximately define the boundary of contamination to help us determine where the best locations are to drill the remaining 10 direct push borings.

- The step-out soil borings are grouped into different rounds by color; pink being the closest step-outs to what has already been delineated, then yellow, orange, and green are the farthest step-outs. Hand augering is proposed to start with the orange borings and if clean (i.e., no staining), step in to the yellow borings. If staining is observed in the orange borings, then step out to the green borings.
- Samples will be collected at 5 feet bgs from all borings. The samples will be shipped to the laboratory and placed on hold for two weeks pending notification. Based on visual conditions of the soil, staining or no staining, will determine which samples we will request the laboratory to run. We will request the laboratory to run samples on the borings that have the no visible staining in proximity to borings with stained soil.
- The location of the borings indicated on the map are in areas that do not need additional biological approval or were included in the current supplement to the biological assessment. If the contamination extends further to the south in the grassy area we will have to wait for US Fish and Wildlife Service (USFWS) to approve the biological opinion (BO).
- After we have completed roughly delineating the lateral extent of the soil contamination using visual and PID readings, the plan is to drill up to ten (10) borings with a direct push drill rig to give us vertical control of the soil contamination in the area where we conducted the hand auger step-out borings.

Mr. Wray gave a brief explanation on how the USFWS coordination process works. A Biological Assessment (BA) is written to include conservation measures and the proposed work. The BA is submitted to USFWS, and they have 145 days to review the BA prior to issuing a Biological Opinion (BO). Ms. Balkissoon said that her Ecological Risk Assessor has expressed concern with the eco risk, and asked if we are allowed to collect a water sample from vernal pools to ensure contamination is not spreading to the vernal pool. Mr. Chakurian said that it is strictly prohibited by USFWS to collect a water sample from a vernal pool (that is considered a “take”). Ms. Burke asked when it is planned on conducting the hand auger borings because she may have some comments. Mr. Chakurian said that they planned on starting 1 August 2016 and to please have the comments in by then.

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

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

Newly Completed Documents: Corrective Action Plan for DERA Funded Oil Water Separators; Site ST032 POCO Completion Report.

Newly Completed Field Work: None.

In-Progress Documents (CERCLA): 2015 Annual CAMU Monitoring Report; Site SD031 Remedial Investigation Work Plan; Site TS060 Action Memorandum; Site SS016 Soil Data Gaps Investigation Work Plan; Site SD034 Technology Demonstration Work Plan; Site TS060 Removal Action Work Plan; Site LF044 Investigation Work Plan; Multi-Site Bioaugmentation Technology Demonstration Work Plan; 2015 Annual GRISR.

In-Progress Documents (POCO): Site ST028 POCO Completion Report; Site FT004 POCO Soil Data Gap Investigation Work Plan.

In-Progress Field Work: DP039 EVO Injection (chase water); SD031 Soil Remedial Investigation; Oil Water Separators Step-out Drilling (4); Oil Water Separators Removal.

Planned Documents (CERCLA): Community Involvement Plan (September); Site FT005 Technology Demonstration Construction Completion Report (August); Site DP039 RD/RA Construction Completion Report (August).

Planned Documents (POCO): Sites ST032 and ST028 Well Decommissioning Work Plan (TBD).

Field Work Planned (CERCLA): Data Gap Investigation for Soil Sites (SD033, SD043, and SS046) (July); SS016 Soil Data Gaps Investigation (July); LF044 Berm Sampling (August); Multi-site Bioaugmentation Well Installation (August); Multi-site Bioaugmentation EVO Injection (August); SD034 Technology Demonstration Bioreactor Installation (August); SD034 Technology Demonstration Well Installation (August); SD031 Remedial Investigation (RI) Step-out Sampling, 2<sup>nd</sup> round (August); TS060 Removal Action (August).

Field Work Planned (POCO): SS014 Bioreactor Installation (August); CG508 Well Decommissioning (August); FT004 POCO Soil Data Gaps Investigation (September) ST032 & ST028 Well Decommissioning (TBD).

#### **4. New Action Item Review**

2) Mr. Duke to create a 2017 RPM calendar.

3) Mr. Duke to separate POCO and CERCLA sites on the Master Meeting and Document Schedule (MMDS).

4) Mr. Wray to look into changing pulsed mode from 2 week off and 2 weeks on, to 1 week off and 1 week on.

5) Mr. Duke to provide agencies with the biological assessment (BA) supplement and the approved biological opinion (BO).



## 5. PROGRAM/ISSUES/UPDATE

None.

## 6. Action Items

Item #	Responsible	Action Item Description	Due Date	Status
1.	Lonnie Duke	Mr. Duke to provide updates on PFOS and PFOA as he becomes aware of them.	Ongoing	Open
2.	Lonnie Duke	Create 2017 RPM calendar.	17 August 2016	Open
3.	Lonnie Duke	Separate POCO and CERCLA sites on the Master Meeting and Document Schedule (MMDS).	17 August 2016	Open
4.	Mike Wray	DP039 Bioreactor look into changing pulsed mode from 2 week off and 2 week on, to 1 week off and 1 week on.	17 August 2016	Open
5.	Lonnie Duke	Provide agencies with the biological assessment (BA) supplement and the approved biological opinion (BO)	17 August 2016	Open