



**Final
HTW BCT
Meeting Minutes
November 17, 2021**
BRAC Conference Room
Former Fort Ord, California
And Teleconference Meeting



Agenda

Reference the handout titled “HTW BRAC Cleanup Team Meeting Agenda, Wednesday, November 17, 2021, at 1:30 PM, Former Fort Ord, California.”

1. Attendance and Announcements

Last Name	First Name	Organization	By Phone
Anderson	Thor	Burleson Consulting	x
Bleichner	Randall	California Department of Toxic Substances Control (DTSC)	x
Cervantes	Christina	Chenega for BRAC	
Chain-Britton	Cindy	DTSC	x
Clancy	Maeve	U.S. Environmental Protection Agency (USEPA)	x
Collins	Bill	U.S. Army BRAC, Fort Ord Office	
Dillon	Holly	Ahtna Global, LLC (Ahtna)	x
Floyd	Bridget	U.S. Army Corps of Engineers (USACE)	
Gentry	Dana	USACE	x
Hibbits	Betsy	Chenega for BRAC	x
Higgins	Jolie	USACE	x
Kochman	Aaron	Chenega for BRAC	
Kosowski	Sylvester	Ahtna	x
Kowalski	Bart	Chenega for BRAC	
Lieberman	Derek	Ahtna	
Lindh	Margaret	Ahtna	x
Nozaki	Chieko	Chenega for BRAC	
Savage	Tom	USACE	x
Schmidt	Eric	Ahtna	x
Sellinger	Amber	California Regional Water Quality Control Board, Central Coast Region (CCRWQCB)	x
Soderberg	Sheila	CCRWQCB	x
Specht	James	USACE	x
Valdez	Val	Chenega for BRAC	x
Whipple	Jonathan	USACE	x

Maeve Clancy with the USEPA made an announcement that with the recent Infrastructure Bill being signed is re-authorizing the Superfund program.

2. BCT Minutes Status

HTW BCT meeting minutes are final through the last meeting in September.

3. Community Outreach Update

The handout titled “U.S. Army Fort Ord Environmental Cleanup Community Outreach Update” was reviewed. Additional discussion included:

- The 2021 community outreach survey is online and being accepted through the end of the year.
- The September Guided Nature Walk was discussed in the Presidio of Monterey newsletter.
- The Annual Report was issued on October 20 online and e-mail and mailed to 67,000 addresses on October 26.
- Online Fact Sheets are being edited and will take a few more weeks to complete.
- A few community outreach data requests were received, one about parcel conditions, one about munitions safety training, and one about accessing groundwater data.
- Plaques and certificates are being distributed for the USEPA 2020 Excellence in Site Reuse Award. Sometime next year the USEPA will plan an in-person event to commemorate the award.
- No news yet on the article from the Associated Press (AP) site visit in April and second interview on August 24.
- The Community Involvement Workshop will be on February 12, 2022 and the Technical Review Committee meeting on February 15, 2022. The topic focus will be on HTW soil and groundwater cleanup and the Landfills. A prep meeting will be scheduled sometime in January 2022.
- Two community comments from the Fort Ord Community Advisory Group. One response was completed and issued and one response is in progress.

4. 5th Five-Year Review

There was no handout for the 5th Five-Year Review. Discussion included:

- The draft document was reviewed by USACE, BRAC, Ahtna, and Chenega. Responses to comments (RTCs) were completed. Back check RTCs are in progress and the report is on schedule.

5. Operable Unit 2 (OU2)

a. Groundwater Remedy/Monitoring –

The handout titled “Operable Unit 2 Data and Status” was reviewed. Additional discussion included:

- Table 1 shows that the OU2 groundwater treatment plant (GWTP) was online 100 percent (%) of the time in October.
- Table 2 shows the OU2 GWTP injection point of compliance was sampled in October. A couple chemicals of concern (COCs) were detected at estimated concentration levels well below their discharge limits.
- Key events were discussed for October and upcoming events.
- The annual groundwater monitoring event was complete August 30-September 3.
 - Validated results were presented and compared to previous results because all of the results were not available at the last HTW BCT meeting in September.
 - In general, results were similar to the previous event.
 - Some increases in COC concentrations are actually wells returning to typical concentrations.

- There was an increase in trichloroethene (TCE) concentration at MW-OU2-40-A in the western network, but the western network extraction wells are online now.
- MW-OU2-81-A also had an increase in TCE concentrations in Hydraulic Zone 5.
- A map was shared for the Third Quarter 2021 A-Aquifer COC plumes to be included in the upcoming Annual Report scheduled to be issued Draft in December. The map was updated to show the Hydraulic Zones.
- The trend chart for MW-OU2-06-AR in Hydraulic Zone 5 west of the eastern extraction well network shows a cyclical trend in TCE concentrations partially attributed to the sample station being alternated. The sample station location was changed to be at a fixed depth in September 2020, which decreased the cyclical trend slightly. Both TCE and 1,2-dichloroethane (1,2-DCA) are hovering around their aquifer cleanup levels (ACLs) at MW-OU2-06-AR.
- The trend chart for MW-OU2-08-A in Hydraulic Zone 5 northeast of the eastern extraction well network had COC increases beginning in 2016, with the past few events at consistent concentrations. A similar trend in COC concentrations is seen at MW-OU2-75-A located east of MW-OU2-08-A.
- The Upper 180-Foot Aquifer TCE results for Third Quarter were compared to the previous year of data. Results are mostly similar to previous events. Some wells had TCE concentration increases such as EW-OU2-01-180.
- A map was shared for the Third Quarter 2021 Upper 180-Foot Aquifer TCE plume to be included in the upcoming Annual Report scheduled to be issued Draft in December. The map was updated to show the Hydraulic Zones.
- The trend chart for MW-OU2-62-180 on the Landfills Area F had increasing TCE concentrations from 2015 through 2019 and steadily decreasing since then.
- One of the monitoring wells in the Sea Haven area (MW-OU2-07-400) was lost due to construction activities. MW-OU2-07-400 is monitored for depth to water measurements and was constructed in 1990s. There are grading activities onsite this week. Bridget is in contact with the developer to find the well and it is expected it will be found, though it will have to be assessed if there is any damage to the well. A map was shown of the locations of this well and adjacent wells. Adjacent monitoring well MW-OU2-07-A was also constructed in the 1990s and had the casing cut approximately seven feet and has caution tape placed around it. MW-OU2-07-A will be sampled in the Fourth Quarter 2021 event; it has been one year since it was last sampled. Wells MW-OU2-05-AR and MW-OU2-84-180 are wells that the Sea Haven contractor installed to replace wells decommissioned due to construction activities.
- Revision 10 of the Groundwater Quality Assurance Project Plan (QAPP) is in progress and recommendations are made based on review of the past four quarters of groundwater data. Changes in the monitoring frequency for various wells were presented in the handout. This information will also be reported in the upcoming Annual Report.
 - A couple wells are recommended to stop sampling due to low COC concentrations, a couple wells recommended to stop groundwater elevation measurements due to redundancy with adjacent wells, and a couple wells recommended for decommissioning.
 - Maps and trend charts for the wells were presented showing the wells are not near current COC plumes and TCE concentrations have been below the ACL for some time.
 - Groundwater elevations are included per to CCRWQCB request to evaluate the relationship between groundwater elevations and COC concentrations.

- Regulatory agencies can respond via the Annual Report review process to review recommended changes to OU2, Sites 2/12, and OUCTP groundwater monitoring programs. The information is provided in advance in the HTW BCT handout to be helpful for any issues or concerns to be addressed earlier if possible.

b. Treated Water Reuse – The handout titled “Operable Unit 2 Treated Water Reuse” was reviewed.

Additional discussion included:

- There was no treated water used in October.
- The total treated water used since October 2016 is 4,341,500 gallons.
- Shea Homes is drafting a Work Plan for treated water use in the upcoming months.

c. Landfills Operations and Maintenance (O&M) – The handout titled “Former Fort Ord Operable Unit 2 Landfills Data and Status” was reviewed. Additional discussion included:

- Annual owl nest box cleaning was completed November 9. There was some evidence of owl presence, but a slight reduction compared to last year.
- A quarterly inspection will be scheduled with the Monterey County Health Department next week.
- Fourth Quarter 2021 perimeter probe monitoring is scheduled for November 29.
- Landfill winterization and rodent trapping is occurring.
- Thermal treatment unit (TTU) operations are continuing, November 3 was the last operational period and the TTU is online this week. The TTU is operated approximately 50 hours every other week. Influent methane is stable at 36.6%. Extraction methane concentrations have been relatively stable for the past year despite an anomalous decline at VF-4. So far this year, approximately 90,000 pounds of methane have been removed from the Landfills. The overall trend for influent TTU methane is declining, which is expected for a closed landfill.

6. Sites 2 and 12 (Sites 2/12)

The handout titled “Sites 2 and 12 Data and Status” was reviewed. Additional discussion included:

- Table 1 shows that the Sites 2/12 GWTP was online 100% of the time in October.
- Table 2 shows the Site 2 injection point of compliance was not sampled in October according to the QAPP sampling schedule.
- The Soil Vapor Treatment Unit (SVTU) remains offline.
- Key events were discussed for October and upcoming events.
- The Third Quarter 2021 groundwater monitoring validated data was discussed:
 - This data was presented at the September HTW BCT meeting but is presented again to be consistent with OU2 and OUCTP handouts.
 - In the Second Quarter 2021 all of the COCs at Sites 2/12 were below ACLs for the first time. Unfortunately, in the Third Quarter 2021 event, EW-12-08-180U tetrachloroethene (PCE) concentrations increased to 5.4 micrograms per liter ($\mu\text{g/L}$), which is just above the ACL. A confirmation sample was collected later in September and PCE was still above the ACL at 5.9 $\mu\text{g/L}$.
 - A map of the Third Quarter 2021 PCE plume was shared and will be presented in the Annual Report to be issued Draft in December.
 - The declining trend was consistent at EW-12-08-180U since mid-2020, but the recent Third Quarter 2021 data was the first increase in PCE concentrations since then.
- Revision 10 of the Groundwater QAPP is in progress and recommendations are made based on review of the past four quarters of groundwater data. Changes in the monitoring frequency for various wells were presented in the handout.

- Two wells are proposed for reduction in monitoring frequency from quarterly to annual.
- A map and trends for the wells were presented showing they are not near a COC plume and PCE/TCE concentrations have been below the ACL for some time.

7. Operable Unit Carbon Tetrachloride Plume (OUCTP)

a. Groundwater Remedy/Monitoring – The handout titled “Former Fort Ord Operable Unit Carbon Tetrachloride Plume Data and Status” was reviewed. Additional discussion included:

- The Third Quarter 2021 groundwater monitoring validated data was discussed:
 - Validated results were presented compared to previous results since all of the results were not available at the last HTW BCT meeting in September.
 - Maps of the carbon tetrachloride (CT) plumes in the OUCTP Annual Report now show the Hydraulic Zones. The Hydraulic Zones were previously presented in an Appendix to the Annual Report but based on comments received on the previous Annual Report, they were added to the CT plume maps. This will be helpful because a lot of the text in the Annual Report describes what is happening in each of the Hydraulic Zones. The Hydraulic Zones are based on a few different factors, including the extent of the historical COC plumes exceeding ACLs and the area of influence of the remedial activities, which is why some Hydraulic Zones are larger than current COC plumes.
 - A-Aquifer results were discussed:
 - Hydraulic Zones 1 through 3 results show not a whole lot of variation in CT concentrations over the past year.
 - A-Aquifer Hydraulic Zones 4 and 5 results also show consistency in CT concentrations over the past year, though there appears to be a declining trend in CT concentrations.
 - In Hydraulic Zone 4 and Enhanced In Situ Bioremediation (EISB) Deployment Area 2A well MW-BW-26-A persistently increasing CT concentrations were observed historically and additional monitoring wells were added back to the sampling program in this area to assess the CT plume size. However, MW-BW-26-A has had consistently declining CT concentrations since 2019.
 - MW-BW-36-A in Hydraulic Zone 4 mid-plume area downgradient of EISB Deployment Areas 2A and 2B. This well had declining CT concentrations and increasing chloroform concentrations, which is expected in a reductive dechlorination process. More recently though, chloroform concentrations decreased, and CT concentrations increased. This is not what was expected, but historically there were higher concentration areas referred to as “eggs in the snake,” characterized by a long thin plume with “bubbles” of higher CT concentrations migrating through areas over time.
 - MW-BW-75-A and MW-BW-80-A in Hydraulic Zone 5 downgradient City of Marina have had increasing CT concentrations.
 - Hydraulic Zone 6 is in the Upper 180-Foot Aquifer with consistent CT results over the past year.
 - MW-OU2-64-180 defines the downgradient extent of the CT plume in the Upper 180-Foot Aquifer and had a decline in CT concentrations. MW-OU2-64-180 is closest to the suspected discontinuity in the intermediate 180-Foot Aquitard, where migration occurs to the Lower 180-Foot Aquifer.

- MP-BW-46-170 CT data were similar to previous events and represent the upgradient extent of the CT plume in the Upper 180-Foot Aquifer. This well had an increasing CT trend that peaked in 2019 at 9 µg/L CT and has dropped off since then and leveled off with a seasonal cycle consistent with Upper 180-Foot Aquifer wells.
- Hydraulic Zones 7 and 8 are in the Lower 180-Foot Aquifer. CT results are consistent quarter-to-quarter.
 - MP-BW-49-316 has an increasing CT concentration trend with seasonal cycling.
 - Hydraulic Zones shown in the Lower 180-Foot Aquifer are only for the COC CT plumes, and there was a historical plume in the north.
- At the September HTW BCT meeting the Water Board requested further information about potential vapor intrusion in the City of Marina A-Aquifer Hydraulic Zone 5 area due to increasing CT concentrations at MW-BW-75-A and MW-BW-80-A. The handout includes additional information about vapor intrusion.
 - As part of the original Remedial Investigation/Feasibility Study (RI/FS), there was a Human Health Risk Assessment (HHRA) conducted. It was found that cancer risk associated with the vapor intrusion pathway was negligible in the City of Marina area using the Johnson and Ettinger Model. Other pathways were investigated that are not currently used due to land use restrictions, such as using the groundwater as drinking water and vapor inhalation while showering.
 - A map was presented showing the most downgradient CT plume in Hydraulic Zone 5 and the EISB Pilot Study area. Some wells currently have multiple passive diffusion bags (PDBs) installed, one at a station where the highest CT concentrations have been detected, and one at the shallowest saturated station to evaluate vapor intrusion, if needed. Additional shallow PDBs are being deployed for the Fourth Quarter 2021 event in December to supplement data collection at MW-BW-75-A and MW-BW-80-A and to restart sampling at MW-BW-81-A.
 - A trend chart of the downgradient wells CT concentrations over time in shallow PDB stations was shared.
 - MW-BW-49-A had higher CT concentrations during the HHRA but concentrations have declined since then.
 - Trend charts were shared of individual well CT concentrations at different station depths.
 - This information will be updated with future quarterly monitoring data and presented at HTW BCT meetings.
- Revision 10 of the Groundwater QAPP is in progress and recommendations are made based on review of the past four quarters of groundwater data. Changes in the monitoring frequency for various wells were presented in the handout. Maps and trends for the wells were presented. A lot of the recommendations are for removing adjacent Westbay multi-port wells that are duplicitous water elevation data.

b. TCE in the Lower 180-Foot Aquifer

TCE results are consistent quarter-to-quarter. TCE is also monitored due to downgradient supply wells and will be addressed in the Five-Year Review.

- MW-OU2-82-180 had an increase in TCE concentrations above the maximum contaminant level.

- MW-BW-59-180 TCE concentrations oscillate around 10 µg/L. Upgradient OU2 Upper 180-Foot Aquifer well MW-OU2-62-180 has had declining TCE concentrations, but no decline yet seen at MW-BW-59-180.

8. Per- and Polyfluoroalkyl Substances (PFAS)

The handout titled “Per- and Polyfluoroalkyl Substances (PFAS) Preliminary Assessment/Site Inspection (PA/SI)” was reviewed. Additional discussion included:

- The Preliminary Assessment (PA) Narrative Report was issued as draft for BCT review on September 29 and comments were requested by October 29.
 - USEPA requested an extension to the comment period to December 3.
 - DTSC requested an extension to the comment period to December 27.
 - FOCAG comments were received on October 29 and RTCs are in progress and will be sent for regulatory agency review.
 - Due to planned site inspection work in the Fort Ord Natural Reserve (FONR) in 2022, extending document reviews could potentially delay field work to 2023 due to the window for working in sensitive habitat areas. The Army requested comments on the PA as soon as possible.
 - Maeve Clancy with the USEPA stated further scientific research is currently being submitted to the USEPA Science Advisory Board. A new health advisory number is expected to be issued, likely much lower than the current 70 parts per trillion, and USEPA is on track for a drinking water standard in fall 2022. Maeve noted that a PFAS PA was issued Draft for another site in May 2021 and it is still not at a point where the next version can be issued. The PFAS issues at most sites are taking a while and she does not want to do a round of sampling and have to remobilize and sample again.
 - The Army requested expedited agency review and comment resolution as soon as possible, to begin Site Inspection field activities in the summer of 2022 as planned.
- The SI Work Plan/QAPP preliminary draft RTCs are in progress and scope will be discussed based on Maeve’s comments.

9. Basewide Range Assessment (BRA) and Lead Evaluation Status

There was no handout for the BRA and Lead Evaluation Status. Discussion included:

a. BRA –

The Comprehensive BRA Report is in BRAC office review. The report is scheduled to be issued final to the BCT in February 2022.

b. Lead Evaluation at HA 18D and HA 23D –

The BRAC-D and Environmental Law Division (ELD) advised to move ahead with a residential lead cleanup level of 200 milligrams per kilogram (mg/kg), which is half the federal preliminary remediation goal (PRG) for lead, and results in a 5 microgram per deciliter (µg/dL) blood lead level increase. The next step is to prepare an Explanation of Significant Differences (ESD). Maeve noted since the State level is not being considered further discussion should be done before moving forward with an ESD. USEPA, DTSC, and BRAC will confer further on the subject.

c. Habitat Restoration – The handout titled “Site 39 Inland Ranges Habitat Restoration Status Update” was reviewed. Additional discussion included:

- Plant propagation target for 2021/2022 is 3,677 plants for the eight HAs. All species targets have been met with surplus plants. They will begin planting this winter, likely in early December following seeding activities.

- Seed collection season was completed with 17 species this year. All targets were met. Seed mixes were prepared and ready for broadcasting. Broadcasting began last week at three HAs. About two more weeks of broadcasting left before switching to planting.
- Erosion control repairs for minor issues will be conducted soon in barren areas with production seed broadcasting at HA 26 and HA 37.
- Fall photo point monitoring are being completed.
- Plant survivorship surveys were completed at four HAs.
- This is the third year of irrigation for HA 26. A total of 3,500 plants are being irrigated with four gallons of water per plant per event (total of 14,000 gallons) with five events total. The first irrigation event was conducted June 8-11. The second event occurred July 6-9 with 14,000 gallons. The third event occurred August 9-12 with 14,000 gallons. The fourth event occurred September 13-16 with 14,000 gallons. One more event will occur, once there is a dry spell. Once completed, the irrigation system will be removed.

10. Federal Facility Agreement (FFA) Schedule

a. Status Update – The FFA schedule is provided to the agencies with the upcoming primary documents with the month the Draft and Draft Final versions will be issued. Draft versions have a 60-day review period, and Draft Final versions have a 30-day review period. The upcoming Fifth Five-Year Review Report would be the next and only primary document and is listed on the document schedule, with the Draft being issued in March 2022 and signature needed by September 2022.

b. Document Schedule – The handout titled “17 November 2021 BCT Deliverable Schedule” was reviewed, and near-term documents were identified.

- The following reports have been issued since the last BCT meeting:
 - The Final OU2 GWTP Evaluation and Optimization Report issued on October 28.
 - The Final Sites 2/12 Soil Gas QAPP Revision 6 issued on September 17.
 - The Final Groundwater QAPP Revision 9 is going to be issued on November 16.
 - The Final OU2 Fourth Quarter 2019 through Third Quarter 2020 Annual Report issued on October 7.
 - The Final OU2CTP Fourth Quarter 2019 through Third Quarter 2020 Annual Report issued on September 29.
- The following reports are currently in BCT review:
 - The Draft PFAS PA Narrative Report, comment period extended to December 3.
 - The Sites 2/12 Soil Gas Rebound Study Technical Memorandum will be sent out tomorrow, November 18.
 - The OU2 Landfills QAPP Revision 6 comments are requested by December 13.
- The following reports are in progress:
 - The SI Work Plan/QAPP.
 - The OU2 Fourth Quarter 2020 through Third Quarter 2021 Annual Report is scheduled to be issued by December.
 - The Sites 2/12 Fourth Quarter 2020 through Third Quarter 2021 Annual Report is scheduled to be issued by December.
 - The OU2CTP Fourth Quarter 2020 through Third Quarter 2021 Annual Report is scheduled to be issued by December.
 - The Comprehensive BRA Report will be issued in February.
 - The 5th Five Year Review is being revised with internal back-check RTCs and the draft is scheduled to be issued by March.

11. Action Items

The handout titled “HTW BCT 2021 Action Items” was reviewed.

- Action Item #1: The lead cleanup level will require further discussion.
- Action Item #2: The Five-Year Review will discuss TCE in the Lower 180-Foot Aquifer. The recommendation is to include the Lower 180-Foot Aquifer in the decision documents for OU2.
- Action Item #3: Vapor intrusion in OUCTP Hydraulic Zone 5 was discussed in the OUCTP topic and will continue to be discussed after each quarterly event.
- Action Item #4: OU2 COCs in OUCTP Upper 180-Foot Aquifer extraction well EW-OU2-09-180 is discussed in the OUCTP Annual Report to be issued draft in December.

12. Calendar Update

The calendar was reviewed for upcoming HTW BCT meeting dates:

- This was the last 2021 HTW BCT meeting.
- The first 2022 HTW BCT is scheduled for February 11, 2022 at 1:30 pm.
- The Community Involvement Workshop (CIW) is scheduled for February 12, 2022 to discuss soil and groundwater cleanup.
- The Technical Review Committee (TRC) meeting is scheduled for February 15, 2022 to discuss soil and groundwater cleanup.