

**Joint Base Cape Cod Cleanup Team
Building 1805
Camp Edwards, MA
January 13, 2016
6:00 – 8:00 p.m.**

Meeting Minutes

<u>Member:</u>	<u>Organization:</u>	<u>Telephone:</u>	<u>E-mail:</u>
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Handouts Distributed at Meeting:

1. Draft final of the October 14, 2015 Meeting Minutes
2. Presentation: Emerging Contaminants Update
3. Presentation: Dump Area UK-C500 No Further Response Action Planned
4. Table 4-1; Preliminary Assessment/Site Inspection Report Dump Area (UK-C500)
5. Presentation: Comprehensive Site Evaluation Phase II Site Inspection Former Ammunition Supply Point - West
6. Presentation: IAGWSP Construction Update
7. JBCC CT Agenda Topics
8. Fact Sheet: What is an Emerging Contaminant?
9. Emerging Contaminants Update: PFCs and 1,4-Dioxane Results
10. Figure 1: Flight Line PFOS and PFOA Detections in Groundwater
11. Figures 2 and 3: Ashumet Valley 1,4-Dioxane and PFOS and PFOA Detections in Groundwater
12. Figure 4: CS-10 1,4-Dioxane Detections in Groundwater
13. Figure 5: LF-1 1,4-Dioxane Detections in Groundwater
14. Figure 6: CS-20 1,4-Dioxane Detections in Groundwater
15. Newspaper Advertisement: A meeting of the Joint Base Cape Cod Cleanup Team



Agenda Item #1. Introductions, Late-Breaking News, Approval of October 14, 2015 JBCC CT Cleanup Team Meeting Minutes

Mr. Karson began the meeting and asked if there were any comments on the October 14, 2015 meeting minutes. He noted that Ms. Bouchard's name was spelled wrong. Ms. Richardson said that she would make that correction. There were no other changes and the minutes were approved.

Mr. Karson then reviewed the agenda and the items included in the handout packets.

Agenda Item #2. Emerging Contaminants Public Meeting Update

Mr. Karson reported that there had been an editorial in the *Cape Cod Times* several months ago pertaining to the work being conducted in Ashumet Valley. The editorial questioned whether or not people were able to gain access to the base and implied efforts were not being made to communicate with residents and suggested that holding meetings off-base would be more appropriate. Mr. Karson explained that the editor of the paper, Bill Mills and reporter George Brennan were invited to meet with the IRP to clear up any misconceptions that they might have and understand what actions were being taken to communicate with community members.

Mr. Karson stated that there had been a public meeting and poster session on January 6, 2016 in Falmouth to provide an update on the Emerging Contaminants investigation at JBCC. He noted that approximately twelve to fourteen residents who own the homes where private well testing is being conducted and one JBCC CT citizen team member attended. He said that the poster session provided an opportunity for one-on-one discussions. He mentioned that an article had appeared in the *Cape Cod Times* the next day and noted that copies were available tonight.

Mr. Karson said that they had prepared a few slides to provide the team an Emerging Contaminants update and introduced Rose Forbes to give the presentation.

Ms. Forbes reminded the team that the IRP has been engaged in an Emerging Contaminants investigation for a couple of years and several presentations have been provided at JBCC CT meetings. She stated that the presentation tonight is only related to the residential well sampling at Ashumet Valley with 1,4-dioxane and Perfluorinated Compounds (PFCs).

Ms. Forbes explained that the contaminants of concern (COCs) for the Ashumet Valley plume are TCE and PCE but, as part of the emerging contaminants investigation, 1,4-dioxane and PFCs are also being detected. As part of the investigation, IRP began reviewing results from the influent and effluent of the treatment plant and noted that while it was doing a good job of removing the PFCs, the 1,4-dioxane wasn't being removed by the carbon. At this time, they received a Dig Safe notice that a private well nearby had failed and was going to be replaced, indicating that private wells existed in the area. A review of neighboring homes found 54 private wells and IRP received access approval to sample 45 of them.

Ms. Forbes stated that the sampling was completed in two phases; one in the July/August timeframe and the other in November/December. Nineteen wells were sampled in July/August and the concentrations of 1,4-dioxane ranged from non-detect (ND) to 0.27 µg/L. Ms. Forbes noted that the Massachusetts Department of Environmental Protection (MassDEP) GW-1 standard is 0.3

µg/L. Seven of the 19 wells were ND. She noted that Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic acid (PFOA), were also detected; she explained that PFOS has an EPA provisional health advisory of 0.2 µg/L and concentrations ranged from ND to 0.0064 µg/L and 16 of 19 wells were ND. PFOA has an EPA provisional health advisory of 0.4 µg/L and concentrations ranged from ND to 0.044 µg/L with 11 of 19 wells ND.

Ms. Forbes explained that all 1,4-dioxane and PFC detections were below applicable health standards and advisories and noted that the results were forwarded to property owners and the Falmouth Board of Health in September 2015.

Ms. Forbes continued by saying that in the November/December timeframe, 45 wells were sampled, which included the nineteen wells from the first round. She reviewed the results stating that 1,4-dioxane concentrations ranged from ND to 0.21 µg/L; 23 of 54 wells were ND. PFOS concentrations ranged from ND to 0.06 µg/L; 33 of 54 wells were ND and PFOA concentrations ranged from ND to 0.12 µg/L; with 23 of 54 wells ND. All 1,4-dioxane and PFC detections were below applicable health standards/advisories. These results were forwarded to property owners and the Falmouth Board of Health in December 2015.

Ms. Forbes showed a figure of Ashumet Valley. It included the plume and the 1,4-dioxane detections and the distribution of the wells that were sampled. She pointed out a monitoring well on the eastern edge of the Ashumet Valley plume and noted that it had a detection of 1,4-dioxane, which might indicate that water from the infiltration trenches could be taking a more southerly route and noted that they would be looking further east to determine if there were any additional private wells. Mr. Karson said that a request had been sent earlier in the week to the Falmouth Water Department to determine if private wells or town water supplies exist in this expanded area.

Ms. Forbes reviewed the path forward by stating that they would be continuing with the Remedial Investigation/Feasibility (RI/FS) Study at Ashumet Valley and noted that there are three other plumes that they are looking at: Chemical Spill-10, Chemical Spill-20 and Landfill-1. The private wells will be resampled for a total of four quarters. Once all the data is received, they will review the results and reassess the sampling approach. Ms. Forbes explained that if results exceed health standards/advisories then evaluate additional protective measures such as more frequent testing, providing bottled water or a home water filtration/treatment system or a municipal water connection. Finally she noted that they would be evaluating the additional area for private wells.

Mr. Winters asked how much discussion is ongoing regarding the applicability of the provisional health standards and if they would be made permanent. He questioned how much uncertainty is in those standards and what the timeframe was for setting a standard. Ms. Dolan noted that she read something recently but was unable to recall the exact timeframe although she thought a Health Advisory would be set in spring 2016. She noted that she would find the email and forward it to the team.

Mr. Goddard asked why no access was received for nine locations. Mr. Karson explained that no response was received and that several appeared to be summer residences. He stated that he personally hand-delivered at least two notices to the properties, as well as three mailings to the owners of record. None of the mailings were returned as undeliverable.

Mr. Goddard asked what the remedy would be for the 1,4-dioxane that is getting through. Ms. Forbes explained that for the time being, since the majority of the residents were along Currier Road, they had shifted all of the water to the Sandwich Road infiltration trench. She noted that in addition, the flow rate of the extraction well had been lowered from 350 gallons per minute (GPM) to 200 gpm. Additional options for treatment will be evaluated as part of the RI/FS process.

Mr. Goddard asked if a technology existed that could be added to the existing treatment facility to address the 1,4-dioxane. Ms. Forbes replied that there could be a resin treatment added and that ultraviolet oxidation has been used to treat 1,4-dioxane at other sites however the concentrations were much higher than what is being seen here.

Mr. Goddard asked if the main concern was ingestion and not direct contact and Ms. Forbes replied that it was.

Agenda Item #3. Dump Area No Further Action Decision Document

Mr. Karson introduced Jennifer Bouchard from EA Engineering, Science, and Technology, Inc. to provide the presentation on the Dump Area No Further Action Decision Document (DD). Ms. Bouchard explained that the Dump Area was located in the southeast area of the installation and while it is not part of the Military Munitions Response Program (MMRP) it immediately adjoins another MMRP site (Former Ordnance Area 1). She said that several dozen highly corroded and degraded 5-gallon (50 pound) iron buckets were found on the ground surface during a site walk being conducted to assess the MMRP site.

Ms. Bouchard reviewed the history explaining that the site was identified in August 2010, during a site walk for the MMRP. The buckets were collected and disposed of by the Otis Air National Guard. During the excavation and removal there was no evidence of release and the buckets were empty. In 2012 as part of an investigation of other potential sites, soil sampling was performed in the area where the buckets were found. Ms. Bouchard explained that as part of the preliminary assessment/site investigation (PA/SI), existing data was evaluated and a report was submitted in September 2015.

Ms. Bouchard displayed photographs of the buckets. She noted that the labels of some were visible and that they read "Jet Sealing Compound" and "Superseal," which were asphalt sealants used for sealing cracks in the runway. They were dated to the 1940s and 1950s, which was coincident to a time when there was runway expansion and redevelopment activity. Ms. Bouchard reviewed the properties of the jet sealing compounds.

Ms. Bouchard stated that in 2012, eight soil borings were installed in the vicinity of the area the buckets were found to 10 feet below grade. Visual observations were collected during the installation of the soil borings and since they did not see any visual impacts, samples were collected from the 1 to 2 foot intervals. The soil was analyzed for metals, volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), pesticides, polychlorinated biphenyls (PCB), and extractable petroleum hydrocarbons/volatile petroleum hydrocarbons (EPH/VPH).

Ms. Bouchard reviewed the sampling results and stated that no VOC, SVOC, pesticides, PCB, or EPH were detected. There were low concentrations (estimated values) of VPH and metals but

none exceeded either EPA human health risk-based screening criteria, MassDEP S-1/GW-1 standards, or MassDEP background concentrations for metals.

Based on those results, it was determined that the site conditions demonstrate “no significant risk of harm.” A full PA/SI evaluation was completed and included evaluating the properties of asphalt sealant, the analytical results and the potential environmental pathways to determine if Dump Area posed unacceptable risks to human health or the environment.

Ms. Bouchard explained that to start the evaluation, they looked at the possibility of impacts to people at the site. She noted that they found there were no residents or workers at the site and the nearest residence is 500 feet south. Additionally the site can only be accessed by military personnel, users of the area (which include a running track) and any workers completing work/maintenance on the running track.

In reviewing the environmental setting she noted that there are no surface water bodies or drainage ditches at the site.

Ms. Bouchard continued by explaining that to evaluate the pathway, they looked at the soil concentrations which do not indicate that a release has occurred or that there is an unacceptable risk. Historical groundwater results from nearby monitoring wells were also reviewed and analytical results did not indicate potential release to groundwater or downgradient surface water. She noted that a release to the air was not expected based on the properties of the material that was in the buckets.

Ms. Bouchard summarized that because there was no evidence of a potential release of contaminants to the environment, and no potentially exposed populations or potential routes of human or biological exposure, the site does not represent a risk to human health or the environment. Because of this, the Dump Area is being recommended for “No Further Response Action Planned” which would mean unlimited use and no land use controls. She noted that the decision is protective of human health and the environment and complies with federal and state regulations. In addition, EPA and MassDEP have reviewed the PA/SI and DD and concur with the no further action recommendation.

Mr. Goddard asked if there were any indications that there were other sites on the installation that may contain a similar dump site. Ms. Bouchard replied that while a few other buckets were found during investigations at the nearby MMRP site, they were not aware of any other dump sites.

Agenda Item #4. Former Ammunition Supply Point West No Further Action

Ms. Forbes reviewed the outline for the presentation on the Former Ammunition Supply Point West (FASP-W) and explained that it was an MMRP site. She began with the background for the site and noted that the site is referred to as the “Former Ammunition Supply Point” but that the IRP has divided the site into “West” and “East” because at one point the Coast Guard was interested in potentially developing the site for a solar project. Because of this, they wanted to get through the Comprehensive Site Evaluation (CSE) Phase II so that if any further action was necessary, it could be done quicker. She said that the whole site was approximately 58 acres in the southwestern portion of the JBCC near the housing area. Ms. Forbes displayed a figure

showing the site's location. In the 1940s it was used as an ammunition supply point then in the late 1950s, it was developed for residential housing. In 1965 the Campbell School was built on the northeast portion of the site. In the early 2000s, the residential housing and the Campbell School were removed. Ms. Forbes showed a series of aerial photos showing the site and noting the changes in site features between 1943 through 2007.

She explained that the report documents all of the work done at the site is the CSE Phase II report, which is like a site investigation (SI) report under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. This report makes a recommendation of no further action for the site and there is a public comment period on it beginning today through February 6th.

Ms. Forbes reviewed a number of previous investigations at or adjacent to the FASP-W and explained that many were done under the Impact Area Groundwater Study Program (IAGWSP). She noted that during the previous investigations, no munitions and explosives of concern (MEC) were identified, nor were munitions constituents (MC) identified in concentrations exceeding regulatory criteria, or that would pose a threat to human health or the environment.

Mr. Goddard asked why the site was being investigated if the site has been examined under the IAGWSP program. Ms. Forbes explained that there was a CSE Phase I done for the MMRP sites that were not completely addressed or didn't have a formal DD and this one was recommended to go forward. Mr. Goddard asked if it was "essentially a loose end you have to housekeep." Ms. Forbes replied that it was.

Ms. Forbes introduced Jeff Morin from EW Wells to discuss the CSE Phase II field activities. Mr. Morin explained that field activities were performed from October 27 through November 29, 2014 and included:

- Magnetometer-aided surface sweep for the removal of all metals from FASP-W that could interfere with the Digital Geophysical Mapping (DGM).
- A DGM survey over 12.55 acres or 29.5% of the FASP-W.
- Once evaluation of the DGM survey data was completed targets to be investigated were selected.
- Reacquisition and intrusive investigation of selected targets.
- Post dig anomaly resolution with EM61-MK2 to be sure anomaly has been resolved.
- Findings from each target resolution were recorded.

Mr. Morin displayed photographs of the equipment used during the field activities. He then displayed figures that showed the DGM results as well as pre- and post-dig maps. Mr. Morin said that no MEC or munitions debris (MD) were found during the surface removal activities. He explained that 308 anomalies were investigated with 272 removed, and 32 were left in place. Anomalies removed included nails, metal pipes, steel wire, butter knife, concrete with rebar, scrap metal, steel pipes, plumbing fixtures, etc. Anomalies left in place included plumbing and sewer pipes, old utility line, large concrete slab with rebar, pole guy wire anchor. No munitions related items were detected during the intrusive investigation of anomalies. He noted that no samples were collected because no material potentially presenting an explosive hazard was encountered and no demolition occurred. He displayed photographs of several anomalies.

Mr. Morin summarized by stating that no explosive safety hazards or potential sources of MC have been identified for the site during the CSE Phase II field work. Based on these results, it was determined that no potential source of MEC /MC is present at the FASP-W within the surveyed area. In addition, given the historical use of the site as an ammunition supply point (as opposed to a training area), the subsequent redevelopment of the site for base housing and a school, and the subsequent demolition of the housing/school, it is very unlikely that MEC/MC are present at the site. He explained that the site is being recommended for no further action under the MMRP.

Ms. Kirkpatrick asked if there would be any land use controls at the site. Ms. Forbes replied there would not as long as the regulators concur with the no further action recommendation.

Mr. Karson reminded the group that public comment periods on the FASP-W and the Dump Area run from January 8th through February 6th.

Agenda Item #5. IAGWSP Construction Update

Mr. Gregson explained that at the last meeting, he had presented information on munitions and soil projects including the Central Impact Area (CIA) munitions removal project and the Small Arms Ranges soil removal project. He noted that at this meeting, he would be focusing on groundwater and talk about construction projects for groundwater treatment that is underway at four separate operable units on Camp Edwards.

Mr. Gregson began by displaying a figure that showed the locations of the projects. In the CIA, a third extraction well is being installed at the leading edge of the plume. He reminded the team that the IAGWSP previously installed two extraction wells on Burgoyne Road however as part of the DD, IAGWSP is required to install an additional extraction well to capture the downgradient portion of the plume. He displayed an engineering drawing and pointed out the locations of the extraction well, pipeline and mobile treatment unit. He also displayed photos showing construction of the infiltration gallery and extraction well.

As a result of the recently completed DD for the J-3 Range, an additional in-plume extraction well is being installed. Mr. Gregson showed a figure with the location of the extraction well and photographs of the well construction activities.

Mr. Gregson continued by saying that two actions are underway for the Demolition Area 1 plume. He explained that the source area is a former demolition pit located in the south central portion of the base. He showed a figure of the design of an off-base treatment system. In the Pocasset neighborhood in Bourne, an extraction well and mobile treatment unit are being installed on private property. He noted that it took several years of negotiations to obtain an easement to work on the private property. He pointed out the components of the treatment system and showed photographs of contraction activities. For Demolition Area 1 on-base, an additional extraction well is being installed near the source of the plume to accelerate the cleanup.

Mr. Gregson explained that a few additional monitoring wells are being installed. He noted that as part of the DD for Demolition Area 2, the IAGWSP was required to install two wells at the base boundary to make sure that the contamination hadn't traveled that far. He noted that the wells have

been installed next to the gas pipeline right of way adjacent to Route 6. He said that results were non-detect for the first location and RDX was detected at 0.26 µg/L at the second.

Mr. Gregson said that at the L Range, a couple of wells are being installed to better define the plume. He reviewed a figure of the plume and new monitoring well locations.

Mr. Gregson concluded by reviewing the schedule for the projects. He indicated that for the CIA and Demolition Area 1, construction will continue through the winter and the milestone for system startup is March 30, 2016 and May 2, 2016 respectively. For the Demolition Area 1 source area extraction well, construction should be finished by June 2016. At the J-3 Range, it is anticipated that construction will be completed by October 2016. He said that well screens will be set and the groundwater samples will be collected from the wells at Demolition Area 2 and the L Range.

Mr. DiNardo asked if modeling had been completed to determine how the new extraction wells would accelerate the cleanup. Mr. Gregson replied that while he did not know the exact numbers, he believed in both cases the cleanup times were extending beyond what was originally predicted in the DDs so installing these wells will pull the times back to within the requirements of the DD.

Agenda Item #7. Agenda Planning for 2016

Mr. Karson reminded the team that the meetings are usually scheduled for January, April, July and October. He explained that the agencies would like to propose to change the meeting frequency, beginning with the next meeting, May 11th. Then follow on with meetings in August, November, and February 2017. He noted that October is the beginning of the new fiscal year for AFCEC and January poses a difficulty for AFCEC with budgetary planning requirements due the first week of the new year.

Mr. Karson reviewed upcoming agenda topics and asked if members had any suggestions or requests for specific updates. Mr. Goddard asked what the Training Areas topic for May was. Mr. Gregson explained that it was all of the remaining sites under the IAGWSP.

Mr. Goddard suggested an update on the Natural Resources Damages Assessment. Mr. Goddard also asked if there was an integrated plume map and plume booklet that could be updated. He suggested a checklist for both programs together to show progress of each site and next steps. Mr. Karson replied that the IRP and IAGWSP are planning to update the JBCC Cleanup Update document this summer, which would include the information Mr. Goddard has suggested.

Ms. Rielinger asked if the data from the new monitoring wells for Demolition Area 2 and the L Range would be presented in May or August. Mr. Gregson replied it would most likely be August. She asked if there were any DDs coming up in this calendar year. Mr. Gregson noted that the Training Areas remedy selection plan would be presented in May followed by the signing of the DD by the end of September. He said that the Training Areas DD would be the last one for the program. He explained that he planned on a topic for the November meeting which would cover the DDs that had been completed for the program and provide a status update and next steps for each. Mr. Goddard suggested that the program make an announcement in the media when the final DD is signed to highlight the milestone.

Agenda Item #8. Final Discussions, Adjourn

Mr. Karson stated that the next meeting is scheduled for May 11, 2016. The meeting was adjourned.