

Marine Corps Base Camp Lejeune (MCB Camp Lejeune) Restoration Advisory Board (RAB) Meeting Minutes

MEETING DATE: November 18, 2015

LOCATION: Coastal Carolina Community College, Business Technology Building, Room 105 in Jacksonville, North Carolina

ATTENDEES:

Charity Delaney/MCB Camp Lejeune	Steven Thompson/RAB Member
Thomas Richard/MCB Camp Lejeune	Amanda Todd/RAB Member
Captain Faunce/MCB Camp Lejeune	(Students of Ms. Todd's class)
Dave Cleland/NAVFAC Mid-Atlantic	Nicole Triplett/Community Member
Gena Townsend/EPA	Jim Wheeler/Community Member
Jennifer Tufts/EPA	Dale Weston/RAB Member
Randy McElveen/NCDEQ	Brian Wheat/RAB Member
Laura Bader/RAB Member	Bridget Berglind/CH2M
Michael Curtis/RAB Co-Chair	Fahran Ferguson/CH2M
Debbie Humphreys/Community Member	Monica Fulkerson/CH2M
Motice Humphreys/Community Member	Kim Henderson/CH2M
Thomas Mattison/RAB Member	Matt Louth/CH2M
Richard Mullins/RAB Member	

FROM: Kim Henderson/CH2M

DATE: December 16, 2015

I. Welcome and Introductions

Ms. Delaney began the meeting and reviewed the agenda.

II. Five-Year Review Results Overview

Objective: The purpose of this agenda item was to review the recently completed Five-Year Review and the proposed actions going forward.

Overview: A presentation was reviewed by Mr. Louth. The purpose of the Five-Year Review is to evaluate implementation and performance of remedies in-place, determine protection of human health and the environment, and it is required under CERCLA. The Five-Year Review is prepared in accordance with EPA and Navy/Marine Corps guidance and policy.

The trigger date for the Five-Year Review for MCB Camp Lejeune was conducted based on the initiation of the remedial action at Operable Unit (OU) 1 on September 24, 1993. The fourth Five-Year Review was just completed in August 2015 and included review of 17 OUs, 26 Sites. The current remedies for ongoing remediation of chlorinated volatile organic compounds (CVOs) in groundwater include groundwater extraction and treatment (pump and treat), air sparging, enhanced reductive dechlorination (ERD), and permeable reactive barrier (PRB). There is also aeration for treatment of

CVOCs in surface water and an engineered cap for a waste-in-place site. The remedies also include land use controls (LUCs), monitored natural attenuation (MNA) and long-term monitoring (LTM).

The conclusion of the Five-Year Review was that all ongoing remedial actions at MCB Camp Lejeune are protecting human health and the environment; however, there were several recommendations to ensure some remedies will continue to be protective in the long-term.

There are four sites with ongoing remediation, LTM, and LUCs that were reviewed and recommendations were made for three of the four sites as follows:

- OU 1 (Site 78) - Refine the conceptual site model to evaluate the extent of groundwater contamination and exposure pathways, collect groundwater samples for emerging contaminant 1,4-dioxane because indicator constituents are present, evaluate expanding or modifying the existing treatment system and/or evaluate alternative treatment technologies, and to add LUCs for vapor intrusion based on the potential for a future pathway.
- OU 2 (Site 82) - Refine the conceptual site model to evaluate the extent of groundwater contamination and exposure pathways, collect groundwater samples for emerging contaminant 1,4-dioxane because indicator constituents are present, re-evaluate human health and ecological risks in Wallace Creek, evaluate expanding or modifying the existing treatment system and/or evaluate alternative treatment technologies, re-evaluate effluent standards for the groundwater extraction and treatment system based on current State and Federal criteria, and add LUCs for vapor intrusion based on the potential for a future pathway and for munitions as explosive hazards that may be present within the former waste disposal area.
- OU 21 (Site 73) – Add LUCs for vapor intrusion based on the potential for a future pathway

There are eight sites with LTM and/or MNA and LUCs that were reviewed and recommendations were made for four of the eight sites as follows:

- OU 2 (Site 6) - Refine conceptual site model to evaluate the extent of groundwater contamination and exposure pathways, collect groundwater samples for emerging contaminant 1,4-dioxane because indicator constituents are present, evaluate treatment technologies, and add LUCs for vapor intrusion based on the potential for a future pathway and for munitions as explosive hazards that may be present within the former waste disposal area.
- OU 6 (Site 36) - Add LUCs for vapor intrusion based on the potential for a future pathway and compare groundwater data collected from the most downgradient locations closest to Brinson Creek to 10 times the surface water standards to monitor future protectiveness.
- OU 10 (Site 35) - Add LUCs for vapor intrusion based on the potential for a future pathway and compare groundwater data.
- OU 20 (Site 86) - Collect groundwater samples for emerging contaminant 1,4-dioxane because indicator constituents are present.

A RAB member asked how many monitoring wells are in-place at MCB Camp Lejeune and it is likely over 2,000.

There are seven sites with LUCs that were reviewed and a recommendation was made for one of the seven sites as follows:

- OU 6 (Sites 43, 44, and 54) - Collect groundwater samples for emerging contaminant perfluorinated compounds because former fire-fighter training was conducted and is indicative of its use.

There are three sites (OU 1 [Site 24], OU 5 [Site 2], and OU 7 [Site 1]) where no further action was determined to be needed because cleanup goals have been met and Remedial Action Completion Reports were recommended to document remedy completion.

A RAB member asked what happens when no further action is achieved, if there is follow-up monitoring to ensure the site is not re-contaminated. When no further action is achieved, there are no further restrictions or monitoring and the land goes back to Base for any property use. Based on the current regulations in place, current environmental practices, and common knowledge of environmental stewardship, sites are not expected to be re-contaminated.

A RAB member mentioned that some of the sites that have been identified were contaminated before the Base was established based on historical farming processes, such as dipping vats for livestock that were discovered and pesticide and arsenic contamination was identified in soil and the soil was removed.

A RAB member asked about where the funding comes from. The Navy is the lead agent for Marine Corps environmental restoration and establishes set aside funds to clean-up hazardous waste sites.

The next steps are to implement recommendations over the next five years and distribute fact sheets that were made available as handouts at this meeting. The Five-Year Review and fact sheet is also available at the Information Repository, the Onslow County library and on the Navy's Administrative Record website. The next Five-Year Review is due in 2020.

III. Update on Sites 6 and 82

Objective: The purpose of this agenda item was to review the recent site investigation activities and proposed future action.

Overview: A presentation was reviewed by Ms. Fulkerson. OU 2 (Sites 6 and 82) is a large waste disposal area and groundwater volatile organic compound (VOC) plumes that have changed over time and since the remedy was put in-place. The remedy as this site is currently being re-evaluated to determine whether we are on the right path or whether additional actions can be taken to accelerate the site towards closure.

A movie of the site history, cleanup activities conducted to-date, current extent of volatile organic compounds in groundwater, and suspected source areas was reviewed. In-line with the recommendations of the Five-Year Review, a Supplemental Remedial Investigation (SRI) and groundwater treatment plant evaluation are being conducted.

The SRI is being conducted to evaluate the extent of groundwater contamination and exposure pathways, characterize potential source areas, delineate VOCs in groundwater, and re-evaluate human health and ecological risks in Wallace Creek. The approach includes direct push technology soil investigation, membrane interface probe investigation, monitoring well installation and sampling, collection of surface water and sediment samples, and conducting human health and ecological risk assessments.

The groundwater treatment plant evaluation is being conducted to evaluate expanding or modifying the existing treatment system and/or evaluate alternative treatment technologies including installing potential additional recovery wells in source areas, and conducting potential treatability studies. The approach is to evaluate the current configuration and loading and additional loading capacity, the recovery well network and capture zones, and current applicable effluent standards.

Based on the results of these activities, the next steps are to refine the conceptual site model, and ultimately amend the Feasibility Study to evaluate alternative treatment technologies followed by revising the Proposed Plan and Record of Decision to update/revise the remedy.

V. RAB Business

Ms. Delaney informed the RAB of Ms. Townsend's retirement at the end of the year and her replacement, Ms. Tufts. Also, Mr. Richard has joined the MCB Camp Lejeune team and Mr. Powers has retired from the RAB.

Ms. Delaney suggested that the next RAB meeting for February 10, 2016. Suggestions for meeting topics were requested. The RAB requested a site visit and May 2016 was proposed.