

Marine Corps Installations East-Marine Corps Base Camp Lejeune (MCIEAST-MCB CAMLEJ) Restoration Advisory Board (RAB) Meeting Minutes

MEETING DATE: November 13, 2013

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

ATTENDEES:

Charity Delaney/MCIEAST-MCB CAMLEJ	Dale Weston/RAB Member
Patti Vanture/MCIEAST-MCB CAMLEJ	Steven Thompson/RAB Member
Bryan Beck/NAVFAC Mid-Atlantic	Thomas Mattison/RAB Member
Dave Cleland/NAVFAC Mid-Atlantic	Karen Sota/RAB Member
Gena Townsend/EPA	Chris Bozzini/CH2M HILL
Randy McElveen/NCDENR	Kim Henderson/CH2M HILL
Michael Curtis/RAB Co-Chair	Matt Louth/CH2M HILL
Laura Bader/RAB Member	James Macdonnell/Sepi
Marvin Powers/RAB Member	Rob Sok/Tetra Tech
Leonard McAdams/RAB Member	

FROM: Kim Henderson/CH2M HILL

DATE: November 26, 2013

I. Welcome and Introductions

Ms. (Rychak) Delaney began the meeting and reviewed the agenda.

II. Site 89 Permeable Reactive Barriers (PRBs)

Objective: The purpose of this agenda item was to review site history and provide a summary of remedial activities.

Overview: A presentation was reviewed by Mr. Macdonnell. A summary of the remedial design was provided. The selected remedy for downgradient groundwater contamination at Site 89 includes the installation of two PRBs on the east side of White Street and monitored natural attenuation (MNA). Aerators will also be installed in Edwards Creek, to address surface water contamination and baseline sampling of groundwater and surface water will be conducted. Figures showing the PRB locations were shown.

Site preparation activities included the removal of ground cover, leaving the existing root mat in place, grading of the site to control stormwater runoff and provide a work platform and media mixing area, and clearing and grubbing completed on June 6, 2013.

The work platform construction was to support a one-pass trencher and consists of a raised platform in the low-lying areas with intermittent standing water. Features were incorporated for erosion control and spoils containment. Approximately 8,000 cubic yards of clean fill material was brought in, compacted, and topped with crusher run for a work surface. The platform construction began on June 18, 2013 and was completed along with site grading on July 9, 2013.

The first loads of media components for the PRB installation were delivered July 8, 2013. The trench media consisting of 40% mulch and 60% aggregate was mixed onsite. Photos and videos of PRB installation were shown. Waste characterization sampling was conducted via direct push technology (DPT) along the PRB alignment during site preparation to facilitate subsequent transportation and disposal. PRB B was trenched from west to east and

finished on July 12, 2013 and PRB A was trenched south to north and was finished on July 15, 2013. Approximately 2,400 tons of waste was generated for off-site disposal and on-site water containment (2 x 21,000 gallon frac tanks) was conducted.

Eighteen new monitoring wells were installed to assess PRB performance. All monitoring well installations were conducted in accordance with NCAC Title 15A 2C.0100 standards and began on September 4, 2013 and were completed on September 11, 2013.

Site restoration included re-grading as close to original contours as possible and re-seeding and re-vegetating with native species. Some of the clean fill material used in platform construction will remain on-site and some of the fill material impacted the wetlands area to provide access to PRB B, future access for DPT reactivation if needed, and the monitoring wells (PRB performance monitoring). The area was re-seeded and re-vegetated with native species and erosion controls will be removed from the perimeter once vegetation is re-established.

Aerators will be installed within Edwards Creek and anchored. They are fed by a compressor with pressurized air to oxygenate water and help break down the contaminants within the creek. A figure with the aerator locations and a video was shown. The manufacturer estimates the aerators will generate 1 billion bubbles per day.

An Interim Remedial Action Completion Report (IRACR) is planned to record as-built conditions, document remedial action implementation in accordance the remedial design and record of decision and will become part of the overall (RACR) for Site 89.

The schedule for the remaining activities is to remove the erosion controls in December 2013, complete baseline sampling and aerator installation in November/December 2013 and complete the IRACR in February 2014.

A RAB member noted that a better base may be needed to keep the aerators in the water and elevation changes may have impacts. An anchor will be installed and operations and maintenance manual prepared to discuss inspections and procedures for ensuring they are clear and functioning. The aerators being used have been successful in similar applications and are designed with a central trunk line with individual ball valves for operation and isolation as needed. The elevation change is minimal and not expected to be a concern for air delivery throughout the system.

A RAB member asked about the depth of the monitoring wells. The monitoring well depths are relative to the depth of the PRB, about 20-30 feet deep

A RAB member asked about the cost for the PRB installation and what media was included in the PRB. The costs were approximately \$1.5MM and mulch was used and can be re-activated. The PRBs are surveyed and will be incorporated in the Base GIS to ensure they are not compromised.

III. Fiscal Year (FY) 2014 Site Management Plan (SMP)

Objective: The purpose of this agenda item was to review key FY 2013 accomplishments, present current site status, and FY 2014 goals.

Overview: A presentation was reviewed by Mr. Louth. CDs of the FY 2014 SMP are available for RAB members and outline site information on environmental restoration, schedules, and goals. An award abstract for the DoD Environmental Restoration Program awards was submitted for MCIEAST-MCB CAMLEJ and the successes from this presentation will be included in the award package submittal.

The key FY 2013 accomplishments for the Installation Restoration Program (IRP) were summarized and included:

- Site 49 - Held public meeting for Proposed Remedial Action Plan (PRAP), selected the remedy as monitored natural attenuation (MNA) and land use controls (LUCs), and prepared Record Of Decision (ROD) for signature
- Site 86 - Finalized the Feasibility Study (FS) to evaluate 5 remedial alternatives including no action, MNA and LUCs, air sparging, in situ chemical oxidation (ISCO), and enhanced reductive dechlorination (ERD).

- Sites 69 and 89 - Signed RODs, finalized Remedial Designs (RDs), and initiated Remedial Actions (RAs). The Site 69 remedy is capping with LUCs for waste and soil and MNA and LUCs for groundwater. The Site 89 remedy is air sparging to treat source areas; PRB to treat groundwater and protect surface water; surface water aeration system to promote reduction of volatile organic compounds (VOCs) and protect the New River; and MNA and LUCs.
- Site 35 - Transitioned from active remediation by horizontal air sparging to MNA to address VOCs in groundwater. The horizontal well was in operation August 2010 - February 2013 and the treatment system objectives were met within 2½ years of ROD signature.
- Sites 10 and 15 - The Base implemented LUCs to restrict intrusive activities at former dump sites.
- Sites 16, 63, and 80 - Completed Explanation of Significant Differences to document LUCs as the remedies in-place and added LUCs to restrict intrusive activities in former waste disposal areas.

The key FY 2013 accomplishments for the Military Munitions Response Program (MMRP) were summarized and included:

- UXO-01, 14, and 23 - Completed non-time critical removal actions (NCRAs) to treat over 16 acres of lead and/or polycyclic aromatic hydrocarbon (PAH) contaminated soil with Enviroblend®, a soil stabilization reagent. Over 52,000 tons of contaminated soil was rendered non-hazardous for disposal.
- UXO-06 and 19 - Completed Remedial Investigation (RI) field activities. At UXO-06, over 15,000 anomalies were investigated and at UXO-19, over 58,000 anomalies were investigated.
- UXO-25 - Completed the Preliminary Assessment/Site Inspection (PA/SI) that was closed with no further action based on no unacceptable risks to human health or the environment and no munitions-related items found.

The key FY 2014 goals are to:

- Complete the PA/SI Report at UXO-24/Site 37 and determine the path forward
- Complete the Expanded SI Report for UXO-21 and determine the path forward
- Complete RI reports for UXO-06 and 22
- Finalize the FS for Site 88 and initiate the PRAP
- Finalize the RI/FS and PRAP, hold the public meeting, sign the ROD for UXO-19, and select the remedial action
- Complete the PRAP, hold the public meeting, sign the ROD for Site 86, and select the remedial action
- Complete RAs at Sites 49, 69, 86, and 89

The current status of the remaining IRP and MMRP sites were reviewed and the FY14 goals were identified as completing the PA/SI for Site 37/UXO-24, the FS for Site 88, the PRAP/ROD for Site 86, and the RD/RAs for Sites 49, 69, 86, and 89.

IV. UXO-27 Preliminary Assessment/Site Inspection (PA/SI)

Objective: The purpose of this agenda item was to provide background, present the investigation approach, and review the schedule.

Overview: A presentation was reviewed by Mr. Louth. The site is an 18-acre former gun position that consists of UXO-27 covering 14 acres closed to range activities, active training covering 4 acres, and off-Base covering 0.3 acres owned by NC Coastal Land Trust. Military construction (MILCON) is pending within UXO-27 for Everett Creek Road improvements and new buildings south of Everett Creek Road.

No munitions findings have been documented to-date. Based on historical records review, Tactical Landing Zone (TLZ) Owl, located across Everett Creek Road from UXO-27, may have trained soldiers with covering fire (usually small arms) and used as a firing position associated with TLZ Owl that may have been used for artillery into K-2 Impact Area. Munitions may be similar to adjacent Site UXO-02.

The objectives for the PA/SI are to evaluate the potential presence and nature of impacts from former training activities, evaluate potential risks to human health and the environment, and reduce the potential for encountering munitions during future MILCON activities.

The PA/SI approach includes site preparation activities (survey, utility locating, and vegetation clearance) followed by digital geophysical mapping (DGM), intrusive investigation, and environmental sampling. DGM will include 10% of the site in transects and 100% in a 1-acre MILCON area. Intrusive investigation of metallic anomalies will be conducted and controlled detonation as needed. Up to 12 surface soil and six subsurface soil samples and up to three groundwater samples will be collected for laboratory analysis for explosives residues and metals and screened to evaluate potential risks to human health and the environment.

The draft work plan was submitted in November 2013 and field activities are planned December 2013 - February 2014. A PA/SI Report and After Action Report are planned for completion in June 2014.

V. MILCON Support at UXO-29

Objective: The purpose of this agenda item was to provide background, present the investigation approach, discuss initial findings, and review the schedule.

Overview: A presentation was reviewed by Mr. Louth. A MILCON at MCAS New River is ongoing for hangar, roadways, recreation facilities, and RV/boat storage. In May 2013, MILCON activities were suspended in a 9.2 acre area based on discovery of three 2.36-inch practice bazooka rockets that Base EOD responded to. There are adjacent/overlapping former ranges to the MILCON area and 182 acres were identified for closure under the MMRP as UXO-29.

UXO-29 includes the Infantry Weapons Demonstration Course, B-17 that was active from 1946 to 1947, Artillery Training Area used from 1941 to 1943, and Hand Grenade (practice) Demonstrator, M-113 that was active from 1970 to 1977. A wide variety of ordnance was used including small arms, cartridges, rockets, projectiles, and hand grenades.

The Explosives Safety Submission (ESS) Determination Request was approved for non-intrusive maintenance (e.g., mowing grass and running path improvements) and an ESS was approved for intrusive activities in the MILCON area and two soil stockpiles. A third soil pile was discovered during site preparation activities and an ESS Amendment No. 1 was submitted to address the 3rd stockpile.

The investigation approach includes vegetation reduction, site survey, utility locating, DGM, and intrusive investigation in 100% of the 6.8-acre MILCON area. Additionally, the stockpiled soil, encompassing 200 cubic yards over 3 acres will be investigated via mag-and-dig excavation in 2-foot lifts until all stockpiled soil is processed.

The DGM activities were completed in October 2013 and 1,537 anomalies were identified representing potential subsurface munitions. Intrusive investigation activities were initiated in November and will continue through December 2013. Today, two munitions were found buried 12 to 18 inches below grade, requiring controlled detonation planned for this Friday. The report is planned for completion in early 2014. The larger UXO-29 site is planned for future investigation.

VI. RAB Business

Ms. Delaney introduced Captain Faunce, the new lead for G-F, in attendance. Captain Faunce recognized the importance of the RAB and welcomed questions after the meeting. Ms. Delaney proposed the next RAB meeting on Wednesday, February 26, 2014. The Site 86 PRAP will be a topic for the next meetings and suggestions for other meeting topics were requested. Meeting minutes are posted on the web site.

A RAB member asked whether Onslow Beach is ever combed for munitions items. Ms. Delaney indicated that sweeps are conducted and the last one was completed about six months ago and to let her know if items are found.