

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

MEETING DATE: January 7, 2026

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

ATTENDEES:

Thomas Richard/MCB Camp Lejeune	Matt Louth/CH2M
Laura Spung/MCB Camp Lejeune	Kristin Brickman/CH2M
David Towler/MCB Camp Lejeune	Ray Tichenor/CH2M
Jennifer Tufts/ EPA	Keith LaTorre/CH2M
Josh Hanks/NCDEQ	Ben Francisco/NAVFAC (virtual)
Robert Johnson/RAB Member	Col Steven Thompson/RAB Member
Michael Curtis/RAB member	Capt. Zachary Johnson/MCB Camp Lejeune
Kevin Howard/Court Reporter	Royce Bennett/Onslow County
Frankie Howard/ONWASA	
Alaina Laster/WCTI News	

FROM: Matt Louth/CH2M

DATE: February 5, 2026

I. Welcome and Introductions

Mr. Richard began the meeting, introduced the team, and explained the purpose of the public meeting and RAB.

II. Site UXO-28 Proposed Plan Public Meeting

Objective: The purpose of this agenda item is to present the Proposed Plan for Site UXO-28 at MCB Camp Lejeune, North Carolina.

Overview: A presentation was reviewed by Mr. LaTorre.

Site UXO-28 was designated in 2013 when munitions and explosives of concern (MEC) and material potentially presenting an explosive hazard (MPPEH) was found during a soil remedial action at the former skeet range located within the area. The initial site was expanded to include a potential former maneuver training area identified on a 1956 aerial photograph. The site includes a total of 225 acres.

During site investigations, 100% of undeveloped/accessible site surface area was investigated for munitions and 5% of site subsurface area was investigated for munitions. A contaminated soil removal action associated with the former skeet range was completed in the middle of the site, resulting in no further action recommended for that area. During site investigations, 23 MEC and 211 MPPEH items were found, of which 82% were illumination flares, grenades, and 3.5" inert training rockets. Potential former fighting positions (fox holes) were found in the woods north and south of central-tree-cleared area (Area 8). The Site was likely used for maneuver training, not an impact range. The Site was divided into 10 separate areas based on land use, munitions finds, and accessibility.

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The Feasibility Study (FS) developed a Remedial Action Objective (RAO) to reduce or prevent the potential for direct physical contact with MEC/MPPEH, which could present risk to human health due to explosive hazards. The FS evaluated the following Remedial Alternatives:

- Alternative 1 – No Action (required for baseline comparison)
- Alternative 2 – Land Use Controls (LUCs)
- Alternative 3 – MEC/MPPEH Subsurface Removal within Site Areas 1, 2, 3, 6, 8, and 10, and LUCs
- Alternative 4 - Sitewide MEC/MPPEH Removal and LUCs for Site Areas 4, 5 and 9

The Remedial Alternatives were compared based on threshold criteria (protection of human health and the environment and compliance with ARARs), primary balancing criteria (long-term effectiveness and permanence, reduction in toxicity, mobility, or volume through treatment, short-term effectiveness, implementability, and total estimated costs), and modifying criteria (regulatory agency acceptance and community acceptance).

The proposed remedy is Alternative 2 – LUCs because it addresses the site explosive hazards by reducing or preventing potential contact with MEC/MPPEH that may be present, and completion of the remedy would be sooner and at a cost more in line with the residual explosive hazards compared to the other alternatives. LUCs would consist of 3R training; warning sign installation; and UXO site support, where required. Alternative 2 does not achieve unlimited use and unrestricted exposure (UU/UE) for Site UXO-28; however, a UU/UE alternative is not considered applicable due to the estimated damage to the environment, potential disruption to Base operations, and high costs.

Public input is a key element in the decision-making process. The public comment period will be from January 5 to February 5, 2026. Comments received from residents and other interested parties will be summarized and a Responsiveness Summary will be prepared. The Proposed Plan can be reviewed at <https://go.usa.gov/xSdBH>. The technical reports supporting the preferred alternative for Site UXO-28 are available for public review in the online Administrative Record. Search the Administrative Record tab for "Site UXO-28". Hard copies of the Proposed Plans are available for review at the Onslow County Public Library.

A meeting attendee asked if the plan will be in all libraries or just library listed, and Mr. Louth answered that the plans will only be kept at the Onslow County Public Library as it is identified as the Program's administrative record repository. Another RAB member asked if there are issues with obtaining the money needed to do this, it was clarified that this funding is secured.

III. Site UXO-29 Proposed Plan Public Meeting

Objective: The purpose of this agenda item is to present the Proposed Plan for Site UXO-29 at MCB Camp Lejeune, North Carolina.

Overview: A presentation was reviewed by Mr. LaTorre.

Site UXO-29 covers 286 acres adjacent to the southern end of MCAS New River and Morgan Bay of the New River. The northern portion of Site is primarily tree-cleared and 20 acres in northeast portion encompass a former recreation area/campground. A running path extends around the northern portion of the Site. The Southern Peninsula includes 130 acres covered by forest, marsh, and scrub bush (which is difficult to access). The Site includes portions of 3 former ranges: the Infantry Weapons Demonstration Course; the Artillery Training Area; and the Hand Grenade Range (Practice) Demonstrator. Munitions were found in 2013 during construction of Perimeter Road.

During site investigations, munitions surface investigation was completed within 100% of the 170 acres in the northern portion of the Site and munitions subsurface investigation was completed within 29 acres (~15%) of the northern portion of the Site. 100% of the surface and subsurface has been investigated within the southern portion (camping/picnic area) of the recreation area. A surface and

subsurface investigation has been completed along approximately 9 linear miles (~3%) of meandering transects within the Southern Peninsula. During site investigations, 1,751 (243 MEC and 1,508 MPPEH) munition items were found, of which 80% were 2.36" rockets or rocket components. The majority of items were found within the southern portion of the recreation area and a shallow burial area adjacent to west side of the recreation area. Munitions were found on the ground surface or less than 2 feet deep. Only 5 expended parachute flares were found within the Southern Peninsula area. Site UXO-29 was likely used as a rocket range/training area. Current land uses are primarily mowing/general site maintenance, use of a running trail, and hunting within the Southern Peninsula.

For the FS, the site was divided into ten distinct areas or Areas of Concern (AOCs) based on variations of current and potential future land use, munitions findings, and site access. The RAO is to reduce or prevent the potential for direct physical contact with MEC/MPPEH, which could present risk to human health due to explosive hazards. The FS evaluated the following Remedial Alternatives:

- Alternative 1 – No Action (for baseline comparison)
- Alternative 2 – Site-wide LUCs
- Alternative 3 – AOC B Subsurface MEC/MPPEH Removal and Site-wide LUCs
- Alternative 4 - Northern Area Subsurface MEC/MPPEH Removal and Southern Peninsula LUCs

The Remedial Alternatives were compared based on threshold criteria (protection of human health and the environment and compliance with ARARs), primary balancing criteria (long-term effectiveness and permanence, reduction in toxicity, mobility, or volume through treatment, short-term effectiveness, implementability, and total estimated costs), and modifying criteria (regulatory agency acceptance and community acceptance).

The proposed remedy is Alternative 2 – Site-wide LUCs and would consist of Site-wide 3Rs Training, Warning Signs, and Stay on Running Path Warning Signs, plus specific warning signs in the Recreation Area.

Public input is a key element in the decision-making process. The public comment period will be from January 5 to February 5, 2026. Comments received from residents and other interested parties will be summarized and a Responsiveness Summary will be prepared. The Proposed Plan can be reviewed at <https://go.usa.gov/xSdBH>. The technical reports supporting the preferred alternative for Site UXO-29 are available for public review in the online Administrative Record. Search the Administrative Record tab for "Site UXO-29". Hard copies of the Proposed Plans are available for review at the Onslow County Public Library.

A RAB member asked if there is an investigation into chemical contamination at UXO-29, and Mr. LaTorre stated that a full investigation and human health risk assessment and ecological risk assessment was completed. A question was asked about when the UXO-29 work was conducted and Mr. LaTorre responded that the field work was carried out through every season. Another RAB member asked if any investigation had been completed in the water. Mr. LaTorre replied that an investigation into the water was not conducted because the investigation completed did not find anything that would trigger an investigation into the water. A question was asked the cost estimate timeframe. Mr. LaTorre clarified that the different Remedial Alternatives have different timeframes depending on the action taken and the need for land use controls.

IV. Site 111 (Camp Davis South Forward Arming and Refueling Point Activity) Per- and Polyfluoroalkyl Substances (PFAS) Remedial Investigation

Objective: The purpose of this agenda item is to review the Site 111 setting and background, present Site 111 PFAS investigations, including the Site Inspection (SI), expedited investigations in deeper aquifers, and the Remedial Investigation (RI), and to review next steps.

Overview: A presentation was reviewed by Ms. Brickman.

Site 111 is a WWII era anti-aircraft training area, where two air strips were constructed in 1942-43. Camp Davis was closed by the Army in approximately 1944. The Greater Sandy Run Annex was added to Camp Lejeune in the 1990's and includes Marine Corps Outlying Landing Field Camp Davis, which was used for Forward Arming and Refueling Point exercises in the 2010's. P-19s were used with possible residual aqueous film forming foam (AFFF) in water lines of emergency response vehicles, which may have resulted in inadvertent AFFF deployment.

Site 111 is located in the southeast-most part of Camp Lejeune and covers approximately 350 acres. The ground cover is primarily pavement surrounded by grass, with wetlands to the west/northwest and east/northeast. The site is generally flat within the runway area surrounded by ditches. Big Shakey Swamp, to the north/northwest, is approximately 10 feet lower in elevation. Surface water flows overland in multiple directions; the nearest surface water migration pathways are drainage ditches that surround the south runway and discharge to Big Shakey Swamp. The lithology includes sands with variable layers of clays from ground surface to approximately 40 feet below ground surface (ft bgs) (surficial aquifer); clay (confining layer) from approximately 40 ft bgs to 55 ft bgs; fine sands (upper Castle Hayne aquifer [UCH]) from approximately 55 ft bgs to 110 ft bgs; and limestone (lower Castle Hayne [LCH] aquifer) beyond 110 ft bgs.

The Camp Davis Site Inspection (SI) started in 2020, which included the installation of 14 new groundwater monitoring wells (8 at Camp Davis South and 6 at Camp Davis North) and the collection of soil samples at 12 locations. Soil results were below the screening levels (SLs) used for the SI. Groundwater results from Camp Davis North were below the SLs used for the SI; however, groundwater results from two wells at Camp Davis South were above the SLs used for the SI.

An expedited evaluation of deeper groundwater was conducted in May 2021, with the installation and sampling of 13 new monitoring wells (3 in the surficial aquifer, 4 in the UCH aquifer, and 6 in the LCH aquifer) and re-sampling 8 existing surficial aquifer wells from the SI. Groundwater flow in the surficial aquifer is to the north/northwest and is to the southeast in the UCH and LCH aquifer. Analytical results were similar to the SI, with 2 surficial aquifer wells above the screening criteria.

The RI included the collection of 26 soil samples at 13 locations and the installation of 30 new monitoring wells between August 2022 and October 2023 (field work was paused between September 2022 and September 2023 for a military construction project to replace the runway), which included 26 surficial aquifer wells, 2 deep surficial aquifer wells, and 2 UCH aquifer wells. Two rounds of samples were collected (one in the fall and one in the spring) from all 51 site monitoring wells, 18 surface water sample locations, and 17 sediment sample locations. Quarterly sampling of 4 sentinel wells was conducted to evaluate potential PFAS migration during water supply well pumping. A 72-hour aquifer pumping test was conducted and continuous water level logging was conducted at 30 wells for approximately one year.

Project action limit (PAL) changes occurred between the time that the RI Sampling and Analysis Plan was finalized in July 2022 and when analytical results were evaluated, with the values established in November 2024 being the most conservative.

In surface soil (from 0 to 1 ft bgs), there was one PAL exceedance at BW-FARP-S-MW31 (PFOS 0.782 J ng/g). In subsurface soil (from 2 to 15 ft bgs), there was one PAL exceedance at BW-FARP-S-MW34 (PFOS 17.8 ng/g). In addition, SI soil data was re-screened against current PALs, and there was one PAL exceedance in surface soil from BW-FARP-S-MW02 (PFOA 0.99 J ng/g).

Potentiometric maps for the surficial aquifer, the UCH aquifer, and the LCH aquifer were presented based on April 2024 data.

In the surficial aquifer, PFOA, PFOS, PFBS, PFHxS, PFNA, and/or PFDA exceeded the PALs at 24 of 37 wells sampled. The highest concentrations were at BW-FARP-S-MW07 (2021 Pre-RI sampling event), with PFOS at 29,200 ng/L and PFOA 849 ng/L. The next highest concentrations were at BW-FARP-S-MW22 (2024 RI Round 2 sampling event), with PFOS at 4,380 ng/L and PFOA at 826 ng/L. The third highest concentrations were at BW-FARP-S-MW26 (2022 RI Round 1 sampling event), with PFOS at 1,090 ng/L and PFOA at 6.76 ng/L.

In the UCH aquifer, PFOA, PFOS, and/or PFHxS exceeded the PALs at 1 of 6 wells (BW-FARP-S-MW18). The highest concentrations were during 2021 Pre-RI sampling event, with PFOS at 1.63 J ng/L and PFOA at 3.06 J ng/L. BW-FARP-S-MW18 was sampled more frequently as part of the sentinel well program and there have been no PAL exceedances during 10 most recent sampling events (10/2022 - 11/2025).

In the LCH aquifer, the only PAL exceedance was at well BW-FARP-MW11 during the 2021 Pre-RI sampling event, with PFOS at 1.64 J ng/L.

Sentinel well sampling began after off-Base water supply production resumed in April 2022, with quarterly sampling of surficial aquifer well BW-FARP-S-MW07, UCH aquifer well BW-FARP-S-MW180 and LCH aquifer wells BW-FARP-S-MW20 and -MW 21, beginning November 2023. The last sampling event was in November 2025. PFAS concentrations are observed fluctuate with groundwater levels at surficial aquifer well BW-FARP-S-MW07. The LCH aquifer wells are located closest to off-Base water supply wells and PFAS with RSLs were not detected in the 14 most recent sampling events.

A groundwater model was developed using data from the Onslow County Groundwater Flow Model, an aquifer test conducted by Onslow County Water and Sewer Authority (ONWASA) at nearby production well D11, and continuous water level logging data collected for the RI. The model includes particle tracking simulations to evaluate where groundwater at Site 111 will travel, which showed particles originating at the site move laterally and downward, with the majority of particles moving north/northeast and discharging to surface water. The model also included capture zone analysis simulations to evaluate effects of different ONWASA well pumping conditions. Scenario 3 - Assumes all 4 wells pumping at design rates, this scenario showed no capture from the upper surficial aquifer or lower surficial aquifer at Site 111.

In surface water, PFOA, PFOS, PFHxS and/or PFNA exceeded the PALs at 14 of 18 sample locations. The highest concentrations were at BW-FARP-S-SW03 (2022 RI Round 1 sampling event), with PFOS at 2,330 ng/L and PFOA at 60.7 ng/L. The next highest concentrations were at BW-FARP-S-SW16 (2024 RI Round 2 sampling event), with PFOS at 7.29 J- ng/L and PFOA 87.4 J- ng/L, an order of magnitude lower than SW03.

In sediment, PFOS exceeded the PAL at 3 of 17 sample locations. The highest concentrations were at BW-FARP-S-SD16 (2024 RI Round 2 sampling event), with PFOS at 5.47 ng/L. The next highest concentrations were at BW-FARP-S-SD17 (2024 RI Round 2 sampling event), with PFOS at 4.66 J ng/L.

The human health risk assessment concludes that noncarcinogenic hazards and carcinogenic risks from exposure to PFAS are within acceptable levels for all current receptors; future site workers and visitors/trespassers exposed to combined surface and subsurface soil, surface water, and sediment; and future industrial workers exposed to combined surface and subsurface soil. Future residential potable use of surficial aquifer groundwater, UCH/LCH aquifer groundwater, and future exposure to combined surface and subsurface soil would result in risks above target risk levels. Future construction worker exposure to combined surface and subsurface soil, surficial aquifer groundwater, and surface water would result in noncarcinogenic hazards above target levels. Exposure to PFAS in each individual media alone would not result in unacceptable noncarcinogenic hazards (the unacceptable hazard is based on combined cumulative exposure to multiple media) and exposure to PFAS in all media would not result in unacceptable carcinogenic risks.

The ecological risk assessment concludes that there are no unacceptable risks to ecological receptor populations from exposure to PFAS in soil, surface water, and sediment.

The next steps for Site 111 are to finalize the RI Report, to conduct a pilot study for in situ treatment of PFAS in surficial aquifer groundwater, and to conduct a background study to better understand potential contribution of non-site-related PFAS.

A RAB member asked if AFFF was the sole source of PFAS at Site 111 and Kristin replied that yes, AFFF is assumed to be the only source.

V. Navy IRP Funding

Objective: The purpose of this agenda item is to present a summary of costs for the MCB Camp Lejeune environmental program.

Overview: A presentation was reviewed by Mr. Francisco.

Mr. Francisco presented an environmental cost summary for MCB Camp Lejeune through Fiscal Year (FY) 2023, based on the Defense Environmental Programs Annual Report to Congress for FY 2023, organized by project phase and separated between the Installation Restoration Program (IRP) and the Munitions Response Program (MRP). There are currently 32 IRP and 1 MRP sites in the Investigation phase, with costs through FY 2023 of \$70,567,000 and \$25,700,000, respectively. There are currently 12 IRP and 3 MRP sites in the Cleanup phase, with costs through FY 2023 of \$212,762,000 and \$13,813,000, respectively. There are currently 177 IRP and 27 MRP sites in the Post Cleanup – Response Complete phase, with costs through FY 2023 of \$11,314,000 and \$1,320,000, respectively. Combined, the subtotal of costs for IRP sites through FY 2023 was \$294,643,000 and \$40,833,000 for MRP sites. In total, through FY 2023, \$335,476,000 has been spent on the Environmental Program at MCB Camp Lejeune.

VI. RAB Business

Mr. Richard asked the RAB members if there were any particular topics they would like to hear about at the next RAB meeting, none were identified, and he then closed out the meeting. The next RAB meeting is planned for April 15, 2026.