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Marine Corps Base, Camp Lejeune
Proposed Remedial Action Plan
Operable Unit No. 12 (Site 3)

November 1996

This Fact Sheet provides information regarding the Proposed Remedial Action Plan (PRAP) for Operable Unit (OU) No. 12 (Site 3) at Marine Corps Base (MCB), Camp Lejeune, North Carolina. MCB, Camp Lejeune has been investigating sites at the Base through the Department of Defense (DoD) Installation Restoration (IR) Program. The goal of the IR Program is to identify, assess, characterize, and clean up or control contamination from past hazardous waste disposal operations.

Overview

Marine Corps Base (MCB), Camp Lejeune is a training base for the U.S. Marine Corps, located in Onslow County, North Carolina. The facility covers approximately 236 square miles and includes 14 miles of shoreline. Operable Unit (OU) No. 12 (Site 3) is one of 18 OUs within MCB, Camp Lejeune. This fact sheet presents the site location and history, investigation results, and the Proposed Remedial Action Plan (PRAP) for Site 3.

Site 3 Location/History

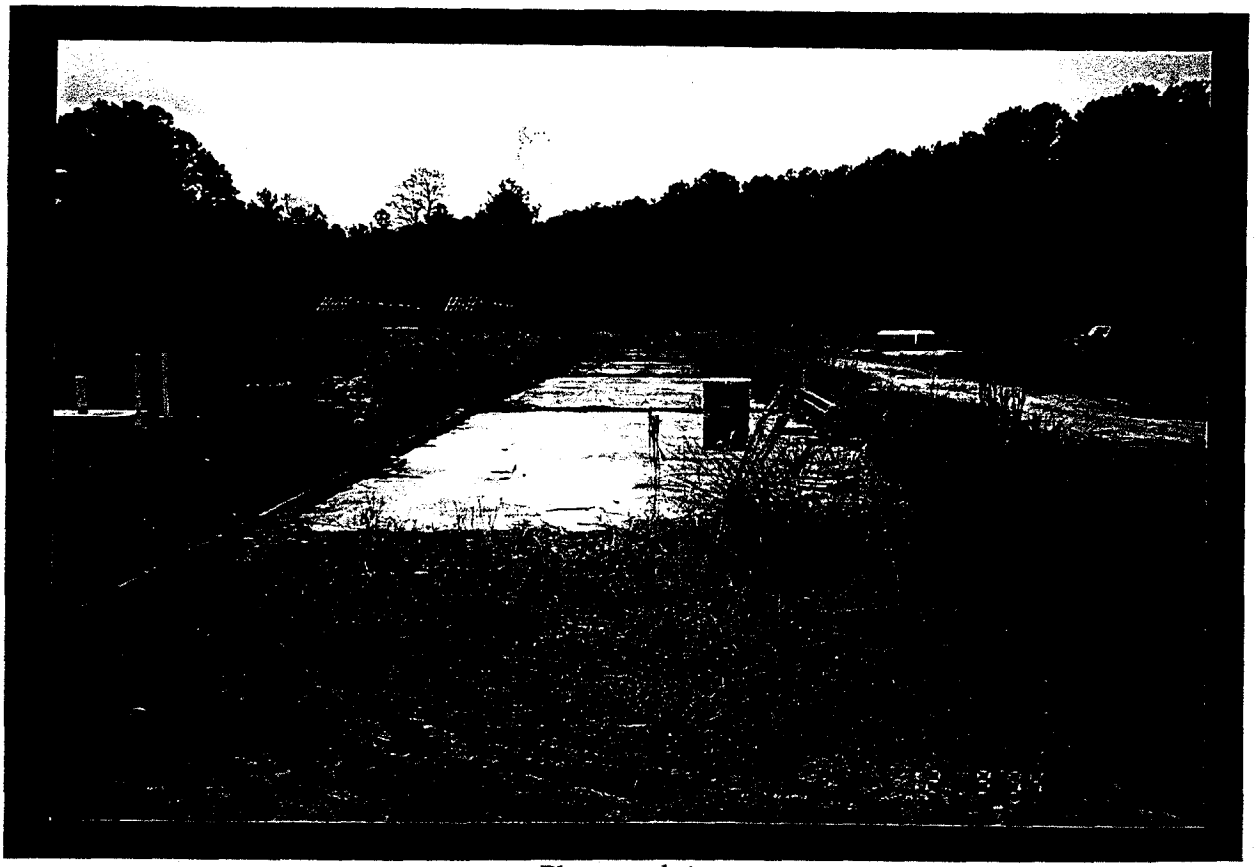
Site 3, referred to as the Old Creosote Plant, is located along Holcomb Boulevard approximately 1-1/2 miles southeast of U.S. Route 24. From 1951 to 1952, the site was reportedly used to treat railroad ties with wood preservatives such as creosote. The railroad ties were then used to construct the Camp Lejeune Railroad line.

Site 3 is situated in a cleared, flat, and unpaved area. Although there is only limited historical land use information, the site contains several structures that may have been associated with past wood-treating operations. An abandoned chimney, which was most likely used to heat and thin creosote, is located in the central portion of the site. A long concrete pad, which may have been a drip track for pressure cylinder chambers or treated ties, is located near the abandoned chimney. Several smaller concrete pads, possibly remnants of the former creosote plant, are scattered throughout the site. The Camp Lejeune Railroad line runs parallel along the western perimeter of the site and intersects an old railroad spur line near the southern border of the site. The spur may have been used to transport creosote to the treatment area. A sawmill, which was used to trim logs into railroad ties, once operated in the northern portion of the site.

Remedial Investigation

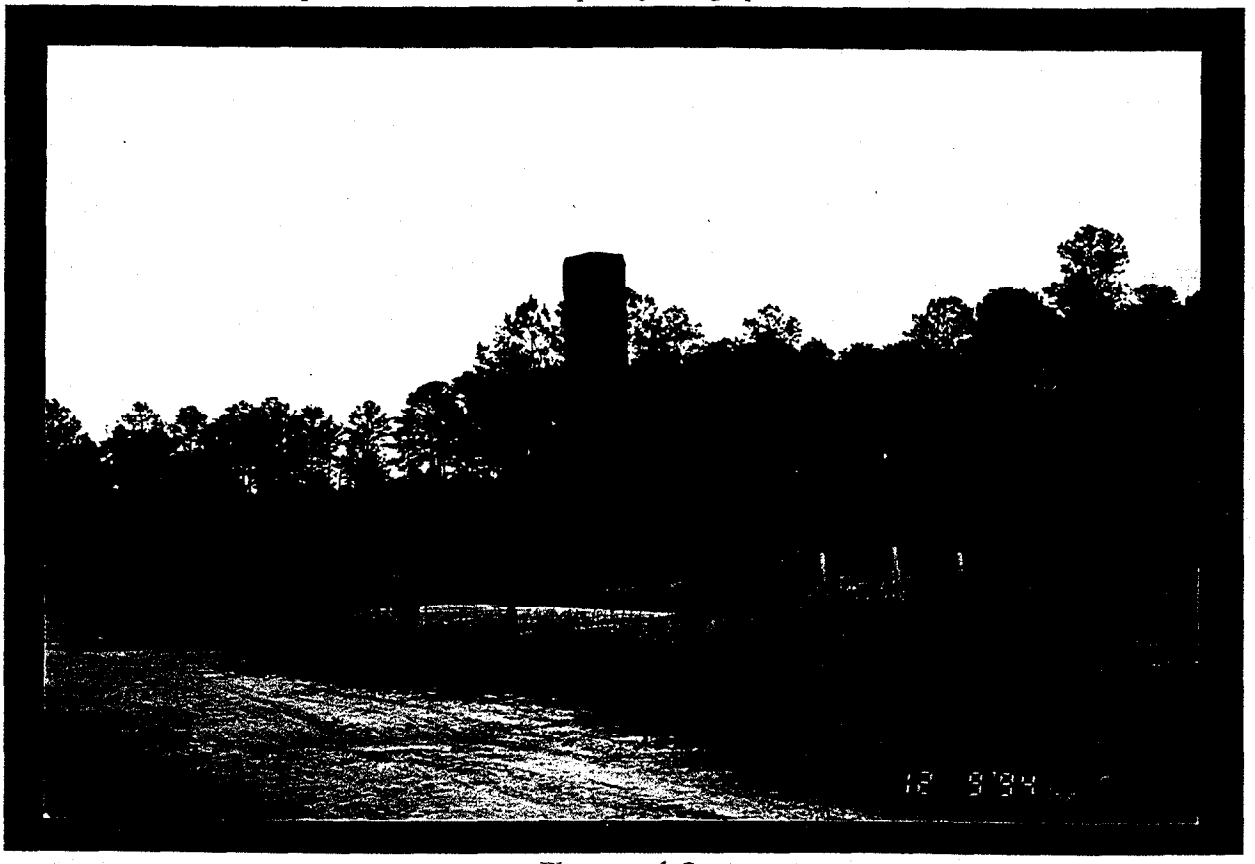
From 1994 through 1995, a Remedial Investigation was conducted at Site 3 in order to assess potential impacts to human health and the environment as a result of the former wood treating operations. The investigation included the collection of surface soil, subsurface soil, and groundwater samples.

The most frequently detected organic compounds were polynuclear aromatic hydrocarbons (PAHs), which are constituents of wood preservatives. In both surface and subsurface soil, the highest PAH concentrations were located in the central portion of the site where the wood treating operations occurred. Fuel constituents, such as ethylbenzene and xylenes, were also detected in surface and subsurface soil in the central area. In both shallow and deep groundwater, PAHs were detected sporadically across the site. Several PAHs were detected at levels exceeding state and federal groundwater standards, but there was no apparent pattern or consistency to their detections. The fuel constituent benzene was also detected in groundwater at levels exceeding state and federal standards.



Photograph 1

Photograph taken from the treatment area (central portion of the site) looking south. Concrete pads, rail lines, and temporary bridge parts are visible.



Photograph 2

Photograph of the abandoned chimney in the treatment area (central portion of the site).

Human Health Assessment

As part of the Remedial Investigation, a Human Health Risk Assessment was conducted to determine the potential human health risks that may exist at Site 3. Potential risks were evaluated for current military personnel, as well as on-site residents and construction workers who could potentially be exposed if the site were developed for residential use in the future. It was determined that there are no unacceptable carcinogenic or noncarcinogenic risks for current military personnel and future construction workers. In the future, unacceptable carcinogenic and noncarcinogenic risks would exist if on-site residents came in contact with the shallow groundwater. All potable water supply wells at MCB, Camp Lejeune are located within the deep groundwater aquifer. In addition, future residential development at Site 3 is highly unlikely. Based on this information, the unacceptable future risks are overly conservative and do not pose a great concern.

Ecological Risk Assessment

In addition to the Human Health Risk Assessment, an Ecological Risk Assessment was conducted to determine potential risks to ecological receptors (e.g., deer, quail, etc.) that may exist at Site 3. Several surface soil constituents were detected at levels exceeding values acceptable to the United States Environmental Protection Agency (USEPA). However, the site-specific risk evaluation demonstrated that there will be no unacceptable risks for terrestrial mammals or birds.

PRAP

The Proposed Remedial Action Plan for Site 3 includes the following:

- Excavation and Biological Treatment of PAH-Contaminated Subsurface Soil
  The Remedial Investigation identified a area of PAH-contaminated subsurface soil located in the central portion of Site 3 from 3 to 9 feet below ground surface. This contaminated soil is believed to be leaching PAHs into the groundwater at Site 3. Thus, removal of the contaminated soil will eliminate any further leaching and will allow the groundwater contamination to naturally attenuate over time. Once excavated, the contaminated soil will undergo aerobic, solid-phase biological treatment using landfarming technology in a controlled unit or biocell. The biological treatment may occur either at an existing biocell located approximately 1-1/2 miles from Site 3, or at a newly-constructed unit at Site 3. These options are being evaluated at this time.

- Long-Term Groundwater Monitoring
  Long-term groundwater monitoring will be conducted over a minimum period of 5 years to ensure the that contaminants do not migrate as a protection to human health, Groundwater samples will be periodically collected on a quarterly basis and sent to a laboratory for chemical analysis. The analytical results will identify any improvement or deterioration in groundwater quality. If groundwater quality is deteriorating over time, additional corrective measures may be taken.

- Institutional Controls: Land Use Controls, Deed Restrictions, and Aquifer Use Restrictions
  Institutional controls will mitigate the potential for human exposure to contaminated groundwater in the future. Land use controls will prohibit the installation of potable water supply wells at Site 3 at the site. Aquifer use restrictions will prohibit the future use of both the shallow and deep groundwater aquifers in the immediate vicinity of Site 3 as potable water sources.

Public Participation

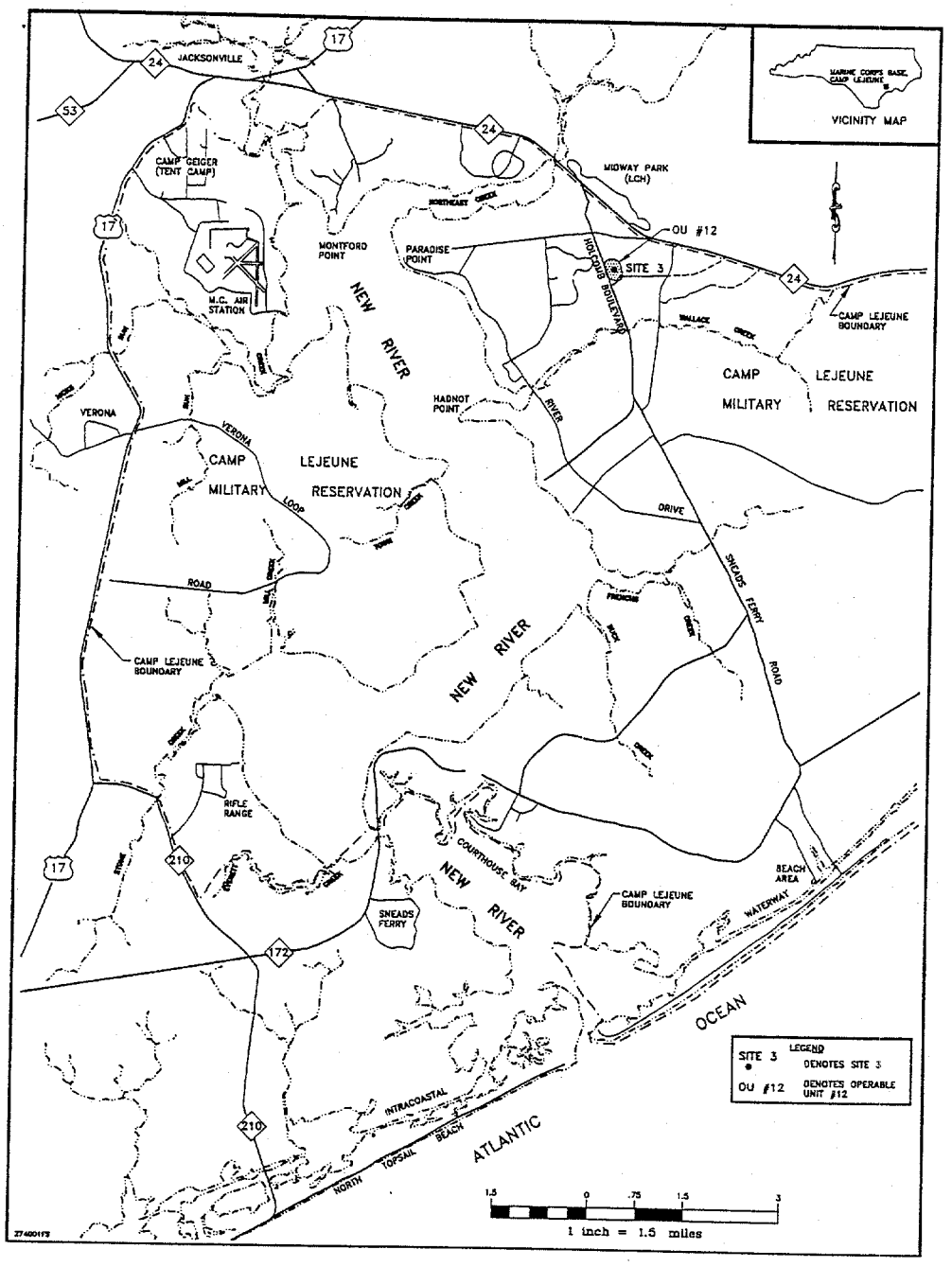
The public is encouraged to review and comment on the PRAP and other documents pertaining to Site 3, which can be found in the Administrative Record file available for review at:

Onslow County Library
58 Doris Avenue East
Jacksonville, NC 28540
Mon.-Thurs. 9:00 a.m. to 9:00 p.m.
Fri.-Sat. 9:00 a.m. to 6:00 p.m.

MCB, Camp Lejeune
Environmental Management Division
Building 67, Room 239
Marine Corps Base
Camp Lejeune, NC 28542

MCB, Camp Lejeune will hold a public information meeting on November 6, 1996 at the Onslow County Public Library at 7:00 p.m. The 30-day public comment period will be held from November 6 to December 6, to aid in the selection of the final remedial alternative.

Site 3 Location (upper right)



Points of Contact

To provide written comments to the PRAP, please contact either:
Ms. Katherine Landman, Code 18232 (804) 322-4818
Commander, Atlantic Division, Naval Facilities Engineering Command
1510 Gilbert Street (Building N-26)
Norfolk, Virginia 23511-2699
or
Mr. Neal Paul, Director, Installation Restoration Program, (910) 451-5068
AC/S EMD (IRD)
Building 67, Room 237
Marine Corps Base, PSC Box 20004
Camp Lejeune, NC 28542-0004