09.10-11/01/96-01837

Marine Corps Base, Camp Lejeune
Proposed Remedial Action Plan
Operable Unit No. 13 (Site 63)

November 1996

This Fact Sheet provides information regarding the Proposed Remedial Action Plan (PRAP) for Operable Unit (OU) No. 13 (Site 63) 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. 13 (Site 63) is one of 18 OUs within MCB, Camp Lejeune being investigated as part of the IR Program. This fact sheet presents the site location and history, investigation results, and the Proposed Remedial Action Plan (PRAP) for Site 63.

SITE 63 LOCATION & HISTORY

Site 63, referred to as the Verona Loop Dump, is a five acre site located within the western portion of the facility, nearly two miles south of the Marine Corps Air Station (MCAS), New River operations area. Site 63 is relatively flat, however, the eastern portion slopes toward an intermittent tributary to Mill Run. Verona Loop Road provides access to Site 63. An unimproved gravel road provides access to the main portion of the site where training exercises, maneuvers, and recreational hunting currently take place.

The study area reportedly received wastes generated during training exercises described only as "bivouac" wastes. The years during which disposal operations occurred are not known. However, additional information suggests that no hazardous wastes were disposed of at Site 63. Based on the findings of a Site Inspection, a Remedial Investigation/ Feasibility Study (RI/FS) was recommended to additionally evaluate the nature and extent of soil, sediment, surface water, and groundwater contamination.

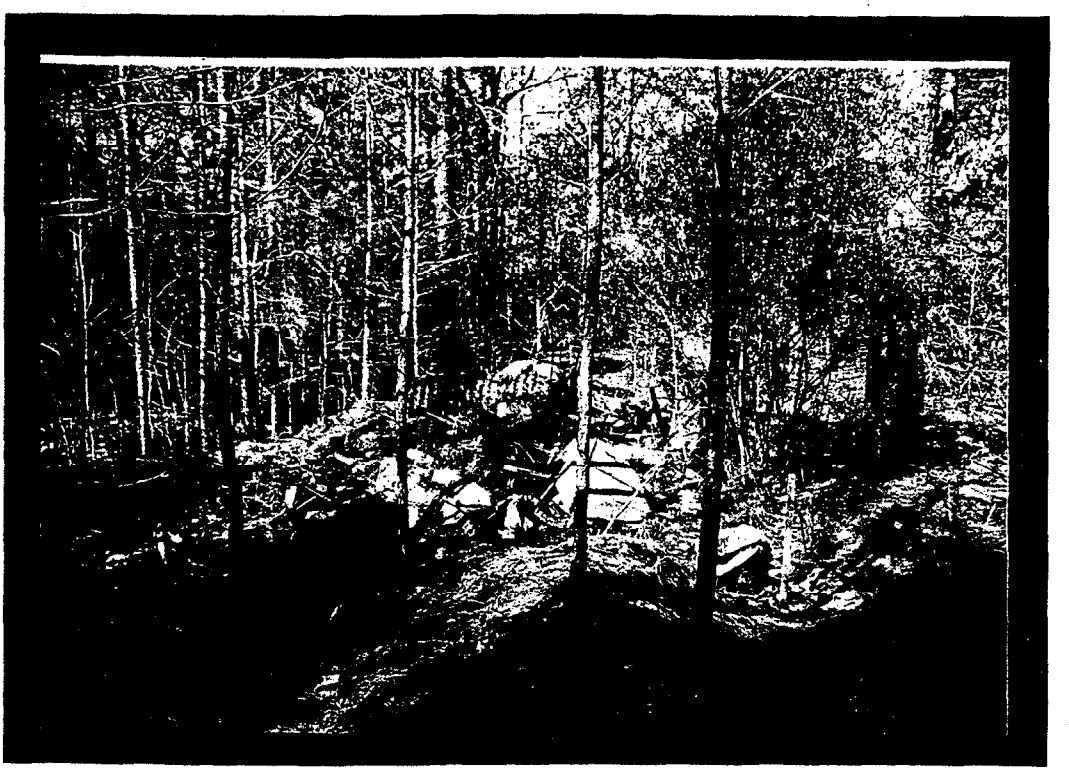
REMEDIAL INVESTIGATION

In November 1995, an RI was conducted at Site 63 in order to assess potential impacts to human health and the environment as a result of former waste management practices or site activities. The investigation included a site survey; a soil investigation, which involved soil sample collection; a groundwater investigation, which included temporary monitoring well installation, sampling, and aquifer testing; a surface water and sediment investigation; and a habitat evaluation.

Soil Results

A single volatile organic compound (VOC) was detected at a low concentration (styrene at 41 micrograms per kilogram [ug/kg]) in one of the 96 soil samples collected at Site 63. Concentrations of semivolatile organic compounds (SVOCs) were limited to two surface and three subsurface soil samples obtained from the suspected disposal portion of the study area. None of the positive VOC or SVOC detections exceeded applicable soil screening values for the protection of groundwater, nor do they suggest long-term disposal operations. Low positive detections (less than 0.1 milligrams per kilogram [mg/kg]) of pesticides were detected in both surface and subsurface soil at Site 63. The frequency and overall concentration of pesticides in soil does not suggest pesticide disposal activities, but rather the routine base-wide application and use of pesticides. Several target analyte list (TAL) metals were detected at levels which are in excess of base-specific background levels. However, only three metals (arsenic, barium, and nickel) were detected at concentrations which exceed soil screening values in a limited number

Photograph 1: This photograph was taken facing north from the access road at Site 63. The gravel road pictured here provides access to the central portion of the study area; unimproved paths extend from this road.



Photograph 2: Reinforced concrete rubble, construction material, and various other inert debris, as pictured, were also identified at Site 63.

of soil samples. However, the same three metals were not detected above North Carolina Water Quality Standards (NCWQS) in any of the groundwater samples at Site 63. The distribution of elevated metal concentrations followed no discernible pattern.

dwater Results

VOCs, SVOCs, pesticides, and polychlorinated biphenyls (PCBs) were not detected in the eleven groundwater samples obtained at Site 63. Metals were detected in each of the groundwater samples. Iron, manganese, and zinc were the only TAL total metals detected in excess of federal maximum contaminant levels (MCLs) or NCWQS. The limited dispersion of zinc in sampling media suggests that its presence is not indicative of former disposal activities. Groundwater within the coastal plain region of North Carolina is naturally rich in iron and manganese; therefore, concentrations of iron and manganese are likely indicative of natural site conditions.

Surface Water and Sediment Results

No organic compounds were detected in any of the five surface water samples. However, concentrations of aluminum exceeded the chronic screening value among five samples. The slight acidity of the surface water coupled with the natural occurrence of aluminum in site soil and sediment effectively contributed to the observed levels of aluminum in surface water. Although pesticide detections exceeded chronic sediment screening values, the frequency and overall concentration of pesticides at Site 63 is not indicative of pesticide disposal activities.

HUMAN HEALTH ASSESSMENT

As part of the RI, a Human Health Risk Assessment was conducted to determine the potential exposure risks that may exist at Site 63. Potential risks were evaluated for current military personnel and trespassers. Potential exposure risks also were evaluated for future residents and construction workers in the event that the study area is developed for residential use. It was determined that there are no unacceptable carcinogenic or noncarcinogenic risks for current military personnel and future construction workers. Also, there are no carcinogenic risks for potential future residents. In the future, unacceptable noncarcinogenic risks would exist if potential adult and child residents came in contact with the shallow groundwater or if a child came in contact with subsurface soil. However, land use restrictions in the Base Master Plan will preclude future residential development and prohibit the installation of water supply wells at Site 63. Based on this information, the unacceptable future noncarcinogenic risks are overly conservative and pose minimal concern.

ECOLOGICAL ASSESSMENT

In addition to the Human Health Risk Assessment, an Ecological Risk Assessment was conducted to determine potential risks to aquatic and terrestrial receptors that may exist at Site 63. A potential risk to the aquatic community was posed by aluminum in surface water and limited amounts of pesticides in sediment. Potential risk to terrestrial vertebrate from exposure to metals in surface soil may exist. A number of metals were detected at levels exceeding screening values acceptable to the United States Environmental Protection Agency (USEPA). However, it was determined that there are no unacceptable risks posed to aquatic and terrestrial receptors at Site 63.

PRAP

The Proposed Remedial Action Plan for Site 63 is the "No Further Remedial Action Alternative". As its name suggests, the "No Further Remedial Action Alternative" involves taking no further action at Site 63. This includes conducting no further investigations or sampling at the site and leaving all environmental media as they currently are. This plan was selected because the RI, the Human Health Risk Assessment, and the Ecological Risk Assessment suggest that conditions at Site 63 are protective of human health and the environment.

PUBLIC PARTICIPATION

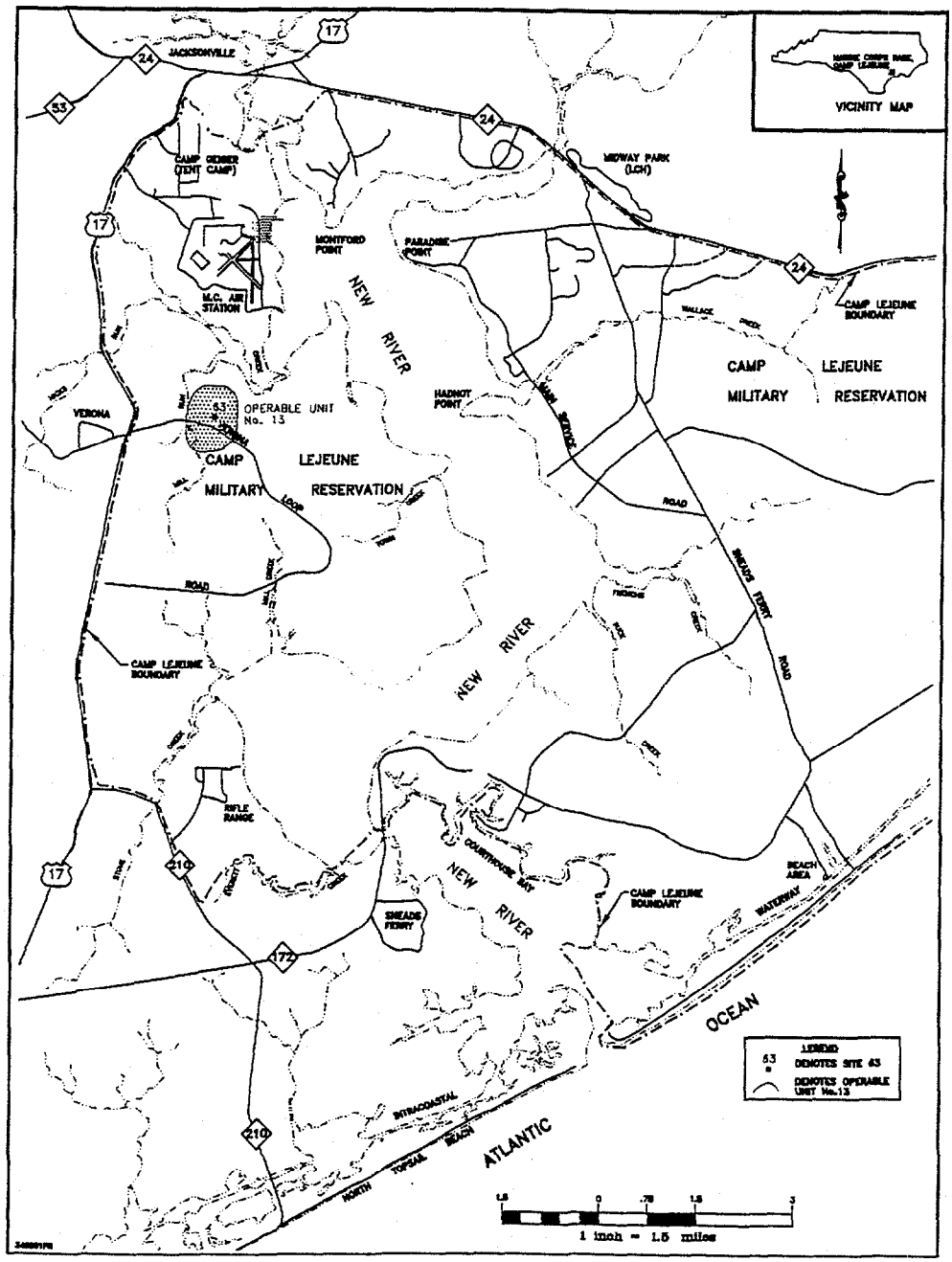
The public is encouraged to review and comment on the PRAP and other documents pertaining to Site 63, which can be found in the Administrative Record file available for review at:

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. A 30-day public comment period will be held from November 6 to December 6, to allow for public participation in the selection of the final remedial alternative.

Site 63 Location (upper left)



Points of Contact

To provide written comments regarding the PRAP, please contact either:

Ms. Katherine Landman, Code 18232 (757) 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