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INSTALLATION RESTORATION DIVISION

UNITED STATES MARINE CORPS

ENVIRONMENTAL MANAGEMENT DEPARTMENT

MARINE CORPS BASE

CAMP LEJEUNE, NORTH CAROLINA

ATTN: KATE LANDMAN / LANT DIV

FAX #: (804) 322-4805

FROM: THOMAS S. MORRIS (ENVIRONMENTAL ENGINEERING TECHNICIAN)

COMMENTS: KATE, I APOLOGIZE FOR THESE COMMENTS BEING LATE - BUT I HAVE BEEN OUT WITH KIDNEY STONE PROBLEMS THE PAST WEEK AND A HALF. AS YOU CAN SEE, WE DON'T HAVE TOO MUCH TO COMMENT ON. PLEASE LET ME KNOW IF THERE IS ANYTHING ELSE I CAN HELP WITH!

TOM

IF THERE IS A PROBLEM WITH THIS TRANSMISSION, PLEASE CALL (910) 451-5068, EXT 404 (DSN 484-5068). OUR FAX NUMBER IS (910) 451-5997 (DSN 484-5997).

DRAFT

INTERIM REMEDIAL ACTION REMEDIAL INVESTIGATION

OPERABLE UNIT NO. 10
SITE 35 - CAMP GEIGER AREA FUEL FARM

MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

CONTRACT TASK ORDER 0160

APRIL 5, 1994

Prepared For:

DEPARTMENT OF THE NAVY
CHESAPEAKE DIVISION
NAVAL FACILITIES
ENGINEERING COMMAND
Washington, D.C.

Under:

LANTDIV CLEAN Program
Contract N62470-89-D-4814

Prepared By:

BAKER ENVIRONMENTAL, INC.
Coraopolis, Pennsylvania

1.0 INTRODUCTION

This Interim Remedial Action Remedial Investigation (RI) Report has been prepared by Baker Environmental, Inc. (Baker) for presentation to the Department of the Navy (DON), Naval Facilities Engineering Command, Atlantic Division (LANTDIV) under Navy CLEAN Contract Number N62470 to address petroleum hydrocarbon contaminated soil at Operable Unit (OU) No. 10, Site 35 - Camp Geiger Area Fuel Farm. The Interim Remedial Action RI has been conducted in accordance with guidelines and procedures presented in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR 300.430). The NCP was published under the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) commonly referred to Superfund and amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). USEPA's Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (USEPA 1988) was also used as guidance for preparing this document.

This report uses available information from previous investigations on surface and subsurface soils at Site 35 in conjunction with the soil data generated during the Interim Remedial Action RI conducted by Baker in December, 1993. Previous investigations were conducted by Water and Air Research, Inc., Environmental Science and Engineering, inc. (ESE), NUS Corporation (NUS) and Law Engineering, Inc. (Law). The results of this Interim Remedial Action RI will serve as the basis for an evaluation or remedial action alternatives for mitigating potential risks to human health and the environment posed by the petroleum hydrocarbon contaminated soil at Site 35. Available results of previous investigations at underground storage tank (UST) sites near the Fuel Farm have not been included in the overall evaluation of Site 35. Two tank sites including: 1) an abandoned No. 6 fuel oil UST adjacent to the Former Mess Hall Heating Plant; and 2) a former No. 2 Fuel Oil UST (removed) adjacent to Building TC480 (Explosive Ordnance Disposal Armory, Office and Supply Building) are subject to investigation and remediation under a different program.

→ G480 ← Apparently, we have incorrectly been refering to this bldg as TC480 in all text and diagrams until now. "G" stands for Geiger, and is the correct designation for this building. (-Kate)

1.1 Purpose

The purpose of the Interim Remedial Action RI is to provide additional soil data for use in conjunction with existing data in an Interim Remedial Action Feasibility Study (FS) to support the selection of an Interim Remedial Action for petroleum hydrocarbon impacted soil at Site 35. Based on previously obtained data and reports of fuel-like odors along Brinson

situated within Camp Geiger just north of the intersection of Fourth and "G" Streets. Previous environmental investigations at the site identified underground fuel distribution piping that connect the ASTs to existing and former underground storage tanks (USTs) and expanded the area referred to as Site 35. To date, the Site 35 study area has been roughly bounded on the west by D Street, on the north by Second Street, and on the east by Brinson Creek, and on the south by Fourth Street and Building No. TC-474.

1.2.2 Site History

Construction of MCB, Camp Lejeune began in 1941 with the objective of developing the "Worlds Most Complete Amphibious Training Base." Construction started at Hadnot Point, where the major functions of the Activity are centered. Development at the Activity is primarily in five geographical locations under the jurisdiction of the Base Command. These areas include Camp Geiger, ~~Montford Point,~~ Courthouse Bay, Mainside, and the Rifle Range Area. CAMP JOHNSON

Construction of Camp Geiger was completed in 1945, four years after construction of MCB, Camp Lejeune was initiated. Figure 1-2 presents a site map of the Camp Geiger Fuel Farm area. Originally, the Fuel Farm ASTs were used for the storage of No. 6 fuel oil, but, were later converted for storage of other petroleum products including unleaded gasoline, diesel fuel, and kerosene. The date of their conversion is not known.

Formerly, the ASTs at Site 35 supplied a gasoline filling station which was located on the northeast corner of the intersection of "F" and Fourth Streets. A leak in an underground line at the station was reportedly responsible for the loss of roughly 30 gallons per day of gasoline over an unspecified period (Law, 1992). The leaking line was subsequently sealed and replaced. After looking at the Law report (page 9), it looks like this event occurred at the fuel farm and not at the gas station. Perhaps this is Tom's question. (-Kate)

The ASTs at Site 35 are currently used to dispense gasoline, diesel and kerosene to government vehicles and to supply USTs in use at Camp Geiger and the nearby New River Marine Corps Air Station. The ASTs are supplied by commercial carrier trucks which deliver product to fill ports located on the fuel unloading pad at the southern end of the facility. Six, short-run (120 feet maximum), underground fuel lines are currently utilized to distribute the product from the unloading pad to the ASTs. Product is dispensed from the ASTs via trucks and underground piping.

DRAFT

INTERIM PROPOSED REMEDIAL ACTION PLAN OPERABLE UNIT NO. 10 SITE 35 - CAMP GEIGER AREA FUEL FARM

MARINE CORPS BASE,
CAMP LEJEUNE, NORTH CAROLINA

CONTRACT TASK ORDER 0160

APRIL 5, 1994

Prepared For:

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES
ENGINEERING COMMAND
Norfolk, Virginia

Under the:

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BAKER ENVIRONMENTAL, INC.
Coraopolis, Pennsylvania

INTERIM PROPOSED REMEDIAL ACTION PLAN

Introduction

This Interim Proposed Remedial Action Plan (Interim PRAP) is issued to describe the Marine Corps Base (MCB) Camp Lejeune and the Department of the Navy's (DON's) preferred remedial action for petroleum hydrocarbon contaminated soil at Operable Unit No. 10 (Site 35 - Camp Geiger Area Fuel Farm) at MCB Camp Lejeune.

MCB Camp Lejeune and the DON are issuing this Interim PRAP as part of the public participation responsibility established under Section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the Federal Facilities Agreement (FFA) between the DON, United States Environmental Protection Agency (USEPA) Region IV, and the North Carolina Department of Environment, Health, and Natural Resources (NC DEHNR).

MCB Camp Lejeune and the DON, with the assistance of USEPA Region IV and the NC DEHNR, will select an interim remedy for Operable Unit No. 10 only after the public comment period has ended and the information submitted during this time has been reviewed and considered. The Final Interim Record of Decision (Interim ROD) may recommend a different remedial action than is presented in this plan depending upon new information or public comments.

This Interim PRAP briefly summarizes information that can be found in greater detail in the Interim Remedial Action Remedial Investigation (RI) Report, the Interim Remedial Action Feasibility Study (FS), and other documents referenced in the Interim Remedial Action RI and FS Reports prepared for Operable Unit No. 10. The DON encourages the public to review these other documents in order to gain a more comprehensive understanding of the sites. The administrative record file, which contains information on which the selection of the remedial action will be based, is available for public review AT THE ONSLOW COUNTY LIBRARY AND at MCB Camp Lejeune, Building 67. The public is invited to review and comment on the administrative record and this Interim PRAP.

Operable Unit Description

Camp Lejeune is a training base for the U.S. Marine Corps, located in Onslow County, North Carolina. The Base covers approximately 236 square miles and includes 14 miles of coastline.

MCB Camp Lejeune is bounded to the southeast by the Atlantic Ocean, to the northeast by State Route 24, and to the west by U.S. Route 17. The town of Jacksonville, North Carolina is located north of the Base (See Figure 1).

The study area, Operable Unit No. 10 is one of 13 operable units within MCB Camp Lejeune. An "operable unit" as defined by the National Contingency Plan (NCP) is a discrete action that comprises an incremental step toward comprehensively addressing site problems. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action. With respect to MCB Camp Lejeune, operable units were developed to combine one or more individual sites where Installation Restoration Program (IRP) activities are or will be implemented.

Camp Geiger is located at the extreme northwest corner of MCB, Camp Lejeune, Onslow County. The main entrance to Camp Geiger is off U.S. Route 17, approximately 3.5 miles southeast of the City of Jacksonville, North Carolina. Site 35, the Camp Geiger Area Fuel Farm, refers primarily to five, 15,000-gallon aboveground storage tanks (ASTs), a pump house, and a fuel unloading pad situated within Camp Geiger just north of the intersection of Fourth and "G" Streets (See Figure 2).

Operable Unit Background History

Construction of Camp Geiger was completed in 1945, four years after construction of MCB, Camp Lejeune was initiated. Originally, the ASTs were used for the storage of No. 6 fuel oil, but, were later converted for storage of other petroleum products including unleaded gasoline, diesel fuel, and kerosene. The date of their conversion is not known. The ASTs currently in use at the site are reported to be the original tanks.

Formerly, the ASTs at Site 35 supplied a gasoline filling station which was located on the northeast corner of the intersection of "F" and Fourth Streets. A leak in the underground line from the ASTs to the dispensing island was reportedly responsible for the loss of roughly 30 gallons per day of gasoline over an unspecified period (Law, 1992). The leaking line was subsequently sealed and replaced.

The ASTs at Site 35 are currently used to dispense gas[oline] to government vehicles and to supply USTs in use at Camp Ge[jeune]

IT WAS MY UNDERSTANDING THAT THIS GASOLINE STATION HAD IT'S OWN UST LOCATED ON THE NORTH SIDE OF STATION.

See my comment page 14 of RI (-Kok)

or "Hydropunch" samples. A "Tracer" study was also performed to investigate the integrity of the active USTs and underground distribution piping.

ASTs

Soil and groundwater samples obtained under the CSA were analyzed for both organic and inorganic compounds. Groundwater analyses included purgeable hydrocarbons (EPA 601), purgeable aromatics and methyl-tertiary butyl ether (MTBE) (EPA 602), polynuclear aromatic hydrocarbons (EPA 610), and unfiltered lead (EPA 239.2). Soil analyses were limited to total petroleum hydrocarbons (TPH) (SW846 3rd Edition, 5030/3550) and lead (SW846 3rd Edition, 6010). Ten soil samples were analyzed for ignitability by SW846 3rd Edition, 1010.

The results of the CSA identified areas of impacted soil and groundwater. The nature of the contamination included both halogenated (i.e., chlorinated) organic compounds and nonhalogenated, petroleum-based constituents. The contamination encountered was typically identified in both shallow (2.5 to 17.5 feet bgs) and deep (17.5 to 35 feet bgs) wells.

In general, contaminant concentrations in soil were greatest in those samples taken at or below the water table. Law concluded that soil contamination at Site 35 was likely due to the presence of a dissolved phase groundwater plume and seasonal fluctuations of the water table.

A follow-up to the CSA was conducted by Law in 1992. Reported as an Addendum to the CSA (Law, 1993), it was designed to provide further characterization of the southern extent of the petroleum contamination resulting from historical releases. Three monitoring wells were installed including MW-26, -27, and PW-28. Soil samples were obtained from each of these locations and analyzed for TPH. As part of the follow-up, a pump test was performed to estimate the hydraulic characteristics of the surficial aquifer. This test was designed to determine performance characteristics of a designated pumping well and to estimate hydraulic parameters of the aquifer. An approximate hydraulic conductivity of 100 feet/day was determined for the surficial aquifer.

Interim Remedial Action RI/FS by Baker

Baker conducted an Interim Remedial Action RI in December of 1993. An additional seven soil borings were located within and around groundwater contaminant plume areas identified during the CSA. In addition to the soil borings, thirteen shallow soil samples were taken along Brinson Creek to determine the extent of contamination emanating from Site 35. Two of

COMMUNITY PARTICIPATION

A critical part of the selection of a remedial action alternative is community involvement. The following information is provided to the community in order to obtain input that addresses the selection of remedial action alternative for Operable Unit No. 10, Site 35.

Public Comment Period

The public comment period will begin on July 17, 1994, and end on August 16, 1994, for the Proposed Remedial Action Plan for Operable Unit No. 10, Site 35. Written comments should be sent to the following address:

Commander
Atlantic Division Naval Facilities Engineering Command
1510 Gilbert Street (Bldg. N-26)
Norfolk, Virginia 23511-2699
Attention: Ms. Katherine Landman, Code 1823

Information Repositories

A collection of information, including the administrative record, is available at the following location:

MCB Camp Lejeune
Building 67
Marine Corps Base
Camp Lejeune, NC 28542
~~(919) 451-5724~~ (910) 451-5068

M-F: 7:00 a.m.-3:00 p.m.

ADD

Onslow County Library
58 Doris Avenue East
Jacksonville, NC 28540
(910) 455-7350

Hours:
M-Th: 9:00 a.m.- 9:00 p.m.
F-Sa: 9:00 a.m.- 6:00 p.m.
Closed Sunday