

Camp LeJeune Military Reservation, North Carolina

Briefing Notes

Introduction:

Camp LeJeune Military Reservation is located in the southeastern part of the state, bounded to the northwest by the city of Jacksonville and the east by the Atlantic Ocean. There are approximately 100,000 people located on the Reservation.

The Reservation is bisected by the New River and incorporates approximately 170 square miles.

Camp LeJeune Military Reservation includes the following separate RCRA facilities:

Marine Corps Base Camp LeJeune:

- established in 1941,
- primary mission is to train Marines for combat,
- TSD facility under RCRA; and

Marine Corps Air Station New River:

- established in 1951,
- primary mission is to provide helicopter support for MCB Camp LeJeune training activities,
- generator of hazardous waste without RCRA interim status.

Environmental Regulatory Background:

As required by Section 211 of CERCLA, the Department of the Navy conducted an Initial Assessment Study (IAS) for the Reservation during April 1983 to identify potential hazardous waste sites. The IAS identified 77 potential sites and concluded that 23 warranted further investigation.

Marine Corps Base Camp LeJeune was issued a RCRA hazardous waste permit for storage in containers during September 1984.

Samples collected during 1985 determined that several Marine Corps Base Camp LeJeune drinking water wells were contaminated with volatile organic compounds. Contaminated wells were removed from service at that time. Contamination caused by solvent disposal in the Hadnot Point Industrial Area (HPIA).

As required by CERCLA Section 120, EPA proposed the Reservation for the National Priorities List (NPL) on June 24, 1988.

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During January 1989, EPA and DSWM representatives conducted a RCRA Facility Assessment (RFA) to identify potential SWMUs on the Reservation. In addition to the 23 sites identified by the IAS, the RFA recommended 7 additional SWMUs requiring further investigation.

On March 22, 1989, the National Oceanic and Atmospheric Administration (NOAA), as a natural resource trustee, determined the Reservation to represent a potential threat to natural resources held in trust by Federal agencies.

On October 4, 1989, the Reservation was finalized on the NPL.

Primary Environmental Concerns:

Fuel contamination of shallow aquifer in the HPIA.

VOC contamination of deep sole-source aquifer in the HPIA.

Potential damage to wetlands from nearby disposal areas.

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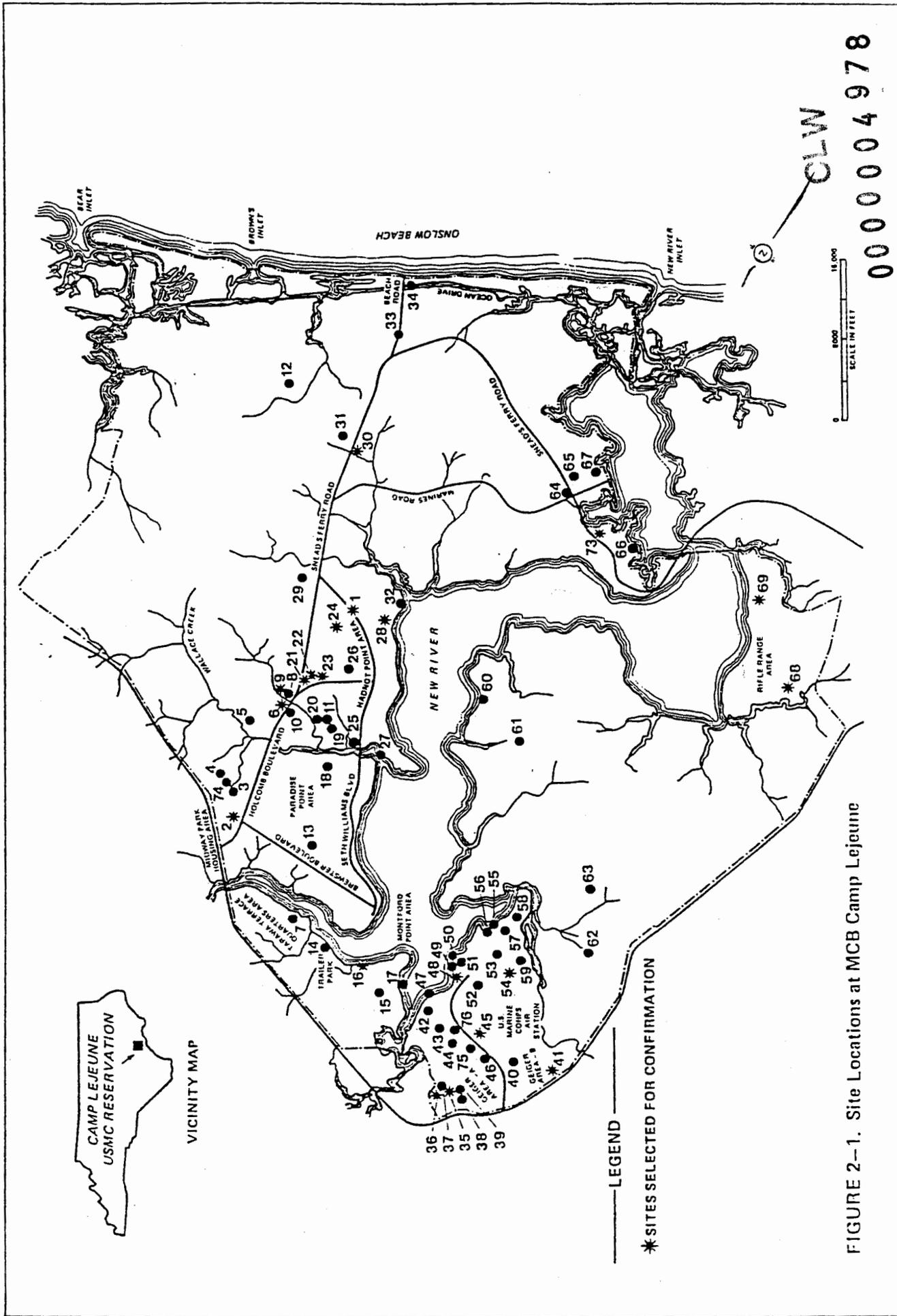


FIGURE 2-1. Site Locations at MCB Camp Lejeune

Camp LeJeune Military Reservation

Sites Recommended for RI/FS Activity

<u>Site #</u>	<u>Site Name</u>
1	French Creek Liquids Disposal Area
2	Former Nursery/Day-Center (Bldg. 712)
6	Storage Lots 201 & 203
9	Fire Fighting Training Pit
16	Montford Point Burn Dump
21	Transformer Storage Lot 140
22	Industrial Area Tank Farm
24	Industrial Area Fly Ash Dump
28	Hadnot Point Burn Dump
30	Sneads Ferry Road Fuel Tank Sludge Area
35	Camp Geiger Area Fuel Farm
36	Camp Geiger Area Dump near Sewage Treatment Plant
41	Camp Geiger Dump near former Trailer Park
45	Campbell Street Underground Avgas Storage and Adjacent JP Fuel Farm at MCAS New River
48	MCAS New River Mercury Dump Site
54	Crash Crew Fire Training Burn Pit at MCAS New River
68	Rifle Range Dump
69	Rifle Range Chemical Dump

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<u>Site #</u>	<u>Site Name</u>
73	Courthouse Bay Liquids Disposal Area
74	Mess Hall Grease Pit Area
75	MCAS New River Basketball Court Site
76	MCAS New River Curtis Road Site
<u>A</u>	MCAS (H) Officer's Housing Area

Total = 23

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Camp LeJeune Military Reservation
Sites Recommended for Site Inspections

<u>Site #</u>	<u>Site Name</u>
3	Old Creosote Plant
7	Tarawa Terrace Dump
12	Explosive Ordnance Disposal (G-4)
43	Agan Street Dump
58	MCAS New River Tank Training Area
65	Engineer Area Dump
<u>67</u>	Engineers TNT Burn Site

Total = 7

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National Priorities List

Superfund hazardous waste site listed under the
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended in 1986

CAMP LEJEUNE MILITARY RESERVATION Onslow County, North Carolina

Conditions at listing (June 1988): Camp Lejeune Military Reservation, established in 1941, covers 170 square miles in Onslow County, North Carolina. The complex has a number of facilities, including Marine Corp Base Camp Lejeune and the adjoining Marine Corps Air Station New River. The main function of the complex is training. ABC One Hour Cleaners in nearby Jacksonville was also proposed for the NPL in June 1988.

This site was originally proposed as "Camp Lejeune Marine Corps Base."

The Navy has identified 76 potential waste disposal areas in Camp Lejeune and designated 22 as posing a potential threat to public health and the environment. Currently, the focus is on "Site #21, Lot #140," a 220- by 890-foot area on the Marine Corps Base where pesticides were mixed and application equipment cleaned. During 1950-51, transformer oil was dumped in an 8-foot-deep pit on the lot. The Navy has detected pesticides, including DDT, DDE, and aldrin, in soil on Site #21.

Ground water at the base is shallow (10 feet) and subsurface formations permeable, conditions that facilitate movement of contaminants into ground water. An estimated 13,800 people obtain drinking water from wells within 3 miles of Site #21, the nearest one 1,400 feet away.

Camp Lejeune Military Reservation is participating in the Installation Restoration Program, established in 1978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from hazardous materials. The Navy has completed Phase I (records search). Phase II (hydrogeologic investigation) is underway.

Status (August 1989): The Marine Corps, the State, and EPA are negotiating an Interagency Agreement under CERCLA Section 120 for oversight of all activities at Camp Lejeune Military Reservation.

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Table 2-1. Detected Target Analytes, Potable Wells--Hadnot Point Industrial Area

Parameter (Units)	Concentration by Well Number				
	601	602	608	634	637
<u>Detected in July 1984</u>					
<u>Analyzed by ESE</u>					
Benzene (ug/L)	NA	380	NA	NA	NA
1,2-Dichloroethane (ug/L)	NA	46	NA	NA	NA
Trans-1,2-Dichloroethene (ug/L)	NA	7.8	NA	NA	NA
Ethylbenzene (ug/L)	NA	8	NA	NA	NA
Trichlorofluoromethane (ug/L)	NA	3	NA	NA	NA
Toluene (ug/L)	NA	10	NA	NA	NA
<u>Detected on December 5, 1984</u>					
<u>Analyzed by JTC Environmental Consultants</u>					
Benzene (ug/L)	--	120	3.7	--	--
Trans-1,2-Dichloroethene (ug/L)	88	630	5.4	--	--
Trichloroethene (ug/L)	210	1,600	110	--	--
Toluene (ug/L)	--	5.4	--	--	--
Tetrachloroethene (ug/L)	5.0	24	--	--	--
Vinyl Chloride (ug/L)	--	18	--	--	--
<u>Detected on December 12, 1984</u>					
<u>Analyzed by JTC Environmental Consultants</u>					
Benzene (ug/L)	--	720	4.0	--	--
Trans-1,2-Dichloroethene (ug/L)	99	380	2.4	2.3	--
Trichloroethene (ug/L)	230	540	13	--	--
Tetrachloroethene (ug/L)	4.4	--	--	--	--
Methylene Chloride (ug/L)	10	--	14	130	--

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Table 2-1. Detected Target Analytes, Potable Wells--Hadnot Point Industrial Area (Continued, Page 2 of 3)

Parameter (Units)	Concentration by Well Number				
	601	602	608	634	637
<u>Detected on December 19, 1984</u>					
<u>Analyzed by JTC Environmental Consultants</u>					
Benzene (ug/L)	NA	230	NA	NA	NA
Trans-1,2-Dichloroethene (ug/L)	NA	230	NA	NA	NA
Trichloroethene (ug/L)	NA	340	NA	NA	NA
Toluene (ug/L)	NA	12	NA	NA	NA
<u>Detected in January 1985</u>					
<u>Analyzed by JTC Environmental Consultants</u>					
1,2-Trans-dichloroethene (ug/L)	8.8	NA	NA	700	--
Trichloroethene (ug/L)	26	NA	NA	1,300	--
Tetrachloroethene (ug/L)	--	NA	NA	10	--
<u>Detected in November 1986</u>					
<u>Analyzed by ESE</u>					
Barium, Total (ug/L)	21.8	31.3	43.4	18.5	NA
Nitrogen, NO ₂ + NO ₃ (as N) (mg/L)	0.042	--	--	--	NA
Nitrogen, NO ₂ (as N) (mg/L)	0.042	--	--	--	NA
Iron, Total (ug/L)	12,800	15,200	3,600	2,830	NA
Chloride (mg/L)	68.3	23.0	9.5	7.9	NA
Manganese, Total (ug/L)	97.6	134	67.8	19.5	NA
Sodium, Total (mg/L)	9.25	12.3	6.53	5.48	NA
Sulfate (mg/L)	5,170	92	12	--	NA
Color, True (PCU)	104	48	9	10	NA

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Table 2-1. Detected Target Analytes, Potable Wells--Hadnot Point Industrial Area (Continued, Page 3 of 3)

Parameter (Units)	Concentration by Well Number				
	601	602	608	634	637
<u>Detected in November 1986</u>					
<u>Analyzed by ESE (Continued)</u>					
Residue, Diss (mg/L)	358	524	270	226	NA
Turbidity (FTU/NTU)	17.0	18.0	10.0	11.0	NA
Chromium, Total (ug/L)	7.7	14.1	6.8	6.1	NA
Copper, Total (ug/L)	10.4	556	574	21.7	NA
Mercury, Total (ug/L)	0.6	0.5	0.7	0.6	NA
Zinc, Total (ug/L)	3,200	93.8	99.1	17.2	NA
Benzene (ug/L)	--	50	--	--	NA
1,2-Dichloroethane (ug/L)	--	9.2	--	--	NA
Trans-1,2-Dichloroethene (ug/L)	--	14	8.5	2.9	NA
Trichloroethene (ug/L)	--	2.2	66	--	NA
Bis(2-Ethylhexyl) Phthalate (ug/L)	1.3	--	--	--	NA

Note: ug/L = micrograms per liter.

mg/L = milligrams per liter.

FTU/NTU = formazin turbidity unit and nephelometric turbidity unit.

NA = not analyzed.

PCU = platinum-cobalt units.

-- = below detection limits.

Source: ESE, 1988.