01.02-02/20/81-00648

UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO

MAIN/JIW/mxc
5240

From: Commanding General
To: Commandant of the Marine Corps (Code LFF)

Subj: Past Hazardous Waste Disposal Sites; report of (Report Symbol DN-6280-32)

Ref: (a) MCBul 6280 of 11 Dec 1980

Encl: (1) Completed Marine Corps Activity Disposal Site Fact Form

1. In accordance with reference (a), requested information for Marine Corps Base, Camp Lejeune and Marine Corps Air Station (Helicopter), New River North Carolina has been entered on enclosure (1) and is submitted herewith.

2. If additional information is desired, please contact Mr. Danny Sharpe, Natural Resources and Environmental Affairs Division, Base Maintenance Department, (FTS) 676-5003, (commercial) 919-451-2083.

Chief of Staff

Copy to:
Cmdr, LANTNAVFACENGCOM
Cmdr, NAVRESA
CO, MCAS(H), NR

ACTIVITY Marine Corps Base, Camp Lejeune

UIC 67001

SECTION I. GENERAL INFORMATION

Person compiling this information:
Name Danny Sharpe
Code BMaintDept telephone 451-5003

1. When was the activity first established? 1941

2. Briefly describe the activity's mission. To provide housing, training facilities and logistical support for Fleet Marine Force and other units assigned to conduct specialized training as assigned.

Has this always been the activity's mission? If not, describe previous missions and when they were changed. Yes

3. Estimate the activity's equivalent population. 49,000

Equivalent Population = activity residents + 1/3 x (employees who commute in).

4. Describe the activity's location, including:

a. Location within state (e.g., northeastern corner near Podunk) Borders Atlantic Ocean in Onslow County, North Carolina, near City of Jacksonville

b. Lies in a generally rural or urban setting? rural

5. Does the activity have any of the following operations (check the appropriate boxes)?

Ship Repair		Pest Control	X
Aircraft Rework		Disaster Control	X
Aircraft Intermediate Maintenance	XX	Power Generation	
Motor Vehicle Maintenance	XX	DPDO Salvage Yard	X
Ordnance/Demil	XX	Hospital, Dispensary	X
		Firefighting Training	X

Laboratory XX What kind? Water Quality Control Laboratory

Appendix A to
ENCLOSURE (1)

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Any other industrial operations? Please list. Tactical vehicle maintenance shops

Were any industrial operations conducted in the past which have since been discontinued? If so, please list along with the year discontinued. Repair of used transformers, Lot 140, Hadnot Point, discontinued in mid 70's still used for storage awaiting disposal.

6. Additional Comments Naval Field Medical Research Laboratory was operated on base from 1947 - 1976. Site is presently used for Insect Vector Shop which is listed as Site #6 in Section III of this report

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SECTION II. DISPOSAL OF SPECIAL WASTES

This section of the fact form will ask about waste disposal sites that are or have been operated by the activity. If a disposal site(s) is identified in this section, section III should be filled out.

To complete this section (and section III, if necessary), activity records should be examined and knowledgeable activity personnel should be interviewed. Long-time activity employees will be invaluable in this effort, since they will be familiar with past disposal operations. If deemed necessary to accurately complete this section, preliminary field investigations may also be performed (however, this fact form does not warrant extensive investigations such as soil borings and waste analyses).

1. Have any of the following techniques ever been used to dispose of chemicals or special wastes on base? Do not include trash or garbage (check the appropriate boxes).

	Operations Present	Past
Solvent Pit		
Acid/Caustic Pit		
Slurry (Chemical Mixtures) Pit		
Waste Oil/Oil Sludges Pit		
Evaporating Pit		
Grease Pit		
Surface Spreading		
Open Burning (Examples: Firefighting Training, Ordnance Waste)		X
Incinerator		
Land Disposal with State Permit	X	X

Any other disposal operations?* Please explain

Lot 140 (discussed in Section III) was utilized for storage and repair of transformers. Significant quantities of oil were discharged onto the ground before awareness to PCB hazards developed.

*Do not include industrial waste treatment/pretreatment facilities that are subject to pretreatment regulations or NPDES permits. Disposal of industrial sludge should be included, however.

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2. The following questions are intended to find out whether small-scale disposal of chemicals or special wastes (whether intentional or not) may have occurred at the activity. If the activity has ever run an operation listed below, check the box in column 1 (some of these operations may have been noted in section I). If a box in column 1 is checked, go to column 2 and check the box if the answer to the question in column 2 is "yes."

	Column 1		Column 2
Refuse disposal site	[X]	Did this site ever receive chemicals or special wastes?	[X]
Pest control shop	[X]	Have pesticides or pesticide rinsates ever been disposed of anywhere on a regular basis?	[X]
Firefighting training using open burning	[X]	Were substances other than oil (e.g., solvents) burned?	[X]
Ordnance operations	[X]	Were ordnance wastes ever disposed of on base?	[X]
Storage of chemical materials or special wastes in a specified area	[X]	Have these materials ever leaked or otherwise escaped confinement?	[X]

3. Section III should be completed for each disposal site identified in question 1 of this section. Section III should also be filled out for any significant disposal site identified in question 2. If the activity has NEVER disposed of chemicals or special wastes on base, completion of section III is not required. (SEE APPENDIX A TO THIS SECTION)

4. Have any accidents involving hazardous materials ever occurred at the activity? If so, briefly describe the incidents.

Structural fire destroyed flammable materials storage warehouse (TP452) on 25 Oct 1978. Due to nature of fire a minimum of water was used to fight fire. Structure and contents were destroyed.

Radioactive beta buttons discovered while grading lot at Bldg PT-37 (See Section III, Site #6)

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5. Are/were there any chemical or special waste disposal sites run by organizations outside the activity's fenceline which may present a current hazard to on-base personnel? Did the activity ever operate disposal sites on property which has since been excessed? Please explain.

UNKNOWN/ No evidence of sites on excessed property

6. In answering the questions in this section, was reliable information available on past operations? How far back in the past? What sources were used? Please explain.

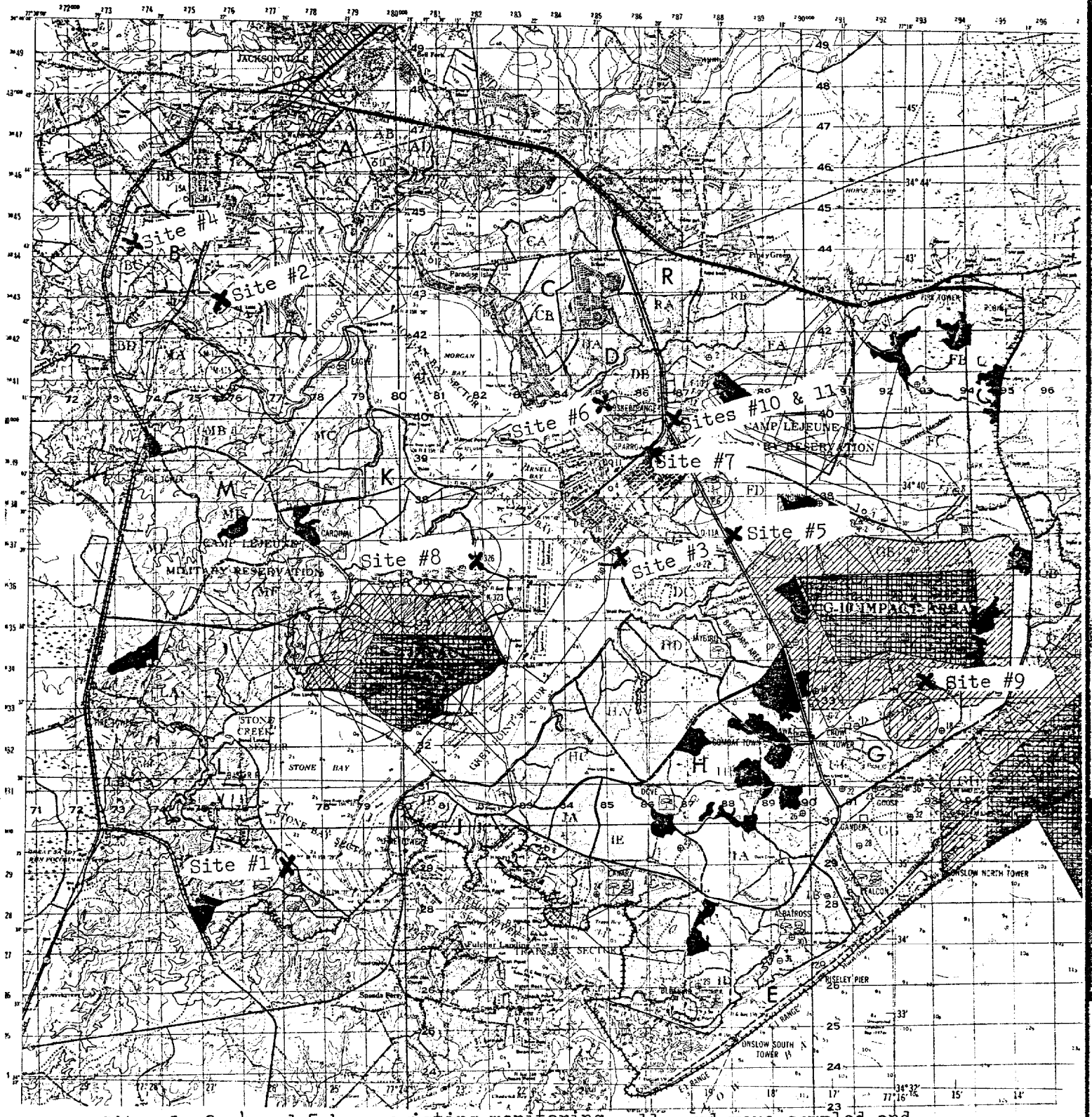
Information based on recollection of knowledgeable personnel.

Documentation of specific items disposed was not available. The following persons furnished information: Elijah Wilson, Electric Distribution (Retired), Gene Jones & John Jordon, Public Works Dept, Hoy Burns, Technician Water Quality Control Laboratory, Percy Huffman Sewage Treatment Branch Head, LT Salamanca (Tel-0118) Explosive Ordnance Disposal, MAJ Bourque, 2d Force Service Support Group (Tel-3456), Mrs. Crawford, Plant Account (Tel-3967), R. J. Andrews,

7. ~~Additional comments~~ Base Safety Officer, Charles Peterson, Base Wildlife Manager.

Footnote #1: Records regarding explosive ordnance disposal are available at EOD (Tel-0118)

SOUNDINGS IN METERS



Note: Sites 1, 3, 4 and 5 have existing monitoring wells and were sampled and analyzed in 1978 in cooperation with LANTDIVNAVFACENGCOM.

✖ Sites identified per MC BUL 6280 of 11 Dec 80 "Past Hazardous Waste Disposal . . ."

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SITE NUMBER 1

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?
Not active

Years of operation: From unknown To approximately 1978

2. What is/was the name of the site (e.g., slurry pit)?
Toxic chemical dump, Rifle Range Area

3. Where is/was the site located (provide a description and give activity map coordinates)?
Approximately 3 miles east south east of the intersection of US Highway 17 and NC Highway 210 at map coordinates 770290. Aboard Marine Corps Base

4. Describe how the site is/was operated. Toxic materials were buried in containers and covered with soil. As a need arose to dispose of a material, it was taken to the site, a hole dug and the container of waste or other toxic material was placed in it and covered with dirt.

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SITE NUMBER 1

5. If the site was closed, briefly describe the closure procedures.

Not specific

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

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SITE NUMBER 1

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

The site is located approximately 300 meters southwest of New River at an elevation of approximately 25 ft. above sea level. Based on soils maps developed by Soil Conservation Service, USDA, soils in the area have the following characteristics. The soil (baymeade) has a sandy surface layer approximately 2 ft thick. Below this, materials are sandy loams or loamy sands with high permeability. Depth to seasonal high water table is 3.5-5 ft. The soil has high corrosivity to concrete and low for steel.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

The site is surrounded by managed forests consisting of loblolly pine and various hardwood trees and shrubs. Much of the site is covered with pine saplings. There are no apparent effects of the site on surrounding vegetation.

9. Do personnel live or work near the site? Please explain. No

The site is in a relatively remote location and access is restricted to authorized personnel.

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SITE NUMBER 1

10. Have there been any incidents or complaints concerning this site? Explain.

None

11. How close is the site to the activity's boundaries?

300 meters to shoreline and approximately 1,000 meters to adjoining tract of non-military land

12. Additional comments

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SITE NUMBER 2

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? In operation

Note: Use of area except for burning of water contaminated fuel is prohibited.

Years of operation: From 1975 To present

2. What is/was the name of the site (e.g., slurry pit)?

Crash crew fire training burn pit

3. Where is/was the site located (provide a description and give activity map coordinates)?
Marine Corps Air Station (H), New River at map coordinates 755428

4. Describe how the site is/was operated. Water contaminated fuels and used petroleum products have been placed into a pit and burned. Present use restricted per item (1) above.

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SITE NUMBER 2

5. If the site was closed, briefly describe the closure procedures. At this time Air Station policy is to burn only water contaminated fuels, otherwise there is no planned change in operation.

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

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SITE NUMBER 2

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

The site is located at an elevation of approximately 15 feet above mean sea level. Although soils in the area have been highly modified by construction associated with the original construction of airport, the soils were originally baymeade and have same characteristics as site number 2. Distance to nearest body of water is approximately 100 meters to a small tributory of southwest creek. Distance to tidal waters is approximately 200 meters.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

There is no vegetation in the immediate area (100 ft radius), however, this could easily be relateed to heat and heavy traffic. There is no observable effects beyond this distance.

9. Do personnel live or work near the site? Please explain.

Yes; personnel work approximately 500 feet away from site which is adjacent to end of aircraft runway in restricted access area.

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SITE NUMBER 2

10. Have there been any incidents or complaints concerning this site? Explain.

No.

11. How close is the site to the activity's boundaries? 250 meters to navigable water. 2,500 meters to nearest adjacent non-military land area.

12. Additional comments

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SITE NUMBER 3

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Closed

Years of operation: From 1946 (approximately) To 1971 (approximately)

2. What is/was the name of the site (e.g., slurry pit)?

Hadnot Point Burn Dump

3. Where is/was the site located (provide a description and give activity map coordinates)?

Near the mouth of Cogdell's Creek at map coordinates 855364. Between Hadnot Point Sewage Treatment Plant and Cogdell's Creek.

4. Describe how the site is/was operated.

This was dump for refuse, trash and other wastes generated throughout the industrial area at Hadnot Point and nearby housing areas. Wastes were burned and residues covered with dirt.

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SITE NUMBER 3

5. If the site was closed, briefly describe the closure procedures. A borrow pit was established near the dump and dirt brought in and the dump site covered with dirt. Fill depth was equivalent to existing state guidelines.

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

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SITE NUMBER 3

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Soils in the area are baymeade and pactolus with characteristics similar to site #1. The site is immediately adjacent to tidal waters at mouth of Cogdell's Creek. Elevations less than 15 ft.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

The entire area has been stabilized. There are no observed occurrences of dying vegetation.

9. Do personnel live or work near the site? Please explain.

The site is contiguous to the Hadnot Point industrial area and near a recreational area for base residents.

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SITE NUMBER 3

10. Have there been any incidents or complaints concerning this site? Explain.

No.

11. How close is the site to the activity's boundaries?

Adjacent to shoreline of New River. Approximately 4 1/2 miles to nearest non-military land area.

12. Additional comments

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SITE NUMBER 4

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? Closed

Years of operation: From 1946 (approximately) to 1971 (approximately)

2. What is/was the name of the site (e.g., slurry pit)? Camp Geiger Dump

3. Where is/was the site located (provide a description and give activity map coordinates)?
Immediately east US Highway 17, one mile south of the intersection of Curtis Road (MCAS(H), NR) and US Highway 17, map coordinates are 732442

4. Describe how the site is/was operated. Operated as an open dump

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SITE NUMBER 4

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

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SITE NUMBER 4

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surfacewaters, etc.

The site is located on a ridge between Tank Creek and another small unnamed tributary to Southwest Creek. Soils are baymeade with properties similar to site #1. Approximately 75 meters to adjacent streams. Elevation approximately 15-20 feet.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

Same as site #1

9. Do personnel live or work near the site? Please explain. Yes

The site is located approximately 200 meters from the nearest residence which is located on non-military property. There are 40-60 residences and businesses within 1/2 mile of the site, all of which are located on non-military property.

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SITE NUMBER 4

10. Have there been any incidents or complaints concerning this site? Explain.

None that compiler could identify

11. How close is the site to the activity's boundaries? 80 meters

12. Additional comments

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SITE NUMBER 5

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

In operation

Years of operation: From 1972 To Present

2. What is/was the name of the site (e.g., slurry pit)?

Base Sanitary Landfill

3. Where is/was the site located (provide a description and give activity map coordinates)?

Located on Sneads Ferry Road, 1 1/2 mile southeast of intersection with Holcomb Blvd at map coordinates 881370

4. Describe how the site is/was operated.

The site is being operated along North Carolina guidelines issued by NC Department of Human Resources

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SITE NUMBER 5

5. If the site was closed, briefly describe the closure procedures.

Not applicable

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
Soil contaminated with waste oil		
Grease from Messhall greasetraps		

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SITE NUMBER 5

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Soil conditions are same as site #1

Approximately 30 and 100 meters to Cogdells and Cowhead Creeks respectively. Elevations from 10 to 30 feet.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

Same as site #1

9. Do personnel live or work near the site? Please explain.

Only landfill personnel work in the immediate vicinity.

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SITE NUMBER 5

10. Have there been any incidents or complaints concerning this site? Explain.

No.

11. How close is the site to the activity's boundaries?

Approximately 3 miles

12. Additional comments

ACTIVITY Marine Corps Base, Camp Lejeune, North Carolina

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SITE NUMBER 6

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? Yes, currently in operation. (Note: Prior to 1976 this operation utilized lot 140 which is described under Site #7).

   Years of operation: From 1976 To Present.

2. What is/was the name of the site (e.g., slurry pit)? Pest Control Shop, Bldg PT 37 (formerly Naval Field Research Laboratory).

3. Where is/was the site located (provide a description and give activity map coordinates)?
   On parachute tower road extension, 1 mile west of Holcomb Blvd. at map coordinates 850401.

4. Describe how the site is/was operated. From 1947 - 1976 this was a Naval Medical Field Research Laboratory. From 1976 to present this facility has been used for Insect Vector Control Shop. Pesticides and pesticide containers are managed in accordance with current regulations.

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

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SITE NUMBER 6

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

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SITE NUMBER 6

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Soils are same as Site #1. Distance to Beaver Dam Creek and Wallace Creek approximately 1500 feet. Elevation approximately 20 feet.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

None observed.

9. Do personnel live or work near the site? Please explain.

Only the personnel assigned to facility.

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SITE NUMBER 6

10. Have there been any incidents or complaints concerning this site? Explain.

On 18 Nov 1980 Sr. 90 Beta Buttons were discovered while grading parking lot. Preventive Medicine personnel from Naval Regional Medical Center, Camp Lejeune, NC, recovered contaminant items and surveyed the area. (See Appendix A to this form).

11. How close is the site to the activity's boundaries?

3 miles to nearest adjacent land area. 500 meters to Navigatable waters.

12. Additional comments

Eno.
Kolwadt

15 DEC 80

List of events of 18 NOV80 thru 13 DEC80 concerning Sr 90 Beta buttons.

Finding and cleanup procedures.

18 NOV 80: First findings
First contact with Port Huenneme, Cal.
Immediatley area roped off 50' x 25'. Personnel cautioned.
Area visted by LTJG McDonough.
Navy Research and Development Command notified to find all old files from research lab. All old files lost in St. Louis.

Initial problem stated from LTJG McDonough: 7 cases of Radium 226 reflectors buried in the area.

19,20,21 NOV80: Contact with local people who worked the lab while it was in a working status.

1 DEC 80: Message received from Naval Nuclear Power Unit, Port Huenneme, Calf. From Mr Kip Rimm, Message # 012240Z. This announced a technical visit from RASO.

1 DEC Thru 10 DEC 80: Continued survailence of area to insure integrity of the sight.

DEC 80: Mr. Rimm arrived and at 0900 initiated investigation on site.
Found area adequatley secured, no health hazard to personel working in adjacent areas.
Area concerned is the north west cornerof Insect Vector Control Center, Marine Corps Base, Camp LeJeune, N.C.
Cordinents: 21degrees North Lat by 41 Degrees west Long.

0830: Preliminary Radiation/ Contamination survey made by RASO Rep.
Area roped off: 100' North to South by 25' East to West

1000: RASO Rep briefed workers and supervisors at site on the significants of the problem and insured them no health hazards existed as long as they stayed out of roped off area.

1100: Grid off area in 5' by 5' grids.
Conducted radiation survey using PRM5/S3.

1300: Advised by the foreman that on 18 NOV80, one button had been thrown in a southwesterly direction into the woods and one northwesterly into woods by employees prior to knowledge of nature of material.
RASO Rep conducted survey of contaminated area using E140N-304 for Beta. No loose surface contamination found in gridded area.

1400: Recovered Beta buttons from woods which personel through into woods.
Buttons surveyed for loose surface contamination - none found.

1500: Surveyed incinerator and areas adjacent to gridded area.
No samples taken from incinerator and mailed to Port Huenneme for isotopic analysis.

1700: Found 15 Beta buttons in extreme south end of gridded area.

11 DEC 80 Continued.

1600: Released southeren portion of grid for unrestricted use and minimized restricted area to 26' 8" east to west by 16' north to south. In the northeast portion of the compound.

1630: Set up controlled area, following individuals were allowed entry by RASO Rep:

1. MC DONOUGH, James, C., LTJG, MSC, USN 215-66-6127
Industrial Hygiene Officer

2. KALISCH, Bert, ENS, MSC, USNR 485-72-8407
Environmental Health Officer

3. SAURINI, Joseph, HM1, USN 088-44-5748
Radiation Saftey Officer

Individuals badged by RSO, briefed on radiological control procedures for handling radioactive material, donning and removing Anti C's and conducting whole body self frisking procedures.

1700: Commenced digging in grid #1. Fifteen Beta buttons found in depths from 1 inch to 1½ feet. Soil samples taken from surface and at 1½ feet and sent to Port Huenneme for isotopic analysis. Radioactive material/storage area set aside on east side of gridded area. Radioactive storage log initiated.

1800: Commenced digging in grid #8 and recovered 25 Beta buttons and remains of 2 dogs at a depth of 2 feet. Soil immediatley adjacent to dog remains found to be contaminated. Two soil samples sent to Port Huenneme for isotopic analysis. Soil adjacent to animal remains placed in radioactive material storage container.

1900: Secured area for the day.

12 DEC 80

0800: Returned to area and commenced digging grid #2. Requested Back hoe and sifter from Base Maintenance.

1000 to 2000: utilized Back hoe and sifter to systematically extricate Beta buttons from gridded area. No further animal remains found.

A total of 499 (Fourhundred ninetynine) Beta buttons recovered. No detectable soil contamination encountered.

Radiation contamination survey conducted on grids one through fifteen, no readings above background noted.

Back hoe and sifter surveyed by RASO Rep and released for unrestricted use. Anti-C's disposed of as Radioactive Waste.

ADDENDUM : 1330: Former research site custodian interviewed by Environmental Health Officer. This revealed the location of incinerator ash dump site. Soil sample taken and sent to Port Huenneme for isotopic analysis. Also revealed no other burial sites exsisted beyond those identified by RASO Rep.

DEC 80

1300: Debriefing held by RASO Rep and attended by:

1. MCDONOUGH, James, C., LTJG, MSC, USN, 215-66-6127
Industrial Hygiene Officer

2. KALISCH, Bert, ENS,MSC,USNR 485-72-8407
Environmental Health Officer

3. SAURINI, Joseph HM1, USN 088-44-5748
Radiation Saftey Officer

RASO Rep made the following recommendations:

1. Store radioactive material in enclosed secure area and mark area in acoordance with Title 10 CFR part 20.

2. Contact Naval Supply Center, Norfolk, Va. for proper packaging and disposition of radioactive material.

3. Take soil samples in grids 1 thru 15.
Three from each grid one from surface, one six inches from surface and one one foot from surface.
Send samples to Port Huenneme for isotopic analysis ASAP.

4. Grids 1 thru 15 retained as restricted area pending results of isotopic analysis from Port Huenneme.

5. Area to be released by RSO.

6. RSO take wet rag survey with E140N/DT304 or HP210 probe of work sites inside Bldg inside PT-37 compound.

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SITE NUMBER 7

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? Open.

Years of operation: From Pre-1960 To Present.

2. What is/was the name of the site (e.g., slurry pit)? Lot 140, Hadnot Point area.

3. Where is/was the site located (provide a description and give active map coordinates)? Located between Ash Street and Sneads Ferry Road, on Center Road extension at coordinates 863 391.

4. Describe how the site is/was operated. This area was used as a maintenance area for transformers, prior to awareness of Polychlorinate Biphenyl (PCB) hazards. Significant quantities of transformer oil were discharged onto the ground prior to the regulation of PCB's.

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SITE NUMBER 7

5. If the site was closed, briefly describe the closure procedures.

The site is now used only for storage of transformers in accordance with Toxic Substances Control Act. Analysis of top 4" of soil in October 1980 indicated approximately 1 PPM of PCB's.

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

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7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

The site is located on highly disturbed soils in a transition zone between Baymeade and Rains-Lynchburg soils. Seasonal high water tables are similar to and possibly somewhat shallower than site #1. Soil textures and other conditions are very similar. The site is approximately 300 meters from nearest stream and is on a level area at approximately 30 feet above sea level.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

No vegetation in immediate area except weeds. No observed effects.

9. Do personnel live or work near the site? Please explain.

Yes. The area is located in an industrial area, access to lot is restricted. Vehicular and foot traffic is present on two dirt streets adjacent to lot.

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UIC 67001

SITE NUMBER 7

10. Have there been any incidents or complaints concerning this site? Explain.

Analysis of current transformers stored in area indicate high percentage with 50-500 ppm of PCB's. Analysis of top 4" of soil indicate only 1 or less than 1 ppm of PCB.

11. How close is the site to the activity's boundaries?

4 miles to nearest adjacent land area.

12. Additional comments

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 8

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? _____

Currently in Operation.

Years of operation: From 1974 (authorized) To Present.

2. What is/was the name of the site (e.g., slurry pit)? _____

K-326 Range, Explosive Ordnance Disposal.

3. Where is/was the site located (provide a description and give activity map coordinates)?

500 meters north of Rhodes Point Road. (Verona Loop Area) at map coordinates 818 365.

4. Describe how the site is/was operated. _____

Miscellaneous unexploded ordnance is detonated or destroyed Per OP-5, Vol. 1, NAVSEASYSCOM Manuals.

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 8

5. If site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 8

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Soils and soil characteristics essentially thesame as Site #1. Elevation is approximately 10-15 feet above sea level. The site is immediately adjacent to New River.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

None apparent. Site is surrounded by managed pine forests and drains containing typical hardwood trees and shrubs.

9. Do personnel live or work near the site? Please explain.

Site is in a remote area with restricted access.

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 8

10. Have there been any incidents or complaints concerning this site? Explain.

No.

11. How close is the site to the activity's boundaries?

Approximately 6 miles to nearest adjoining non-military land area.

Immediately adjacent to shoreline of navigatible waters.

12. Additional comments

ACTIVITY Marine Corps Base, Camp Lejeune, N.C.

UIC 67001

SITE NUMBER 9

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Currently in operation.

Years of operation: From 1974 To Present.

2. What is/was the name of the site (e.g., slurry pit)?

G4A Range, Explosive Ordnance Disposal.

3. Where is/was the site located (provide a description and give activity map coordinates)?

1/2 mile northwest of Highway 172 (near G5/G5A Ranges) at map coordinates 933 335.

4. Describe how the site is/was operated.

Miscellaneous unexploded ordnance is detonated or destroyed per OP-S Vol.#1, NAVSEASYSCOM Manuals.

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 9

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 9

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

The soils at the site are Kureb-Lakeland which are excessively drained. Water tables are below six feet. A small natural pond is located immediately beside site. Approximately 500 meters to nearest perennial stream. Subsoil materials are highly permeable.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

Vegetation has been killed and damaged by heat and shrapnel. No apparent damage due to pollution.

9. Do personnel live or work near the site? Please explain.

No - area is restricted.

ACTIVITY Marine Corps Base, Camp Lejeune N. C.

UIC 67001

SITE NUMBER 9

10. Have there been any incidents or complaints concerning this site? Explain.

No.

11. How close is the site to the activity's boundaries?

3.5 miles to nearest adjoining non-military land area.

12. Additional comments

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 10

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? In operation.

Years of operation: From Early 1970's To present.

2. What is/was the name of the site (e.g. slurry pit)? Flammable storage warehouse, Bldg. TP-451, and 452.

3. Where is/was the site located (provide a description and give activity map coordinates)? Between Piney Green Road and Holcomb Blvd. at map coordinates 867 398.

4. Describe how the site is/was operated. Flammable supplies of all types were stored in Butler type Buildings. Bldg. TP 452 burned in 1977. At that time the operation moved to TP 451. TP 451 was vacated in October and will be upgraded for use for hazardous waste storage.

ACTIVITY Marine Corps Base, Camp Lejeune N. C.

UIC 67001

SITE NUMBER 10

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
All types of flammable and reactive (chemical) materials.		

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 10

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Soils are Baymeade with characteristics similar to Site #1. The site is located at approximately 30 feet above sea level. Has excellent surface drainage. Approximately 250 meters to Bearhead Creek, a tributary to Wallace Creek.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

None Observed.

9. Do personnel live or work near the site? Please explain.

The Site is located on the fringes of the Hadnot Point industrial area. Military personnel are located adjacent to the site and are actively involved in training on surrounding grounds.

ACTIVITY Marine Corps Base,
Camp Lejeune N. C.

UIC 67001

SITE NUMBER 10

10. Have there been any incidents or complaints concerning this site? Explain.

Yes - See Section II, paragraph 4

11. How close is the site to the activity's boundaries?

Approximately 3½ miles.

12. Additional comments

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 11

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Currently in operation.

Years of operation: From 1967 To present.

2. What is/was the name of the site (e.g., slurry pit)?

Fire Fighting training Pit (Piney Green Road)

3. Where is/was the site located (provide a description and give activity map coordinates)?

Between Piney Green Road and Holcomb Blvd. at map coordinates 868398 adjacent to site #10.

4. Describe how the site is/was operated.

Flammable liquids poured into pit and burned. Did not have oil water separators and other pollution abatement equipment now considered as essential. Operated by Marine Corps Base Fire Department.

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 11

5. If the site was closed, briefly describe the closure procedures.

Currently being upgraded to include pollution abatement facilities. Will continue to operate.

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

ACTIVITY Marine Corps Base, Camp Lejeune, N. C.

UIC 67001

SITE NUMBER 11

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Same as Site #10

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

None apparent.

9. Do personnel live or work near the site? Please explain. Yes.

The site is located on the fringes of the Hadnot Point Industrial Area. Military personnel are located adjacent to the site and are actively involved in training on surrounding grounds.

ACTIVITY Marine Corps Base, Camp Lejeune N. C.

UIC 67001

SITE NUMBER 11

10. Have there been any incidents or complaints concerning this site? Explain.

No.

11. How close is the site to the activity's boundaries?

3½ miles.

12. Additional comments

TTHM SURVEILLANCE REPORT FORM

Installation MCAS – NEW RIVER

Date Collected 19 AUG 81 PM

Source	Sample Number	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	TTHM
WTP 110	516	SEPTUM INVERTED				—
6-520	517	42.5	33.3	40.7	37.9	154
4025	518	SEPTUM INVERTED				—
710	519	45.3	31.9	38.7	<0.1	116
2800	520	48.6	33.4	41.1	24.6	148
Reference OBS						
True						

Date Received 24 AUG 81

Date Analyzed 7 DEC 81

Remarks:

William C Neal

WILLIAM C. NEAL, JR.
Chief, Laboratory Services

USAEHA-S Form 7
20 Feb 80

TTHM SURVEILLANCE REPORT FORM

Installation CAMP LEJEUNE - HADNOT PT.

Date Collected 21 AUG 81 AM

Source	Sample Number	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	TTHM
WTP 26	521	27.8	INTERFERENCE	3.2	0.1	31 +
Nit-1	522	38.2	ON	3.3	0.2	42 +
120²	523	29.3	THIS	2.9	0.1	32 +
65	524	27.7	PEAK	3.2	0.1	31 +
530	525	32.2	↓	3.4	0.1	36 +
Reference OBS						
True						

Date Received 24 AUG 81

Date Analyzed 4 DEC 81

Remarks:

William C Neal

WILLIAM C. NEAL, JR.
Chief, Laboratory Services

USAEHA-S Form 7
20 Feb 80

TTHM SURVEILLANCE REPORT FORM

Installation CAMP LE JEUNE - RIFLE RANGE

Date Collected 20 AUG 81

Source	Sample Number	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	TTHM
P-Cl_2 WTP	466	7.4	<0.1	0.2	<0.1	8
A-Cl_2 WTP	467	50.4	27.4	19.6	2.3	100
6	468	48.9	27.5	20.7	2.5	100
10	469	46.7	26.9	21.6	2.3	98
92	470	48.3	27.2	20.1	2.0	98
Reference OBS						
True						

Date Received 24 AUG 81

Date Analyzed 7 DEC 81

Remarks:

William C Neal

WILLIAM C. NEAL, JR.
Chief, Laboratory Services

USAEHA-S Form 7
20 Feb 80

Site Confirmation based on [illegible] quantities released to ground.

ACTIVITY Camp LeJeune

UIC

SITE NUMBER 25

22

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From To

2. What is/was the name of the site (e.g., slurry pit)?

Industrial Area Tank Farm

3. Where is/was the site located (provide a description and give activity map coordinates)?

at 864389

4. Describe how the site is/was operated. Fuel Depot

MH MH.

(Continued) CF

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo 7/21-24. See photo log. Excavation/Maintenance of underground tanks (foreground of photo 7/21) valves & pipes at top of tanks exposed in holes. Water standing in berm of large tank (photo 7/22) but no fuel oil ~~surface~~ film observed on waters surface.

ACTIVITY Camp LeJune

UIC

SITE NUMBER 18

(1)

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Closed - Located on property leased by [illegible] University College Inc

Years of operation: From early 1960's To ≅1972

2. What is/was the name of the site (e.g., slurry pit)?

Midway Park Dump

3. Where is/was the site located (provide a description and give activity map coordinates)?

at 859458 . surface dump - used for about 2 yrs

4. Describe how the site is/was operated. open dump

— now on Onslow Comm. Col.

— asbestos siding and asphalt paving on surface

— other debris may be buried

— part of area in ground cover, rest in mature pines and understory

WA MH

MH CF

A

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
Asbestos siding		
Asphalt		

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo ~~6/24~~ 6/24-27
Concrete, tricycle observed on surface, minor evidence of earth movement, majority of area had been graded & was a picnic area with maintained grass field

ACTIVITY Camp LeJeune

UIC

SITE NUMBER 27

SECTION III. DETAILED DISPOSAL INFORMATION

19

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From To

2. What is/was the name of the site (e.g., slurry pit)?

Naval Research Lab Dump (Now Insect Vector Control)

3. Where is/was the site located (provide a description and give activity map coordinates)? at 848402

4. Describe how the site is/was operated. reports of 100+ dogs used in experiments being buried here (quite deep - 20'). Animals used in metabolic studies using radioactive substances, levels very low.
- old borrow pit in sandy soil
- large (≅ 5,000 gal) tank and scrap metal.

NA WA MH
MH CF

A

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Sandy soils. Drainage similar to site 6.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. Personnel work nearby in Vector Control.

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo 7/14-16.
One barrel observed on surface (photo 7/14 & 16) and appeared to be large depression. Area observed was inside loop of road. JN thinks area may have been to the west of the road loop. (See map).

Site confirmed Sampling [illegible]

ACTIVITY CLeJ

UIC

SITE NUMBER 75

SECTION III. DETAILED DISPOSAL INFORMATION 2

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From 1943 (?) (15yrs) To Feb 7 1958 (or late 1957)

2. What is/was the name of the site (e.g., slurry pit)?

Nursery - Day Care Center (Bldg 712)

3. Where is/was the site located (provide a description and give activity map coordinates)? at 855441 at NE corner of Holcomb Blvd and Brewster Blvd, between Holcomb and railroad tracks

4. Describe how the site is/was operated. old pesticide storage and miping area with office space and equipment washing cement slat (pic #12) - pesticide miping area between building 712 and railroad tracks (now at least partially paved over) Mr. Neil Sadiston (phone 346-4184) willing to cooperate with phase two work if needed

6F

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

CTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

Following information from Mr. Neil Sadiston by telephone 6/16/82

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity per year	Origin
Lindane	<10 gal of 1% material/yr.	
Chlordane	100 gal of 40% Powder/yr.	
Mirex	stored but not used	
2,4,D	1000 gal - 1 gal conc to 100 gal H2O	
Silvex 2,4,5-TP	not used but stored	
DDT	750-1000 gal per day of 5-15% material	
Dursban	not used.	
Malathion	100 gal per yr.	
2,4,5T	50 gal per year for one year	
Baygon	unknown quantities considered to be low	
Diazinon	25 gal/month	
Dieldrin	<100 lbs/yr.	

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

CTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments activities at this site were moved to Bldg 1105 (Site #) in late 1957 or early 1958, the following pesticides and herbicides were identified to be at Bldg 1105 and at one time or another: Diganon, Chlordane Dust, Lindane, DDT dust, Malathion (46% soln) Mirex, 2,4-D, Silvex, Dalpon, Dexthan, (Dioxin may have been present as a herbicide contaminant)

Note: ... asbestos ...
Landfill ...

ACTIVITY Camp Lejeune

UIC

SITE NUMBER 14

SECTION III. DETAILED DISPOSAL INFORMATION 16

> This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?
Closed

Years of operation: From 1958 - 1960 To 1972

2. What is/was the name of the site (e.g., slurry pit)?
Montford Point Burn Dump Site A

3. Where is/was the site located (provide a description and give activity map coordinates)? at 795450

4. Describe how the site is/was operated. burn dump for debris, garbage and some oil - all from Montford Point Area
- open dump. ~~on~~ municipal type waste
- wooded area down to river
- Friable asbestos
- recyclable ~~ti~~ tires and wheels

WA MH
MH CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Groundwater flow towards Northeast Cr.
Uncontrolled dumping in area. Maybe should recommend clean up and patrols of area.

rifle range people use dry cleaning solvent and bore cleaner for weapons cleaning

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo 7/3-6

Current trash site with asbestos steam pipe insulation found (recent).

Area still open with invading vegetation only around edges due to semi-active site.

ACTIVITY C Le J

UIC _____

SITE NUMBER 12

(E) 6

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? _____

Years of operation: From _____ To _____

2. What is/was the name of the site (e.g., slurry pit)? _____

Storage Lots 201 + 203

3. Where is/was the site located (provide a description and give activity map coordinates)?

4. Describe how the site is/was operated. Storage Sete for 10% DDT

Photos CRF-3 #22-23 (aerial)

— lot 203 used to be a dump in 1940's - metal, leaky containers and rubbel

— original lot for R+D — bare earth

— Transformer storage

— lot 203 - 1940's to 1965 then from 1975

lot 201 - in 1965 to 1975

WA WE MH CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Lots 201 and 203 are large generally flat and generally sandy.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo 6/10-14 (Lot 201) 6/15-18 (Lot 203) Lots graded, Forest in photo 6/16 ~ 12-15 years old. Barrel in photo 6/12 was unlabeled, Sketch of lots see back.

(Continued)

W Adams

15 MAR 82

- Insect Vector (Forma Naval Rock Lab) Site 6
  - Radiation contamination (Beta buttons).

- Lot 140 (SITE 7) 17MAR82
  - Transformer storage and maint.
  - Pesticide storage and prep.
  - PCB spills
  - BARE EARTH, SANDY
  - GEN. FLAT.

- SITES 10 & 11
  - Flat, sandy. Bare earth

- SITE 20 Piney Green Road
  - Sandy road.
  - Waste oil disposal for dust control
  - No oil evident.

- SITE 12 LOTS 201 & 203 DPDO
  - Storage of machines & materials
  - Transformers (new).
  - Barrels stored on concrete pad (unbermed).
  - Sand and gravel over surface.

17 MA. 2

- LOT 203
  - PCB Transformers were stored here. Removed to unk. location. Soil in storage was being removed to loc. not known to yard foreman
  - Transformers had been moved w/i Lot 203.
  - Chr the past, H. W. could have been stored anywhere in either lot.
  - POL was drained from vehicles before shipping.
  - Sandy soil, bare earth in both lots, one most of area. Area of 15 yr pines in 203.
  - DDT dump marked via trad. area in 203.
  - Soil is disturbed by rewanding to keep lot graded.

- SITE 19 - CREOSOTE PLANT
  - now co-located & sawmill.
  - sandy soil, but standing water.
  - CHECK AERIALS FOR LOCATION.

Note: [illegible]

ACTIVITY C Le J.

UIC _____

SITE NUMBER 11

SECTION III. DETAILED DISPOSAL INFORMATION

9

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? _____

Years of operation: From 1907 To present

2. What is/was the name of the site (e.g., slurry pit)?

Fire Fighting Training Pit Piney Green Rd

3. Where is/was the site located (provide a description and give activity map coordinates)?

4. Describe how the site is/was operated.

flat, sandy. Bare earth

Information on pits and whether or not they are lined; pits are presently lined.

WA
CF
MH

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Best reason for monitoring is nature of fire-fighting training pit at Cherry Point. Was this one as bad previously?

Soil type 415A1, 371B1 - Sandy soil conducive to migration.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo ~~B/W~~ 6/4-5

Pits are brand new and area graded. No evidence of former fuel oil etc. on surface of ground. Former fuel supply tank in background of photos.

Chief Padgett - Pit was unlined*. Water was on bottom fuel on top. Used JP-4 or JP5. * Assume that a liner was put in after 1965.

(Continued)

ACTIVITY C & E J

UIC

SITE NUMBER 10

8

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From To

2. What is/was the name of the site (e.g., slurry pit)?

Flammable Storage Warehouse Building TP451 + TP452

3. Where is/was the site located (provide a description and give activity map coordinates)?

4. Describe how the site is/was operated. TP452 burned; TP451 current hazardous waste storage facility

flat, sandy, Bare earth

WA MH CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Best reason for monitoring is the use of the buildings for storage of hazardous waste.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo 6/ 6-9
White containers in photo 9 contain sulfuric acid (to fill batteries?).

ACTIVITY CLeJ A

UIC

SITE NUMBER 55

SECTION III. DETAILED DISPOSAL INFORMATION 45

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From probably post-1950 but pre 1956 (constructed) To present

2. What is/was the name of the site (e.g., slurry pit)?

Campbell St Underground Avgas #Storage

3. Where is/was the site located (provide a description and give activity map coordinates)?

at ~~757444~~ 754444

4. Describe how the site is/was operated. underground leaks, ground in vicinity saturated with avgas ——? collection system now installed for collection and removal at sump

— operational in ~1962
— present fuel farm
— fenced storage lot.
— reported ~~by~~ undergrd AVGAS tanks.

WA WE MH CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

ECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Poss site Vol. Hyd., etc.

Well 4140 (non-potable) is downgradient of this site.

Recommendations.

1. Sample Well 4140 for analysis for ~~gasoline~~ fuel compounds.

2. Take soil samples from 3 locations within the suspected fuel saturated area. Samples should be cores from land surface to the water table. Retain soil samples for analysis at one foot intervals.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

CTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

Pg. 1.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo 9/13-15. Currently fenced lot. No fuel oil slick observed on surface of water in low area on North side of lot. Some evidence of leakage/spillage in vicinity of parked trucks on lot (see photos)

Camp Geiger Trailer Park Dump
taken from 1964 aerial. AOR-3EE-49

$\frac{3}{16}'' \times \frac{9}{16}'' = 0.105$ sq in

[redacted] $\times \frac{1}{2}'' = 0.125$

$\frac{5}{16}'' \times \frac{1}{4}'' = 0.078$

1" = 1400'

← 0.308

603680 sq ft → 778' sq ≅ 800 × 750

[redacted]

Camp Geiger Trailer Park
Dimensions taken from
1964 aerial photo AOR-3EE-49
2/10/64

[redacted] 800' × (750 OR 800')

ACTIVITY CLeJ

UIC

SITE NUMBER 4

SECTION III. DETAILED DISPOSAL INFORMATION (41)

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Closed - Have Wells been sited near dump - Groundwater testing.

Years of operation: From ~~~1946~~ open ~1953/4 (8/9) To ~1971 (2) closed 1970

2. What is/was the name of the site (e.g., slurry pit)?

Camp Geiger Dump (Trailer Park)

3. Where is/was the site located (provide a description and give activity map coordinates)?

Immediately east of US 17, 1 mile south of intersection of Curtis Road + US 17 Coord 732442

4. Describe how the site is/was operated. Mixed Industrial (Air Station) Municipal Type Solid Waste - burn dump - no fill mound (like #34) was found - saw surface disposal of asphault, concrete & ~~building~~ metal debris, some domestic solid wastes ~~recd stuff from Camp~~ Geiger + MCAS Site was operated as a "burn dump" - sanitary landfill. Trench was dug with a dragline, waste materials were deposited and burned. After the fire was extinguished a bulldozer was used to cover the ash and non-combustables.

WA MH CF

7

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

generally flat – mature pines – POL Drum – Pallets – 5-gal ~~on~~ can labeled paint thinner evidence of burning

Wrong area. Were at end of Robert L. Wilson Blvd. in forested area instead of at ~~end~~ end of dirt road at end of Hawkins Blvd. in cleared area.

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
Solid Wastes		MCAS
Solid Waste		Geiger Area
UXO		
POL – Solvents	>100gals may have been many 55 gal drums.	MCAS
old batteries	unknown	MCAS

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

The movement of gw is probably controled by Southwest GW to the S:

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments from EPA haz. waste sheet: Site was open dump for refuse, trash & other wastes generated from MCAS, New River & MCCL west of New River.

Photographs CRF-1 #'s 20-21 from ground
CRF-3 #'s 1-8 from air
→ mound apparent in aerial photos

Photos 9/9-10 were taken at end of Robert L. Wilson Blvd, in forested area & not at site 4 area. Items dumped within last ~5 years and appear to be construction debris.

ACTIVITY Marine Corps Base, Camp Lejeune

UIC 67001

SITE NUMBER 4

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

The site is located on a ridge between Tank Creek and another small unnamed tributary to Southwest Creek. Soils are baymeade with properties similar to site #1. Approximately 75 meters to adjacent streams. Elevation approximately 15-20 feet.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

Same as site #1

9. Do personnel live or work near the site? Please explain. Yes

The site is located approximately 200 meters from the nearest residence which is located on non-military property. There are 40-60 residences and businesses within 1/2 mile of the site, all of which are located on non-military property.

A

ACTIVITY CLeJ

UIC

SITE NUMBER 60

SECTION III. DETAILED DISPOSAL INFORMATION

48

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From To

2. What is/was the name of the site (e.g., slurry pit)?

MCAS Mercury Dumpsite

3. Where is/was the site located (provide a description and give activity map coordinates)?

at 772438 somewhere behind building on Longstaff St ~~(illegible)~~

4. Describe how the site is/was operated. Approximately 1 (one) gallon ~~of~~ metallic Hg per year was poured into hole (holes?) and buried. Mercury came from radar units Hg delay lines. Practice extended over 10 year period.

CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Soils: Craven fine sandy loam K≈ 0.06-0.2 IN/HR. This soil has a fairly high percentage of clay in the B-horizon. This would probably slow the migration rate and enhance the attenuation of mercury by adsorption by clay minerals. There is the potential for migration of Hg into the New River.

Recommendation: 1.) Place 1 well upgradient of site, 3 downgradient. Sample for Hg anal.

2) Collect water sample and sediment sample from New River adjacent to site. Hg anal.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

ECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's bounderies? _____

12. Additional comments _____

(Continued)

A

ACTIVITY C Le J

UIC

SITE NUMBER 2

SECTION III. DETAILED DISPOSAL INFORMATION

54

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From 1975 To present

2. What is/was the name of the site (e.g., slurry pit)?

Crash Crew Fire Training Barn Pit

3. Where is/was the site located (provide a description and give activity map coordinates)?

MCAS-New River Coord 755428

4. Describe how the site is/was operated. see fact sheet attached

— oil spilled in whole area
— contaminated fuel stores
— two pits 1) earth berm 2) round hole in ground
— several wrecked A/C
— small oil-stained area

Note: [illegible]

WA WE MH CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

Present policy is to burn only water contaminated oils.

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
Pit was filled with water when visited in 3/82. There is a berm which will prevent overflow in most instances except in extremes of rainfall. The pit is lined to prevent seepage. The surrounding area is cleared of vegetation, HDP		

From EPA - Notification of hazardous waste site: Historically disposal of waste oil containing undetermined amounts of degreasers & solvents were burned for fire fighting training. Accidental discharges of water & residues of above mixtures have occurred which likely contained quantities of ~~oil~~ solvents degreasers and other materials. Upgrading site currently in progress to provide pollution abatement structures. Current regulations prohibit discharge of any substance other than JP-5 into training pit. (6/3/81).

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

This site seemed pretty clean compared to the ~~East~~ CPMCAS crash crash site. The best reason to monitor would be the nature of the activity itself would probably involve some spills.

Soil type: Baymeade Urban Land Complex.

Soil Permeability: 2.0 to 6.0 IN/HR.

Well log for MCAS 5009 not available. Well logs for Wells 1255, 1256, 3, and 4 show great variation in the ~~thickness of the confining units~~ & short distances. However, I expect the predominant drainage in both surface water and the water table aquifer is directly toward Southwest Creek.

8. ~~Briefly describe animal and plant life surrounding the site,~~ including any peculiarities (e.g., dying plants).

Recommend: If this site seems bad, we should monitor for appropriate wastes.

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? 250 meters to navigable water. 2500 meters to nearest adjacent non-military land area. (from fact sheet)

12. Additional comments photographs: Roll 9 (MKH-9) Negative #16 + 17: Pit appears to be relatively new with no evidence of oil scum or fuel sheen on surface of water.

according to Fire Chief Padgett — estimates fuel use to be about 15000 gal/yr.

— before concrete structure was put in (1975) burn pit was formed of earth pit with rocks in bottom - thought leakage was inevitable

ACTIVITY Marine Corps Base, Camp Lejeune

UIC 67001

SITE NUMBER 2

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? In operation

Note: Use of area except for burning of water contaminated fuel is prohibited.

Years of operation: From 1975 To present

2. What is/was the name of the site (e.g., slurry pit)?

Crash crew fire training burn pit

3. Where is/was the site located (provide a description and give activity map coordinates)?
Marine Corps Air Station (H), New River at map coordinates 755428

4. Describe how the site is/was operated. Water contaminated fuels and used petroleum products have been placed into a pit and burned. Present use restricted per item (1) above.

ACTIVITY Marine Corps Base, Camp Lejeune

UIC 67001

SITE NUMBER 2

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

The site is located at an elevation of approximately 15 feet above mean sea level. Although soils in the area have been highly modified by construction associated with the original construction of airport, the soils were originally baymeade and have same characteristics as site number 2. Distance to nearest body of water is approximately 100 meters to a small tributory of southwest creek. Distance to tidal waters is approximately 200 meters.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

There is no vegetation in the immediate area (100 ft radius), however, this could easily be relateed to heat and heavy traffic. There is no observable effects beyond this distance.

9. Do personnel live or work near the site? Please explain.

Yes; personnel work approximately 500 feet away from site which is adjacent to end of aircraft runway in restricted access area.

Site qualitative; confirm ... information ... date; doubtful ... hydrogeology

ACTIVITY CLeJ A

UIC

SITE NUMBER 42

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SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From ______ To ______

2. What is/was the name of the site (e.g., slurry pit)?

Marines Rd - Sneads ~~Ferry~~ Rd - Mogas Spill

3. Where is/was the site located (provide a description and give activity map coordinates)? at 835297

4. Describe how the site is/was operated.

- ~5000 gal MOGAS spill on Feb 28, 1975.
- sandy soil

Fire Chief Padgett

spill occurred about "2 blocks" south of intersection on east side of road - gas was collected in dammed drainage ditch and about 2/3 of 5000 gallons was pumped out - sand was placed in ditch and then removed ~~and~~ with top soil - spill area "appeared normal" about 2 months later - probably was leaded gas

WA MH CF.

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

May wish to recommend sampling a la Langley.
Soils: Baymeade fine sand and Marvyn loamy fine sand.
K: 2.0 - 6.0 IN/HR and 0.6 - 2.0 IN/HR.
Well BB-220 is quite close to the intersection. As this is an active well, there may be a pumping-induced gradient toward BB-220. There could be some leakage through the ~ 22 ft confining zones.
Recommend. 1. Sampling and analysis of water from well BB-220 for gasoline compounds.
2. Soil sampling within area of spill from land surface to the water table consisting of 2 3/4 cores with samples retained at one foot intervals for analysis of gasoline compounds

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments No photos. Looked like normal hwy. intersection with no evidence of fuel oil in ditches or on standing water or plants.

Site confirmed on basis that [illegible] [illegible] [illegible] [illegible] [illegible] limited [illegible] [illegible] [illegible] [illegible]

ACTIVITY C Le J

UIC

SITE NUMBER 45

SECTION III. DETAILED DISPOSAL INFORMATION

~~#~~ 66

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From ________ To ________

2. What is/was the name of the site (e.g., slurry pit)?
Amphibian Landing Site

3. Where is/was the site located (provide a description and give activity map coordinates)? at   oil spillage
Coord. 815285

4. Describe how the site is/was operated.

— Discharge of POL to Courthouse Bay
— Possibly batt. acid
— NBC storage bldg.
} See 45A

Those notes apply to the Amphibious Vehicle Storage Area that Danny Sharp thought warranted a visit. The Amphib Landing site was an area of extensively

MH WA CF.

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

disturbed clean white sand.

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments No photos. Extensive cleared areas and ~~trails~~ for amphibious landing craft. Area kept ~~constant~~ constantly disturbed by vehicles & no vegetation except sparse grasses observed. Area looked like area in photo 7/28.

SITE INFORMATION C. LeJ

Site Number and Location: 45 A
Map Sheet 17 of 24. Near Bldg 5-A-29.

Initial if you visited this site: MH
photos: 7/30-33

Who gave you information on this site and what did they tell you?
Danny Sharpe. Known past oil spill area

Are you aware of other sources of information on this site? reports, sampling results, etc.

What are your personal observations of the site?
Possible oil scum on reeds at waters edge (Courthouse Bay). See photo log.

What would be the most compelling reason to do follow-up work at this site? (NOT whether you think it should be done or not)

Site confirmed on basis of written permits granted by [illegible]

ACTIVITY Che T

UIC

SITE NUMBER 40

68

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From pre-1942 To about 1972

2. What is/was the name of the site (e.g., slurry pit)?

Rifle Range Dump

3. Where is/was the site located (provide a description and give activity map coordinates)? at 748302 - material just from rifle range - some solvents, etc.

4. Describe how the site is/was operated.

- sandy soils, wooded area
- WTP sludge
- Bricks and building material
- wood

WA MH

MH (Continued) CF

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photo 8/30-32. concrete, wood, stove pipes, barrels(unidentified), fence posts observed on surface. Most material dumped in cleared area but some scattered back into present woods(photo 8/31).

I. RECEPTORS

Factor	Measurement, Observation	Information Obtained from:
Working population w/in 1000 ft:		
Distance to nearest well in aquifer of concern:		
Land use/zoning w/in 1 mile radius:		
Distance to reservation boundry:		
Critical environments w/in 1 mile radius:		
Water quality of nearest surface water body:		
Ground water use of the aquifer of concern:		
Population served by surface water supply w/in 3 miles downstream:		
Population served by the aquifer of concern supply w/in 3 miles of site:		

II. PATHWAYS

Factor
Distance to nearest surface water:
Net Preciptation:
Surface erosion:
Surface permeability:
1 yr-24 hr rainfall (or mean annual number of thunderstorms):
In which floodplain:
Depth to ground water:
Subsurface flows:
Direct acccess to ground water:
Lab evidence of contaminant migration (attach results):

III. WASTE CHARACTERISTICS *

Factor	Measurements, Observations	Information Obtained from:
Waste type :		
Waste quantity:		
Toxicity - Acute:		
Chronic:		
Persistency:		
Flammability:		
Reactivity:		
Incompatible wastes present:		
Corrosiveness:		
Solubility at 20°C:		
Bioaccumulative:		
Physical State:		

* NOTE: May be more than one of these pages per site

IV. WASTE MANAGEMENT

Factor	Measurement, Observement	Information Obtained from:
Site containment		
Confidence level of information on site		

WORKSHEET FOR RANKING DISPOSAL SITES

Name of Base:

Name of Site:

Prepared by:

Date:

Years of site use: 19____ - 19____

Map Coordinates:

Location: (NE x ' from building Y, x' SW of intersection of A&B, etc.)

Approximate size:

Shops that may have used the site:

Description of site: (including basic hydrogeology and biology of site)
(Include sketch of site on back)

Comments:

This [illegible] - Flyash/sludge disposal area.

ACTIVITY Camp Le Jeune

UIC

SITE NUMBER 26

SECTION III. DETAILED DISPOSAL INFORMATION

24

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? No

Years of operation: From 1972 (at least) To present

2. What is/was the name of the site (e.g., slurry pit)?

Industrial Area Fly Ash Dump

3. Where is/was the site located (provide a description and give activity map coordinates)?

at 866380

4. Describe how the site is/was operated. surface dump of fly ash and cinders from central heating plant, water treatment plant spiractor sludge, sewage treatment plant sludge — all 7 sewage treatment plant sludges have been spread there for several years to present (at least 1972 – present)

Open dump

wrong ~~construction rubble~~, sewage sludge in 1960's

~~tank farm leak reported~~

— Sandy soil.

— fly ash, WTP sludge on sandy soil

WA WE MH MH CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
Fly ash and cinders		Central Heating Plant
Sewage Treatment Plant Digester (Anaerobic) Sludge		All 7 base Sewage Treatment Plants
Furniture Stripping Vat Wastes (lacquer, varnish, etc)		Former Furniture Stripping Shop

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Drainage on this site is probably to the south and west toward Cogdels Cr.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photos CRF-1 # 2-3 ground
CRF-3 #26+31 aerial
Photo 7/37;8/1-3. Borrow pit with fly ash catalyst from water treatment plant. Disturbed field with some areas becoming revegetated.

(Continued)

ACTIVITY CLEJ

UIC

SITE NUMBER 3

SECTION III. DETAILED DISPOSAL INFORMATION ~~26~~ 28

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From ~1946 (1947-8) To ~1971 (~1966-67)

2. What is/was the name of the site (e.g., slurry pit)?

Hadnot Point Burn Dump

3. Where is/was the site located (provide a description and give activity map coordinates)?

Near mouth of Cogdell's Creek at map Coord 855364. Between Hadnot Point sewage treatment plant and Cogdell's Creek. Dimensions ~ 1000' x 1000'

4. Describe how the site is/was operated. Mixed Industrial - Municipal type solid waste - received oil based paint which was burned refuse, trash + other wastes generated throughout industrial area in Hadnot Point and nearby housing areas. Wastes were burned + covered with dirt. Dump was graded and landscaped.

- may be on both sides of Cogdell (AP) Creek
- site on former wetland
- Wooten reported oily seepage to River
- Poss. leachate
- ? h-like area on dump?

WA MH WE CF

(Continued)

ACTIVITY CL

UIC

SITE NUMBER 3

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures.

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
Wastewater Treatment Plant Digested Sludge		Hadnot Point STP
Old paint cans		Paint Shop
Old Incinerator Ash		Incinerator

(Continued)

ACTIVITY CL

UIC

SITE NUMBER 3

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

see fact sheet

Adjacent to New River and ~~poss~~ built on a former course of Cogdle's Cr., there is a high probability of g.w. movement into the New River.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain.

ACTIVITY C 2

UIC

SITE NUMBER 3

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries?

12. Additional comments photographs: Roel 6 (MKH-6) negative #'s 1+2. Photos 8/4-5 present park area. mowed field. Also CRF-1 #3 ground
CRF-3 #32-36 ~~aerial~~ aerial

(Continued)

A

ACTIVITY CLeJ

UIC

SITE NUMBER 77

SECTION III. DETAILED DISPOSAL INFORMATION ~~33~~ 30

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From To

2. What is/was the name of the site (e.g., slurry pit)?

Sneads Ferry Rd - Fuel Tank Sludge Area

3. Where is/was the site located (provide a description and give activity map coordinates)? at 898324 in sand ridge by tank trail (from J. Wooten)

4. Describe how the site is/was operated. need info on whether disposal area is lined; amount of sludge involved; geohydeology.

present Base Safety Officer - had no documents regarding this site from "Mr. Tollman's Administration" - was unaware of any site on Sneads Ferry Rd

(Continued) CP

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Soil: Kureb fine sand. K≈ 6.0 - 20 IN/HR ← FACT!
Hydraulic gradient in WTA would be toward French's Creek.
Recommendation: Place 3 monitor wells downgradient and one upgradient if sufficient quantity of wastes disposed here. Sample and analyze for appropriate constituents.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments _____

(Continued)

A

ACTIVITY C Le J

UIC

SITE NUMBER 33

SECTION III. DETAILED DISPOSAL INFORMATION

35

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed?

Years of operation: From To

2. What is/was the name of the site (e.g., slurry pit)?

Geiger Area Fuel Farm

3. Where is/was the site located (provide a description and give activity map coordinates)? at 756466 Mogas Spill

4. Describe how the site is/was operated. Fuel Depot

5 above ground POL tanks

vehicle fuel pumps

asphalt berm + basin

Some oil staining of soil only outside fence

WA MH MH CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
Mogas Spill		Underground break

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

→ May want to recommend sampling similar to that performed at Langley AFB in area of fuel leaks.
Closest wells: TC-100 completed in WTA; TC-104 completed beneath 46ft thick confining zone.
Soil Type: Baymeade Urban Land Complex. K ≐ 2.0-6.0 in/hr.
Contaminants from this site would probably migrate toward Brinson Creek via surface runoff and movement in the WTA.
Threat to wells is low as they are upgradient of the site.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments Photos CRF rolls

Photo 9/26-28 No major evidence of oil spills.

ACTIVITY C LeJ A

UIC

SITE NUMBER 34

SECTION III. DETAILED DISPOSAL INFORMATION 36

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? Closed

Years of operation: From pre 195X° To late 1950's (58/9)

2. What is/was the name of the site (e.g., slurry pit)?

Geiger Area Sewage Treatment Plant Dump

3. Where is/was the site located (provide a description and give activity map coordinates)? at 76362

4. Describe how the site is/was operated. mixed Industrial (Air Station) and Municipal Solid Waste — burned and buried — found ~~the~~ mound of burn + fill area ≅ 200 feet by 100 feet and about 10-12 feet abort surrounding land — debris and refuse scattered throughout area

Trash and garbage burned in open, low area and periodically (~1wk) covered over with earth.

~~Small qty asphalt~~ = wrong area

WA MH

MH CF

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin
Misc. refuse		Camp Geiger Area
Liquid and Solid Industrial Wastes		MCAS

(Continued)

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

Soil: Baymeade-Urban Land Complex. K ≈ 2.0 - 6.0 IN/HR. Probable movement of contaminants via WTA and surface runoff toward Brinson Cr. and the New River. No threat to water supply wells as they are both distant and well upgradient. Recommend 1 upgradient well and 3 downgradient wells.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION (CONTINUED)

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments photos - CTF rolls

(Continued)

TABLE 1 (Continued)

II. PATHWAYS CATEGORY

A. Evidence of Contamination

Direct evidence is obtained from laboratory analyses of hazardous contaminants present above natural background levels in surface water, groundwater, or air. Evidence should confirm that the source of contamination is the site being evaluated. The samples should have been off site but near the site.

B-1 POTENTIAL FOR SURFACE WATER CONTAMINATION

Rating Factor	Rating Scale Levels 0	1	2	3	Multiplier
Distance to nearest surface water (includes drainage ditches and storm sewers)	Greater than 1 mile	2,001 feet to 1 mile	501 feet to 2,000 feet	0 to 500 feet	8
Net precipitation (total precipitation minus evapotranspiration)	Less than -10 in.	-10 to + 5 in.	+5 to +20 in.	Greater than +20 inches	6
Surface erosion	None	Slight	Moderate	Severe	8
Soil permeability	0% to 15% clay ($> 10^{-2}$ cm/sec)	15% to 30% clay 10^{-2} to 10^{-4} cm/sec)	30% to 50T% clay (10^{-4} to 10^{-6} cm/sec)	Greater than 50% clay ($< 10^{-6}$ cm/sec)	6
Rainfall intensity based on 1 year 24-hr rainfall (or mean annual number of thunderstorms)	Less than 1.0 inch (0-5)	1.0-2.0 inches (6-35)	2.1-3.0 inches (36-48)	Greater than 3.0 inches (>50)	8
B-2 POTENTIAL FOR FLOODING					
Floodplain	Beyond 100-year floodplain	In 100-year floodplain	In 10-year floodplain	Floods annually	1
B-3 POTENTIAL FOR GROUND-WATER CONTAMINATION OF THE AQUIFER OF CONCERN					
Depth to ground water	Greater than 500 ft	50 to 500 feet	11 to 50 feet	0 to 10 feet	8
Net precipitation	Less than -10 in.	-10 to +5 in.	+5 to +20 in.	Greater than +20 inc.	6
Soil permeability	Greater than 50% clay ($> 10^{-6}$ cm/sec)	30% to 50% clay (10^{-4} to 10^{-6} cm/sec)	15% to 30% clay (10^{-2} to 10^{-4} cm/sec)	0% to 15% clay ($< 10^{-2}$ cm/sec)	8
Subsurface flows	Bottom of site greater than 5 feet above high ground-water level	Bottom of site < 5 feet above high ground-water level Bottom of site occasionally submerged (1-3 times/year)	Bottom of site frequently submerged (>3 times/year)	Bottom of site submerged.	8
Direct access to ground water (through faults, fractures, faulty well casings, subsidence fissures, etc.)	No evidence of risk	Low risk	Moderate risk	High risk	8

WATER & AIR RESEARCH INC.
6821 SW Archer Rd. P. O. Box 1121
GAINESVILLE, FLORIDA 32602
(904) 372-1500

JOB Camp Lejeune
SHEET NO. 1 OF 2
CALCULATED BY HDP DATE 5/20/82
CHECKED BY DATE
SCALE

Revised Site #	Orig Site #	Revised Site #	Orig Site #	Revised Site #	Orig Site #
1	18	18	58	35	33
2	75	19	27	36	34 no pic
3	19	20	28	37	35
4	81	21	7	38	71
5	20	22	25	39	78
6	12	23	76	40	36
7	17	24	26	41	4
8	10	25	30	42	49
9	11	26	29	43	53
10	21	27	24	44	54
11	6	28	3	45	55
12	9	29	5	46	64
13	23	30	77 No Pic	47	65
14	13	31	79	48	60 no pic
15	15	32	32	49	66
16	14	33	47	50	67
17	16	34	48	51	68

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JOB Camp Lejeune
SHEET NO. 2 OF 2
CALCULATED BY HNP DATE 5/20/82
CHECKED BY _____ DATE _____
SCALE _____

Revised Site #	Orig Site #	Revised Site #	Orig Site #
52	61	(69)	1
53	62	70	72
(54)	2	71	73
55	50	72	74
56	63		
57	51		
58	69		
59	70		
60	8		
61	39		
62	37		
63	38		
(64)	42 No pic		
65	43		
(66)	45		
67	80		
(68)	40		

Source:
U.S. Marine Corps History Office

CAMP LEJEUNE.

Early History: Camp Lejeune is located on the scenic banks of New River, Onslow County, in the south coastal area of North Carolina. It is known that early French and Spanish explorers visited the coast of North Carolina, but no serious attempt was made to establish a settlement until near the close of the 16th century, when Sir Walter Raleigh, in April 1584, received from Queen Elizabeth a patent for colonization in the New World. Philip Amadas (Amidas) and Arthur Barlowe were sent out in early 1584 on this mission, and returned in September with an interesting account of what is now the coast of North Carolina. The following April, a colony of 108 men under Ralph Lane sailed from Plymouth in a fleet of seven small ships commanded by Sir Richard Grenville. The colony was established in August 1585, however, in June 1586, the entire colony left for England because of threatened famine and destruction by the Indians. Because of his great disappointment of the return of the first colony, Raleigh despatched another colony consisting of 121 persons under John White, whose grand-daughter, Virginia Dare, was the first English child to be born in America. The first permanent English colony in North Carolina was established at Albemarle in 1660

by people from Virginia. A war with the Tuscarora Indians in 1711-1713, resulted in the defeat of the Indians, and the removal of the greater part of the tribe to New York, where they became the sixth nation of Iroquois confederacy. Wars seriously affected the New River regions throughout their early history. After the Indian wars, Spanish buccaneers and pirates beset the region. During the Spanish "invasion" in 1740s, prisoners were brought to Onslow County through Bear Inlet. The first courthouse for Onslow County is believed to have been located at Courthouse Bay, six miles from the mouth of New River, now an integral part of Camp Lejeune. The second county seat and courthouse were located on North East Branch, where the Marine Officers' quarters now occupy at the scenic Paradise Point. Stocks and the whipping post were ordered along the courthouse and jail. Court met from 1737 to 1744, when it was recorded:

> "The court being met at ye place where ye courthouse formerly stood & finding ye house by some malishious and evil disposed person was burnt, they were pleased to adjoin to ye house of John Taylor."

Within two years after the creation of the Marine Corps, American Marines were on duty in the coast area, and were assigned in 1777 to the Privateer STURDY BEGGAR of New Bern. They sailed against two English brigs which had arrived within the bar in the Carolina seashore and captured several vessels.

While passing through Onslow County from New Bern to Wilmington, during his southern tour in 1791, President George Washington made the following entry in his diary: "The whole road from Newbern to Wilmington .... passes through the most barren country I have ever beheld."

Activation of Marine Corps Camp: When the world crisis tended to draw the United States into global conflict, the Marine Corps anticipated the need for a mammoth East Coast Fleet Marine Force training center, since their expansion plans had outgrown Quantico and Parris Island. On 15 February 1941, their request for new ground and air bases was approved by the House Naval Affairs Committee. Chairman Fred M. Vinson issued the following report to accompany a bill authorizing the Secretary of the Navy to proceed with the project:

> "After detailed reconnaissance by a board of Marine officers of various areas along the Atlantic and Gulf coasts between Norfolk, Va., and Corpus Christi, Tex., it was determined that the areas in the vicinity of the New River and Neuse River in North Carolina, were the only ones which meet the requirements....
>
> "In order that there will be no operational interference between airplanes and elements of the ground forces, such as artillery and anti-aircraft, it is advisable to establish the air facilities in an area outside the divisional area proper. The distance between the two, however, should not be so great as to render the necessary ground-air liaison and combined training impractical. They should be as close as possible without mutual interference.

"A suitable training area for all elements of Marine division requires that there be access to deep-water ports; that it include an area of at least ten miles square, unobstructed by public roads, railroads, industries or habitations which would interfere with firing by artillery weapons up to six inch, or with aircraft and anti-aircraft gunnery; that landing beaches providing varying surf conditions be available; that suitable sites exist for the operation of land and sea planes; that it be in proximity to recreation areas; and that rail transportation and power be readily available."

An initial appropriation of $1,500,000 for surveys and land purchases was announced on 15 February 1941 by President Franklin D. Roosevelt and Secretary of the Navy Frank Knox. Members of a special Marine Corps board were appointed to select the sites. They were Brigadier General Julian C. Smith, Colonel Pedro del Valle and Lieutenant Colonel Thomas J. Cushman. From land, sea and air, careful inspections were made over this territory, and by 10 April, they submitted a definite recommendation that New River be chosen for the ground base and Neuse River for the air station. The Navy Department announced on 22 April that three firms of Charlotte, North Carolina had been awarded the contract for building a $14,575,000 Marine Corps base in Onslow County, the largest original contract up to that time awarded in the south for the nation's defense. Two Civilian Conservation Corps Companies assisted in road construction, forestry and other phases of developing Onslow swamp lands into a modern military post.

On 16 July 1941, Secretary of the Navy Knox arrived at the New Bern airport for his first official inspection of the Marine Corps site, where he was met by Colonel W. P. Hill (now Major General, and the Quartermaster of the Marine Corps) liaison officer between the Marine Corps and the Navy Engineers, Major John Kaluf, purchasing and disbursing officer, and Lieutenant Commander Madison Nicholas, USNR, first naval officer in charge of construction. The Secretary expressed hearty approval of the progress and plans, although heavy rains during his visit, made the dirt roads so muddy that the automobile in which the party rode, became frequently mired. By then the Tent City was nearing completion.

When units of the 1st Marine Division arrived at New River in September 1941, they found on the reservation a little town named "Marines", which had previously been named in honor of one of the oldest families of Onslow county. The Marine Barracks at New River, under the command of Colonel D.L.S. Brewster, was activated on 15 September 1941, and on 20 September, the American flag was raised over the U.S.Marine Corps reservation, which embraced approximately 85,000 acres of land and 26,000 of water acreage.

On 7 December 1941, two commands were established at New River: the Marine Barracks, consisting of a small maintenance staff under Colonel Brewster, stationed at Montford

Point, and the 1st Marine Division under the command of Major General Philip H.Torrey, located at the Tent City. All Marine Corps assignments of almost every kind, were rehearsed at New River, except preliminary boot training for recruits conducted at Parris Island, South Carolina.

After the departure of the forward echelon of the 1st Marine Division, the Fleet Marine Force Training Center, New River was organized in accordance with instructions contained in a letter dated 23 May 1942 from the Commandant of the Marine Corps, Major General Thomas Holcomb, to the Commanding General, Rear Echelon, 1st Marine Division, which is quoted in part as follows:

> "Please organize the Training Center, Fleet Marine Force, Marine Barracks, New River, North Carolina, to include all Fleet Marine Force Units, and such replacement units as may be organized. Units not specifically attached to the Amphibious Corps, Atlantic Fleet, will operate under this headquarters...."

Completion of the permanent quarters was a gigantic task for 1942. More than 1400 permanent buildings and 1000 huts were projected. So rapid was the translation of blueprints into reality that by August 1942, the base Headquarters was moved from Montford Point to Hadnot Point, and occupied by post troops, while Montford Point was taken over by the negro recruits. By that time, the 1st Marine Division, which had received its final training at New River, was already en-

gaged in combat against the Japanese on Guadalcanal under General A. A. Vandegrift. However, their places in Tent City were filled by other Marines. In September 1942, the Rifle Range was completed, with three 50-target ranges, and a pistol range. Marine recruits were brought from Parris Island for rifle practice at New River after undergoing the first phases of boot training. With consideration for future requirements for training activities, the Training Center was reorganized in December 1942. The Commandant further directed that the following list of activities within the Training Center be organized: Headquarters Battalion, School Battalion, Signal Battalion, Quartermaster Battalion, Engineer Battalion, Artillery Battalion, Infantry Battalion, Barrage Balloon Group, Parachutge Battalion, and Replacement Battalions.

Effective 20 December 1942, the Marine Barracks, New River was redesignationed as Camp Lejeune and included the following activities: Marine Barracks, Training Center and Fleet Marine Force units. The name "Camp Lejeune" was chosen in honor of the late Lieutenant General John Archer Lejeune, who commanded the 2d Division of the American Expeditionary Forces in France during World War I, and served as Commandant of the Marine Corps from 1920 to 1929. It was a very fitting name, since General Lejeune had a large part in the develop-

ment of amphibious training in the Corps.

In addition to the tremendous training program at Camp Lejeune, the year to fruition of elaborate programs for athletics and recreation. Supplementing the area theatres, gymnasiums, post exchanges, mess halls and barracks were service men's clubs, a non-commissioned officers' clubhouse and a large recreation hall for Women Marines.

Women Reserves - In March 1943, Major Ruth Cheney Streeter, director of the Marine Corps Women Reserves, paid her first visit to Camp Lejeune to make plans for the arrival of one of the largest contingents of Women Marines anywhere in the Unites States. Late in April, 10 Women Reserve Officers arrived at Camp Lejeune, and by 1 May, the first enlisted personnel (about 145 women reserves) arrived from Hunter College, New York, where they had received their indoctrination training; 40 of them started a four-weeks' course at a new non-commissioned officers' school set up within the Women's Reserve Battalion; 70 were sent to the Quartermaster School for three months; 20 undertook a six-weeks' course at the Cooks and Bakers' School; and 15 reported for four weeks of classes at the Motor Transport School. The largest mass movement of Women Marines took place in July 1943, when 75 officer candidates and 525 recruits from all parts of the United States arrived to form the first classes at the new Marine Corps Women's Reserve School - the first school of its kind ever to be established at

a regular Marine Corps post. New classes arrived bi-weekly, until approximately 3000 were at Camp Lejeune to study or to train under rules and along deversified lines similar for men. One of main streets within the Marine Corps Women's Reserve School area was named "Virginia Dare" in honor of the first white child born of English parentage in the New World, and another thoroughfare was named "Lucy Brewer", so-called because of a mythical first Women Marine, whom it is said, attired herself in masculine clothes, and served on board the renowned CONSTITUTION during the War of 1812.

In August 1943, Major Streeter attended the first graduation ceremonies of the first women officer candidates who received their commissions. Women Marines proved their value to the Marine Corps by participating in almost every type of Marine study and job except actual combat. In the latter days of the war, the WRs served in Hawaii.

Negro Marines - Approximately 18000 negroes were trained at Camp Lejeune, the Marine Corps' only recruit depot for negroes. World War II was the first conflict in which there were negro Marines. For the first time in history of amphibious invasions, the colored race participated in the South Pacific landings and campaigns. When Japanese troops staged a desperate counter-attack on American positions during the bloody struggle for Saipan, it is said that about a dozen Negro Marines

who had been ordered into the defense lines of the 4th Marine Division, advanced bravely against the enemy, despite intense rifle, machine gun, mortar and artillery fire, and killed about 15 Japs, and assisted in checking the counter-attack. The Negro Marines fought on Guadalcanal, Bougainville, New Georgia, the Russell and Mariana Islands, and their courage under fire spoke well for their military training received at Camp Lejeune. Many preferred to become stewards, and by June 1943, a Stewards' Branch Battalion was activated to train cooks, butchers, stewards and waiters for Marine Corps messes in all parts of the world. The 51st and 52nd Defense Battalions were activated in 1943 at Montford Point, Camp Lejeune, and were sent out to the south Pacific area in 1944.

War Dogs - The Civilian Conservation Corps Camp (Camp Knox) at Camp Lejeune was converted into a war dog training camp in July 1942, and in January 1943, the Marine Corps War Dog Training School was activated, under the direction of Captain Jackson H. Boyd, of Southern Pines, North Carolina; Captain Boyd had been a fox hunter, a sportsman of national fame, and a former Army officer during World War I. The best modern kennels and equipment possible were used in the war dog training camp. Strict care was exercised in the selection of applicants; official records were kept for each canine, with daily reports on aptitudesa and progress. For several days, the dog recruits were isolated until complete physical examinations had been made, and upon completion, the dogs were

turned over to their trainers. Like all good Marines, they were taught principally to obey orders, which training required patience, persuasion and firmness. These canine Marine Devil dogs proved their values as aides to the fighting Marines in the Pacific. For the first time in American history, a trained war dog unit landed with Marines on Bougainville, and lived up to the Marine Corps motto "Semper Fidelis". More than 450 dogs, mostly Doberman Pinschers, were trained at Camp Lejeune and about 1,048 processed.

Dutch Marines - In December 1944, the Royal Netherlands Marines (the 279-year-old military organization) arrived at Camp Lejeune. Because of their Nazi-held homeland, they were unable to drill and train during World War II. In accordance with the Lend-Lease Act, the United States Marine Corps assumed the training of the Dutch Marines. They were organized from members of the old Netherlands Marine Corps, the Netherlands Army in the Indies, air units of the Dutch Army and Navy, and recruits from liberated Holland. They wore uniforms like those worn by the United States Marines, but they had their own insignia featuring a standing lion surmounted with a crown. Their shoulder blaze was a simple curved oblong patch with the words "Netherlands Marines". Their traditional motto was "Je Maintiendrai", or "I shall maintain."

Miscellaneous Marine Corps Training - At Courthouse Bay, landing craft and lighters were used in river traffic, and a barrage balloon school was operated. Para-marines were also trained here until the Corps discontinued parachute troops. Glider training was planned but was never consummated. An amphibian tractor-tank base was of outstanding importance. A large "mockup" built to resemble the side of a transport, with cargo nets along its side, enabled the Marines to learn how to scramble rapidly from a ship, fully equipped with weapons and ammunition. Anti-aircraft units were trained at Camp Lejeune, as were infantry companies, artillery groups, anti-tank outfits, motor transport organizations, armed scouting units, engineer battalions, sabotage and demolition specialists, and raider battalions - in fact, every kind of training for a complete Marine Division. With every branch of modern warfare represented in its framework, the Fleet Marine Force, not only trained its Camp Lejeune Marines for invasions but also for guerilla warfare, and hand-to-hand combat.

Conclusion - The end of World War II found Camp Lejeune with a population of about 31,000, consisting of male and female Marines, Negro Marines and a Detachment of Netherlands Marines. The immediate effect of the war's end was to remove the emphasis from intensive training program, and to direct the main effort toward processing the personnel for discharge. The Redistribution Battalion, activated on 12 August 1945, had

the mission of performing the medical and dental screening, and effecting the discharge of eligible personnel. On 14 September, the Redistribution Battalion was redesignated the Redistribution Battalion, Redistribution and Replacement Regiment, Camp Lejeune, and finally on 1 December, the designation of the regiment was changed to Separation and Replacement Regiment.

The Women's Reserve Separation Company, activated 1 October 1945, effected separation from the Marine Corps for Women Reserves from Camp Lejeune, Parris Island, Cherry Point, and some 1,435 women from West Coast stations as well.

The Netherlands Marine Unit in training at Camp Davis, Holly Ridge, North Carolina, under the supervision of the Commanding General, Marine Training Command at Camp Lejeune, completed their training the latter part of November, and by 26 December 1945, the Dutch Marines had concluded their evacuation of Camp Davis.

On 6 December 1945, the War Dog Training and Administrative Headquarters was disbanded, and the personnel transferred to the War Dog Training School.

Effective 1 April 1946, North Carolina Highway number 172 was opened to transient traffic through the Marine Corps reservation as the result of an agreement between the Bureau of Yards and Docks, U.S.Navy, the Commanding General of Camp Lejeune, and the North Carolina State Highway Department, whereby the state of North Carolina assumed responsibility for the

operation and maintenance of the Snead's Ferry Bridge.

NPL-87-2-A

National Priorities List

Stands 36.M

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

CAMP LEJEUNE MARINE CORPS BASE
Onslow County, North Carolina

Lant Riv

Camp Lejeune, a U.S. Marine Corps Base established in 1941, covers 170 square miles in Onslow County, North Carolina. The complex has a number of facilities, including the Marine Corps Air Station New River, which adjoins the base. The main function of the complex is training. ABC One Hour Cleaners in nearby Jacksonville is also being proposed for the NPL in June 1988.

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. The NPL site is "Site #21, Lot #140," a 220- by 890-foot area 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 from 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 their drinking water from wells within 3 miles of Site #21, the nearest one 1,400 feet away.

Camp Lejeune is participating in the Installation Restoration Program, the specially funded program established in 1978 under which the Department of Defense has been identifying and evaluating its past hazardous waste sites and controlling the migration of hazardous contaminants from these sites. The Navy has completed Phase I (records search). Phase II (hydrogeologic investigation) is under way.

Encl (1)

NPL-07-2-100

2 ??? Blew

Facility name: ~~Marine Corps Base, Camp Lejeune, Site # 21~~ Camp Lejeune Marine Corps. Base

Location: Onslow County, North Carolina

EPA Region: IV, Atlanta, Georgia

Person(s) in charge of the facility: Col. Tom Dalzell
Asst. Chief of Staff, Facilities

Name of Reviewer: Andrew Puffer Date: 11/18/86

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Pesticides were handled and disposed of at Site # 21 which is located on the Camp Lejeune Marine Corps Base in Onslow County, North Carolina. Sampling has confirmed the presence of pesticides in the soil on Site # 21.

Scores: S_M = 36.84 (S_{gw} = 53.33 S_{sw} = 7.09 S_a =)

S_{FE} =

S_{DC} =

FIGURE 1
HRS COVER SHEET

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Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	0 1 (2) 3	1	2	3	
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			13	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
Total Waste Characteristics Score			19	26	
5 Targets					3.5
Ground Water Use	0 1 2 (3)	3	9	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 / 12 16 18 20 / 24 30 32 36 (40)	1	40	40	
Total Targets Score			49	49	
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			36309	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} =	63.33		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

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Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.						
2 Route Characteristics						4.2
Facility Slope and Intervening Terrain	(0) 1 2 3		1	0	3	
1-yr. 24-hr. Rainfall	0 1 2 (3)		1	3	3	
Distance to Nearest Surface Water	0 1 (2) 3		2	4	6	
Physical State	0 1 -2 (3)		1	3	3	
Total Route Characteristics Score				10	15	
3 Containment	0 1 2 (3)		1	3	3	4.3
4 Waste Characteristics						4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)		1	18	18	
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8		1	1	8	
Total Waste Characteristics Score				19	26	
5 Targets						4.5
Surface Water Use	0 1 (2) 3		3	6	9	
Distance to a Sensitive Environment	0 (1) 2 3		2	2	6	
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40	
Total Targets Score				8	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				4560	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} =	7.09		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

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NOT RATED

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max Score	Ref (Section)
1 Observed Release	0 45	1		45	5.1
Date and Location:					
Sampling Protocol:					
If line 1 is 0, the S_a = 0. Enter on line 5. If line 1 is 45, then proceed to line 2.					
2 Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
Total Targets Score				39	
4 Multiply 1 x 2 x 3				35,100	
5 Divide line 4 by 35,100 and multiply by 100		S_a =			

FIGURE 9
AIR ROUTE WORK SHEET

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	S	S^2
Groundwater Route Score (S_{gw})	63.33	4010.69
Surface Water Route Score (S_{sw})	7.09	50.27
Air Route Score (S_a)	———	———
$S_{gw}^2 + S_{sw}^2 + S_a^2$		4060.96
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		63.73
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		36.84

FIGURE 10
WORKSHEET FOR COMPUTING S_M

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DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

FACILITY NAME: Camp Lejeune Marine Corps Base. ~~MARINE CORPS BASE, CAMP LEJEUNE, SITE # 21~~

LOCATION: Onslow County, North Carolina

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1. OBSERVED RELEASE
Contaminants detected (5 maximum):

No Supporting Data.

Rationale for attributing the contaminants to the facility:

***

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

The aquifers of concern are the water table aquifer (Upper Sandy aquifer) and the Castle Hayne Limestone Aquifer (refs. 1A & 2B, pp 5-7 thru 5-15). The water table aquifer lies approximately 10 feet below the surface (ref. 2B, p. 5-13) and ranges in thickness from about 20 feet in northwestern Onslow County to around 80 feet in the eastern part (ref. 1A, pp 242 & 251). This aquifer consists of sand, silt, limestone, and small amounts of clay (ref. 2B, p 5-13). The water table aquifer is underlain by the Castle Hayne Limestone (ref. 1A, pp 242 & 251) which varies in thickness from approximately 100 feet to more than 200 feet and consists of shell, limestone, marl, calcareous sand and clay (ref. 2B, pp 5-7). Logs from base wells indicate that confining beds within the strata are discontinuous therefore making the Castle Hayne Limestone only semi-confined with no continuous confining layers preventing groundwater flow between the two aquifers (refs. 2A and 2B, pp. 5-13 & 5-14). Groundwater in the aquifer beneath the Castle Hayne Limestone is usually brackish (refs. 1A, pp 242 & 251, and 2B, p 5-11).

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Eleven feet and six inches (ref. 2A, well HP-609).

Depth from the ground surface to the lowest point of waste disposal/storage:

Soil contamination was detected at 2 feet below the surface (ref. 5A, samples 21S2C, 21S3C, 21S4C).

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Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

56.0 inches (ref. 6A).

Mean annual lake or seasonal evaporation (list months for seasonal):

41.7 inches (ref. 6A).

Net precipitation (subtract the above figures):

14.3 inches

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Sand, silt, limestone and small amounts of clay (ref. 2B, p 5-13).

Permeability associated with soil type:

10^{-3} to 10^{-5} cm/sec (ref. 7).

Physical State

Physical state of substance at time of disposal (or at present time for generated gases):

Liquid (ref. 2B, pp 2-7 & 6-48).

***

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3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Soil contamination (refs. 5A & 3, p 2-26 & Table 2-8): Evaluated as uncovered, unstablized waste piles with no liner.

Method with highest score:

Soil contamination (ref. 7).

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:	Matrix Score (refs. 7 & 8)
1. DDT	18
2. DDE	18
3. DDD	18
4. Aldrin	18
5. Heptachlor	18

These compounds were detecte in soil samples taken from t site (refs. 5A & 3, p. 2-26 Table 2-8). This site is reported to have been used f mixing pesticides and washin pesticide application equipm (ref. 2B, p. 6-48).

Compound with highest score:

DDT, DDE, DDD, aldrin, and heptachlor (refs. 7 & 8).

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Soil contamination was detected on site (refs. 5A & 3, p 2-26 & Table 2-8); however, waste quantity as deposited is unknown. A waste quantity of 1 is assigned (ref. 7).

Basis of estimating and/or computing waste quantity:

NA

***

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5. TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

The 35 wells supplying the Hadnot Point Water Distribution System are all screened in the Castle Hayne Limstone (ref. 1A, pp 245 -250). Thirty of the these wells are located within 3 miles of site # 21 (ref. 1A, p 252). Since this system cannot be replaced by the other Camp Lejuene water systems (ref. 1B), there is no alternate unthreatened supply available.

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Water supply well #602 (refs. 1A, p 252, 5A, & 5B).

Distance to above well or building:

1500 feet (refs. 5A & 5B).

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

The Hadnot Point Water Distribution System consists of 35 wells serving approximately half the Camp Lejeune Base population of 41,250 (ref. 1C). Conservatively assuming 40% of the base population uses this distribution system (ref. 1A says "almost half" and ref. 1C says "at least half") 16,500 people use water from the Hadnot Point distribution system.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

None identified

Total population served by ground water within a 3-mile radius:

16,500 people

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SURFACE WATER ROUTE

1. OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 max.):

No Supporting Data

Rationale for attributing the contaminants to the facility:

2. ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Less than 1% (ref. 5B).

Name/description of nearest downslope surface water:

Bearhead Creek, which receives site runoff via a railroad drainage ditch (ref. 2B, pp 6-49 & 6-50), flows westwardly into Wallace Creek (ref. 5B).

Average slope of terrain between facility and above-cited surface water body in percent:

Less than 1% (ref. 5B).

Is the facility located either totally or partially in surface water?

No (ref. 5B).

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Is the facilty completely surrounded by areas of higher elevation?

No (ref. 5B).

1-Year 24-Hour Rainfall in Inches

3.75 inches (ref. 6B).

Distance to Nearest Downslope Surface Water

3000 feet via site drainage ditch (ref. 5B).

Physical State of Waste

Liquid (ref. 2B, pp 2-7 & 6-48).

3 CONTAINMENT

Containment

Method(s) of waste or leachate contamiment evaluated:

Site # 21 is a lot with no dikes, trenches, etc. to contain surface runoff (ref. 4). There is a drainage ditch adjacent to the site that discharges into Bearhead Creek (ref. 2B, pp 6-49 & 6-50). The soil contamination at the site (refs. 5A & 3, p 2-26 & Table 2-8) is evaluated as uncovered, unconsolidated waste piles with no diversion or containment structures.

Method with highest score:

Contaminated soil (ref. 7).

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4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:	Matrix Score (refs. 7 & 8)
1. DDT	18
2. DDE	18
3. DDD	18
4. Aldrin	18
5. Heptachlor	18

These compounds were detected in soil samples taken from the site (refs. 5A, & 3, p. 2-26 Table 2-8). This site is reported to have been used for mixing pesticides and washing pesticide application equipment (ref. 2B, p. 6-48).

Compound with highest score:

DDT, DDE, DDD, aldrin, and heptachlor (refs. 7 & 8).

Hazardous Waste Quantity

Soil contamination was detected on site (refs. 5A & 3, p 2-26 & Table 2-8); however, waste quantity as deposited is unknown. A waste quantity of 1 is assigned (ref. 7).

Basis of estimating and/or computing waste quantity:

NA

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Recreational - Wallace Creek which is approximately 8000 feet downstream of the site (ref. 5B) is used for fishing (ref. 4).

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Is there tidal influence?

Wallace Creek is over 17 miles upstream from the New River Inlet (ref. 2B, p 5-12), and no tidal influence is identified (ref. 2B, p 5-11).

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

None identified (ref. 5B).

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

3000 feet to marshland around Bearhead Creek (ref. 5B).

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

A critcal habitat for the federally endangered red-cockaded woodpecker is within 1 mile of the site (ref. 2B, pp 5-21 thru 5-25).

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

None identified (refs. 1A, p 241, 2B, p 5-12, & 4).

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Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

NA

Total population served:

NA

Name/description of nearest of above water bodies:

NA

Distance to above-cited intakes, measured in stream miles.

NA

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AIR ROUTE

1. OBSERVED RELEASE

Contaminents detected:

No Supporting Data.

Date and location of detection of contaminants:

Methods used to detect the contaminants:

Rationale for attributing the contaminants to the site:

***

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Most incompatible pair of compounds:

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MARINE CORPS BASE, CAMP LEJEUNE, SITE # 21
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A. Driller's Logs for Camp Lejeune wells HP-608, HP-609, T-2, and T-5.

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DA 6/18/87 Final