MAIN/DDS/th
6240

From: Commanding General
To: Commandant of the Marine Corps (Code LFF-2)

Subj: Pollution Abatement Related to Past Hazardous Material Disposal Aboard Marine Corps Base, Camp Lejeune

Ref: (a) FONECOM btwn Mr. Paul Hubbell, CMC (Code LFF-2), and Mr. Danny Sharpe, BMainD, on 8 Dec 1981
(b) OIC, NEESA, ltr 112N/WSE/pn 11100/1:273A Ser 1754 of 18 Dec 1981

Encl: (1) CG, MCB, ltr MAIN/DDS/th 6240 of 27 Aug 1981
(2) Input for Pollution Control Report

1. The purpose of this letter is to identify an environmental concern having potential for adverse public reaction/controversy. Enclosures (1) and (2) provide background on recent actions involving an abandoned chemical landfill located aboard Marine Corps Base, Camp Lejeune where the subject disposal was accomplished. The subject situation was discussed with Headquarters Marine Corps Environmental personnel during reference (a).

2. This command is concerned that the NACIP, discussed in reference (b) and enclosure (1), will not address the subject issue in a timely manner.

3. Enclosure (2) outlines a proposed course of action to accelerate assessment and corrective action related to the chemical landfill site.

4. It is requested that guidance be provided regarding this matter. The point of contact is Mr. Danny Sharpe, Base Maintenance Division, (AUTOVON) 484-5003.

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MAIN/DOS/th
6240

AUG 27 1981

Mr. Charles E. Rundgren
Water Supply Branch
Sanitary Engineering Section
Division of Health Services
Post Office Box 2091
Raleigh, North Carolina 27602

Dear Mr. Rundgren:

The purpose of this letter is to provide follow-up information to telephone calls made to your agency on 25 August 1981 concerning the Camp Lejeune Chemical Landfill and the potable water system at the Rifle Range. Attached are results of laboratory analyses of water samples collected in the vicinity of the landfill and from the Rifle Range potable water system. Also attached is a map showing the locations of the landfill, the Rifle Range and the sample collection points.

Although use of the landfill was discontinued several years ago, concern regarding potential discharges from the landfill arose recently as a result of the implementation of federal and state hazardous waste regulations promulgated under the Resource Conservation and Recovery Act. At that time, this Command requested technical assistance from the Atlantic Division of the Naval Facilities Engineering Command, Norfolk, Virginia (LANTNAVFACENGCOM).

Based on the laboratory analyses mentioned above and on-site inspections of the landfill and the Rifle Range water system, LANTNAVFACENGCOM officials have concluded that the Rifle Range drinking water meets current drinking water standards, however, they recommended that careful monitoring continue. The Camp Lejeune Rifle Range water system has been included in a monthly trihalomethanes monitoring program. Since test well and surface water data from samples near the landfill, especially test well 16 and sample point number 5, indicate significant levels of contamination, this Command made a decision to notify both the general public and appropriate state agencies of this potential problem.

LANTNAVFACENGCOM has advised that Marine Corps Base Camp Lejeune is scheduled for FY-82 Initial Assessment Study (IAS) in the Navy Assessment and Control of Installation Pollutants (NACIP) Program. The IAS is the first phase in a program to identify, assess and control the contamination of the environment from past hazardous waste disposal operations at Navy and Marine Corps activities.

Questions regarding this matter should be directed to the Base Maintenance Officer, Marine Corps Base, Camp Lejeune, North Carolina, telephone (919) 451-2511.

Sincerely,

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C. G. COOPER
Major General, U. S. Marine Corps
Commanding

Encls

ENCLOSURE ( )

MCB CAMP LEJEUNE
SAMPLE DATE 10 APRIL 1981

ALL RESULTS IN PARTS PER BILLION (ppb)

	RR-45 WELL	RR-47 WELL	RR-97 WELL	RR-85 WTP FINISHED WATER TAP	SAMPLE POINT NO. 7*	SAMPLE POINT No. 8*
BENZENE						
TOLUENE						
CARBON TETRACHLORIDE						
1, 2 - DICHLOROETHANE						
1, 1, 1 - TRICHLOROETHANE						
1, 1 - DICHLOROETHANE						
1, 1 - DICHLOROETHYLENE						
1, 1, 2 - TRICHLOROETHANE						
CHLOROFORM			17	17		
METHYLENE CHLORIDE	4		6	3		
TETRACHLOROETHYLENE						
TRICHLOROETHYLENE			2			

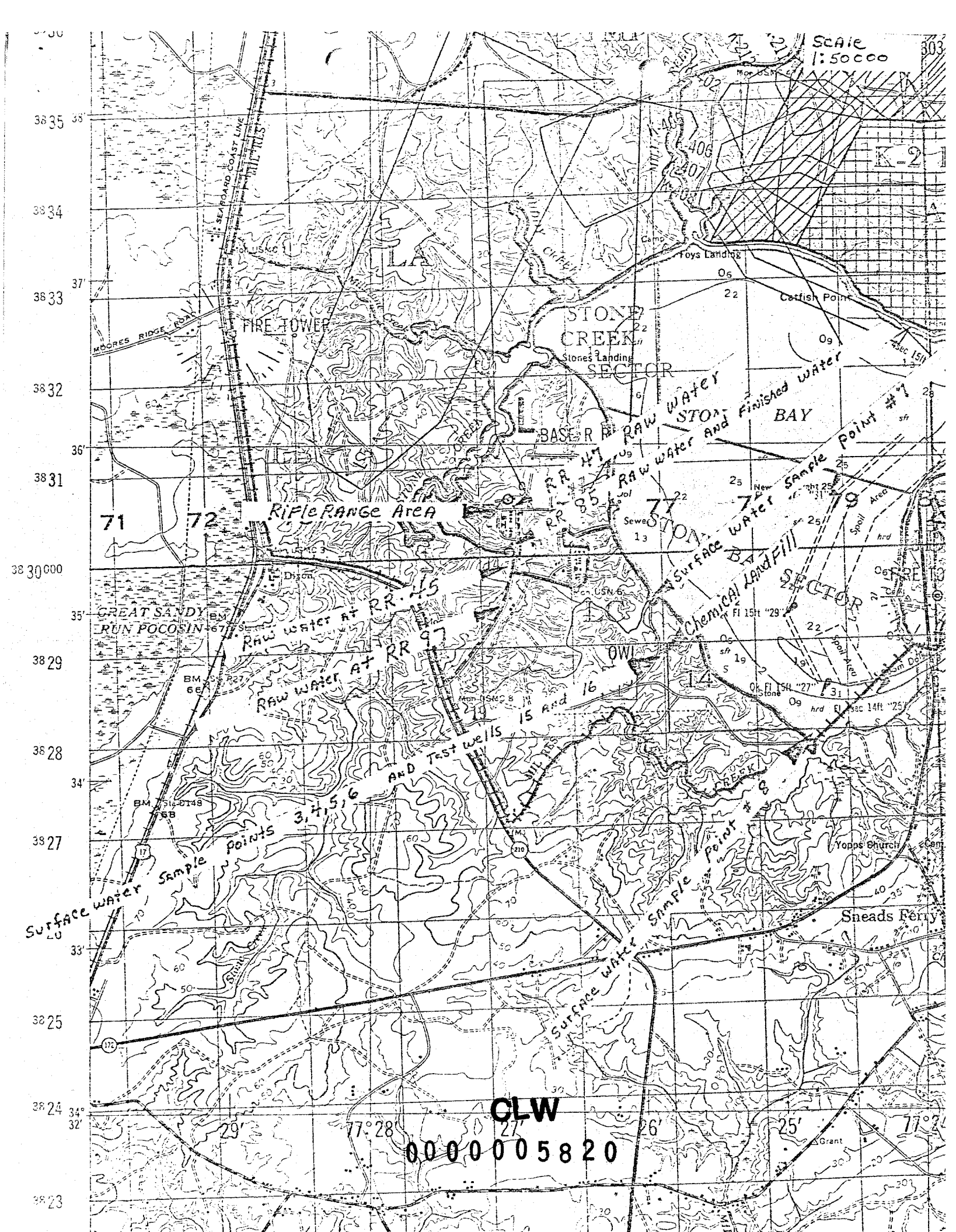
The above chart summarizes data from analysis run on water samples collected at locations indicated on Map shown on page 4. Pages 5 and 6 outline the parameters tested for and detection limits. Analysis sheets similar to those on pages 5 and 6 are available for each sampling point. Analyses were conducted by Jennings Laboratory, Inc., 1118 Cypress Avenue, P. O. Box 854, Virginia Beach, Virginia 23451, phone (804) 425-1498.

MCB CAMP LEJEUNE
SAMPLE DATE 10 APRIL 1981

ALL RESULTS IN PARTS PER BILLION (ppb)

	TEST WELL NO. 15	TEST WELL NO. 16	Sample Point No.3 Pool of Water Below Well No. 16	Sample Point No. 4 RAD POOL	SAMPLE POINT NO. 5*	SAMPLE POINT NO. 6*
BENZENE					1	
TOLUENE		52			101	
CARBON TETRACHLORIDE						
1, 2 - DICHLOROETHANE		52			176	
1, 1, 1 - TRICHLOROETHANE					103	
1, 1 - DICHLOROETHANE		38		2	101	
1, 1 - DICHLOROETHYLENE		74			258	
1, 1, 2 - TRICHLOROETHANE					252	
CHLOROFORM					35	
METHYLENE CHLORIDE	2	13	3	2	37	14
TETRACHLOROETHYLENE						6
TRICHLOROETHYLENE					141	

The above chart summarizes data from analysis run on water samples collected at locations indicated on map shown on page 4. Pages 5 and 6 outline the parameters tested for and detection limits. Analysis sheets similar to those on pages 5 and 6 are available for each sampling point. Analyses were conducted by Jennings Laboratory, Inc., 1118 Cypress Avenue, P. O. Box 854, Virginia Beach, Virginia 23451, phone (804) 425-1498.


Scale 1:50000
STONE CREEK SECTOR
BASE
RAW WATER
STONE BAY
RAW water and Finished water
Surface water sample Point #1
Chemical Landfill
SECTOR
RIFLE RANGE AREA
RR 85
RR 45
RR 97
RAW WATER AT
Surface water Sample Points 3, 4, 5, 6 AND Test wells 15 And 16
Surface water Sample Point #2
Surface water
Sneads Ferry
Yopps Church
Stones Landing
Toys Landing
Catfish Point
Dixon
Moores Ridge Road
Seaboard Coast Line
Great Sandy Run Pocosin
Stones Creek
Mill Creek
71
72
77
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JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

VA (EPA) CERTIFIED LABORATORY for Drinking Water Analysis - Microbiological, Inorganic and Organic

ASBESTOS ANALYSIS – NIOSH 582

Official Referee Chemists for:
AMERICAN OIL CHEMISTS SOCIETY
NATIONAL SOYBEAN PROCESSORS ASSOCIATION

Laboratory Certified by VA. STATE WATER CONTROL BOARD for Analysis of Effluents for NPDES PERMITS

CERTIFIED OFFICIAL U.S.D.A. LABORATORY FOR MEAT ANALYSIS

CERTIFICATE OF ANALYSIS

TO: Mr. Dave Goodwin
Building N-23 Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

DATE: May 29, 1981

SAMPLE OF FINISHED WATER #1

MARKED MCB CAMP LEJEUNE - Rifle Range Water Treatment Plant taken 5/20/81 Grab

Sample picked up 5/21/81 by JENNINGS LABORATORIES, INC. Total Cl 1.3 ppm

OFFICIAL SAMPLE BY: P. A. Rakowski

PRIORITY POLLUTANTS	PURGEABLE ORGANICS	DETECTION LIMITS µg/l
Acrolein	None Detected	2.0
Acrylonitrile	None Detected	2.0
Benzene	None Detected	10.0
Toluene	None Detected	10.0
Ethylbenzene	None Detected	10.0
Carbon Tetrachloride	None Detected	.007
Chlorobenzene	None Detected	.03
1,2-Dichloroethane	None Detected	.006
1,1,1-Trichloroethane	None Detected	.005
1,1-Dichloroethane	3.40 ppb	.004
1,1-Dichloroethylene	None Detected	.006
1,1,2-Trichloroethane	None Detected	.006
1,1,2,2-Tetrachloroethane	None Detected	.006
Chloroethane	None Detected	.01
2-Chloroethyl vinyl ether	None Detected	.08

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Respectfully submitted,
JENNINGS LABORATORIES, INC.

Laboratory Analysis No. 243

PRIORITY POLLUTANTS	VOLATILE ORGANICS (continued)	DETECTION LIMITS µg/l
Chloroform	94.40 ppb	.010
1,2-Dichloropropane	None Detected	.004
1,3-Dichloropropane	None Detected	.006
Methylene Chloride	4 ppb	.010
Methyl Chloride	None Detected	.009
Methyl Bromide	None Detected	.03
Bromoform	None Detected	.02
Dichlorobromomethane	None Detected	.006
Trichlorofluoromethane	None Detected	.03
Dichlorodifluoromethane	None Detected	.01
Chlorodibromomethane	None Detected	.01
Tetrachloroethylene	None Detected	.007
Trichloroethylene	None Detected	.005
Vinyl Chloride	None Detected	.01
1,2-trans-Dichloroethylene	None Detected	.006
bis(chloromethyl)ether	None Detected	.003

BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

1,2-Dichlorobenzene	.04
1,3-Dichlorobenzene	.04
1,4-Dichlorobenzene	.04
Hexachloroethane	.001
Hexachlorobutadiene	.001
Hexachlorobenzene	.002
1,2,4-Trichlorobenzene	.006
Bis(2-Chloroethoxy)methane	.40
Naphthalene	.04
2-Chloronaphthalene	.04
Isophorone	5.0
Nitrobenzene	5.0
2,4-Dinitrotoluene	.06
2,6-Dinitrotoluene	.06

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 BY _____ Chemist

1. Facility: Marine Corps Base
   Address: Camp Lejeune, North Carolina
   County: Onslow

2. Specific Type of Pollution: Miscellaneous types of hazardous materials/ wastes.

3. Amount of Pollution: Undetermined at this time.

4. Pollution Source and Discharge, Emission or Deposit Site:

Leacheate from inactive chemical landfill located approximately 1800 meters north west of the confluence of Everetts Creek and New River and 300 meters west of New River shoreline.

5. Existing Treatment and Other Control Measures:

Three existing monitoring wells located at the site are periodically sampled and analysis performed. No remedial/abatement facilities/actions are in place or programmed.

6. Effectiveness of Existing Treatment and Control:

Adequacy of monitoring wells cannot be documented. Hydrological conditions at the site and hydrological relationships between the site and surrounding potable water wells/supplies are unknown.

7. Remedial Measures Proposed and Estimated Effect on Correcting Problem:

Provide the following: (a) Hydrological/engineering evaluation of the site; potentially affected ground/surface water supplies; and adequacy of existing monitoring program. (b) Design and construction of additional monitoring facilities/wells if required. (c) Develop baseline data for groundwater quality at the problem site.

8. Applicable Standards:

   a. Comprehensive Environmental Response, Compensation and Liability Act of 1980.

   b. Resource Conservational Recovery Act Regulations.

9. Project Schedule:

To be determined.

10. North Carolina Public Health Agency has been advised of the potential problem and supplied with available monitoring data. The general public was advised by a news release. The site was identified to the EPA as required by the Comprehensive Environmental Response Compensation and Liability Act of 1980.

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ENCLOSURE (2)