

CL-2.04

02.04-03/11/86-00297



UNITED STATES MARINE CORPS  
Marine Corps Base  
Camp Lejeune, North Carolina 28542-5001

IN REPLY REFER TO:

6280/9  
FAC

11 MAR 1986

From: Commanding General, Marine Corps Base, Camp Lejeune  
To: Commander, Atlantic Division, Naval Facilities Engineering  
Command, Norfolk, VA 23511-6287 (Code 114)

Subj: GROUNDWATER QUALITY DATA

Ref: (a) U.S.E.P.A., Region IV ltr 4WD-ER dtd 3 Feb 86  
(b) Phonecon btwn Mrs. Barnette, LANTDIV and Mr. Alexander,  
MCB-FAC of 24 Feb 86

Encl: (1) Water Quality Data

1. We are forwarding the subject data as requested by the references in conjunction with the N.A.C.I.P. program. The enclosure represents data provided by N.C. Divisions of Health Services and Environmental Management, Raleigh, N.C. Data obtained by Navy contract laboratories should be combined with the enclosure for forwarding to EPA per reference (a) request.

2. As agreed during reference (b), all available data on drinking water quality for the N.A.C.I.P. program will be centrally stored in the LANTDIV Environmental Quality Branch. Mr. Bob Alexander, MCB Environmental Engineer, AV 484-3034 will provide assistance in this regard.

*R.A. Tiebout*  
R. A. TIEBOUT  
By direction

Copy to:  
CMC (LFL)

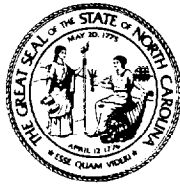
CONTENTS

DRINKING WATER QUALITY DATA

obtained for the

NAVY ASSESSMENT AND CONTROL OF INSTALLATION POLLUTANTS PROGRAM  
Camp Lejeune, North Carolina

- NCDEM ltr w/lab report dtd 21 June 85
- NCDHS lab reports dtd 22 Feb 85 (two reports)
- NCDHS lab reports dtd 8 Feb 85
- NCDHS lab reports dtd 4 Feb 85
- NCDHS lab reports dtd 31 Jan 85
  
- Summary of Tarawa Terrace Water Quality Data, dtd 19 Mar 85  
indicating data reported telephonically by NCDHS for 11 March 85  
samples.



State of North Carolina  
Department of Natural Resources and Community Development  
Wilmington Regional Office

James G. Martin, Governor

S. Thomas Rhodes, Secretary

DIVISION OF ENVIRONMENTAL MANAGEMENT

June 21, 1985

Colonel R.A. Tiebout  
Assistant Chief of Staff, Facilities  
United States Marine Corps  
Marine Corps Base  
Camp Lejeune, NC 28542-5001

SUBJECT: Transmittal of Analytical Results  
Three Community Water Supply Wells  
Tarawa Terrace I  
Camp Lejeune MCB  
Onslow County

Dear Colonel Tiebout:

Attached please find copies of the analytical results completed on samples that I collected on 9 April 1985 from wells TT-25, TT-26, and new TT.

Your staff's cooperation in helping me collect these samples was greatly appreciated.

Sincerely,

Rick Shiver  
Regional Hydrologist

RS/sbm

cc: Julien Wooten  
Mike Bell  
Perry Nelson

Attachments

*DEC 11 1985*

RECEIVED

TT-26

RECEIVED

PRO-12A

COUNTY UNSLAC

DEPARTMENT OF NATURAL RESOURCES  
& COMMUNITY DEVELOPMENT  
DEM

LAB NUMBER 97-122

QUAD NO. X 21 b SERIAL NO. JUN 6 1985

DATE REC'D 4/10/85

REPORT TO: (circle one)

WILMINGTON REGIONAL OFFICE  
GROUNDWATER FIELD/LAB FORM  
DEM

RECEIVED

JUN 4 1985

REC'D BY SD

ARO, WSRO, MRO, FRO, WaRO,  
WIRO, RRO, Ahoakie FO,  
OTHER \_\_\_\_\_

DATA ENTRY BY Am CK

DATA REPORTED 5/7/85  
6-3-85

PURPOSE: (circle one) baseline, pollution monitor, other \_\_\_\_\_

GROUND WATER SECTION

DATE COLLECTED 01 09 85 Time 10:15 By SD Location or RALEIGH #126

Description of sampling point ... Sampled interval ...

Remarks ...  
(pumping time, air temp, etc.)

Field Analysis By: ... Lat. 3444 23 N Long. 77 21 52 W

pH ... Spec. Cond. ... Temp. ... °C ... or ... Appearance ... Taste ...

Lab Analysis

✓ Alkalinity to pH 4.5	P00410	180 mg/l
Alkalinity, Hydroxide	P71830	21 mg/l
✓ Carbonate	P00445	<1 mg/l
✓ Bicarbonate	P00440	220 mg/l
✓ pH value (when analyzed)	P00400	8.2 units
✓ Arsenic (D)	P01000	<10 ug/l
Carbon dioxide	P00405	mg/l
✓ Chloride (D)	P00940	7 mg/l
✓ Color (True)	P00080	24 units
Cyanide	P00720	mg/l
✓ Dissolved solids (D)	P70301	230 mg/l
✓ Fluoride (D)	P00951	0.2 mg/l
✓ Hardness (as CaCO <sub>3</sub> ) (D)	P00900	190 mg/l
✓ Hardness (non-carbonate) (D)	P00902	10 mg/l
MBAS (D)	P38260	mg/l
Phenol (D)	P34466	ug/l
✓ Silica (D)	P00955	6 mg/l
✓ Sulfate (D)	P00946	5 mg/l
Specific Cond.	P00094	430 UMHOS/cm

✓ Ag-Silver (D)	P01075	<50 ug/l
✓ Al-Aluminum (D)	P01106	100 ug/l
✓ Ba-Barium (D)	P01005	<1000 ug/l
✓ Ca-Calcium (D)	P00915	80 mg/l
✓ Cd-Cadmium (D)	P01025	<20 ug/l
✓ Cr-Chromium (D)	P01030	<50 ug/l
✓ Cu-Copper (D)	P01040	<20 ug/l
✓ Fe-Iron (D)	P01046	1200 ug/l
✓ Hg-Mercury	P71900	<0.2 ug/l
Li-Lithium (D)	P01130	<50 ug/l
✓ Mg-Magnesium (D)	P00925	2.0 mg/l
✓ Mn-Manganese (D)	P01056	<50 ug/l
✓ Na-Sodium (D)	P00929	5.4 mg/l
✓ Pb-Lead (D)	P01049	<100 ug/l
✓ Zn-Zinc (D)	P01090	<20 ug/l
✓ K-Potassium (D)	P00935	1.6 mg/l
✓ Se-Selenium		<5.0 ug/l

BOD	P00310	mg/l
COD	P00341	mg/l
Coliform (Fecal MF)	P31616	/100ml
Coliform (total MF)	P31505	/100ml
✓ TOC	P00680	<5 mg/l
Turbidity	P82079	NTU
✓ Ammonia (as Nitrogen) (D)	P00612	0.2 mg/l
✓ Kjeldahl (as Nitrogen) (D)	P00623	<0.1 mg/l
✓ Nitrate + Nitrite (as Nitrogen) (D)	P00631	<0.0 mg/l
✓ Phosphorus, total as P (D)	P00666	0.27 mg/l
Dissolved Solids - cond. meter	P70304	mg/l

Other Analyses:  
✓ ...  
✓ ...  
✓ ...

D = Dissolved Analysis - submit filtered sample  
White copy - Headquarters Pink copy - Region  
Yellow copy - Lab

TT-26

Reported by MLU

TI-26

Date 5.29.85

Checked by PKD

ORGANIC ANALYSIS

Supervisor REK

Entered by \_\_\_\_\_

Checked by \_\_\_\_\_

Lab No.	1 WATER	Analytical Results
G-182	<p>THE FOLLOWING COMPOUNDS WERE IDENTIFIED BY MATCHING TO LIBRARY MASS SPECTRA. THEY WERE NOT MATCHED TO STANDARDS. CONCENTRATIONS ( ) WERE ESTIMATED AS A RATIO TO A KNOWN INTERNAL STANDARD.</p>	
	<p>BY GC/MS/PT:</p>	
	<p>DICHLORO ETHENE (1.7 <math>\mu\text{g/l}</math>)</p>	
	<p>TRICHLORO ETHENE (18 <math>\mu\text{g/l}</math>)</p>	
	<p>TETRACHLORO ETHENE (638 <math>\mu\text{g/l}</math>)</p>	
	<p>ONE UNIDENTIFIED PEAK DETECTED BY GC/MS/PT-</p>	

GC/MS/DS used

COUNTY WILMINGTON  
 QUAD NO. 1 SERIAL NO. 110

REPORT TO: (circle one)  
 ARO, WSRO, MRO, FRO, WaRO,  
 WIRO, FRO, Ahoskie FO,  
 OTHER \_\_\_\_\_

PURPOSE: (circle one) baseline, pollution monitor, other \_\_\_\_\_

DATE COLLECTED 110 Time 110 By DEM Location or site WILMINGTON

Description of sampling point WILMINGTON Sampled interval 10-15, 1-11

Remarks \_\_\_\_\_  
 (pumping time, air temp, etc.)

Field Analysis By: DEM Lat. 3444120 Long. 7717010

pH \_\_\_\_\_ Spec. Cond. \_\_\_\_\_ Temp. \_\_\_\_\_ °C \_\_\_\_\_ Appearance \_\_\_\_\_ Taste \_\_\_\_\_

Lab Analysis

✓ Alkalinity to pH 4.5	P00410	180 mg/l
Alkalinity, Hydroxide	P71830	1 mg/l
✓ Carbonate	P00445	< 1 mg/l
✓ Bicarbonate	P00440	220 mg/l
✓ pH value (when analyzed)	P00400	7.4 units
✓ Arsenic (D)	P01000	< 10 ug/l
Carbon dioxide	P00405	mg/l
✓ Chloride (D)	P00940	15 mg/l
✓ Color (True)	P00080	31 units
Cyanide	P00720	mg/l
✓ Dissolved solids (D)	P70301	250 mg/l
✓ Fluoride (D)	P00951	0.3 mg/l
✓ Hardness (as CaCO <sub>3</sub> ) (D)	P00900	190 mg/l
✓ Hardness (non-carbonate) (D)	P00902	10 mg/l
MBAS (D)	P38260	mg/l
✓ Phenol (D)	P34466	< 5 ug/l
✓ Silica (D)	P00955	7 mg/l
✓ Sulfate (D)	P00946	11 mg/l
✓ Specific Cond.	P00094	450 μMOS/cm

✓ Ag-Silver (D)	P01075	< 50 ug/l
✓ Al-Aluminum (D)	P01106	100 ug/l
✓ Ba-Barium (D)	P01005	< 1000 ug/l
✓ Ca-Calcium (D)	P00915	77 mg/l
✓ Cd-Cadmium (D)	P01025	< 20 ug/l
✓ Cr-Chromium (D)	P01030	< 50 ug/l
✓ Cu-Copper (D)	P01040	< 20 ug/l
✓ Fe-Iron (D)	P01046	1000 ug/l
✓ Hg-Mercury	P71900	< 0.2 ug/l
✓ Li-Lithium (D)	P01130	< 50 ug/l
✓ Mg-Magnesium (D)	P00925	2.6 mg/l
✓ Mn-Manganese (D)	P01056	< 50 ug/l
✓ Na-Sodium (D)	P00929	12 mg/l
✓ Pb-Lead (D)	P01049	< 100 ug/l
✓ Zn-Zinc (D)	P01090	350 ug/l
✓ K-Potassium (D)	P00935	4.3 mg/l
✓ Sulfate (D)	P00946	< 50 ug/l

BOD	P00310	mg/l
COD	P00341	mg/l
Coliform (Fecal MP)	P31616	/100ml
Coliform (total MP)	P31505	/100ml
✓ TOC	P00680	< 5 mg/l
Turbidity	P82079	NTU
✓ Ammonia (as Nitrogen) (D)	P00612	0.04 mg/l
✓ Kjeldahl (as Nitrogen) (D)	P00623	0.1 mg/l
✓ Nitrate + Nitrite (as Nitrogen) (D)	P00631	0.01 mg/l
✓ Phosphorus, total as P (D)	P00666	0.22 mg/l
Dissolved Solids - cond. meter	P70304	mg/l

Other Analyses:  
 ✓ units < 0.1 mg/l  
 ✓ units < 0.1 mg/l  
 ✓ units < 0.1 mg/l

RECEIVED  
 COMMUNITY DEVELOPMENT  
 DEM  
 GROUNDWATER FIELD/LAB FORM  
 JUN 3 1985

WILMINGTON REGIONAL OFFICE  
 DEM  
 GROUND WATER SECTION  
 RALEIGH, N. C.

LAB NUMBER 6-174  
 DATE REC'D 4-10-85  
 REC'D BY DD  
 DATA ENTRY BY B. M. CK  
 DATA REPORTED 5-29-85

D = Dissolved Analysis - submit filtered sample  
 White copy - Headquarters Pink copy - Region Yellow copy - Lab

11 NEW WELL



RECEIVED

UIC PROGBA

COUNTY ONSLAW

N. C. DEPARTMENT OF NATURAL RESOURCES  
JUN 8 1985  
DEVELOPMENT

RECEIVED

LAB NUMBER G-181

QUAD NO. X 241 SERIAL NO. 057-1170

DATE REC'D 4-10-85

REPORT TO: (circle one)

WILMINGTON REGIONAL OFFICE / LAB FORM

MAY 31 1985

REC'D BY SPD

ARQ, WSRQ, MRO, FRO, WaRO,  
(MRO) RRO, Ahoskie FO,  
OTHER

DATA ENTRY BY CK

DATA REPORTED 5-29-85

DEM

GROUND WATER SECTION  
RALEIGH, N. C.

PURPOSE: (circle one) baseline, pollution monitor, other

DATE COLLECTED 04-07-85 Time 1200 By SPD Location or site 17-25

Description of sampling point WELL Sampled interval 70-75'

Remarks WELL WAS PUMPED FOR 5 MINUTES SINCE 08-85 @ 1000  
(pumping time, air temp, etc.)

Field Analysis By: SPD Lat. 344419N Long. 772143W

pH 5.4 Spec. Cond. 305 Temp. 17 °C Odor None Appearance Clear Taste None

Lab Analysis

✓ Alkalinity to pH 4.5	P00410	170 mg/l
Alkalinity, Hydroxide	P71830	<1 mg/l
✓ Carbonate	P00445	<1 mg/l
✓ Bicarbonate	P00440	200 mg/l
✓ pH value (when analyzed)	P00400	7.5 units
✓ Arsenic (D)	P01000	<10 ug/l
Carbon dioxide	P00405	mg/l
✓ Chloride (D)	P00940	9 mg/l
✓ Color (True)	P00080	23 units
Cyanide	P00720	mg/l
✓ Dissolved solids (D)	P70301	220 mg/l
✓ Fluoride (D)	P00951	0.2 mg/l
✓ Hardness (as CaCO <sub>3</sub> ) (D)	P00900	180 mg/l
✓ Hardness (non-carbonate) (D)	P00902	10 mg/l
MBAS (D)	P38260	mg/l
✓ Phenol (D)	P34466	<5 ug/l
✓ Silica (D)	P00955	7 mg/l
✓ Sulfate (D)	P00946	7 mg/l
✓ Specific Cond.	P00094	390 UMHOS/cm

✓ Ag-Silver (D)	P01075	<50 ug/l
✓ Al-Aluminum (D)	P01106	1.00 ug/l
✓ Ba-Barium (D)	P01005	<1000 ug/l
✓ Ca-Calcium (D)	P00915	73 mg/l
✓ Cd-Cadmium (D)	P01025	<20 ug/l
✓ Cr-Chromium (D)	P01030	<50 ug/l
✓ Cu-Copper (D)	P01040	<20 ug/l
✓ Fe-Iron (D)	P01046	700 ug/l
✓ Hg-Mercury	P71900	<0.2 ug/l
✓ Li-Lithium (D)	P01130	<50 ug/l
✓ Mg-Magnesium (D)	P00925	1.9 mg/l
✓ Mn-Manganese (D)	P01056	<50 ug/l
✓ Na-Sodium (D)	P00929	6.1 mg/l
✓ Pb-Lead (D)	P01049	<100 ug/l
✓ Zn-Zinc (D)	P01090	<20 ug/l
✓ K-Potassium (D)	P00935	1.8 mg/l
✓ Selenium		<50 ug/l

BOD	P00310	mg/l
COD	P00341	mg/l
Coliform (Fecal MF)	P31616	/100ml
Coliform (total MF)	P31505	/100ml
✓ TOC	P00680	<5 mg/l
Turbidity	P82079	NTU
✓ Ammonia (as Nitrogen) (D)	P00612	.01 mg/l
✓ Kjeldahl (as Nitrogen) (D)	P00623	<0.1 mg/l
✓ Nitrate + Nitrite (as Nitrogen) (D)	P00631	<0.1 mg/l
✓ Phosphorus, total as P (D)	P00666	.26 mg/l
Dissolved Solids - cond. meter	P70304	mg/l

Other Analyses:  
✓ PHOSPHATE <.01 mg/l  
✓ UNIDENTIFIED

One unidentified peak detected by GC/MS/PT

D - Dissolved Analysis - submit filtered sample  
White copy - Headquarters Pink copy - Region Yellow copy - Lab

No base must also be sent  
extra tables attached GC/MS



NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES  
DIVISION OF HEALTH SERVICES  
OCCUPATIONAL HEALTH LABORATORY

COMPANY: Camp Lejeune Water System  
ADDRESS: Camp Lejeune, Onslow County  
SAMPLE TAKEN ON: 02/07/85  
SAMPLE TAKEN BY: J. Fred Hill  
SUBMITTED TO LABORATORY: 02/08/85  
SUBMITTED BY: J. Fred Hill, E. Betz

DATE OF ANALYSIS: 02/08/85  
ANALYSED BY: John L. Neal, Vicki Painter

DATE REPORTED: 02/08/85

RESULTS IN PPB (ug/L)

<u>LOCATION</u>	<u>trans 1,2-DCE</u>	<u>CHCl3</u>	<u>DCBM</u>	<u>TCE</u>	<u>DBCM</u>
Bldg. 20 Res. Fin. Water	5.3	10.3	6.3	16.8	3.4
Bldg. 20 Filter Eff.#1	<2.0	6.8	4.3	<2.0	2.0
Bldg. 20 Filter Eff.#2	<2.0	9.1	5.7	3.4	3.4
Bldg. 20 Influent	<2.0	5.0	4.0	<2.0	1.5
Bldg. 670* Res. Fin. Water	<2.0	14.84	8.3	<2.0	3.6
Bldg. 670 Filter Eff.#1	<2.0	11.45	6.1	<2.0	1.2
Bldg. 670 Filter Eff.#2	<2.0	10.03	5.8	<2.0	1.2
Bldg. 670 Influent	<2.0	8.1	4.9	<2.0	1.7
MOQ 2204 Hydr. Dis. Sys.	9.0	23.92	10.74	32.4	4.5
Bldg. 5400 Ber. Man. Sch.	44.8	24.49	10.83	135.1	5.0

COMMENTS: trans 1,2-DCE is trans 1,2-dichloroethylene, CHCl3 is Chloroform, DCBM is dichlorobromomethane, TCE is trichloroethylene, and DBCM is dibromochloromethane. Samples analysed by purge and trap method utilizing Hall detector in the halogen mode.

REPORTED BY: John L. Neal

cc. Charles Rundgren, Water Supply Branch  
Mike Bell, ERO  
J. Fred Hill, ERO  
Environmental Epidemiology

\* Holcomb Blvd. plant

DEPARTMENT OF HUMAN RESOURCES DIVISION OF HEALTH SERVICES  
 LABORATORY SECTION  
 OCCUPATIONAL HEALTH

G C REPORT SHEET

COMPANY: USMC CAMP LEJEUNE

DATE OF ANALYSIS: Feb. 7, 1985

SAMPLE #	TOTAL MILLIGRAMS ug/L							
	trans, 1,2-dichloroethylene	CHCl <sub>3</sub>		Dichlorobromomethane		Trichloroethylene		Dibromochloromethane
500446	5.3	10.3		6.3		16.8		3.4
500447	< 2.0	6.8		4.3		< 2.0		2.0
500448	< 2.0	9.1		5.7		3.4		3.4
500449	< 2.0	5.0		4.0		< 2.0		1.5
500450	< 2.0	14.84		8.3		< 2.0		3.6
500451	< 2.0	11.45		6.1		< 2.0		1.2
500452	< 2.0	10.03		5.8		< 2.0		1.2
500453	< 2.0	8.1		4.9		< 2.0		1.7
500454	9.0	23.92		10.74		32.4		4.5
500455	44.8	24.49		10.83		135.1		5.0

North Carolina Department of Human Resources  
 Division of Health Services  
 Occupational Health Laboratory

ANALYSIS REPORT

Company: USMC Camp Lejeune  
 Address: (Onslow Co.) 404 St. Andrews St., Greenville, NC  
 Service Requested: TCE & DCE  
 Sample Taken On: 7 FEB 85 By: J. Fred Will  
 Submitted To Laboratory On: 7 FEB 85 By: \_\_\_\_\_  
 Date of Analysis: \_\_\_\_\_ Date Reported: \_\_\_\_\_  
 Analyzed By: \_\_\_\_\_

SEALS INTACT RECD. V.P.

LABORATORY NUMBER	SAMPLE NUMBER	DESCRIPTION	REMARKS	RESULTS IN
500446	#1 Bldg. 20	RESERVOIR - FINISHED H <sub>2</sub> O		
500447	#2 " "	FILTER EFF. #1		
500448	#3 " "	FILTER EFF. #2		
500449	#4 " "	INFLUENT		
500450	#5 Bldg. 670	RESERVOIR		
500451	#6 " 670	FILTER EFF. #1		
500452	#7 " 670	FILTER EFF. #2		
500453	#8 " 670	INFLUENT		
500454	#9 MOQ 2204	hydrant-dist. system ✓		
500455	Bldg. 5400	Berkley Manor Elem. School Cafeteria		

REMARKS:

REPORTED BY: John P. Neal  
 Chief, Occupational Health Lab

NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES  
DIVISION OF HEALTH SERVICES  
OCCUPATIONAL HEALTH LABORATORY

COMPANY: Camp Lejeune Water System  
ADDRESS: Camp Lejeune, Jacksonville, N.C.  
SERVICE REQUESTED: VOLATILE ORGANIC ANALYSIS  
SAMPLE TAKEN ON: 1/31/85  
SAMPLE TAKEN BY: Betsy Betz  
SUBMITTED TO LABORATORY: 2/1/85  
SUBMITTED BY: Betsy Betz

DATE OF ANALYSIS: 2/1-4/85  
ANALYSED BY: John L. Neal

DATE REPORTED: 2/4/85

RESULTS IN PPB (ug/liter)

<u>LOCATION</u>	<u>DICHLOROETHYLENE</u>	<u>TRICHLOROETHYLENE</u>
Bldg 20	321.3	900.0
Bldg 670 Bottom	7.4	24.1
MOQ 2212 Cold Water	249.4	724.6
Bldg 670 Top	7.6	26.8
MOQ 2212 Hot Water	201.2	612.9
Bldg 670 Middle	7.8	25.8
Tank SLCH 4004	107.5	318.3
Hydrant MOQ 2204	307.6	839.7
Hydrant Elev. Tank S-830	340.0	849.0
Tank S-2323	159.0	407.1
BM 5677	368.7	981.3
BM 5531	335.0	905.5
Bldg PP 2600	332.4	890.9
Bldg 5400	406.6	1,148.4

COMMENTS:

Also identified in all samples were chloroform, dichloromethane, and two (2) unidentified peaks possibly dibromomethane and bromoform. Total Trihalomethanes <<100.0 PPB.

REPORTED BY: John L. Neal

cc. Charles Rundgren, Water Supply Branch  
Mike Bell, ERO  
Fred Hill, ERO  
Environmental Epidemiology

STATE LABORATORY OF PUBLIC HEALTH  
 DIVISION OF HEALTH SERVICES  
 N. C. DEPARTMENT OF HUMAN RESOURCES  
 P.O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

**X** ORGANIC CHEMICAL ANALYSES-PRIVATE WATER SYSTEM

Complete All Items Above Heavy Line  
 (See Instructions on Reverse Side)

# 308, 309,  
310, 311

4/8/50/1

Name of System: WTPC-CAMP Lejeune  
 Address: Bldg. 670 - WTP  
 ZIP: \_\_\_\_\_  
 County: ONslow  
 Report To: J. Fred Hill  
 Address: 404 St Andrews St  
Brownville NC  
 ZIP: \_\_\_\_\_  
 Collector: Elizabeth P. Bly  
 Date Collected: 1/29/85 Time: 1420 AM/PM  
 Location of Sampling Point: Bldg 670 TREATED  
BEFORE RESERVOIR

Source of Water:  
 Ground ( ) Both  
 Surface ( ) Purchased

Source of Sample:  
 House Tap  
 Well Tap

Type of Sample:  
 Raw (X) Treated

Type of Treatment:  
 None (X) Lime  
 Chlorinated ( ) Soda Ash  
 Fluoridated ( ) Polyphosphate  
 Filtered ( ) Water Softener  
 Alum ( ) Other

Type of Analysis Desired:  
 Regular Parameters ( ) Both  
 Optional Parameters

Remarks: PETROLEUM PRODUCT ANALYSIS

Gasoline & EDB  
 HS

Regular Parameters		Results	Optional Parameters (List as needed)	
	units			Results
Chloride	mg/l		<u>NO gasoline hydrocarbons indicated by purge and trap analysis.</u>	
Sulfate	mg/l			
Iron	mg/l			
Manganese	mg/l			
Cadmium	mg/l			
Lead-CaCO <sub>3</sub> (Ca, Mg)	mg/l			
Hardness-CaCO <sub>3</sub>	mg/l			
Chloride	mg/l		<u>TRICHLOROETHYLENE</u>	<u>339.8 ppb</u>
Turbidity	NTU units		<u>EDB</u>	<u>&lt; 50 ppt</u>
Lead	mg/l			

Received 1/30/85 n.w. Date Reported 1-31-85 Reported By John R. Neal  
 Analyzed 1/30/85 1-30-85 n.w. Laboratory Number 510308

Call Reservoir  
 Please Rush  
 H. Shears

STATE LABORATORY OF PUBLIC HEALTH  
 DIVISION OF HEALTH SERVICES  
 N. C. DEPARTMENT OF HUMAN RESOURCES  
 P.O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

ORGANIC CHEMICAL ANALYSES-PRIVATE WATER SYSTEM

Complete All Items Above Heavy Line  
 (See Instructions on Reverse Side)

Name of System: USMC - Camp Lejeune

Address: Bldg. 670 - WTP

County: Onslow

Report To: J. Fred Hill

Address: 404 St. Andrews St  
Greenville NC

Collected By: Elyse H. D. B...

Date Collected: 29 JAN 1985 Time: 1405 AM/PM

Location of Sampling Point: Bldg 670 Reservoir

Source of Water:  
 Ground  
 Surface

Source of Sample:  
 House Tap  
 Well Tap

Type of Sample:  
 Raw  
 Treated

Type of Treatment:  
 None  
 Chlorinated  
 Fluoridated  
 Filtered  
 Alum

Type of Analysis Desired:  
 Regular Parameters  
 Optional Parameters

Remarks: PETROLEUM PRODUCT ANALYSIS  
methane 2 samples taken  
EAB & Casatone  
H5

Regular Parameters		Results	Optional Parameters (List as needed)	
		units		Results
pH				
Arsenic		mg/l		
Lead		mg/l		
Iron		mg/l		
Manganese		mg/l		
Copper		mg/l		
Zinc		mg/l		
Calcium		mg/l		
Magnesium		mg/l		
Hardness-CaCO <sub>3</sub> (Ca, Mg)		mg/l		
Alkalinity-CaCO <sub>3</sub>		mg/l		
Chloride		mg/l		
Color		units		
Turbidity		NTU units		
Fluc		mg/l		
				<u>No gasoline hydrocarbons indicated by purge and trap analysis.</u>
				<u>TRICHLOROETHYLENE 8.2 ppb</u>
				<u>EAB &lt; 50 ppt</u>

Date received 1/30/85 NW Date Reported 1-31-85 Reported by John R. Neal

Date Analyzed 1/30/85 NW Laboratory Number 500309

*Please Rush  
J. Swears*

STATE LABORATORY OF PUBLIC HEALTH  
DIVISION OF HEALTH SERVICES  
N.C. DEPARTMENT OF HUMAN RESOURCES  
P.O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

ORGANIC CHEMICAL ANALYSES - Petroleum Prod.

Complete All Items Above Heavy Line  
(See Instructions on Reverse Side)

Name of System: USMC-Camp Lejeune

Address: Bldg 670 - WTP

County: Onslow

Report To: J. Fred Hill

Address: 404 St Andrews St  
Greenville NC ZIP 27834

Telephone Number: ( ) - ( ) - ( )

Collected By: Elizabeth A. Burt

Date Collected: 29 JAN 1985 Time: 1315 AM PM

Location of Sampling Point: MOO 2212 PARADISE POINT  
(Address where sample was collected)

Remarks: gasoline & EDB CAMP LEJEUNE

Source of Water:  
 Ground  Both  
 Surface  Purchased

Source of Sample:  
 Distribution Tap  House Tap  
 Well Tap

Type of Sample:  
 Raw  Treated

Type of Treatment:  
 None  Lime  
 Chlorinated  Soda Ash  
 Fluoridated  Polyphosphate  
 Filtered  Water Softener  
 Alum  Other

Type of Sample:  
 Regular  Private  
 Check  Special

WATER SYSTEM I.D. NUMBER (COPY FROM MAILING LABEL)

□ □ - □ □ - □ □ □

State Drinking Water Parameters (Required)

Optional Parameters (List as needed)

Results		Results	
<b>(CHLORINATED HYDROCARBONS:)</b>			
Endrin	mg/l 5	<i>No gasoline hydrocarbons</i>	
Lindane	mg/l 4		
Methoxychlor	mg/l 3	<i>indicated by purge and</i>	
Toxaphene	mg/l 4		
<b>(CHLOROPHENOXY:)</b>			
2,4-D	mg/l 3	<i>trap analysis</i>	
2,4,5-TP	mg/l 4	<i>TRICHLOROETHYLENE 1,040.9 ppb EDB 250 ppt</i>	

Date Received 1/30/85 Date Reported 1-31-85 Reported By J. L. Neal

Date Analyzed 1/30/85 Laboratory Number 5 310

Comments: (+) HS

#500310

NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES  
DIVISION OF HEALTH SERVICES  
OCCUPATIONAL HEALTH LABORATORY

COMPANY: Camp Lejeune Water System  
ADDRESS: Camp Lejeune, Onslow County, N.C.  
SERVICE REQUESTED: Volatile Organic Analysis  
SAMPLE TAKEN ON: 02/19/85  
SAMPLE TAKEN BY: Gaines Huneycutt/Q.C. Lab  
SUBMITTED TO LABORATORY ON: 02/21/85  
SUBMITTED BY: via Federal Express

DATE OF ANALYSIS: 02/21-22/85  
ANALYZED BY: Vicki Painter

DATE REPORTED: 02/22/85

RESULTS IN PPB (ug/liter)

LOCATION	trans 1,2-DCE	TCE	TetraCE	CHCl3	DiCBM	DiCBM
TT New Well	trace	53.53	26.17	<2.0	<2.0	<2.0
TT-26 Well	trace	3.91	55.17	<2.0	<2.0	<2.0
TT Water Plt. Trt.	<2.0	<2.0	<2.0	0.9	2.1	3.2

COMMENTS: trans 1,2-DCE is trans 1,2-dichloroethene, TCE is trichloroethene, TetraCE is tetrachloroethene, CHCl3 is chloroform, DiCBM is dichlorobromo-methane, DiBCM is dibromochloromethane. Samples were collected from the Tarawa Terrace System. Samples were analysed by purge and trap method utilizing a Hall detector in the halogen mode. Identifications were confirmed by GC/MS.

REPORTED BY: 

cc. Charles Rundgren Water Supply Branch  
Mike Bell, ERO  
Fred Hill, ERO  
Environmental Epidemiology



*Dan Shaye*  
 12 hr 1985

G C REPORT SHEET

COMPANY: ERO

DATE OF ANALYSIS: 2/22/85

PPB

~~XXXXXXXXXXXX~~

PLE #	Chloroform	Dichlorobromo- methane	Dibromochloro- methane	Trichloro- ethene	Dichloro- ethylene
Bm5400 0720	14.6	11.0	4.9	*	*
MOO 2204 0721	15.7	11.2	4.4	*	*
HP Treated 0722	16.9	8.7	1.8	*	*
HB Treated 0723	10.9	8.1	3.0	*	*
BID 65 0724	16.6	8.5	2.4	1.0	*
* = Less than detectable concentration by purge and trap utilizing Hall detector in halogen mode.					



NREAD - Recv'd 2-28-85

STATE LABORATORY OF PUBLIC HEALTH  
 DIVISION OF HEALTH SERVICES  
 N.C. DEPARTMENT OF HUMAN RESOURCES  
 P.O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

ORGANIC CHEMICAL ANALYSES - PUBLIC WATER SYSTEM

Pesticide

Complete All Items Above Heavy Line  
 (See Instructions on Reverse Side)

Name of Premises: TARAWA TERRACE

Address: 1100 W. ... NC ZIP 28542

City: ...

Report To: Director NREAD

Occupation: COMMANDING GENERAL, MARINE

Address: ... NC ZIP 28542

Phone Number: (919) 451-5977

Collected By: GAINES HONEYCUTT / QC LAB

Collected: 19 Feb 1985 Time: 3:15 AM PM

Location of Sampling Point: (1) TI Newbliss (2) TI 36 Well  
 (Address where sample was collected) (3) TI ... TREATED

Remarks:

Source of Water:  
 Ground  Both  
 Surface  Purchased

Source of Sample:  
 Distribution Tap  House Tap  
 Well Tap

Type of Sample:  
 Raw  Treated

Type of Treatment:  
 None  Lime  
 Chlorinated  Soda Ash  
 Fluoridated  Polyphosphate  
 Filtered  Water Softener  
 Alum  Other

Type of Sample:  
 Regular  Private  
 Check  Special

WATER SYSTEM I.D. NUMBER (COPY FROM MAILING LABEL)

04-67-044

Required Drinking Water Parameters (Required)			Optional Parameters (List as needed)		
	Results			Results	
CHLORINATED HYDROCARBONS:)					
Endrin	mg/l	5			
Lindane	mg/l	4			
Methoxychlor	mg/l	3			
Toxaphene	mg/l	4			
DROPHENOXYLS:)					
2,4-D	mg/l	3			
2,4,5-TP	mg/l	4			

*see attached sheet*

Received 2/21/85 nw Date Reported 2/22/85 Reported By J. ...

Extracted ... Date Analyzed 2/21-22/85 Laboratory Number 5 0633  
5 0634  
5 0635

Comments: #500633  
500634, 500635

STATE LABORATORY OF PUBLIC HEALTH  
DIVISION OF HEALTH SERVICES  
N. C. DEPARTMENT OF HUMAN RESOURCES  
P.O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

**\* ORGANIC CHEMICAL ANALYSES-PRIVATE WATER SYSTEM**

Complete All Items Above Heavy Line  
(See Instructions on Reverse Side)

# 308, 309,  
310, 311

4/8/50/1

*Re: S.H.  
Sweats*

Name of System: <u>WSTDC-CAMP Lejeune</u> Address: <u>Bldg. 670 - WTP</u> City: <u>Oxlow</u> Port To: <u>J. Fred Hill</u> District: <u>404-St Andrews St</u> <u>Breville NC</u> Collector: <u>Elizabeth P. B...</u> Collected: <u>1/29/85</u> Time: <u>1420</u> AM/PM Location of Sampling Point: <u>Bldg. 670 TREATED</u> <u>BEFORE RESERVOIR</u>	Source of Water: <input checked="" type="checkbox"/> Ground                      ( ) Both <input type="checkbox"/> Surface                         ( ) Purchased Source of Sample: <input checked="" type="checkbox"/> House Tap <input type="checkbox"/> Well Tap Type of Sample: <input type="checkbox"/> Raw                                 (X) Treated Type of Treatment: <input type="checkbox"/> None                                 (X) Lime <input checked="" type="checkbox"/> Chlorinated                         ( ) Soda Ash <input type="checkbox"/> Fluoridated                         ( ) Polyphosphate <input checked="" type="checkbox"/> Filtered                                 ( ) Water Softener <input type="checkbox"/> Alum                                 ( ) Other Type of Analysis Desired: <input type="checkbox"/> Regular Parameters                 ( ) Both <input checked="" type="checkbox"/> Optional Parameters
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Remarks: PETROLEUM PRODUCT ANALYSIS ⊖  
Baseline & EDB  
HS

Regular Parameters	Optional Parameters (List as needed)
Results	Results
units	
mg/l	<u>NO gasoline hydrocarbons</u>
mg/l	
mg/l	
mg/l	
mg/l	
mg/l	
mg/l	<u>TRICHLOROETHYLENE 339.8 ppb</u>
mg/l	<u>EDB &lt; 50 ppt</u>
mg/l	
NTU units	
mg/l	

Received 1/30/85 NW Date Reported 1-31-85 Reported By John H. Neal  
 Analyzed 1/30/85 1-30-85 Laboratory Number 510308  
*HS*  
*N.W.*