

BASE MAINTENANCE DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 23542

FPM f

MAIN/FHM/rn
11330
10 Sep 1981

MEMORANDUM FOR THE COMMANDING GENERAL

From: Base Maintenance Officer

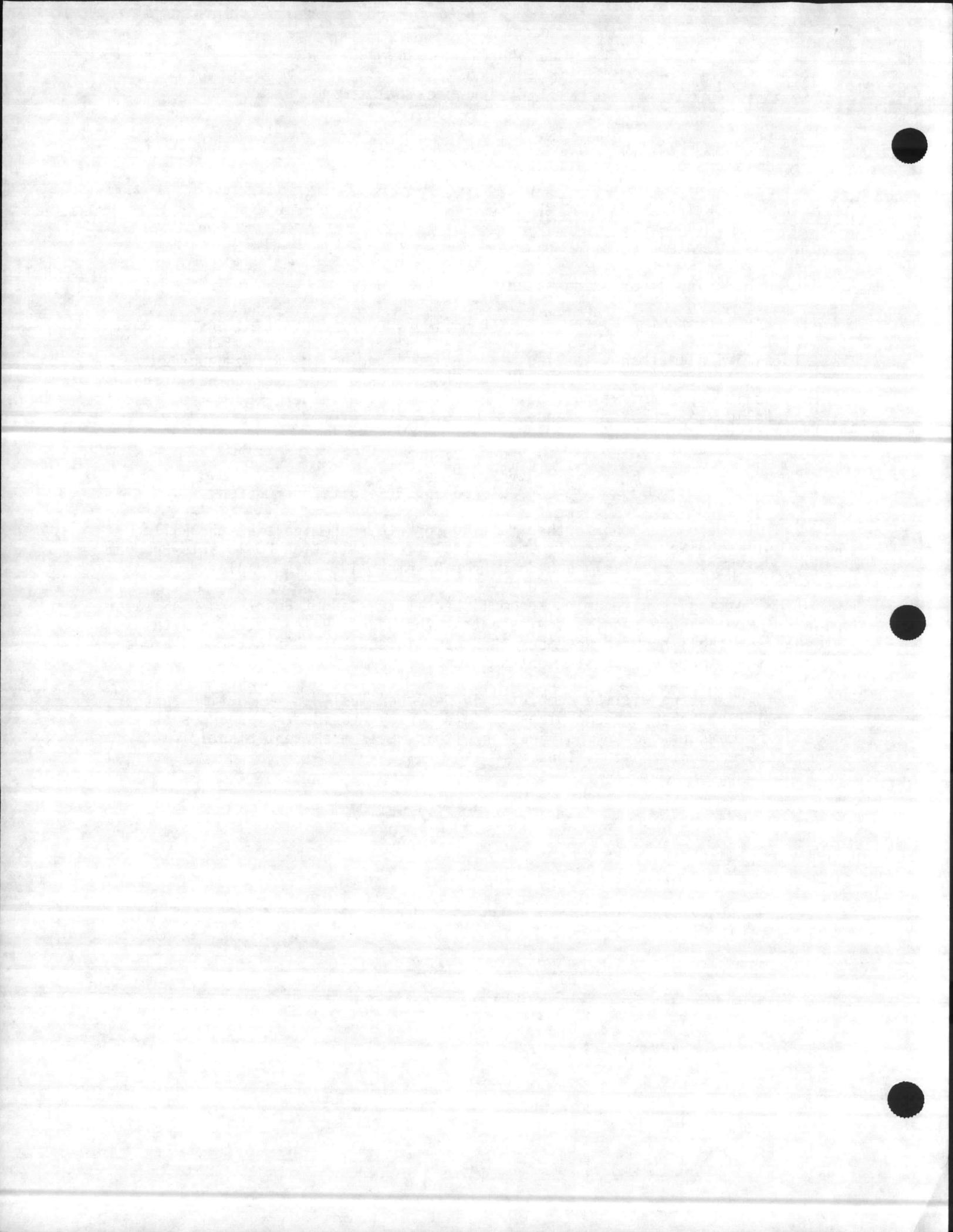
Subj: Monitoring of Drinking Water

- 1. Weekly testing for bacteria at the Rifle Range has presented no problems.
- 2. Total Trihalomethanes testing was reestablished at the Rifle Range in July and will continue until December. The standard for total trihalomethanes (TTHM) is 100 ppb, and we must be in compliance by November 1983. Test results are as follows at the Rifle Range:

- Apr - 17 ppb
- May - 94 ppb
- Jul - 35 ppb (Results by FONECON)

- 3. LANTDIV recommends no further testing for other chemicals at the Rifle Range until the Navy Assessment and Control of Installation Pollutants Program Study, which is tentatively scheduled for November 1981, is completed.
- 4. TTHM testing is also being accomplished at the Hadnot Point and MCAS water plants. Preliminary results indicate that the Hadnot Point water is within standards established for November 1983 compliance, but MCAS water has exceeded standards in three of the six months tested.
- 5. LANTDIV testing will be completed in December 1981, at which time further action will be taken through planned field surveys to identify sources of organic precursors and/or modification within water treatment plants if conditions warrant those actions.

F. H. Mount
F. H. MOUNT



REPORT # 60
LABORATORY ANALYSIS ON
NAVAL SAMPLES
(A/E CONTRACT N62470-84-B-6932)
JTC REPORT # 85-179

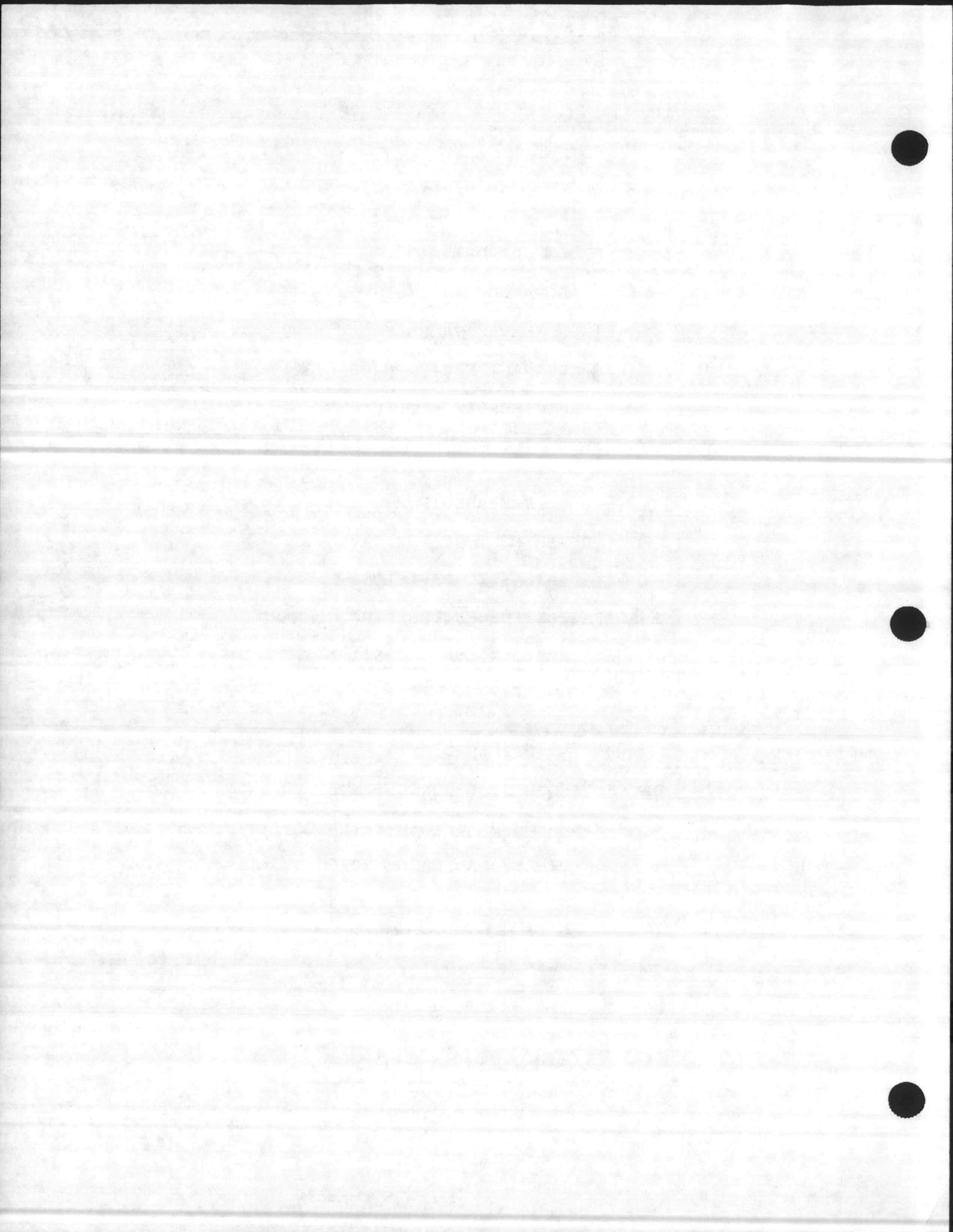
PREPARED FOR:
DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VA 23511

PREPARED BY:
JTC ENVIRONMENTAL CONSULTANTS, INC.
4 RESEARCH PLACE, SUITE L-10
ROCKVILLE, MARYLAND 20850

May 15, 1985

Ann E. Rosecrance

Ann E. Rosecrance
Laboratory Director



JTC Environmental Consultants, Inc.

Date 5/15/85 Report No. 60 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 85-179 Table 1 Date of Sample Receipt 4-15-85

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER						
		Ca mg/g	PCB ug/g	Chloride mg/g	Oil & Grease mg/g	Iodine ppm		
white powder in glass ampules	12-0803	173	X	374	X	X		
"	12-0804	227	X	419	X	X		
"	12-0805	328	X	214	X	X		
clear oil in small flat sided jar	12-0806	X	<50	X	842	X		
tablet * in amber jar	12-0807	X	X	X	X	<0.1		

* Sample did not dissolve in water. A cloudy suspension was formed by placing the tablet in water and stirring for 24 hours. Iodine was not detected in the sample

Doc No: QLE3-00308-209-3/15/85



6280/1
NREAD
24 Jan 1986

From: Director, Natural Resources and Environmental Affairs Division,
Marine Corps Base, Camp Lejeune
Environmental Engineer, Facilities Department, Marine Corps
Base, Camp Lejeune
Base Maintenance Officer, Marine Corps Base, Camp Lejeune

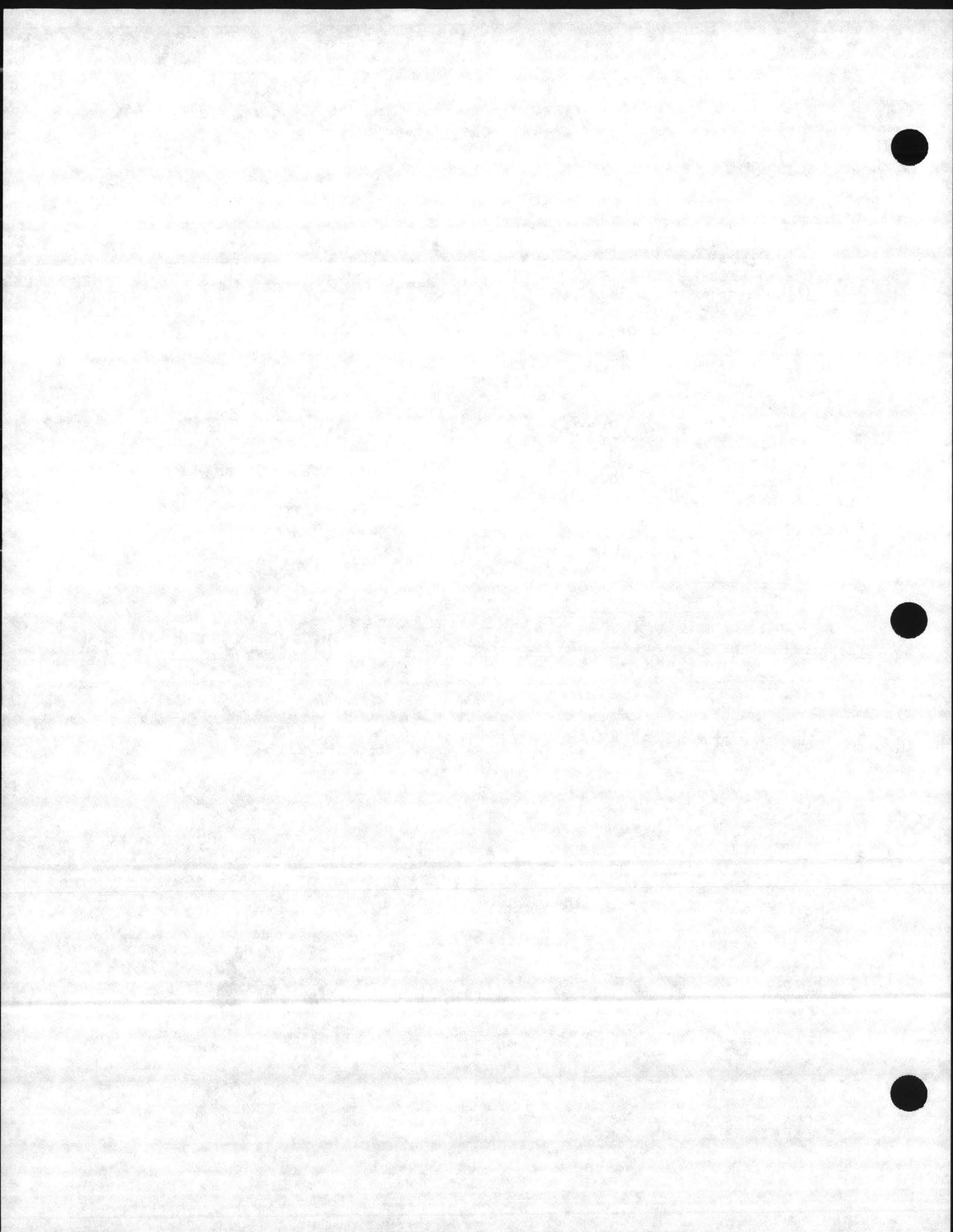
Subj: ANALYSIS OF DRINKING WATER SYSTEMS ABOARD CAMP LEJEUNE/MCAS,
NEW RIVER.

Encl: (1) Chemical Analysis Results of Hadnot Point Finished Water
(2) " " " " Tarawa Terrace "

1. Enclosures (1) and (2) indicate no immediate concern over the quality of water in the two systems at Tarawa Terrace and Hadnot Point. While the periodic reading for Benzene are felt to be a quality control problem in sampling and/or laboratory analysis, samples of each active raw water well for Hadnot Point was taken by NREAD and BMO last week. Results are anticipated in early February.
2. Unless advised otherwise, Tarawa Terrace wells are scheduled for February. Please note that due to previously discussed personnel shortages in the NREAD Laboratory, local capability to generate certified data is not anticipated in the immediate future.
3. The cost of analysis of the sampling shown in enclosures (1) and (2) was approximately \$10,000.00. Funding by Atlantic Division, Naval Facilities Engineering Command of this analysis is anticipated to end not later than the end of this fiscal year. NREAD has entered \$120,000 in the 1988 POM to reflect the overall loss of funding for laboratory analysis.
4. It is apparent that careful planning will be required to absorb this additional cost and to hold actual sampling to the essential minimum which protects public health and provides compliance with applicable standards, laws and regulations.
5. Accordingly, the Environmental Engineer is requested to obtain ~~the necessary funding for the analysis of the various~~
~~water systems.~~
This will require coordination with CO, MCAS, New River and Naval Hospital. Please advise.

J. I. WOOTEN

Writer: D. D. Sharpe, NREAD 5003
Typist: J. Cross 23Jan86



SYSTEM: HADNOT POINT

DATE	TTHMs 1,1,1-TRICHLORO ETHANE	BENZENE	METHYLENE CHLORIDE	TOLUENE	DATE	TTHMs	BENZENE	TOLUENE
4/24/85	*	2.1			12/2/85	*		
6/18/85	*				12/10/85	*	38	10
6/24/85	*				12/18/85	*	1.0	
7/1/85	*				12/23/85	*		
7/8/85	*				12/30/85	*		
7/15/85	*							
7/25/85	*							
7/31/85	*							
8/13/85	*							
8/19/85	*							
8/27/85	*							
9/3/85	*							
9/10/85	*							
9/16/85	*							
9/23/85	*							
10/1/85	*							
10/9/85	*							
10/15/85	*							
10/21/85	*							
10/29/85	*							
11/4/85	*							
11/12/85	*							
11/19/85	*							
11/26/85	*							

NOT REPRESENTATIVE
2500 2600 100

* - THMs FOUND WITHIN LIMITS

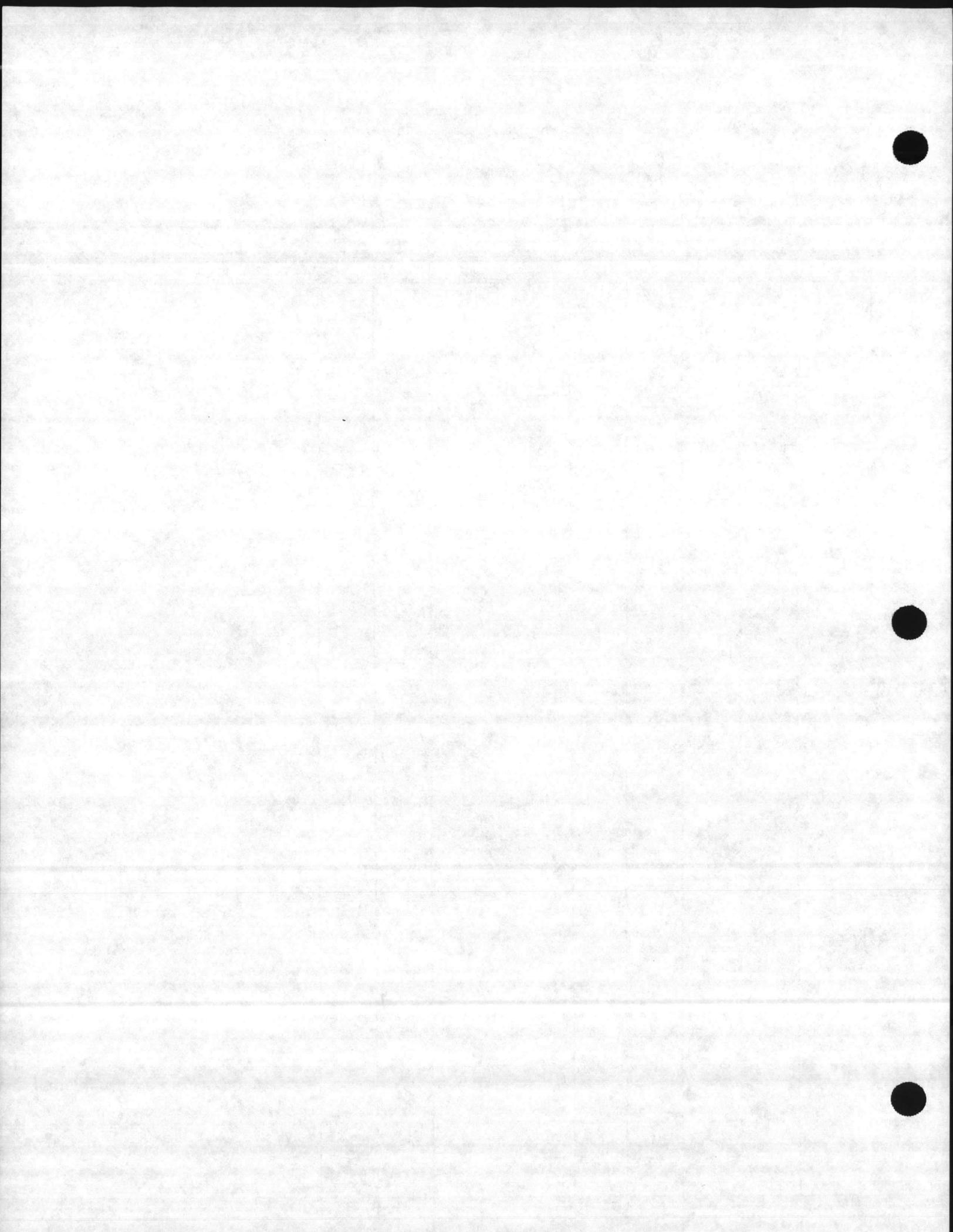


SYSTEM: TARAWA TERRACE

DATE	THMs	1,1,1-TRICHLORO-ETHANE	TETRACHLORO-ETHYLENE	BENZENE	DATE	THMs	BENZENE
4/22/85	*	4.1	1.0		12/2/85	*	2.0
4/23/85	*	1.4			12/10/85	*	
7/1/85	*				12/18/85	*	1.0
7/8/85	*				12/23/85	*	
7/15/85	*				12/30/85	*	
7/23/85	*						
7/31/85	*						
8/13/85	*						
8/19/85	*						
8/27/85	*						
9/3/85	*						
9/10/85	*			4.0			
9/16/85	*						
9/23/85	*						
10/1/85	*						
10/9/85	*						
10/15/85	*						
10/21/85	*						
10/29/85	*						
11/4/85	*						
11/12/85	*						
11/12/85 T-25 WELL	*						
11/19/85	*						
11/26/85	*						

* THMs FOUND WITHIN LIMITS

ENCLOSURE





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)



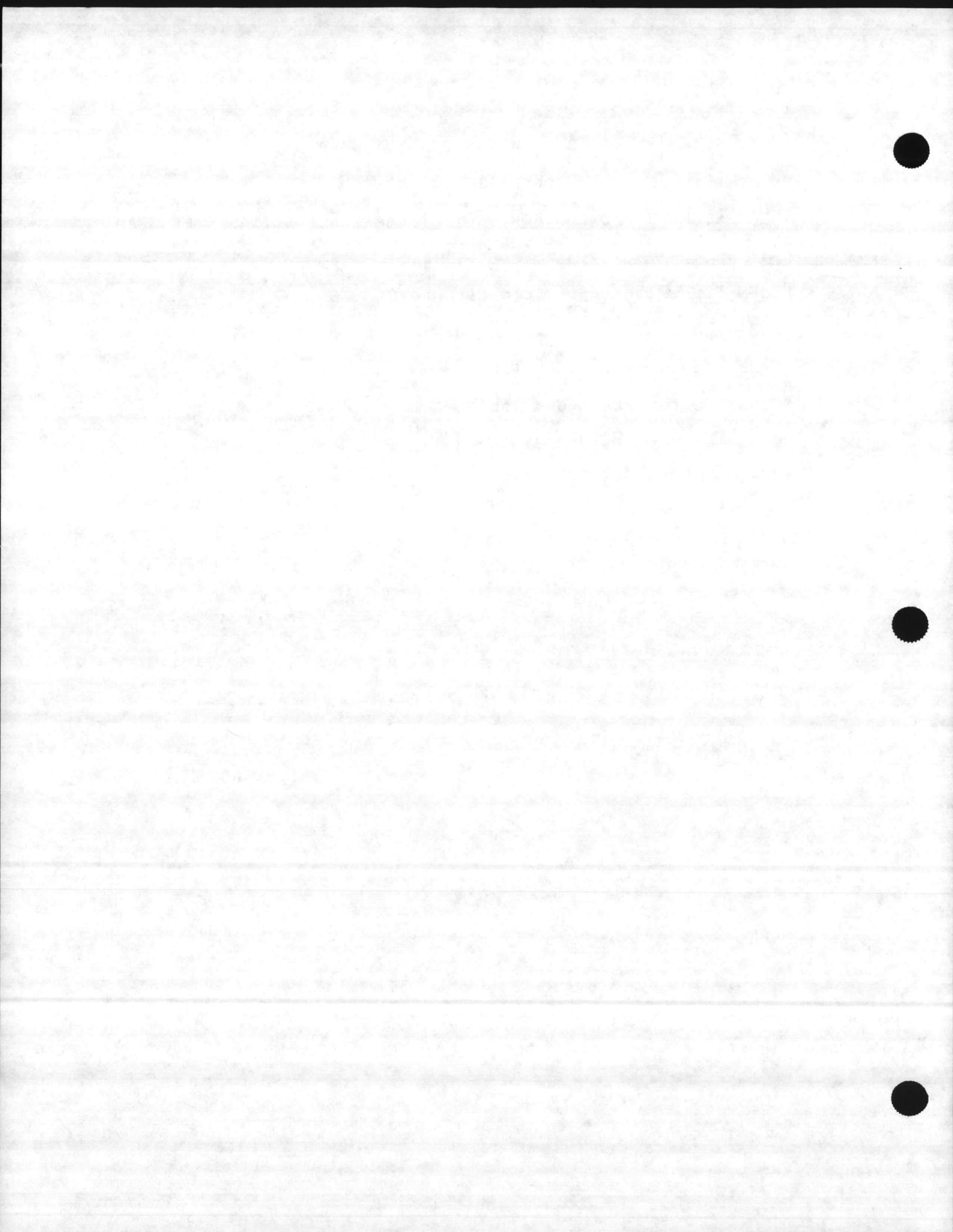
CONTENTS

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

DE: [unclear] [unclear] [unclear]

Attachments



RECEIVED

75-26

COUNTY WILMINGTON

QUAD NO. X 4 b SERIAL NO. JUN 6 1985

REPORT TO: (circle one)
ARO, WSRO, MRO, FRO, WARD,
WIRO, RRO, Ahooskie PO,
OTHER _____

DEPARTMENT OF NATURAL RESOURCES
& COMMUNITY DEVELOPMENT
DEM
WILMINGTON REGIONAL OFFICE
GROUNDWATER FIELD/LAB FORM
DEM

RECEIVED

JUN 4 1985

LAB NUMBER 11200

DATE REC'D 4/11

REC'D BY SLD

DATA ENTRY BY SLD CK

DATA REPORTED 6/3/85

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

GROUND WATER SECTION I

DATE COLLECTED 01 09 85 Time 10:15 By SLD Location or RALEIGH #22

Description of sampling point _____ Sampled interval 5000-10000

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

Field Analysis By: SLD Lat. 3444 30 Long. 77 15 20

pH 7.1 Spec. Cond. 110 Temp. 18 °C 0 Appearance clear 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	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 ₃) (D)	P00900	130 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	< 0.1 mg/l
✓ Phosphorus, total as P (D)	P00666	mg/l
Dissolved Solids - tond. meter	P70304	mg/l

Other Analyses:
✓ ...
✓ ...
✓ ...

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

Doc. No.: CLETS-00297-2.04-03/11/86 11-20



Reported by WCU

11-26

Date 5.29.85

Checked by PKD

ORGANIC ANALYSIS

Doc. No.: CLEJ -

Supervisor REK

Entered by _____

00297-2.04-

03/11/86

Checked by _____

Lab No.

1 WATER

Analytical Results

G-182

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.

BY GC/MS/PT:

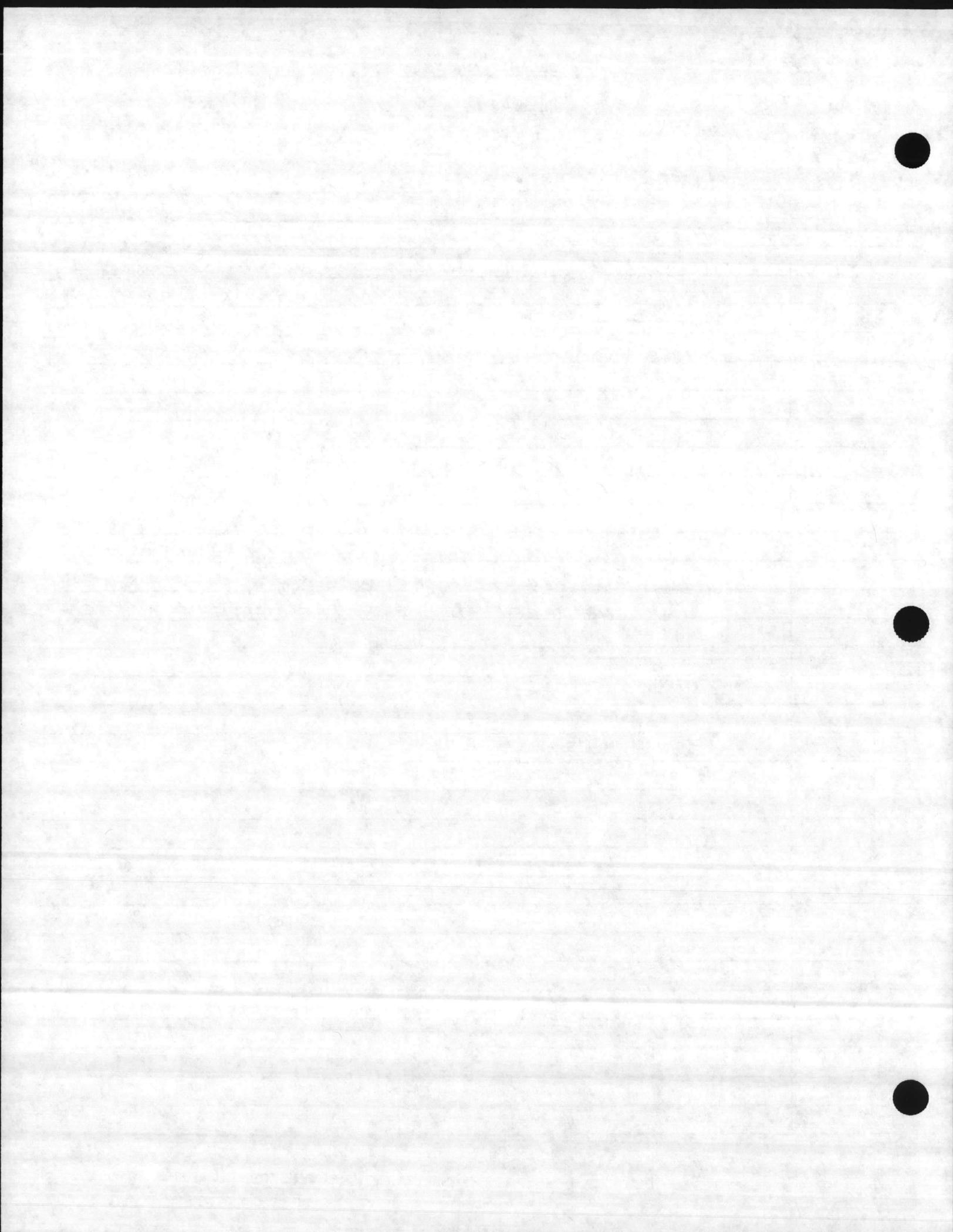
DICHLORO ETHENE (1.4 μ g/l)

TRICHLORO ETHENE (18 μ g/l)

TETRACHLORO ETHENE (638 μ g/l)

ONE UNIDENTIFIED PEAK DETECTED BY GC/MS/PT-

GC/MS/DS used



COUNTY WILMINGTON

QUAD NO. 1 SERIAL NO. 1111

REPORT TO: (circle one)
ARO, WSRO, MRO, FRO, WaRO,
WIRO, RRO, Ahooskie FO,
OTHER _____

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

DATE COLLECTED _____ Time _____ By DEM Location or site _____

Description of sampling point _____ Sampled interval 10:15 - 11:15

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

Field Analysis By: _____ Lat. 444120 Long. 771701 W

pH _____ Spec. Cond. _____ Temp. _____ °C _____ Color _____ 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	22 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 ₃) (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 μhos/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
✓ _____		< 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	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:
 ✓ _____ < 0.01 _____
 ✓ _____ _____ _____
 ✓ _____ _____ _____

RECEIVED
 WILMINGTON REGIONAL OFFICE
 GROUNDWATER FIELD/LAB FORM
 JUN 3 1985

LAB NUMBER 2174
 DATE REC'D 4-10-85
 REC'D BY [Signature]
 DATA ENTRY BY [Signature]
 DATA REPORTED 5-29-85

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

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

Be attached to report...
Worksheet

Doc. No. 1-000071-2.04-03/1/86





COUNTY ONSLOW

QUAD NO. X 211 SERIAL NO. 0511170

REPORT TO: (circle one)

ARO, WSRO, MRO, FRO, WaRO,
(WRO) RRO, Ahoskie FO,
OTHER _____

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

DATE COLLECTED 01/07/85 Time 1200 By W. J. ... Location or site 11 25

Description of sampling point INSIDE ... Sampled interval 70-75' 85-95' 100-110'

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

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

pH 5.4 Spec. Cond. 340 Temp. 12 °C (for 11) Appearance clear Taste _____

Lab Analysis

✓ Alkalinity to pH 4.5	P00410	170	mg/l
Alkalinity, Hydroxide	P71890	<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 ₃) (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	340	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	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	0.01	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	0.26	mg/l
Dissolved Solids - cond. meter	P70304		mg/l

Other Analyses:
 ✓ ...
 ✓ ...
 ✓ ...

RECEIVED

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

WILMINGTON REGIONAL FIELD LAB FORM

DEM

GROUND WATER SECTION
RALEIGH, N. C.

REC'D
MAY 31 1985

LAB NUMBER G 181

DATE REC'D 4-10-85

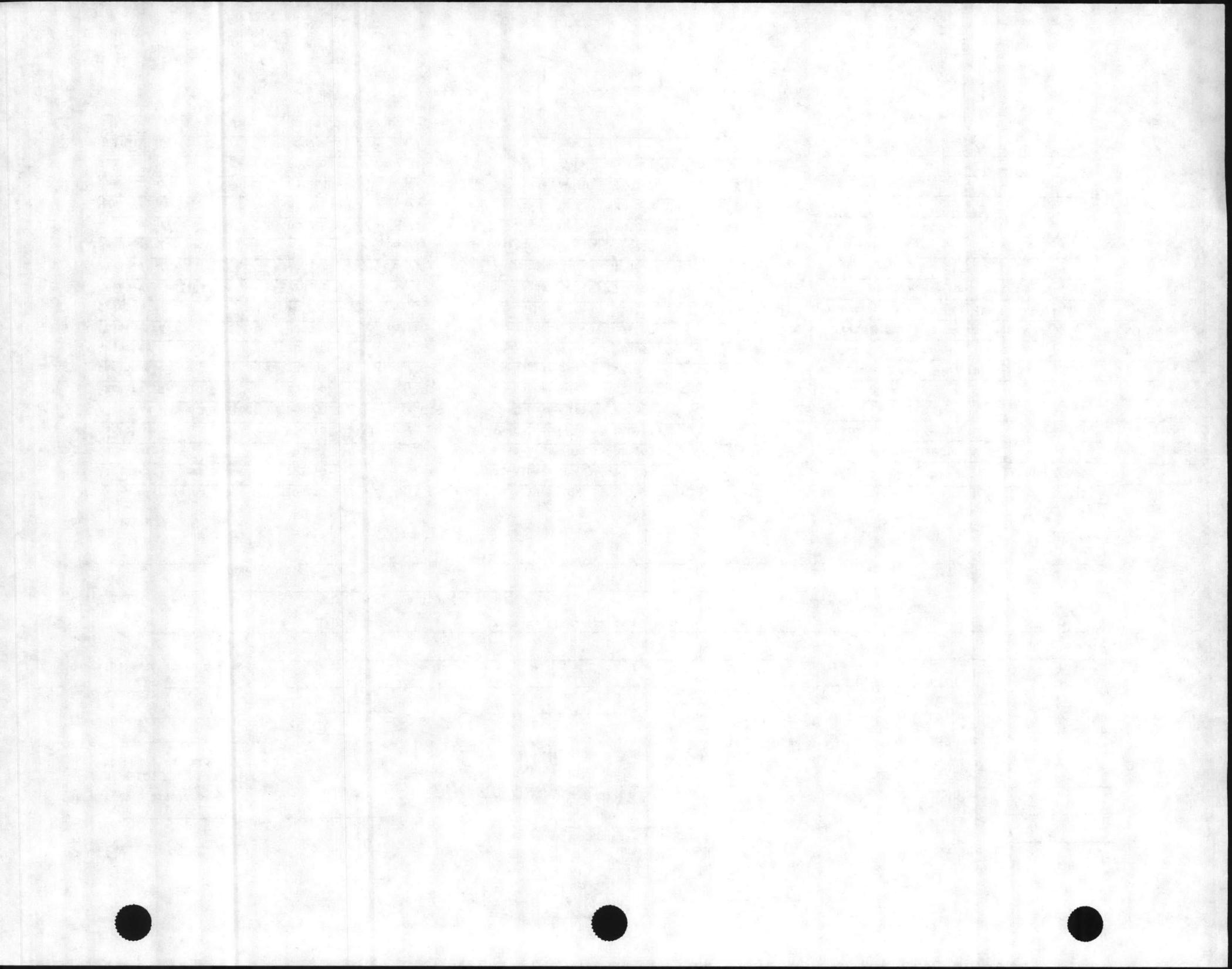
REC'D BY SJS

DATA ENTRY BY ...

DATA REPORTED 5-29-85

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

One unidentified peak detected by GC/MS/PT
The base must be a good
extremely sensitive 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 ₃	Dichlorobromo methane	Trichloroethylene	Dibromochloro methane			
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			

Doc No: CLEJ-00847-207-0311180



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 Hill
 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 ₂ 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 CATERIA	

REMARKS:

REPORTED BY: John D. 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

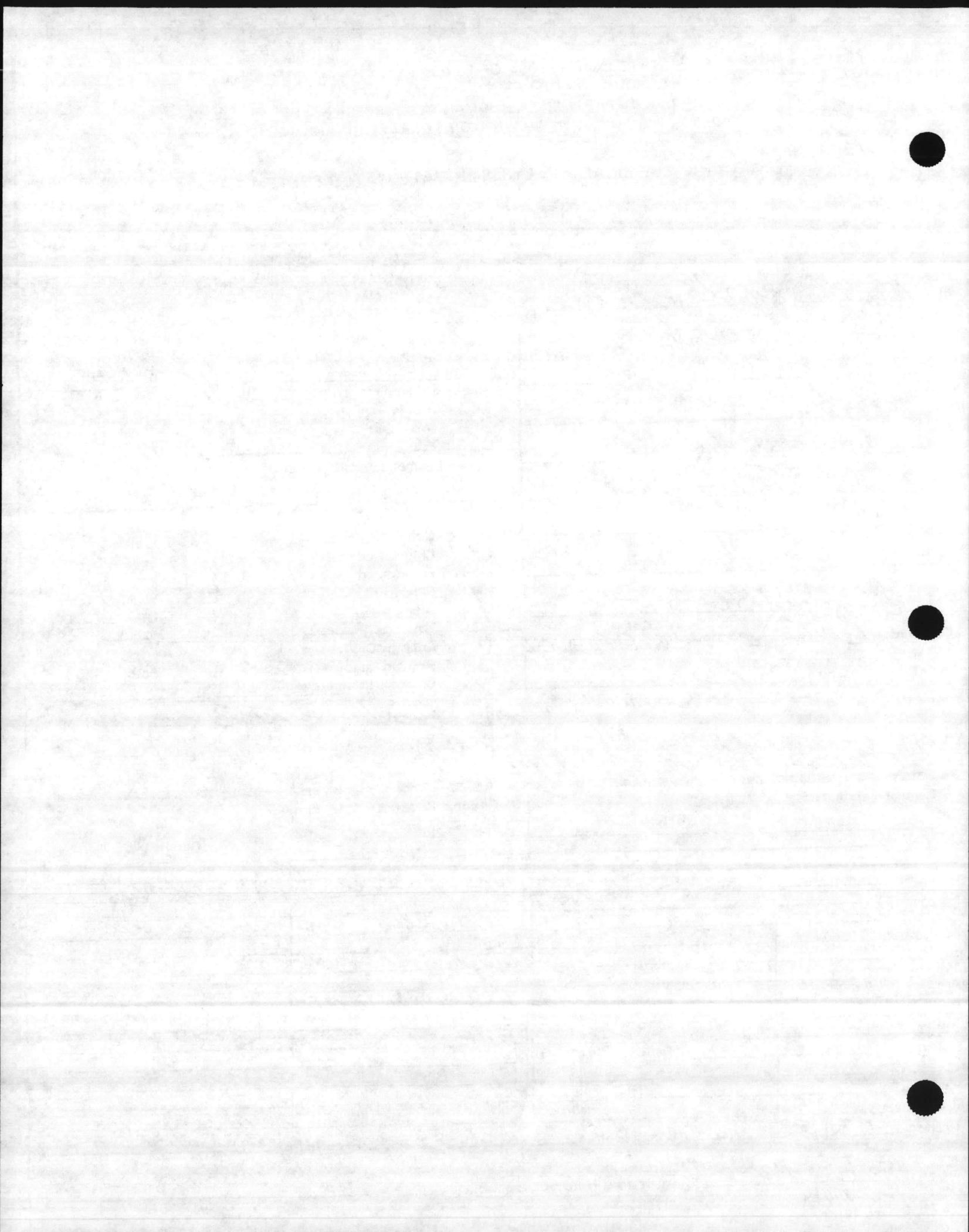
COMMENTS:

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





Doc. No. CLEJ-00297-2.04-03/11/86

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

Call Reservoirs
Horse Rush
H. Shears

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
ZIP _____

County Onslow

Report To: J. Fred Hill

Address: 404 St Andrews St
Greenville NC
ZIP 27834

Collected By: Elizabeth D. Bely

Date Collected: 29 JAN 1985 Time: 1405 AM
PM

Location of Sampling Point: BLDG 670 RESERVOIR

Source of Water:
 Ground
 Surface
 Both
 Purchased

Source of Sample:
 House Tap
 Well Tap

Type of Sample:
 Raw
 Treated

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

Type of Analysis Desired:
 Regular Parameters
 Optional Parameters
 Both

Remarks: PETROLEUM PRODUCT MIXTURE

methane EDB & Gasoline
2 samples
H5

Regular Parameters		Results	Optional Parameters (List as needed)	
		units		Results
H				
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 ₃ (Ca, Mg)		mg/l		
Alkalinity-CaCO ₃		mg/l		
Chloride		mg/l		
Color		mg/l		
Turbidity		units		
Fluoride		NTU units		
		mg/l		

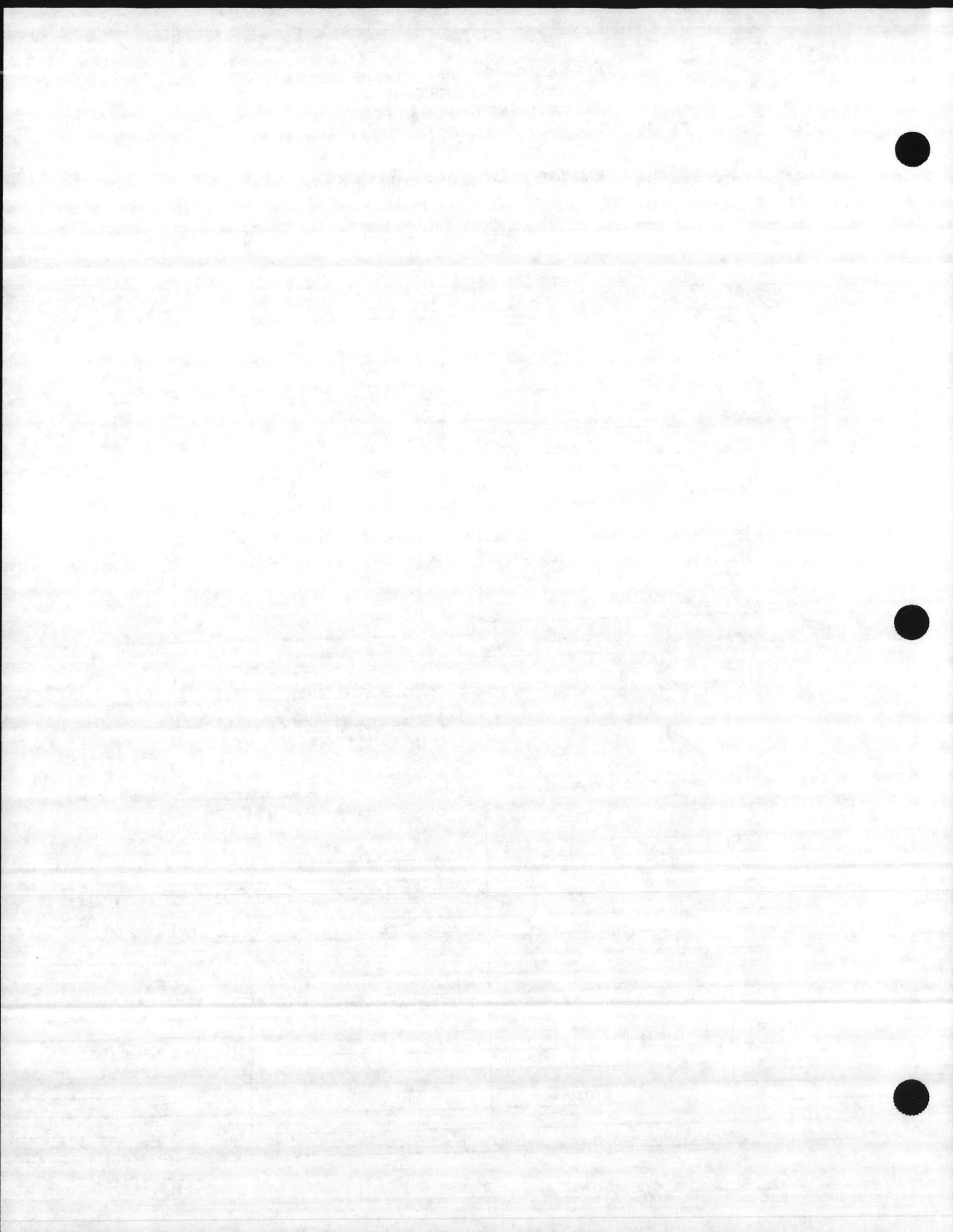
No gasoline hydrocarbons indicated by purge and trap analysis.

TRICHLOROETHYLENE 8.2 ppb

EDB <50 ppt

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. Smears*

Doc. No. 25-06297-204-031180

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

Date Received 1/30/85 nw Date Reported 1-31-85 Reported by John L. Neal

Date Extracted 1-30-85 HS 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 dichlorobromomethane, 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: John P. Neal

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



LABORATORY SECTION
OCCUPATIONAL HEALTH

Kenny Shaye
MAR 1985

G C REPORT SHEET

COMPANY: ERO

DATE OF ANALYSIS: 2/22/85

PPB

~~XXXXXXXXXXXX~~

LE #	Chloroform	Dichlorobromo- methane	Dibromochloro- methane	Trichloro- ethene	Dichloro- ethylene
Bm5400 1720	14.6	11.0	4.9	*	*
MOQ 2204 1721	15.7	11.2	4.4	*	*
HP Treated 1722	16.9	8.7	1.8	*	*
HB Treated 1723	10.9	8.1	3.0	*	*
BID 68 1724	16.6	8.5	2.4	1.0	*
* = Less than detectable concentration by purge and trap utilizing Hall detector in halogen mode.					

Doc. No. CLEJ-00291-2.04-03/11/86



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~~

Postside

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

Name of: TARAWA T. ACC.

Address: 1110 W. ...
... ZIP 28542

City: ...

Port To: DISPATCH NREAD

Business: COMMANDING GENERAL, MARINE
... ZIP 28542

Phone Number: (919) 451-5977

Collected By: GAINES HONEYCUTT / OC LAB

Collected: 19 Feb 1985 Time: 3:14:15 AM PM

Location of Sampling Point: DTT Newblair 12) TT 26 Mill
 (Address where sample was collected) 3) TT 1000 ... TREATED

Remarks:

Source of Water:
 Ground
 Surface

Source of Sample:
 Distribution Tap
 House Tap
 Well Tap

Type of Sample:
 Raw
 Treated

Type of Treatment:
 None
 Chlorinated
 Fluoridated
 Filtered
 Alum

Type of Sample:
 Regular
 Check

Other: Lime
 Soda Ash
 Polyphosphate
 Water Softener
 Other

Other: Private
 Special

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

04-67-044

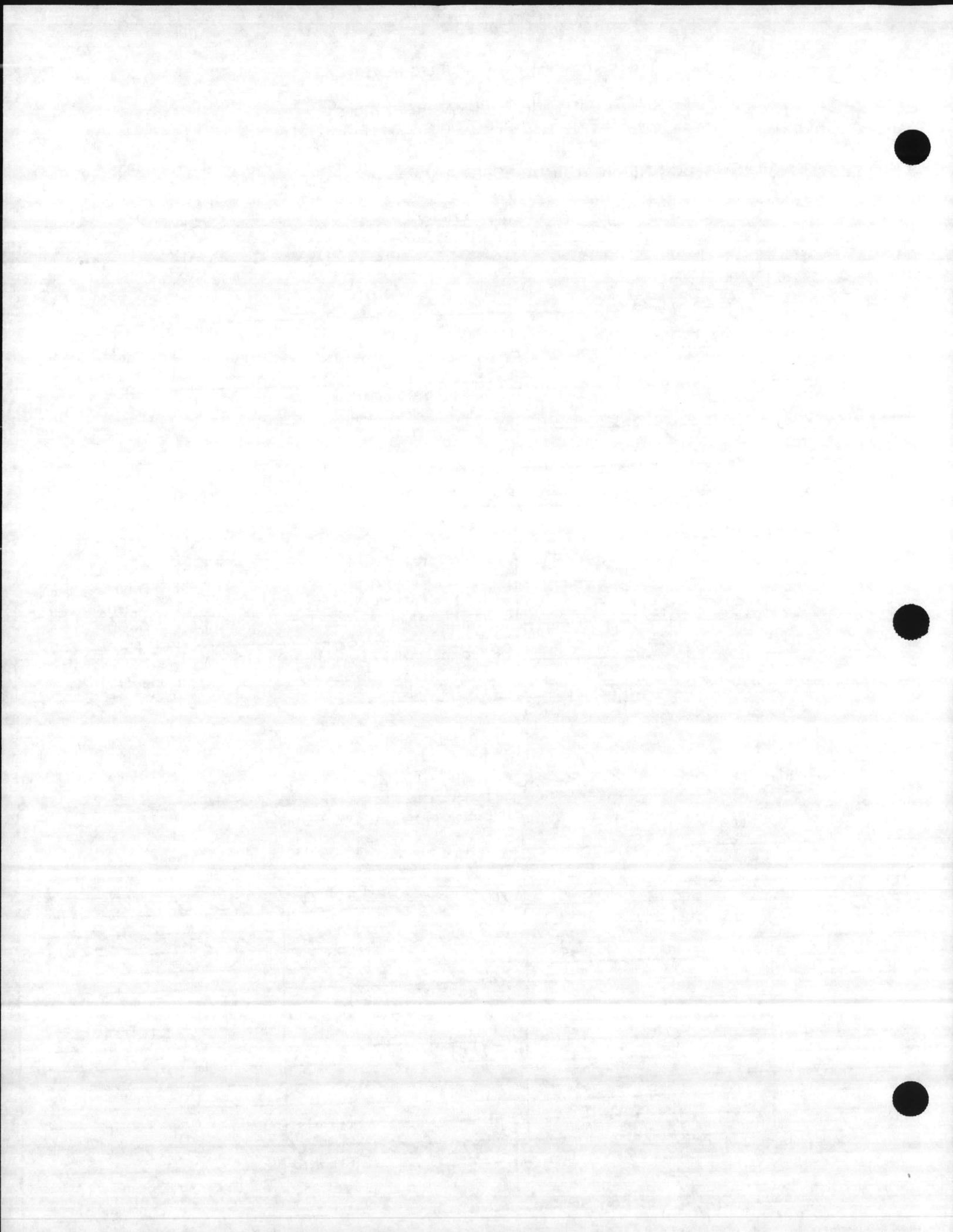
Drinking Water Parameters (Required)			Optional Parameters (List as needed)		
	Results			Results	
CHLORINATED HYDROCARBONS:					
Endrin	mg/l	5			
Lindane	mg/l	4			
Methoxychlor	mg/l	3			<i>see attached sheet</i>
TOXAPHENES:					
Toxaphene	mg/l	4			
2,4-D	mg/l	3			
2,4,5-TP	mg/l	4			

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

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

Comments: #500633
500634, 500635





MEMORANDUM OF CALL

Previous editions usable

TO: Cheryl Barnett
 YOU WERE CALLED BY-- YOU WERE VISITED BY--

OF (Organization) Bob Alexander
Camp Lejeune
 PLEASE PHONE FTS AUTOVON

WILL CALL AGAIN IS WAITING TO SEE YOU
 RETURNED YOUR CALL WISHES AN APPOINTMENT

MESSAGE

Well #	Closing Date
602	11-30-84
601	12-06-84
602	12-06-84
602	12-14-84
637	02-04-85
652	02-08-85
653	02-08-85
TT26	02-08-85
TT New Well	02-08-86

RECEIVED BY DRY DATE 4-18-86 TIME 0855

