

NREAD/DDS/jc
11330/1
2 Mar 1984

Mr. John McFadyen
Water Supply Branch
Division of Health Services
North Carolina Department of
Human Resources
Post Office Box 2091
Raleigh, North Carolina 27602

Dear Mr. McFadyen:

Enclosed are the completed Department of Health Forms (DHS 1942
2/74) for all water treatment plants aboard Marine Corps Base,
Camp Lejeune, for the period 1-29 February 1984. Also enclosed
are the weekly Chemical Analysis Forms (MCBCL 11330/3 Rev 3-82)
for the same period, as requested in the 25 October 1982 letter
from Mr. Charles Sundgren of your office.

The analysis is run by the Quality Control Laboratory located
in the Natural Resources and Environmental Affairs Division,
Assistant Chief of Staff, Facilities. Ms. Elizabeth Betz, Super-
visory Chemist, Quality Control Laboratory, telephone (919)451-
5977 is the point of contact in this matter.

Sincerely,

J. I. WOOTEN
Director

Encl:
(1) Dept of Health Forms
(2) Chemical Analysis Forms

Copy to:
LANTDIV (Code 114)

Blind copy to:
OCL

CLW
0000004075

Health 1-3-20-3-97
 Year 1984

RESIDUAL NUMBER

WATER TREATMENT PLANT AT 0-1177 LOCATION

CONTAMINANT CODE: 3000

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES
 N. C. DEPARTMENT OF HUMAN RESOURCES

SERIAL # 04-67-041

DATE	RAW WATER COLIFORMS (MFP)						NO. OF COLIFORMS PER 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	DISTRIBUTION SYSTEM COLIFORMS (MFP)					REPEAT SAMPLES			INCUBATOR TEMP.	
	A		B		C								1	2	3	4	5	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.		
	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES																
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HF MEDIA		BBL M-ENDO		BACTERIAL DENSITY		ARITH. MEAN		GEO. MEAN				0		DIST. SYSTEM		TOTAL NO. SAMPLES					36	
TPC MEDIA												10				SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml					0	

CLW
 0000004076

Month
 Year 1984

WATER TREATMENT PLANT AT

CONTAMINANT CODE: 3000

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES
 N. C. DEPARTMENT OF HUMAN RESOURCES

SERIAL #: 04-67-042

DATE	RAW WATER COLIFORMS (HFP)						NO. OF COLIFORMS PER 100 ml.	FILTERED		FINISHED		DISTRIBUTION SYSTEM					INCUBATOR TEMP.					
	A		B		C			TOTAL PLATE COUNT	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	HFP COLIFORMS per 100 ml.	COLIFORMS (HFP)						REPEAT SAMPLES				
	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES						1	2	3	4	5		COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.		
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14	314											0	7	0	0	0	0	0	0	35.0		
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21	324											0	7	0	0	0	0	0	0	35.0		
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27																						
28	328											0	7	0	0	0	0	0	0	35.0		
29																						
30																						
31																						
MF MEDIA	BBL m-ENDO		DACTERIAL DENSITY		ARITH. MEAN		GEO. MEAN						0		DIST. SYSTEM		TOTAL NO. SAMPLES					28
TPC MEDIA													10				SAMPLES EXCEEDING 3/50. (4/100) 7/200, 13/500ml					0

CLW

0000004077

Month
 Year 1984

WATER TREATMENT PLANT AT

CONTAMINANT CODE: 3000

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES
 N. C. DEPARTMENT OF HUMAN RESOURCES

SERIAL #: 04-67-043

DATE	RAW WATER COLIFORMS (MFP)						NO. OF COLIFORMS PER 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	DISTRIBUTION SYSTEM					INCREASOR TEMP.			
	A		B		C								COLIFORMS (MFP)						REPEAT SAMPLES		
	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES							1	2	3	4	5		COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.
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8	37											0	7	0	0	0	0	0	0	350	
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14	34											0	7	0	0	0	0	0	0	350	
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21	321											0	7	0	0	0	0	0	0	350	
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29	328											0	7	0	0	0	0	0	0	350	
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HF MEDIA	BBL m-ENDO		DACTERIAL DENSITY	ARITH. MEAN GEO. MEAN		CLW 0000004078						0	DIST. SYSTEM	TOTAL NO. SAMPLES					28		
TPC MEDIA												10		SAMPLES EXCEEDING 3/50, (4/100) 7/200, 13/500ml					0		

SERIAL #: 04-67-044

DATE	RAW WATER COLIFORMS (MFP)									NO. OF COLIFORMS PER 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	DISTRIBUTION SYSTEMS					INCUBATOR TEMP.		
	A			B			C									COLIFORMS (MFP)						REPEAT SAMPLES	
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES							1	2	3	4	5		COLIFORMS per 100 ml.	COLIFORMS per 100 ml.
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MF MEDIA	BBL M-ENDO			BACTERIAL DENSITY	ARITH. MEAN		GEO. MEAN							0	DIST. SYSTEM	TOTAL NO. SAMPLES					12		
TPC MEDIA														10		SAMPLES EXCEEDING 3/50, (4/100) 7/200, 13/500ml					0		

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SERIAL #: 04-67-045

DATE	RAW WATER COLIFORMS (MFP)						NO. OF COLIFORMS PER 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	DISTRIBUTION SYSTEM COLIFORMS (MFP)					REPEAT SAMPLES			INCUBATOR TEMP.
	A		B		C								1	2	3	4	5	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	
	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES															
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29												0	3	0							35.0
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HF MEDIA	BBL M-ENDO		BACTERIAL DENSITY	ARITH. MEAN		GEO. MEAN						0	DIST. SYSTEM	TOTAL NO. SAMPLES					12		
TPC MEDIA												10		SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml					0		

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Year 1984

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES
N. C. DEPARTMENT OF HUMAN RESOURCES

CONTAMINANT CODE: 3000

SERIAL #: 04-67-046

DATE	RAW WATER COLIFORMS (HFP)						NO. OF COLIFORMS PER 100 ml.	FILTERED		FINISHED		DISTRIBUTION SYSTEM					INCUBATOR TEMP.				
	A		B		C			TOTAL PLATE COUNT	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	COLIFORMS (HFP)					REPEAT SAMPLES			
	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES							1	2	3	4		5	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.
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29													3	0	0			0		350	
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HF MEDIA	BBL m-ENDO		BACTERIAL DENSITY		ARTH. MEAN								0	DISTR. SYSTEM					9		
TPC MEDIA					GEO. MEAN								1.0	TOTAL NO. SAMPLES					0		
													SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml					0			

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0000004081

Laboratory Cert. #100
ID * 37807

b Signat Elyse B. Bell Cert. Grado B WELL No. _____

Month 1984

WATER TREATMENT PLANT AT 00000 DEPT. CODE

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES

CONTAMINANT CODE: 3005

N. C. DEPARTMENT OF HUMAN RESOURCES

SERIAL #: 04-67-047

DATE	RAW WATER COLIFORMS (HFP)									NO. OF COLIFORMS PER. 100 ml.	TOTAL PLATE COUNT	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	DISTRIBUTION SYSTEM											INCUBATOR TEMP.			
	A			B			C									COLIFORMS (HFP)					REPEAT SAMPLES									
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES							1	2	3	4	5	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.							
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MF MEDIA	<u>BBL m-ENDO</u>									DACTERIAL DENSITY	ARTIH. MEAN												NO. OF SAMPLES EXAMINED							
TPC MEDIA											GEO. MEAN												DIST. SYSTEM							
										TOTAL NO. SAMPLES					12															
										SAMPLES EXCEEDING 3/50. <u>(4/100)</u> 7/200. 13/500ml.					0															

CLW
0000004082

Laboratory Cert. #100

Signed Elyabab Cert. Grado B. WEL No.

Year 1984

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES
 N. C. DEPARTMENT OF HUMAN RESOURCES

CONTAMINANT CODE: 3000

SERIAL #: 04-67-048

DATE	RAW WATER COLIFORMS (HFP)									NO. OF COLIFORMS PER. 100 ml.	FILTERED TOTAL PLATE COUNT	FINISHED TOTAL PLATE COUNT	DISTRIBUTION SYSTEM COLIFORMS (HFP)					REPEAT SAMPLES			INCUBATOR TEMPE.
	A			B			C						1	2	3	4	5				
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES												
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CHEMICAL ANALYSIS — WATER TREATMENT PLANTS

MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED

2-7-84

PARAMETER	HADNOT POINT -041	MONTFORD POINT -045	TARAWA TERRACE -044	ONSLow BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -043	NEW RIVER -046	
PH (IN LAB NOT PLANT)	9.0	7.5	7.7	7.5	8.4	8.4	8.8	8.4	
PENOLTHALEIN ALKALINITY	2	0	0	0	4	4	4	10	
METHYL ORANGE ALKALINITY	44	180	120	160	170	164	64	220	
CARBONATES AS CaCO ₃	2	0	0	0	8	8	8	20	
BICARBONATES AS CaCO ₃	40	180	120	160	162	156	56	200	
CHLORIDES AS Cl	10	30	10	20	20	24	14	170	
HARDNESS AS CaCO ₃	50	80	136	60	56	54	70	54	
IRON AS Fe	<0.04	0.57	0.08	0.22	<0.04	40.04	<0.04	0.14	
FLUORIDE	AM 0.87 PM 0.93		0.84 0.96				1.02 1.02	1.31	
CHLORINE RESIDUAL	1.0	1.0	1.0	1.5	1.5	1.0	1.0	1.3	
TURBIDITY	AM PM		0.36 0.18	0.14	0.14	0.15	0.18 0.18	0.28	
TOTAL PHOSPHATE		1.13			1.21				
ORTHO PHOSPHATE		1.00			1.02				
META PHOSPHATE		0.13			0.19				
STABILITY	+0.3	-0.5	-0.3	-0.6	0.0	0.0	+0.2	+0.1	
REMARKS								CLW	0000004084

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY

Buens 803

DATE OF ANALYSIS

2/7/84

ENCLOSURE (2)

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS

MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED

14 FEB 84

PARAMETER SERIAL #04-61	HADNOT POINT -041	MONTFORD POINT -045	TARAWA TERRACE -044	ONSLow BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -043	NEW RIVER -042	
PH (IN LAB NOT PLANT)	8.5	7.4	8.7	7.5	8.4	8.1	8.7	8.7	
PENOLTHALEIN ALKALINITY	8	0	8	0	2	0	10	14	
METHYL ORANGE ALKALINITY	70	186	54	154	174	176	76	250	
CARBONATES AS CaCO ₃	16	0	16	0	4	0	20	28	
NON-CARBONATES AS CaCO ₃	54	186	38	154	170	176	56	222	
CHLORIDES AS Cl	10	24	4	14	24	14	14	110	
HARDNESS AS CaCO ₃	54	96	80	66	70	66	72	54	
IRON AS Fe	<0.04	0.59	<0.04	0.19	<0.04	<0.04	<0.04	0.15	
FLUORIDE	AM 0.89 PM 0.90	0.17	0.80 0.75	0.19	0.10	0.10	0.88 0.90	1.21	
CHLORINE RESIDUAL	1.0	1.2	1.0	1.3	1.2	1.0	1.0	1.3	
TURBIDITY	AM 0.14 PM 0.14	0.18	0.15 0.18	0.15	0.16	0.16	0.15 0.14	0.46	
TOTAL PHOSPHATE		2.75			1.60				
ORTHO PHOSPHATE		1.10			0.22				
META PHOSPHATE		1.65			1.38				
STABILITY	+0.1	-0.4	+0.2	-0.6	+0.2	-0.1	+0.3	+0.3	
REMARKS									CLW 0000004085

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY

HONEYCUTT - LACHAPPELLE EES

DATE OF ANALYSIS

14 FEB 84

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED
 21 Feb 84

PARAMETER SERIAL #0461	HADNOT POINT -041	MONTFORD POINT -045	TARAWA TERRACE -044	ONSLow BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -043	NEW RIVER -042		
PH (IN LAB NOT PLANT)	8.9	7.4	8.4	7.6	8.4	8.1	8.4	8.4		
PENOLTHALEIN ALKALINITY	6	0	2	0	4	0	4	8		
METHYL ORANGE ALKALINITY	40	170	60	100	140	156	84	160		
CARBONATES AS CaCO ₃	12	0	4	0	8	0	8	16		
NON-CARBONATES AS CaCO ₃	28	170	56	100	152	156	76	144		
CHLORIDES AS Cl	8	30	10	14	16	20	10	90		
HARDNESS AS CaCO ₃	56	64	88	58	56	64	84	50		
IRON AS Fe	<0.04	0.65	<0.04	0.26	<0.04	0.07	<0.04	0.14		
FLUORIDE	AM 0.14 PM 0.13	0.15	0.83 0.77	0.17	0.10	0.09	0.33 0.26	0.64		
CHLORINE RESIDUAL	1.0	1.4	1.0	1.0	1.2	1.0	0.7	1.4		
TURBIDITY	AM PM	INSTRUMENT OUT OF SERVICE								
TOTAL PHOSPHATE		3.65			1.62					
ORTHO PHOSPHATE		1.24			0.22					
META PHOSPHATE		2.41			1.40					
STABILITY	+0.3	-0.4	+0.1	-0.4	+0.2	-0.1	+0.2	0.0	CLW	
REMARKS									0000004086	

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY
 BURNS *EB*

DATE OF ANALYSIS
 21 FEB 84

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS

MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED

28 FEB 84

PARAMETER SERIAL # 04-61	HADNOT POINT -041	MONTFORD POINT -045	TARAWA TERRACE -044	ONSLow BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -043	NEW RIVER -042	
PH (IN LAB NOT FLINT)	8.7	7.4	7.6	7.6	7.8	8.2	8.6	8.6	
PENOLTHALEIN ALKALINITY	6	0	0	0	0	2	4	8	
METHYL ORANGE ALKALINITY	60	180	106	140	160	160	66	140	
CARBONATES AS CaCO ₃	12	0	0	0	0	4	8	16	
CARBONATES CaCO ₃	48	180	106	140	160	156	58	124	
CHLORIDES AS Cl	10	30	8	20	18	24	18	94	
HARDNESS AS CaCO ₃	64	74	140	60	64	52	78	960	
IRON AS Fe	<0.04	0.48	<0.04	0.25	<0.04	0.08	<0.04	0.20	
FLUORIDE	AM 0.22 PM 0.19	0.14	0.70 0.58	0.17	0.09	0.09	0.20 0.17	0.54	
CHLORINE RESIDUAL	0.8	1.3	1.0	1.3	1.5	1.1	0.9	1.4	
TURBIDITY	AM PM	INSTRUMENT OUT OF SERVICE							
TOTAL PHOSPHATE		3.45			0.35				
ORTHO PHOSPHATE		1.24			0.10				
META PHOSPHATE		2.19			0.25				
STABILITY	+0.3	-0.5	-0.3	-0.4	-0.3	0.0	+0.2	+0.1	

REMARKS

CLW

0000004081

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY

BUCNS - LACHAPPELLE

DATE OF ANALYSIS

28 FEB 84

ENCLOSURE (2)