

T- 11330/1

NREAD/DDS/jc
11330/1
8 May 1984

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CLW

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 1-30 April 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 Rundgren 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, Supervisory 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:
SupvChem

CLW

0000004296

Month APRIL
Year 1984

HADDON POINT

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES

CONTAMINANT CODE: 3000

N. C. DEPARTMENT OF HUMAN RESOURCES

SERIAL #: 04-67-041

DATE	RAW WATER COLIFORMS (MFP)						NO. OF COLIFORMS PER 100 ml.	FILTERED TOTAL PLATE COUNT	FINISHED TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	DISTRIBUTION SYSTEM COLIFORMS (MFP)					REPEAT SAMPLES			INCUBATOR TEMP.			
	A		B		C								1	2	3	4	5							
	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES							COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.							
1																								
3																								
4	W 3											0	9	0	0	0	0	0	0	0				350
5																								
6																								
7																								
8																								
9																								
10	W 10											0	9	0	0	0	0	0	0	0	0			350
11																								
12																								
13																								
14																								
15																								
16																								
17	W 17											0	9	0	0	0	0	0	0	0	0			350
19																								
20																								
21																								
22																								
23																								
24	W 24											0	9	0	0	0	0	0	0	0	0			350
25																								
26																								
27																								
28																								
29																								
30																								
31																								
KF MEDIA	BBL M-ENDO		BACTERIAL DENSITY	ARITH. MEAN							0	DIST. SYSTEM	TOTAL NO. SAMPLES								36			
TPC MEDIA				GEO. MEAN							10		SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml								0			

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0000004297

Laboratory Cert. #100
ID # 37807

Signed [Signature] Cert. Grade B-WELL No. 4087 W
Encl 13

Month APRIL
Year 1984

MARINE CORPS AIR STATION

WATER TREATMENT PLANT AT VAHIF LEJUNE

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 (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					INCUBATOR 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.
1																					
3	53												0	7	0	0	0	0	0	350	
4																					
5																					
6																					
7																					
8																					
9																					
10	10												0	7	0	0	0	0	0	350	
11																					
12																					
13																					
14																					
15																					
16																					
17	17												0	7	0	0	0	0	0	350	
18																					
19																					
20																					
21																					
22																					
23																					
24	24												0	6	0	0	0	0	0	350	
25																					
26																					
27																					
28																					
29																					
30																					
31																					
HF MEDIA		BBL M-ENDO		BACTERIAL DENSITY		ARITH. MEAN						0		DISTR. SYSTEM		TOTAL NO. SAMPLES					27
TPC MEDIA						GEO. MEAN						10				SAMPLES EXCEEDING 3/50, (4/100) 7/200, 13/500ml					0

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0000004298

Laboratory Cert. #100
ID # 37807

Signed Elyse B. B. B. Cert. Grado B-WELL No. 4087 W

Month APRIL
Year 1984

HOLCOMB BLVD

WATER TREATMENT PLANT AT CAMP LEJEUNE

METHOD CODE: 303
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.	FILTERED	FINISHED	TOTAL PLATE COUNT	DISTRIBUTION SYSTEM										INCUBATOR 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.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.		
1																						
3	W										0	7	0	0	0	0	0					350
4	W																					
5																						
6																						
7																						
8																						
9																						
10	W										0	7	0	0	0			0	0			350
11	W																					
12																						
13																						
14																						
15																						
16																						
17	W										0	7	0	0	0	0	0					350
18																						
19																						
20																						
21																						
22																						
23																						
24	W										0	7	0	0	0	0						350
25	W																					
26																						
27																						
28																						
29																						
29																						
30																						
30																						
31																						
	HF MEDIA	BBL m-ENDO		BACTERIAL DENSITY	ARTH. MEAN						0	DIST. SYSTEM	TOTAL NO. SAMPLES						28			
	TPC MEDIA				GEO. MEAN						10		SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml						0			

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Laboratory Cert. #100
ID # 37807

Signed Elizabeth O. Betz Cert. Grado B-WELL No. 4087 W

Month April
Year 1984

BRAND TEEPACE

WATER TREATMENT PLANT AT VIIITH LEJUNE

CONTAMINANT CODE: 3000

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES

N. C. DEPARTMENT OF HUMAN RESOURCES

SERIAL #: 04-67-044

DATE	RAW WATER COLIFORMS (MFP)						NO. OF COLIFORMS PER 100 ml.	FILTERED TOTAL PLATE COUNT	FINISHED TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	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																AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED
1																							
3												0	3	0	0	0							35.0
4																							
5																							
6																							
7																							
8																							
9																							
10												0	3	0	0		0						35.0
11																							
12																							
13																							
14																							
15																							
16																							
17												0	3	0	0			0					35.0
19																							
20																							
21																							
22																							
23																							
24												0	3	0	0				0				35.0
25																							
26																							
27																							
29																							
30																							
31																							
MF MEDIA		BBL M-ENDO		BACTERIAL DENSITY		ARITH. MEAN						0	DIST. SYSTEM	TOTAL NO. SAMPLES					12				
TPC MEDIA						GEO. MEAN						10		SAMPLES EXCEEDING 3/50, (4/100) 7/200, 13/500ml					0				

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Laboratory Cert. #100
ID # 37807

Signed Eugene C. Barty Cert. Grado B-WELL No. 4087 W

MONTH APRIL
 Year 1984

NAME JOHNSON

WATER TREATMENT PLANT AT VAIMP LEJUNE

INCUBATION CODE 300
 CONTAMINANT CODE: 3000

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES

X. C. DEPARTMENT OF HUMAN RESOURCES

SERIAL #: 04-67-045

DATE	RAW WATER COLIFORMS (HFP)						NO. OF COLIFORMS PER 100 ml.	FILTERED TOTAL PLATE COUNT	FINISHED TOTAL PLATE COUNT	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	DISTRIBUTION SYSTEM COLIFORMS (HFP)					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														
1																				
3												0	3	0	0	0				350
4																				
5																				
6																				
7																				
8																				
9																				
10												0	3	0		0	0			350
11																				
12																				
13																				
14																				
15																				
16																				
17												0	3	0			0	0		350
19																				
20																				
21																				
22																				
23																				
24												0	3	0				0	0	350
25																				
26																				
27																				
29																				
29																				
30																				
31																				
IF MEDIA	BBL m-ENDO		DACTERIAL DENSITY	ARITH. MEAN		GEO. MEAN						0	DEST. SYSTEM	TOTAL NO. SAMPLES					12	
TPC MEDIA												10	SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml					0		

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Laboratory Cert. #100
 ID # 37807

Signed Elizabeth A. Betz Cert. Grado B-WELL No. 4087-W

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

DATE COLLECTED
3 APRIL 1984

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)	8.8	7.4	8.7	7.7	8.3	8.3	8.8	8.5
PENOLTHALEIN ALKALINITY	4	0	8	0	8	8	18	24
METHYL ORANGE ALKALINITY	16	190	56	156	180	176	58	166
CARBONATES AS CaCO ₃	8	0	16	0	16	16	36	48
BICARBONATES AS CaCO ₃	8	190	40	156	164	160	22	118
CHLORIDES AS Cl	14	36	14	20	20	20	20	104
HARDNESS AS CaCO ₃	62	76	66	58	64	54	66	78
IRON AS Fe	0.04	0.95	0.04	0.32	0.04	0.08	0.04	0.08
FLUORIDE	AM 1.00		0.89				0.98	
	PM 0.99	0.16	0.88	0.18	0.10	0.09	0.93	0.53
CHLORINE RESIDUAL	1.1	1.3	1.0	1.1	1.3	1.0	0.9	1.3
TURBIDITY	AM		0.20				0.20	
	PM 0.30	1.20	0.70	0.30	0.20	0.50	0.20	1.40
TOTAL PHOSPHATE		3.85			1.30			
ORTHO PHOSPHATE		1.54			0.32			
META PHOSPHATE		2.31			0.98			
STABILITY	+0.3	-0.5	+0.1	-0.4	0.0	-0.1	+0.2	0.0

REMARKS

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0000004305

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

HUNEXCUT + BURNS *EB*

DATE OF ANALYSIS

3 APRIL 1984

Encl (2)

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

DATE COLLECTED
 10 APRIL 1984

PARAMETER SERIAL #04-67	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)	9.1	7.3	8.9	7.4	8.2	8.2	8.7	9.0
PENOLTHALEIN ALKALINITY	8	0	4	0	2	4	6	16
METHYL ORANGE ALKALINITY	60	190	54	160	176	170	70	154
CARBONATES AS CaCO ₃	16	0	8	0	4	8	12	32
NON-CARBONATES AS CaCO ₃	44	190	46	160	172	162	58	122
CHLORIDES AS Cl	8	32	8	16	14	14	10	98
HARDNESS AS CaCO ₃	62	84	64	58	62	64	70	48
IRON AS Fe	0.04	0.58	0.04	1.27	0.04	0.06	0.04	0.14
FLUORIDE	AM	0.85	1.05				0.76	
	PM	0.99	0.14	0.98	0.17	0.10	0.76	0.64
CHLORINE RESIDUAL	1.1	1.3	1.0	1.4	1.5	1.0	1.1	1.2
TURBIDITY	AM		0.29				0.18	
	PM	1.40	0.76	0.38	1.2	0.30	0.20	1.30
TOTAL PHOSPHATE		2.60			1.40			
ORTHO PHOSPHATE		1.26			0.25			
META PHOSPHATE		1.34			1.15			
STABILITY	+0.5	-0.6	+0.3	-0.8	-0.1	-0.1	+0.3	+0.1

REMARKS

CLW

0000004306

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

LACHAPPELLE, BURNS

DATE OF ANALYSIS

10 APRIL 1984

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

DATE COLLECTED
 17 APRIL 1984

PARAMETER SERIAL #04-67	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)	9.0	7.3	8.5	7.4	8.2	8.2	8.9	8.6
PENOLTHALEIN ALKALINITY	6	0	2	0	4	4	8	10
METHYL ORANGE ALKALINITY	54	184	64	158	170	170	60	150
CARBONATES AS CaCO ₃	12	0	4	0	8	8	16	20
BICARBONATES AS CaCO ₃	42	184	60	158	162	162	44	130
CHLORIDES AS Cl	8	36	12	18	14	20	8	64
HARDNESS AS CaCO ₃	58	78	74	68	60	56	58	50
IRON AS Fe	0.05	0.60	0.04	0.27	0.04	0.07	0.04	0.13
FLUORIDE	AM 1.15 PM 1.16	0.16	0.98 1.01	0.19	0.12	0.10	0.98 0.89	0.60
CHLORINE RESIDUAL	1.0	1.2	1.1	1.0	0.9	1.0	0.9	1.2
TURBIDITY	AM 2.2 PM 2.2	1.1	0.3 0.4	0.3	0.4	0.6	0.2 0.2	1.0
TOTAL PHOSPHATE		4.20			1.54			
ORTHO PHOSPHATE		1.54			0.25			
META PHOSPHATE		2.66			1.29			
STABILITY	+0.4	-0.5	+0.1	-0.5	+0.1	+0.1	+0.4	+0.2

REMARKS

CLW

0000004307

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
 LACHAPPELLE

DATE OF ANALYSIS
 17 APRIL 1984

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS

MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED

24 APRIL 1984

PARAMETER SERIAL #04-67	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)	8.8	7.2	8.5	7.4	8.1	8.2	8.7	8.8	
PENOLTHALEIN ALKALINITY	6	0	4	0	6	2	6	14	
METHYL ORANGE ALKALINITY	56	190	56	174	176	160	60	124	
CARBONATES AS CaCO ₃	12	0	8	0	12	4	12	28	
BICARBONATES AS CaCO ₃	44	190	48	174	164	156	48	96	
CHLORIDES AS Cl	8	36	10	14	22	20	16	134	
HARDNESS AS CaCO ₃	60	76	86	92	62	42	60	58	
IRON AS Fe	0.04	0.54	0.04	0.24	0.06	0.07	0.04	0.31	
FLUORIDE	AM 1.30 PM 1.26	0.79	1.33	0.58	0.58	0.34	1.13 0.83	1.06	
CHLORINE RESIDUAL	1.0	1.3	1.0	1.2	1.2	1.0	1.0	1.3	
TURBIDITY	AM 1.5 PM 0.5	0.7	0.5	0.3	0.4	0.4	0.3 0.3	1.4	
TOTAL PHOSPHATE		4.60			1.92				
ORTHO PHOSPHATE		1.54			0.32				
META PHOSPHATE		3.06			1.60				
STABILITY	+0.4	-0.5	+0.2	-0.4	0.0	-0.1	+0.2	+0.2	

REMARKS

CLW

0000004308

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

LACHAPPELLE, + BURNS ^{EBB}

DATE OF ANALYSIS

24 APRIL 1984