

11330/1
NREAD
12 Feb 85

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 1-31 January 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:
NAVFACENGCOM (Code 114)

Blind copy to:
OCL, NREAD



CLW
0000004519

Serial # 04-67-041

DATE	RAW WATER COLIFORMS (MFP)		FILTERED		FINISHED		DISTRIBUTION SYSTEM						INCUBATOR TEMP.				
	VOLUME FILTERED ml.	TOTAL COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	COLIFORMS (MFP)								
									1	2	3	4		5	6	REPEAT SAMPLES	
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Serial # 04-67-042

DATE	RAW WATER COLIFORMS (HFP)			FILTERED			FINISHED			AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	DISTRIBUTION SYSTEM					REPEAT SAMPLES	INCUBATOR TEMP.		
	A	B	C	HFP COLIFORMS per 100 ml.			HFP COLIFORMS per 100 ml.					COLIFORMS (HFP)								
	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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										TOTAL NO. SAMPLES					SAMPLER EXCEEDING 3/50, 4/100, 7/200, 13/500 ml		35			
										NO. OF COLIFORMS PER 100 ml.					TOTAL PLATE COUNT		35.5			
										AVE. COLIFORMS per 100 ml.					HFP COLIFORMS per 100 ml.		35.0			
										NO. OF SAMPLES EXAMINED					TOTAL PLATE COUNT		35.0			
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										COLIFORMS per 100 ml.					TOTAL PLATE COUNT		35.0			

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Serial # 04-67-043

DATE	RAW WATER COLIFORMS (MFP)		FILTERED		FINISHED		DISTRIBUTION SYSTEM					REPEAT SAMPLES	INCUBATOR TEMP.	PLANKTON	
	VOLUME FILTERED ml.	TOTAL COLONIES	TOTAL COLONIES	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	COLIFORMS (MFP)							
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PLATE SHEET DOWN - DISTRIBUTION SYSTEM

TEMP. 34-61-84 (HARVEST POINT)

TOTAL NO. SAMPLES 27

SAMPLES EXCEEDING 1/50, 1/100, 1/200, 1/500ml 0

Serial # 04-67-044

No.	DATE	RAW WATER COLIFORMS (HFP)			FILTEREC		FINISHED		DISTRIBUTION SYSTEM					REPEAT SAMPLES	INCUBATOR TEMP.						
		VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED			COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.
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Serial # 04-67-046

DATE	RAW WATER COLIFORMS (MFP)			FINISHED			COLIFORMS (MFP) DISTRIBUTION SYSTEM					REPEAT SAMPLES			INCUBATOR TEMP.				
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	FILTERED	FINISHED	TOTAL PLATE COUNT	AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.		COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.
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Serial #04-67-047

DATE	RAW WATER COLIFORMS (HFP)			FILTERED			FINISHED			DISTRIBUTION SYSTEM					REPEAT SAMPLES	INCUBATOR TEMP.												
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	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	AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.		
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Laboratory Cert. #37807
 Total No. Samples: 20
 Samples Exceeding 3/50, 4/100, 7/200, 13/500ml: 0
 Signoff: *[Signature]*
 Cert. Grade: B-Well No. 4087-W

DATE	RAW WATER COLIFORMS (HFP)			FILTERED			FINISHED			DISTRIBUTION SYSTEM					REPEAT SAMPLES			INCUBATOR TEMP.
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	HFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	
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Laboratory Corl. #37807 Signed *Elizabeth C. Beck* Cert. Grade B-Well No. 4087-W

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CHEMICAL ANALYSIS -- WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV 6-84)

PARAMETER	HADNOT POINT -04	CAMP JOHNSON -045	TARAWA TERRACE -044	ONSLOW BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -045	NEW RIVER -042	DATE COLLECTED	DATE OF ANALYSIS
PH (IN LAB NOT PLANT)	8.8	7.4	8.4	7.5	8.4	8.1	8.6	8.7	2 JAN 1985	2 JAN 1985
PHENOLTHALEIN ALKALINITY	16	0	10	0	10	0	12	20		
METHYL ORANGE ALKALINITY	62	220	66	168	178	164	66	190		
CARBONATES AS CaCO ₃	32	0	20	0	20	0	24	40		
BICARBONATES AS CaCO ₃	30	220	46	168	158	164	42	150		
CHLORIDES AS Cl	10	40	10	20	20	30	18	116		
HARDNESS AS CaCO ₃	72	84	90	66	58	66	70	50		
IRON AS Fe	<0.04	0.67	<0.04	0.22	<0.04	0.09	<0.04	<0.04		
FLUORIDE	AM 1.05	0.16	0.80	0.18	0.13	0.11	1.04	0.76		
CHLORINE RESIDUAL	PM 1.1	1.2	1.1	1.5	1.3	1.0	0.9	1.3		
TURBIDITY	AM 0.2	1.7	0.3	0.3	0.2	0.6	0.2	0.4		
TURBIDITY	PM 0.3		0.6				0.3			
TOTAL PHOSPHATE		2.40			1.13					
ORTHO PHOSPHATE		1.09			0.28					
META PHOSPHATE		1.31			0.85					
STABILITY	+0.6	-0.5	+0.3	-0.6	+0.1	-0.2	+0.4	+0.1		
REMARKS										

CLW

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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

HUNDERCITE

COPY TO:

UTIL DIR

WATER TREATMENT

PMU MCAS PMU

NREAD FILE

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 6-84)

PARAMETER	HADNOT POINT	CAMP JOHNSON	TARAWA TERRACE	ONSLOW BEACH	COURTHOUSE BAY	RIFLE RANGE	HOLCOMB BLVD	NEW RIVER
(IN LAB NOT PLANT)	-041	-045	-044	-048	-047	-046	-045	-042
PH (IN LAB NOT PLANT)	8.7	7.4	8.9	7.5	8.5	7.9	7.9	8.7
PHENOLTHALEIN ALKALINITY	4	0	6	0	6	0	0	8
METHYL ORANGE ALKALINITY	32	220	54	168	158	178	92	184
CARBONATES AS CaCO ₃	8	0	12	0	12	0	0	16
BICARBONATES AS CaCO ₃	24	220	42	168	146	178	92	168
CHLORIDES AS Cl	14	22	8	20	20	34	10	116
HARDNESS AS CaCO ₃	60	56	66	58	60	56	86	66
IRON AS Fe	<0.04	0.59	<0.04	0.23	<0.04	<0.04	0.17	0.05
FLUORIDE	AM 1.01 PM 1.03	0.19	AM 1.30 PM 0.97	0.17	0.12	0.10	1.08 0.84	0.88
CHLORINE RESIDUAL	1.1	1.4	1.0	1.0	1.5	0.5	0.9	1.3
TURBIDITY	AM 0.12 PM 0.28	0.73	0.37 0.67	0.32	0.30	0.35	0.13 0.27	0.47
TOTAL PHOSPHATE		2.05			1.28			
ORTHO PHOSPHATE		1.04			0.32			
META PHOSPHATE		1.01			0.96			
STABILITY	+0.3	-0.9	+0.4	-0.9	0	-0.6	-0.5	0

DATE COLLECTED 8 JAN 1985
 DATE OF ANALYSIS 8 JAN 1985

REMARKS

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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
 Basse & Buens

- COPY TO:
- UTIL DIR
 - WATER TREATMENT
 - PMU
 - MCAS PMU
 - NREAD
 - FILE

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS
 MGBCL 11330/3 (REV. 6-84)

PARAMETER	HADNOT POINT	CAMP JOHNSON	TARAWA TERRACE	ONSLOW BEACH	COURTHOUSE BAY	RIFLE RANGE	HOLCOMB BLVD	NEW RIVER	DATE COLLECTED	DATE OF ANALYSIS
(IN LAB NOT PLANT)	-04	-045	-044	-048	-047	-046	-045	-042	15 JAN 1985	15 JAN 1985
PH	9.1	7.9	8.8	7.4	8.4	8.2	8.7	8.1		
PHENOLTHALEIN ALKALINITY	8	0	4	0	2	0	4	0		
METHYL ORANGE ALKALINITY	50	200	50	160	150	156	64	210		
CARBONATES AS CaCO ₃	16	0	8	0	4	0	8	0		
BICARBONATES AS CaCO ₃	34	200	42	160	146	156	56	210		
CHLORIDES AS Cl	10	40	10	14	14	30	8	120		
HARDNESS AS CaCO ₃	54	62	68	70	50	52	66	82		
IRON AS Fe	<0.04	0.51	0.14	0.21	0.08	0.06	<0.04	0.07		
FLUORIDE	AM 0.95 FM 0.98	0.18	1.02 1.13	0.19	0.12	0.11	1.12 1.14	0.76		
CHLORINE RESIDUAL	AM 1.0 FM 0.13	1.3	1.3 0.73	1.5	1.6	1.0	0.8 0.27	1.1		
TURBIDITY	AM 0.23 FM	0.93	0.94	0.27	0.74	0.44	0.42	0.61		
TOTAL PHOSPHATE		2.95			1.13					
ORTHO PHOSPHATE		1.04			0.25					
META PHOSPHATE		1.91			0.88					
STABILITY	+0.8	-0.1	+0.5	-0.8	+0.1	-0.1	+0.5	-0.1		
REMARKS										

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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

COPY TO: UTIL DIR WATER TREATMENT PMU MCAS PMU NREAD FILE

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 6-84)

PARAMETER	HADNOT POINT -041	CAMP JOHNSON -043	TARAWA TERRACE -044	ONSLOW BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -049	HOLCOMB BLVD -043	NEW RIVER -048
PH (IN LAB NOT PLANT)	8.8	7.4	8.6	7.5	8.4	8.0	8.7	8.3
PHENOLTHALEIN ALKALINITY	8	0	4	0	4	0	6	2
METHYL ORANGE ALKALINITY	56	186	62	170	164	168	64	188
CARBONATES AS CaCO ₃	16	0	8	0	8	0	12	4
BICARBONATES AS CaCO ₃	40	186	54	170	156	168	52	184
CHLORIDES AS Cl	116	24	10	18	18	36	10	142
HARDNESS AS CaCO ₃	54	64	82	64	72	50	72	68
IRON AS Fe	<0.04	0.61	<0.04	0.14	<0.04	<0.04	<0.04	<0.04
FLUORIDE	AM 1.02	0.20	1.13	0.18	0.12	0.11	1.03	0.77
PM 1.00			1.01				0.86	
CHLORINE RESIDUAL	1.1	1.3	1.3	1.4	1.4	1.1	1.0	1.5
TURBIDITY	AM 0.16	1.50	0.21	0.21	0.77	0.41	1.54	0.33
PM 0.30			0.39				1.18	
TOTAL PHOSPHATE		2.34			2.18			
ORTHO PHOSPHATE		1.21			0.28			
META PHOSPHATE		1.13			1.90			
STABILITY	+0.4	-0.9	+0.3	-0.8	+0.1	-0.4	+0.4	-0.1

REMARKS

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DATE COLLECTED
22 JAN 1985

DATE OF ANALYSIS
22 JAN 1985

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
BREEBE + BURNS

- COPY TO:
- UTIL DIR
 - WATER TREATMENT
 - PMU
 - MCAS PMU
 - NREAD
 - FILE

CHEMICAL ANALYSIS -- WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 6-84)

PARAMETER	HADNOT POINT	CAMP JOHNSON	TARAWA TERRACE	ON SLOW BEACH	COURTHOUSE BAY	RIFLE RANGE	HOLCOMB BLVD	NEW RIVER
(IN LAB NOT PLANT)	-04	-05	-04	-08	-07	-09	-05	-02
PH (IN LAB NOT PLANT)	8.7	7.4	8.4	7.8	8.3	8.3	Plant Temporarily Shut Down	9.0
PHENOLTHALEIN ALKALINITY	2	0	0	0	0	0		8
METHYL ORANGE ALKALINITY	58	184	64	156	160	160		160
CARBONATES AS CaCO ₃	4	0	0	0	0	0		16
BICARBONATES AS CaCO ₃	54	184	64	156	160	160		144
CHLORIDES AS Cl	10	30	10	20	12	14		150
HARDNESS AS CaCO ₃	60	80	90	60	70	50		58
IRON AS Fe	<0.04	0.63	<0.04	<0.04	<0.04	<0.04		0.09
FLUORIDE	AM 1.09	0.17	1.22	0.15	0.09	0.08		0.69
FM 1.05			1.18					
CHLORINE RESIDUAL	1.0	1.2	1.0	1.4	1.1	1.0		1.2
TURBIDITY	AM 0.30	0.70	0.20	0.20	0.40	0.20		0.60
FM 0.20								
TOTAL PHOSPHATE		1.62			0.73			
ORTHO PHOSPHATE		1.04			0.22			
META PHOSPHATE		0.58			0.51			
STABILITY	+0.4	-0.7	+0.3	-0.5	0.0	0.0		+0.3

DATE COLLECTED 29 JAN 1985
 DATE OF ANALYSIS 29 JAN 1985

REMARKS

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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 + Braase

- COPY TO:
- UTIL DIR
 - WATER TREATMENT
 - PMU
 - MCAS PMU
 - NREAD
 - FILE