11330/1
NREAD
7 Aug 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 1-31 July 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,

C. D. PETERSON
Acting Director

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

Copy to:
LANTDIV (Code 114)

Blind copy to:
BMO (Attn: UtilDir)
SupvChem

CLW

0000004167

Writer: E. Betz, NREAD 5977
Typist: J. Cross, 7Aug84 5003

Month JULY HARBOR POINT WATER TREATMENT PLANT AT [illegible]

Year 1981

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) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: MFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFP): AVE. COLIFORMS per 100 ml.	COLIFORMS (MFP): NO. OF SAMPLES EXAMINED	COLIFORMS (MFP): 1	2	3	4	5	REPEAT SAMPLES ON 7/1: COLIFORMS per 100 ml.	REPEAT SAMPLES ON 7/2: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.
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2							1																			
3	S3															0	9	0 0	0 0	0 0	0	0 0	0			35.2
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17	S17															0	9	0 0 0	0 0 0	0 0			0			35.0
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24	S24															0	9	0 0	0 0	0 0	0 0	0				35.0
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30	S31															0	9	0 0	0 0	0 0	0 0	0				35.0
31																		0	0							

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MF MEDIA	BBL m-ENDO	BACTERIAL DENSITY	ARITH. MEAN		0.02	DIST. SYSTEM	TOTAL NO. SAMPLES 46
TPC MEDIA			GEO. MEAN		1.0		SAMPLES EXCEEDING 3/50, (4/100) 7/200, 13/500ml 0

Laboratory Seal #120

Signed Elizabeth Cates Cert. Grade B-WELL No. 4087-W

Month [illegible] WATER TREATMENT PLANT AT [illegible]

Year 1984

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

CONTAMINANT CODE: 3000

SERIAL # 04-67-042

DATE	RAW WATER COLIFORMS (MFP) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: MFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFP): AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	1: COLIFORMS per 100 ml.	2: COLIFORMS per 100 ml.	3: COLIFORMS per 100 ml.	4: COLIFORMS per 100 ml.	5: COLIFORMS per 100 ml.	REPEAT SAMPLES ON 7/11: COLIFORMS per 100 ml.	REPEAT SAMPLES ON 7/12: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.
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23																										
24	324											CLW				0	7	0 0	0 0 0	0 0	1	1				35.0
25	324																									
26												0000004169														
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29																										
30	331															0	7	0 0	0 0	1	0	0				
31	331																			0						350
																										35
	MF MEDIA		BBL m-ENDO		BACTERIAL DENSITY		ARITH. MEAN									0.34	DIST. SYSTEM	TOTAL NO. SAMPLES								
	TPC MEDIA						GEO. MEAN									1.07		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml								1

Signed [signature] Cert. Grade B-WELL No. 4087-W

Month 1984 HOLCOMB BLVD WATER TREATMENT PLANT AT CAMP LEJEUNE METHOD CODE: 303

Year 1984 REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES CONTAMINANT CODE: 3000

N. C. DEPARTMENT OF HUMAN RESOURCES

SERIAL #04-67-043

DATE	RAW WATER COLIFORMS (MFP) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: MFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFP): AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	1: COLIFORMS per 100 ml.	2: COLIFORMS per 100 ml.	3: COLIFORMS per 100 ml.	4: COLIFORMS per 100 ml.	5: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.
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MF MEDIA	BBL m-ENDO	BACTERIAL DENSITY	ARITH. MEAN		0	DIST. SYSTEM	TOTAL NO. SAMPLES	35
TPC MEDIA			GEO. MEAN		1.0		SAMPLES EXCEEDING 3/50, (4/100) 7/200, 13/500ml	0

Laboratory Cert. #100 Signed [signature] Cert. Grade B-WELL No. 4087-W

Month _____ WATER TREATMENT PLANT AT _____

Year _____

CONTAMINANT CODE: 3000

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

SERIAL #04-67-04

DATE	RAW WATER COLIFORMS (MFP) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: MFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFP): AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	1	2	3	4	5	REPEAT SAMPLES ON 1/25: COLIFORMS per 100 ml.	REPEAT SAMPLES ON 7/26: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.
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22																										
23																										
24																1.33	3	0	0			4	0	0		35.0
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31																0	3	0	0			0				35.0
MF MEDIA		BBL m-ENDO				BACTERIAL DENSITY		ARITH. MEAN								0.27	DIST. SYSTEM	TOTAL NO. SAMPLES								15
TPC MEDIA								GEO. MEAN								1.00		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml								0

CLW

0000004171

Laboratory Seal #160

Signed Elizabeth Betz Cert. Grade B-WELL No. 4087-W

Month _____ WATER TREATMENT PLANT NO. _____

Year 1984

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

CONTAMINANT CODE: 3000

SERIAL #04-67-045

DATE	RAW WATER COLIFORMS (HFP) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: HFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: HFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (HFP): AVE. COLIFORMS per 100 ml.	COLIFORMS (HFP): NO. OF SAMPLES EXAMINED	COLIFORMS (HFP): 1 COLIFORMS per 100 ml.	COLIFORMS (HFP): 2 COLIFORMS per 100 ml.	COLIFORMS (HFP): 3 COLIFORMS per 100 ml.	COLIFORMS (HFP): 4 COLIFORMS per 100 ml.	COLIFORMS (HFP): 5 COLIFORMS per 100 ml.	REPEAT SAMPLES ON 7/25: COLIFORMS per 100 ml.	REPEAT SAMPLES ON 7/26: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.
1																										
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HF MEDIA	ÖBLM-ENDO	BACTERIAL DENSITY	ARITH. MEAN				0.36	DIST. SYSTEM	TOTAL NO. SAMPLES		14
TPC MEDIA			GEO. MEAN				1.92		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml		1

Signed _____ Cert. Grade B-WELL No. 4087-W

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 (MFP) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: MFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFP): AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	1	2	3	4	5	REPEAT SAMPLES			INCUBATOR TEMP.
1																										
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24																0	3	0	0			0				350
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30																										
31																0	3	0	0			0				350
MF MEDIA			BBL m-ENDO			DACTERIAL DENSITY		ARITH. MEAN								0	DIST. SYSTEM	TOTAL NO. SAMPLES								15
TPC MEDIA								GEO. MEAN								1.0		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml								0

CLW

0000004173

Laboratory Code #100 Signed Elizabeth Cert. Grade B-WELL No. 4087-W

Month [illegible] WATER TREATMENT PLANT AT [illegible]

Year 1984

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

CONTAMINANT CODE: 3000

SERIAL # 04-67-047

DATE	RAW WATER COLIFORMS (MFP) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: MFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFP): AVE. COLIFORMS per 100 ml.	COLIFORMS (MFP): NO. OF SAMPLES EXAMINED	COLIFORMS (MFP): 1 COLIFORMS per 100 ml.	COLIFORMS (MFP): 2 COLIFORMS per 100 ml.	COLIFORMS (MFP): 3 COLIFORMS per 100 ml.	COLIFORMS (MFP): 4 COLIFORMS per 100 ml.	COLIFORMS (MFP): 5 COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.
2																										
3																0	4	0	0	0 0						35.2
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22																										
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30																										
31																0	4	0	0	0		0				35.0

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MF MEDIA	BBL m-ENDO	BACTERIAL DENSITY	ARITH. MEAN						0	4	TOTAL NO. SAMPLES 20
TPC MEDIA			GEO. MEAN						10		DIST. SYSTEM SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml 0

Analyst [illegible] #48 Signed Elizabeth A Betz Cert. Grade B-WELL No. 4087-W

Month JULY ONSLOW BEACH WATER TREATMENT PLANT AT CAMP LEJEUNE

Year 1984

CONTAMINANT CODE: 3000

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

SERIAL #04-67-048

DATE	RAW WATER COLIFORMS (MFP) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: MFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFP): AVE. COLIFORMS per 100 ml.	COLIFORMS (MFP): NO. OF SAMPLES EXAMINED	COLIFORMS (MFP): 1	2	3	4	5	REPEAT SAMPLES			INCUBATOR TEMP.
1																										
2																										
3																0	2	0	0							35.2
4					1																					
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23												CLW														
24																0	2	0	0							35.0
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27																										
28																										
29																										
30																										
31																0	2	0	0							35.0
MF MEDIA		BBL m-ENDO		DACTERIAL DENSITY		ARITH. MEAN										0	DIST. SYSTEM	TOTAL NO. SAMPLES								10
TPC MEDIA						GEO. MEAN										1.0		SAMPLES EXCEEDING 3/50. (4)/100 7/200. 13/500ml								0

Laboratory Cert. #100

Signed [signature] Cert. Grade B-WELL No. 4087-W

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

DATE COLLECTED 3 JULY 84

PARAMETER SERIAL # 04-167	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)	8.36	7.52	7.73	7.64	8.57	8.55	8.78	8.90
PENOLTHALEIN ALKALINITY	4	0	0	0	4	2	4	10
METHYL ORANGE ALKALINITY	54	178	148	124	166	158	70	162
CARBONATES AS $CaCO_3$	8	0	0	0	8	4	8	20
BICARBONATES AS $CaCO_3$	46	178	148	124	158	154	62	142
CHLORIDES AS Cl	10	18	16	28	20	16	14	134
HARDNESS AS $CaCO_3$	58	54	154	56	60	52	70	56
IRON AS Fe	< 0.04	0.48	0.10	0.25	< 0.04	0.05	< 0.04	0.09
FLUORIDE AM	0.17	0.16	0.79	0.19	0.10	0.08	0.90	0.73
FLUORIDE PM	0.99		0.70				0.88	
CHLORINE RESIDUAL	1.1	1.3	1.0	1.6	1.2	1.0	0.9	1.3
TURBIDITY AM	0.63	0.44	0.51	0.38	0.25	0.30	0.28	2.64
TURBIDITY PM	0.83		0.50				0.20	
TOTAL PHOSPHATE		1.54			1.13			
ORTHO PHOSPHATE		1.04			0.25			
META PHOSPHATE		0.50			0.88			
STABILITY	- 0.35	- 0.81	- 0.49	- 0.71	+ 0.07	0 CLW .28		+ 0.10

REMARKS

0000004176

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 Th Barbee RJ LaCHAPELLE

DATE OF ANALYSIS 3 JULY 84

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

DATE COLLECTED: 10 JULY 84

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	7.5	8.7	7.6	8.5	8.3	8.9	8.9
PENOLTHALEIN ALKALINITY	4	0	4	0	4	2	6	4
METHYL ORANGE ALKALINITY	64	170	56	150	170	150	60	150
CARBONATES AS $CaCO_3$	8	0	8	0	8	4	12	8
BICARBONATES AS $CaCO_3$	56	170	48	150	162	146	48	142
CHLORIDES AS Cl	10	30	10	14	18	10	10	134
HARDNESS AS $CaCO_3$	72	68	70	64	64	38	60	58
IRON AS Fe	0.06	0.68	<0.04	0.40	<0.04	0.05	<0.04	0.08
FLUORIDE AM	1.17	0.16	0.93	0.17	0.09	0.08	1.30	0.60
FLUORIDE PM	1.10		0.91				1.25	
CHLORINE RESIDUAL	1.1	1.4	1.0	1.3	1.3	1.0	0.8	1.2
TURBIDITY AM	3.3	1.4	0.2	0.52	0.40	0.40	0.2	1.00
TURBIDITY PM	3.3		0.6				0.57	
TOTAL PHOSPHATE		4.80			0.92			
ORTHO PHOSPHATE		1.66			0.22			
META PHOSPHATE		3.14			0.70			
STABILITY	~~+0.5~~ +0.05	-0.8	+0.3	-0.8	+0.1	-0.2	+0.5	+0.3

REMARKS

CLW

0000004177

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: HJ BURNS

DATE OF ANALYSIS: 10 JULY 84

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS

MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED 7/31/84

PARAMETER SERIAL # 04-161	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	8.3	8.3	7.4	8.4	8.2	8.7	8.7
PENOLTHALEIN ALKALINITY	6	0	0	0	2	0	4	10
METHYL ORANGE ALKALINITY	54	192	66	150	142	168	66	176
CARBONATES AS $CaCO_3$	12	0	0	0	4	0	8	20
BICARBONATES AS $CaCO_3$	42	192	66	150	138	168	58	156
CHLORIDES AS Cl	14	48	14	26	26	44	20	180
HARDNESS AS $CaCO_3$	56	154	78	46	46	52	60	56
IRON AS Fe	<0.04	1.10	<0.04	0.08	0.05	<0.04	0.05	0.04
FLUORIDE AM / PM	1.17 / 1.14	0.19	1.24 / 1.07	0.19	0.14	0.11	0.81 / 0.82	0.76
CHLORINE RESIDUAL	1.1	1.3	1.0	1.2	1.5	1.0	0.9	1.2
TURBIDITY AM / PM	0.6 / 0.6	1.1	0.60 / 1.0	0.30	0.20	0.40	0.20 / 0.30	0.60
TOTAL PHOSPHATE		1.17			1.21			
ORTHO PHOSPHATE		0.88			0.25			
META PHOSPHATE		0.29			0.96			
STABILITY	+0.6	−0.3	+0.1	−0.6	+0.1	−0 CLW	+0.5	+0.2

REMARKS

0000004178

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 & BARBEE

DATE OF ANALYSIS: 7/31/84

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

DATE COLLECTED: 24 JULY 84

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)	8.9	7.2	8.6	7.4	8.4	8.4	8.9	8.4
PENOLTHALEIN ALKALINITY	4	0	4	0	4	4	6	6
METHYL ORANGE ALKALINITY	56	190	58	160	170	164	62	178
CARBONATES AS $CaCO_3$	8	0	8	0	8	8	12	12
BICARBONATES AS $CaCO_3$	48	190	50	160	162	156	50	166
CHLORIDES AS Cl	12	48	16	24	22	20	18	156
HARDNESS AS $CaCO_3$	60	86	80	72	60	48	58	76
IRON AS Fe	<0.04	0.77	<0.04	0.12	<0.04	<0.04	<0.04	<0.04
FLUORIDE AM / PM	1.00 / 1.06	0.17	0.97 / 1.04	0.18	0.12	0.10	0.78 / 0.90	0.72
CHLORINE RESIDUAL	1.0	1.5	1.1	1.4	1.5	1.0	0.9	1.3
TURBIDITY AM / PM	3.1 / 3.7	0.9	0.4 / 1.7	0.4	0.3	0.4	0.2 / 0.2	0.6
TOTAL PHOSPHATE		3.45			0.92			
ORTHO PHOSPHATE		1.38			0.13			
META PHOSPHATE		2.07			0.79			
STABILITY	+0.6	−0.9	+0.2	−0.8	+CLW	0.0	+0.5	0.0

REMARKS

000000419

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: LACHAPELLE & TH BARBEE

DATE OF ANALYSIS: 24 JULY 84

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

DATE COLLECTED 17 JULY 84

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	7.4	9.3	7.6	8.4	8.3	8.8	8.9	
PENOLTHALEIN ALKALINITY	10	0	10	0	2	2	4	10	
METHYL ORANGE ALKALINITY	40	180	30	154	140	146	60	160	
CARBONATES AS $CaCO_3$	20	0	20	0	4	4	8	20	
BICARBONATES AS $CaCO_3$	20	180	10	154	136	142	52	140	
CHLORIDES AS C1	10	40	10	16	10	10	10	150	
HARDNESS AS $CaCO_3$	48	70	50	60	58	42	66	60	
IRON AS Fe	<0.04	0.49	<0.04	0.21	<0.04	0.08	0.06	0.06	
FLUORIDE AM	1.01	0.17	0.99	0.19	0.10	0.07	1.40	0.67	
FLUORIDE PM	1.05		0.99				1.30		
CHLORINE RESIDUAL	1.0	1.4	1.0	1.9	1.3	1.0	0.9	1.3	
TURBIDITY AM	1.5	1.0	0.7	0.3	0.20	0.4	0.20	0.90	
TURBIDITY PM	0.7		5.6				0.30		
TOTAL PHOSPHATE		4.05			0.92				
ORTHO PHOSPHATE		1.35			0.16				
META PHOSPHATE		2.70			0.76				
STABILITY	+0.3	-0.6	+0.3	-0.6	+0.1	-0.1	+0.2	+0.1	

REMARKS

CLW

0000004180

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 HJ BUENS TH BARBEE

DATE OF ANALYSIS 17 JULY 84