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:
QCL,NREAD

CLW
0000004519

Month January — Hadnot Point — WATER TREATMENT PLANT AT Camp Lejeune — Method Code: 303

Year 1985 — 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	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 6: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.	PLANKTON
1																												
2	322															0	9	0	0	0	0	0	0				35.0	
3																												
4																												
5																												
6																												
7																												
8	328															0	9	0	0	0	0	0	0		0			35.0	
9																												
10																												
11																												
12																												
13																												
14																												
15	315															0	9	0	0	0	0	0			0			35.0	
16																		0	0	0	0							
17																												
18																												
19																												
20																												
21																												
22	322															0	9	0	0	0	0	0	0				35.0	
23																				0	0							
24																												
25																												
26																												
27																												
28																												
29	324															0	16	0	0	0	0	0	0				35.5	
30																				0	0	0	0	0	0	0		
31																												

CLW

0000004520

MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN		0	DIST. SYSTEM	TOTAL NO. SAMPLES 52
TPC MEDIA			GEO. MEAN		1.0		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml 0

Laboratory Cert. #37807 — Signed _____ — Cert. Grade B-Well — No. 4087-W

Month January — Marine Corps Air Station WATER TREATMENT PLANT AT Camp Lejeune — Method Code: 303

Year 1985 — REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES — Contaminant Code: 3000

N. C. DEPARTMENT OF HUMAN RESOURCES

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: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.
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2							1									0	7	0 0	0 0	0 0	0					35.0
3	52																									
4				1																						
5																										
6																										
7																										
8																0	7	0 0	0 0	0 0		0				35.0
9	58																									
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11																										
12																										
13																										
14																										
15																0	7	0 0	0 0	0 0		0				35.0
16	515																									
17																										
18																										
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20																										
21																										
22																0	7	0 0	0 0	0 0		0				35.0
23	522																									
24																										
25																										
26																										
27																										
29											CLW															
29											00000	4521				0	7	0 0	0 0	0 0						35.5
30	529																	0								
31																										

MF MEDIA	BBL mEndo	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. #37807 — Signed Elizabeth A Bell — Cert. Grade B-Well — No. 4087W

Month January Holcomb Blvd WATER TREATMENT PLANT AT Camp Lejeune Method Code: 909

Year 1985 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.	PLANKTON
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2																0	6	0 0	0	0 0	0					35.0	35
~~3~~	5/2																										
4																											
5																											
6																											
7																											
8	5/8															0	7	0 0	0	0 0		0				35.0	35
~~9~~																											
10																											
11																											
12																											
13																											
14																											
15	5/15															0	7	0 0 0	0	0			0 0			35.0	
~~16~~																											
17																											
18																											
19																											
20																											
21																											
22	5/22															0	7	0 0	0	0 0	0					35.0	
~~23~~																		0		0							
24																											
25																											
26																											
27																											
28																											
29	5/29																	PLANT SHUT DOWN - DISTRIBUTION								35.5	
~~30~~																		FED FROM 24-67-24 (HADNOT POINT)									
~~31~~																											
MF MEDIA		BBL mEndo			BACTERIAL DENSITY		ARITH. MEAN									0	DIST. SYSTEM	TOTAL NO. SAMPLES								27	
TPC MEDIA							GEO. MEAN									1.0		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml								0	

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Laboratory Cert. #37807 Signed Elizabeth Ogle Cert. Grade B-Well No. 4087-W

Month January | Tarawa Terrace | WATER TREATMENT PLANT AT Camp Lejeune | Method Code: 303

Year 1985 | REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES | Contaminant Code: 3000

N. C. DEPARTMENT OF HUMAN RESOURCES

Serial #04-67-044

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.
1																										
2																0	3	0	0	0	1	1				350
3																										
4																										
5																										
6																										
7																										
8																0	4	0	0	0	0	1				350
9																										
10																										
11																										
12																										
13																										
14																										
15																0	3	0	0	1	0	1				350
16																										
17																										
18																										
19																										
20																										
21																										
22																0	3	0	0	1	1	0				550
23																										
24																										
25																										
26																										
27																										
28																										
29																0	3	0	0	1	1	0				35
30																										
31																										

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MF MEDIA	BBL mEndo	DACTERIAL DENSITY	ARITH. MEAN			0	DIST. SYSTEM	TOTAL NO. SAMPLES	16
TPC MEDIA			GEO. MEAN			1.0		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml	0

Laboratory Cert. #37807

Signed Elizabeth A Betz Cert. Grade B-Well No. 4087-W

Month January — Camp Johnson — WATER TREATMENT PLANT AT Camp Le Jeune — Method Code: 303

Year 1985

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES — Contaminant Code: 3000

N. C. DEPARTMENT OF HUMAN RESOURCES

Serial #04-67-045

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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2	32															0	3	0	0	0						35.0
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4																										
5																										
6																										
7																										
8	38															0	3	0		0	0					35.0
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15	15															0	3	0			0	0				35.0
16																										
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21																										
22	22															0	3	1			0	0				35.0
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26													CLW													
27																										
28													0000004524													
29	29															0	3	0								35.5
30																		0								
31																										

MF MEDIA	BBL mEndo	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

Laboratory Cert. #37807 — Signed Elizabeth A Ott — Cert. Grade B-Well — No. 4087-W

Month January | Rifle Range | WATER TREATMENT PLANT AT Camp Lejeune | Method Code: 303

Year 1985 | REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES | Contaminant Code: 3000

N. C. DEPARTMENT OF HUMAN RESOURCES

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.	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.
1																										
2																0	3	0	0	0						35.0
3																										
4																										
5																										
6																										
7																										
8																0	3	0	0	0						35.0
9																										
10																										
11																										
12																										
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15																0	3	0	0		0					35.0
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22																0	3	0	0			0				35.0
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26																										
27																										
28																										
29																0	3	0	0	0						35.5
30																										
31																										

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MF MEDIA / TPC MEDIA: BBL mEndo | DACTERIAL DENSITY | ARITH. MEAN / GEO. MEAN | DIST. SYSTEM: 0 / 1.0 | TOTAL NO. SAMPLES 15 | SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml 0

Laboratory Cert. #37807 | Signed Elizabeth A Belz | Cert. Grade B-Well | No. 4087-W

Month January | Courthouse Bay | WATER TREATMENT PLANT AT Camp Lejeune | Method Code: 303

Year 1985

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.
1																										
2																0	4	0 | 0	0 | 0	1	1					35.0
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28												CLW															
29														0000004526		0	4	0 | 0	0 |	0	1					35.5
30																										
31																										

MF MEDIA: BBL mFendo | DACTERIAL DENSITY | ARITH. MEAN | GEO. MEAN

- TPC MEDIA

DIST. SYSTEM: 0 | 1.0

TOTAL NO. SAMPLES 20

SAMPLES EXCEEDING 3/50. 4/100, 7/200. 13/500ml 0

Laboratory Cert. #37807

Signed Elizabeth Coffey Cert. Grade B-Well No. 4087-W

Month January — Onslow Beach — WATER TREATMENT PLANT AT Camp Lejeune — Method Code: 505

Year 1985

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES — Contaminant Code: 3000

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.	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.
1																										
2																0	2	0	0							35.0
3																										
4																										
5																										
6																										
7																										
8																0	2	0		0						35.0
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15																0	2	0	0							35.0
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22																0	2	0	0							35.0
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24																										
25																										
26																										
27																										
29																										
29																0	2	0				0				35.5
30																										
31																										

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MF MEDIA BBL mEndo — BACTERIAL DENSITY — ARITH. MEAN — GEO. MEAN — DIST. SYSTEM: 0 — TOTAL NO. SAMPLES 10

TPC MEDIA — 1.0 — SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml 0

Laboratory Cert. #37807 — Signed Elizabeth C. Bell — Cert. Grade B-Well — No. 4087-W

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

DATE COLLECTED: 2 JAN 1985
DATE OF ANALYSIS: 2 JAN 1985

PARAMETER (SERIAL # 04-67)	HADNOT POINT -041	CAMP JOHNSON -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	8.4	7.5	8.4	8.1	8.6	8.7		
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 C1	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		0.80				1.04			
FLUORIDE PM	1.05	0.16	0.67	0.18	0.13	0.11	0.99	0.76		
CHLORINE RESIDUAL	1.1	1.2	1.1	1.5	1.3	1.0	0.9	1.3		
TURBIDITY AM	0.2		0.3				0.2			
TURBIDITY PM	0.3	1.7	0.6	0.3	0.2	0.6	0.3	0.4		
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

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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

HUNEYCUTT 803

COPY TO:

☐ UTIL DIR ☐ _____

☐ WATER TREATMENT

☐ PMU ☐ MCAS PMU

☐ NREAD ☐ FILE

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

DATE COLLECTED: 8 JAN 1985
DATE OF ANALYSIS: 8 JAN 1985

PARAMETER (SERIAL # 04-67)	HADNOT POINT -041	CAMP JOHNSON -045	TARAWA TERRACE -044	ONSLOW BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -043	NEW RIVER -042		
PH (IN LAB NOT PLANT)	8.7	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		1.30				1.08			
FLUORIDE PM	1.03	0.19	0.97	0.17	0.12	0.10	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		0.37				0.13			
TURBIDITY PM	0.28	0.73	0.67	0.32	0.30	0.35	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		

REMARKS

CLW

0000004529

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

BARBEE + BURNS

COPY TO:

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- ☐ WATER TREATMENT
- ☐ PMU ☐ MCAS PMU
- ☐ NREAD ☐ FILE

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

DATE COLLECTED: 15 JAN 1985
DATE OF ANALYSIS: 15 JAN 1985

PARAMETER (SERIAL #04-67)	HADNOT POINT -041	CAMP JOHNSON -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	7.9	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		1.02				1.12			
FLUORIDE PM	0.98	0.18	1.13	0.19	0.12	0.11	1.14	0.76		
CHLORINE RESIDUAL	1.0	1.3	1.3	1.5	1.6	1.0	0.8	1.1		
TURBIDITY AM	0.13		0.73				0.27			
TURBIDITY PM	0.23	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

CLW

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COPY TO:

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☐ WATER TREATMENT

☐ PMU ☐ MCAS PMU

☐ NREAD ☐ FILE

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

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

DATE COLLECTED: 22 JAN 1985
DATE OF ANALYSIS: 22 JAN 1985

PARAMETER (SERIAL# 01-67)	HADNOT POINT -041	CAMP JOHNSON -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	8.6	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 C1	16	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		1.13				1.03			
FLUORIDE PM	1.00	0.20	1.01	0.18	0.12	0.11	0.86	0.77		
CHLORINE RESIDUAL	1.1	1.3	1.3	1.4	1.4	1.1	1.0	1.5		
TURBIDITY AM	0.16		0.21				1.54			
TURBIDITY PM	0.30	1.50	0.39	0.21	0.77	0.41	1.18	0.33		
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

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
BARBEE + BURNS

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- ☐ PMU ☐ MCAS PMU
- ☐ NREAD ☐ FILE

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

DATE COLLECTED: 29 JAN 1985
DATE OF ANALYSIS: 29 JAN 1985

PARAMETER (SERIAL # 01-67)	HADNOT POINT -041	CAMP JOHNSON -045	TARAWA TERRACE -044	ONSLOW BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -043	NEW RIVER -042		
PH (IN LAB NOT PLANT)	8.7	7.4	8.4	7.8	8.3	8.3	PLANT TEMPORARY 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 C1	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		1.22							
FLUORIDE PM	1.05	0.17	1.18	0.15	0.09	0.08		0.69		
CHLORINE RESIDUAL	1.0	1.2	1.0	1.4	1.1	1.0		1.2		
TURBIDITY AM	0.30		0.20							
TURBIDITY PM	0.20	0.70	0.20	0.20	0.40	0.20		0.60		
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		

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: BURNS + BARBEE

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