

6280/1
NREAD
10 Oct 1984

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commanding Officer, Naval Hospital, Camp Lejeune

Subj: WATER QUALITY MONITORING AND RELATED ENVIRONMENTAL HEALTH
CONSIDERATIONS

Ref: (a) CG MCB CLNC ltr NREAD/DDS/th 11330/2 of 19 May 1983

Encl: (1) Weekly Chemical Analysis of Drinking Water
(2) Weekly Bacteriological Analysis of Drinking Water
(3) Miscellaneous Bacteriological Analysis
(4) Analysis of Complaint

1. In accordance with the reference, enclosures (1) through (4) are forwarded for information.
2. Questions regarding this matter should be forwarded to Mr. Danny Sharpe, Supervisory Ecologist, extensions 2083 or 1690.

J. I. WOOTEN
By direction

Blind copy to:
SupvChem

CLW

0000004389

Writer: E. Betz, NREAD, 5977

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

File

DATE COLLECTED

11/1/74

PARAMETER	HADNOT POINT	MONTFORD POINT	TARAWA TERRACE	ONSLow BEACH	COURTHOUSE BAY	RIFLE RANGE	HOLCOMB BLVD	NEW RIVER
PH	8.1	1.4	8.5	1.4	8.4	8.1	8.8	8.1
PENOLTHALEIN ALKALINITY	6	0	2	0	6	0	4	20
METHYL ORANGE ALKALINITY	42	180	60	160	158	170	56	184
CARBONATES AS CaCO ₃	12	0	4	0	12	0	8	40
BICARBONATES AS CaCO ₃	30	180	56	160	146	170	48	144
CHLORIDES AS Cl	10	16	10	20	14	50	12	170
HARDNESS AS CaCO ₃	56	64	80	60	56	50	58	58
IRON AS Fe	20.04	20.04	20.04	0.15	20.04	20.04	20.04	20.04
FLUORIDE	1.2	0.17	0.12	0.16	0.11	0.13	0.76 0.75	0.80
CHLORINE RESIDUAL	1.1	1.4	1.1	1.5	1.4	0.6	0.8	1.2
TURBIDITY	0.4 0.4	1.1	0.4 0.6	0.2	0.3	0.3	0.5 0.1	0.6
TOTAL PHOSPHATE		2.70			1.09			
ORTHO PHOSPHATE		1.21			0.25			
META PHOSPHATE		1.49			0.76			
STABILITY	+0.6	-0.8	+0.2	-0.9	0.0	-0.3	+0.3	+0.2

REMARKS

CLW

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

0000004390

DATE OF ANALYSIS

1/4/74

Encl(1)

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

DATE COLLECTED
 18 Sept 1984

PARAMETER	HADNOT POINT	MONTFORD POINT	TARAWA TERRACE	ONSLOW BEACH	COURTHOUSE BAY	RIFLE RANGE	HOLCOMB BLVD	NEW RIVER	
PH	9.1	7.4	8.9	7.4	8.5	8.4	8.8	8.8	
PENOLTHALEIN ALKALINITY	6	0	4	0	8	6	4	18	
METHYL ORANGE ALKALINITY	54	192	52	166	150	152	62	240	
CARBONATES AS CaCO ₃	12	0	8	0	16	12	8	36	
BICARBONATES AS CaCO ₃	42	192	44	166	134	140	54	204	
CHLORIDES AS Cl	10	36	10	18	16	16	10	162	
HARDNESS AS CaCO ₃	62	76	66	56	56	40	66	56	
IRON AS Fe	<0.04	0.46	<0.04	0.13	<0.04	<0.04	<0.04	<0.04	
FLUORIDE	AM PA 0.78 0.80	0.19	1.02 0.92	0.19	0.12	0.11	0.97 1.00	1.05	
CHLORINE RESIDUAL	1.2	1.4	1.1	1.5	1.1	1.0	1.2	1.4	
TURBIDITY	AM PA 0.2 0.3	1.4	0.7 1.6	0.4	0.2	0.3	0.4 0.3	0.4	
TOTAL PHOSPHATE		2.52			1.30				
ORTHO PHOSPHATE		0.96			0.28				
META PHOSPHATE		1.56			1.02				
STABILITY	+0.7	-0.7	+0.5	-0.9	+0.1	-0.1	+0.5	+0.2	CEW

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
 Lachapelle

T. Barber

DATE OF ANALYSIS
 18 Sept 1984

CHEMICAL ANALYSIS -- WATER TREATMENT PLANTS

MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED 7-25-84

PARAMETER	8.5 HADNOT POINT	8.2 MONTFORD POINT	8.6 TARAWA TERRACE	8.3 ONSLow BEACH	8.4 COURTHOUSE BAY	8.5 RIFLE RANGE	8.4 HOLCOMB BLVD	8.7 NEW RIVER
PH	9.0	7.6	9.2	7.5	8.5	8.4	8.7	8.7
PENOLTHALEIN ALKALINITY	12	0	10	0	2	6	6	14
METHYL ORANGE ALKALINITY	66	190	50	160	162	172	66	240
CARBONATES AS CaCO ₃	24	0	20	0	4	12	12	28
BICARBONATES AS CaCO ₃	42	190	30	160	158	160	54	212
CHLORIDES AS Cl	20	30	10	20	20	20	16	170
HARDNESS AS CaCO ₃	66	104	66	66	60	46	74	48
IRON AS Fe	<0.04	0.61	<0.04	0.16	<0.04	<0.04	<0.04	<0.04
FLUORIDE	1.03 / 1.07	0.18	1.21 / 1.25	0.18	0.12	0.10	0.97 / 0.95	1.13
CHLORINE RESIDUAL	1.0	1.5	1.2	1.3	1.3	1.0	0.9	1.2
TURBIDITY	0.4 / 0.5	1.3	0.4 / 0.8	0.2	0.3	0.3	0.3 / 0.2	0.4
TOTAL PHOSPHATE		0.81			0.52			
ORTHO PHOSPHATE		0.73			0.19			
META PHOSPHATE		0.08			0.33			
STABILITY	+0.5	-0.6	+0.6	-0.8	+0.1	-0.1	+0.3	0

REMARKS O.B. POND = 8.3 CLW

0000004392

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 *H. Brubaker & Burns* DATE OF ANALYSIS 9-25-84

BACTERIOLOGICAL ANALYSIS OF WATER
 MCBCL 11330/4 (REV. 7-83)

DATE COLLECTED
 1/18/84

REPORTABLE POINTS FOR SDWA

WATER SAMPLES	MARKED	COLIFORM MF/100 ML	RESIDUAL CHLORINE	TIME	WATER SAMPLES	MARKED	COLIFORM MF/100 ML	RESIDUAL CHLORINE	TIME	LABORATORY DATA
RR - 3	1	φ	0.8	1000	MCAS - 3502	24	φ	0.4	0730	TIME RECEIVED 1205 - 1345
RR - 15	2	φ	0.8	1005	MCAS - 2002	25	φ	0.4	1000	DATE RECEIVED 1/18/84
RR - 10	3	φ	0.8	1040	MCAS - 4157	26	φ	0.6	0715	ACCEPTED BY 130005
	4	φ			MCAS - 2043	27	φ	0.4	0740	DATE ANALYZED 1/18/84
A-1	5	✓	0.7	0750		28	φ			ANALYSIS STARTED 1215
BB - 7	6	φ	0.7	0835	NRMC - 7000	29	φ	0.9	1030	ANALYSIS FINISHED 1400
BB - 49	7	NO SAMPLE			PP - 2615	30	φ	0.5	1010	INCUBATOR TEMP 35
BB - 245	8	φ	0.7	0810	PP - 2600	31	φ	0.5	1015	PROCESSED BY 130005
	9	φ			BM - 5400	32	φ	0.1	1040	
BA - 103	10	φ	1.1	1100	BM - 1725	33	φ	0.8	1050	CUSTODY DATA
BA - 101	11	φ	1.1	1110	LCH - 4022	34	φ	0.7	1110	DATE
	12	φ			LCH - 4002	35	φ	0.4	1110	TIME
TT - 38	13	φ	1.2	0900		36	φ			SIGNATURE
TT - 43	14	φ	1.1	0715	H-1000 1205	37	φ	0.5	0755	DATE
TT - 2500	15	φ	1.0	0730	H - 18	38	φ	0.5	1000	TIME
	16	φ			FC - 303	39	φ	0.4	0705	SIGNATURE
CK - 1506	17	φ	0.9	1015	FC - 420	40	φ	0.8	0710	
M - 139	18	φ	1.2	1115	FC - 540	41	φ	0.9	0715	COPY TO:
M - 231	19	φ	0.9	1100	HP - 236	42	φ	0.8	0745	<input type="checkbox"/> UTIL DIR
	20	φ			HP - 540	43	φ	0.8	0725	<input type="checkbox"/> WATER TREATMENT
CG - 1	21	φ	0.6	0830	HP - 1300	44	φ	0.5	0715	<input type="checkbox"/> PMU <input type="checkbox"/> MCAS PMO
OC - 830	22	φ	0.7	0705	HP - 20	45	φ	0.8	0735	<input type="checkbox"/> NREAD <input type="checkbox"/> FILE
TC - 650	23	φ	0.7	0850		46	φ			<input type="checkbox"/> _____

REMARKS

DATE 45, 18, 22, 26, 31 = N/A. 0000004-393

CLW

SIGNATURE

H. J. Burns
 1/19/84

encl (2)

BACTERIOLOGICAL ANALYSIS OF WATER

NON-REPORTABLE

WATER SAMPLES	MARKED	COLIFORM COUNT M-ENDO MEDIUM	RESIDUAL CHLORINE	pH	TIME
BB-97		1	0.8		01:00
FC-19		NO GROWTH	—		—
SH-8		1	0.4		08:55
T T POOL		1	0.3	7.4	09:45
M.P. POOL		Closed	—	—	—
#2 POOL		1	0.5	7.6	01:45
#5 POOL		1	0.5	7.6	09:25
P. P. POOL					
P. P. BABY POOL					
MCAS E-POOL					
MCAS O-POOL					
MCAS BABY POOL					
1980		1			08:45
1980					

REMARKS

4-8 ALL POOLS ARE OPEN (1980)

MCBCL 11220/4 (A)

CLW

0000004394

UTIL DIR
 CLW
 0000004395

DATE COLLECTED
 9/25/84

REPORTABLE POINTS FOR SDWA

WATER SAMPLES	MARKED	COLIFORM MF 100 ML	RESIDUAL CHLORINE	TIME	WATER SAMPLES	MARKED	COLIFORM MF/100 ML	RESIDUAL CHLORINE	TIME	LABORATORY DATA
RR - 3	1	∅	1.0	0940	MCAS - 3502	24	∅	0.2	0935	TIME RECEIVED 1115 - 1345 DATE RECEIVED 9/25/84 ACCEPTED BY Burns DATE ANALYZED 9/25/84 ANALYSIS STARTED 1220 ANALYSIS FINISHED 1430 INCUBATOR TEMP 35 PROCESSED BY Burns
RR - 15	2	∅	1.0	0935	MCAS - 2002	25	∅	0.7	0930	
RR - 6	3	∅	1.0	0945	MCAS - 4157	26	∅	0.2	0855	
	4	∅			MCAS - 1047	27	TNTC	0.8	0950	
A-1	5	∅	1.0	0915		28				
BB - 7	6	∅	1.3	0850	NRMC - FOOD SERVICE	29	∅	0.4	1215	
BB - 49	7	∅	1.0	0910	PP - 2615	30	∅	0.4	1205	
BB - 45	8	∅	1.3	0845	PP - 2613	31	∅	0.5	1210	
	9	∅			BM - 5400	32	∅	0.5	1225	
BA - 103	10	∅	1.3	1100	BM - 5107	33	∅	0.5	1230	
BA - 101	11	∅	1.3	1105	LCH - 4022	34	∅	0.4	1255	CUSTODY DATA
	12	∅			LCH - 4000	35	∅	0.5	1300	DATE
TT - 38	13	∅	1.2	0845		36	∅			TIME
TT - 43	14	∅	1.0	0900	H - 1	37	∅	0.5	1150	SIGNATURE
TT - 3101	15	∅	0.6	0950	H - 16	38	∅	0.5	1145	DATE
	16	∅			FC - 303	39	∅	1.0	0919	TIME
CK - 1423	17	∅	0.7	0915	FC - 420	40	∅	0.9	0935	SIGNATURE
M - 139	18	Down for repair			FC - 323	41	∅	0.8	0930	COPY TO:
M - 103	19	∅	1.3	0940	HP - 236	42	∅	0.7	1135	<input type="checkbox"/> UTIL DIR
	20	∅			HP - 540	43	∅	0.8	1335	<input type="checkbox"/> WATER TREATMENT
CG - 1	21	∅	0.2	0845	HP - 1300	44	∅	0.5	0843	<input type="checkbox"/> PMU <input type="checkbox"/> MCAS PMO
TC - 830	22	∅	1.2	0835	HP - 1407	45	∅	0.8	0853	<input type="checkbox"/> NREAD <input type="checkbox"/> FILE
TC - GC 650	23	∅	0.6	0830		46	∅			<input type="checkbox"/>

REMARKS
 H.P.# 521 Cl₂: 0.7 1110
 1316 Cl₂: 1.2 0910
 42 Cl₂: 0.9 1120
 1504 Cl₂: 0.5 0900
 NOTE 21+23 NUMEROUS NON-COLIFORM

SIGNATURE
 H. J. Burns
 9/26/84

BACTERIOLOGICAL ANALYSIS OF WATER

NON-REPORTABLE

WATER SAMPLES	MARKED	COLIFORM COUNT M-ENDO MEDIUM	RESIDUAL CHLORINE	pH	TIME
BB-97		∅	0.8		0900
FC-19		∅	0.2		1100
SH-8		∅	0.1		1040
T. J. POOL		∅	0.7	7.2	0855
M.P. POOL	DOWN	FOR REPAIR			
#2 POOL		∅	0.5	7.3	1135
#5 POOL		∅	1.6	6.8	1110
P. P. POOL	/				
P. P. BABY POOL					
MCAS E-POOL					
MCAS O-POOL					
MCAS BABY POOL					
ICE SAMPLE		∅			0851
BLDG 1300					

REMARKS

NOTE: NUMEROUS NON-COLIFORM NOTED

FC-19, SH-8, ICE SAMPLE

MCBCL 11330/4 (A)

CLW

0000004396

BACTERIOLOGICAL ANALYSIS OF WATER
 MCBCL 11330/4 (REV. 7-83)

DATE COLLECTED

4 SEP 84

REPORTABLE POINTS FOR SDWA

WATER SAMPLES	MARKED	COLIFORM MF/100 ML	RESIDUAL CHLORINE	TIME	WATER SAMPLES	MARKED	COLIFORM MF/100 ML	RESIDUAL CHLORINE	TIME	LABORATORY DATA
RR - 3	1	✓	1.4	1:15	MCAS - 3502	24	1	1.4	1:15	TIME RECEIVED
RR - 15	2	✓	1.4	1:25	MCAS - 2002	25	1	1.4	1:25	DATE RECEIVED
RR - 10	3	✓	1.2	1:25	MCAS - 4157	26	1	1.2	1:25	ACCEPTED BY
	4				MCAS - 2069	27	1	1.3	1:25	DATE ANALYZED
A-1	5					28				ANALYSIS STARTED
BB - 7	6	✓	1.0	1:40	NRMC -	29	1	1.0	1:40	ANALYSIS FINISHED
BB - 38	7	✓	1.6	1:40	PP - 2615	30	1	1.6	1:40	INCUBATOR TEMP
BB - 58	8	✓	1.3	1:40	PP - 2600	31	1	1.3	1:40	PROCESSED BY
	9				BM - 5400	32				
BA - 103	10	✓	1.1	1:40	BM - 825	33				CUSTODY DATA
BA - 115	11	✓	1.1	1:40	LCH - 4022	34				DATE
	12				LCH - 4000	35				TIME
TT - 38	13	✓	1.1	1:45		36				SIGNATURE
TT - 43	14	✓	1.0	1:40	H - 1	37				DATE
TT - 2265	15	✓	1.0	1:45	H - 16	38				TIME
	16				FC - 303	39				SIGNATURE
CK - 1115	17	✓	1.1	1:45	FC - 420	40				
M - 139	18	✓	1.2	1:45	FC - 323	41				COPY TO:
M - 19	19	✓	1.2	1:45	HP - 236	42				<input type="checkbox"/> UTIL DIR
	20				HP - 540	43				<input type="checkbox"/> WATER TREATMENT
CG - 1	21	✓	1.2	1:45	HP - 1300	44				<input type="checkbox"/> PMU <input type="checkbox"/> MCAS PMO
TC - 830	22	✓	1.0	1:40	HP - 1400	45				<input type="checkbox"/> NREAD <input type="checkbox"/> FILE
TC - 501	23	✓	1.0	1:40		46	CLW			<input type="checkbox"/> _____

REMARKS

0000004399

SIGNATURE

BACTERIOLOGICAL ANALYSIS OF WATER

NON-REPORTABLE

WATER SAMPLES	MARKED	COLIFORM COUNT M-ENDO MEDIUM	RESIDUAL CHLORINE	pH	TIME
BB-97		/	1.5		0
FC-19					
SH-8					
<i>TI Pool</i>					
M.P. POOL					
#2 POOL					
#5 POOL					
P. P. POOL					
P. P. BABY POOL					
MCAS E-POOL					
MCAS O-POOL		Overgrown			
MCAS BABY POOL					
<i>Ice Bdg 1300</i>		/			

REMARKS

MCBCL 11330/4 (A)

CLW
0000004400

2500 11

DATE COLLECTED: 9/15/84

PARAMETER	MONTFORD POINT	MONTFORD POINT	TARAWA TERRACE	ONSLow BEACH	COURTHOUSE BAY	RIFLE RANGE	HOLCOMB BLVD	NEW RIVER
PH	7.7							
PENOLTHALEIN ALKALINITY	6							
METHYL ORANGE ALKALINITY	120							
CARBONATES AS CaCO ₃	0							
BICARBONATES AS CaCO ₃	120							
CHLORIDES AS Cl	10							
HARDNESS AS CaCO ₃	140							
IRON AS Fe	—							
FLUORIDE	1.23							
CHLORINE RESIDUAL	0.9							
TURBIDITY	1.8							
TOTAL PHOSPHATE								
ORTHO PHOSPHATE								
META PHOSPHATE								
STABILITY								
REMARKS								

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

B. J. P. > CLW

DATE OF ANALYSIS

9/15/84

0000004405

Encl (4)