11331
NREAD
2 Oct 87

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 September 1987. 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 Environmental Chemistry and Microbiology Laboratory, located in the Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities. Ms. Betz, Supervisory Chemist, telephone (919) 451-5977, is the point of contact in this matter.

Sincerely,

JULIAN I. WOOTEN
Director, Natural Resources Division
By direction of the Commanding General

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

Copy to:
LANTNAVFACENGCOM (Code 114)

Blind copy to:
CMO (Attn: Util Dir)
Supvy Chem (2)

Writer/Typist Betz/Trisnedi
Date Typed 2 Oct 87
Word Processor Number 11331

Month SEPTEMBER
Year 1987

HADNOT POINT WATER TREATMENT PLANT AT Camp Lejeune

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

Method Code: 5
Contaminant Code: 3000

ENCLOSURE (1)

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: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.
1	7 1ST															0	9	0 0	0 0	0 0	0 0	0 1				35.2
2																										
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16	7 16TH															0	9	0 0 0	0 0	1 0	0 1	0 0				35.5
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21	7 22ND															0	9	0 0	0 0	0 0	0 1	0 0				35.5
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27																										
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29	7 29TH															0	9	0 0	0 0	0 0	0 0	1 0				35.2
30																										
31																										

MF MEDIA: BBL mEndo
TPC MEDIA:
BACTERIAL DENSITY
ARITH. MEAN
GEO. MEAN

DIST. SYSTEM: 0 / 1

TOTAL NO. SAMPLES: 44
SAMPLES EXCEEDING 3/50. 4/100. 7/200. 13/500ml: 0

LAB ID # 37807

CERT GRADE B-WELL # 4087-W

Month SEPTEMBER — COURTHOUSE BAY — WATER TREATMENT PLANT AT Camp Lejeune — Method Code: 303

Year 1987 — REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES — Contaminant Code: 3000

Serial # 04-67-047 — N. C. DEPARTMENT OF HUMAN RESOURCES

ENCLOSURE 1/1

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	7 1ST															0	4	0 0	0 0							35.2
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8	7 8TH															0	4	1 0	0 0	0 1						35.2
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13																										
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15	7 15TH															0	4	1 0	1 0	0 0						35.4
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22	7 22 JD															0	4	0 0	0 0							35.5
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28																										
29	7 29TH															0	4	0 0	0 1			0 1				35.2
30																										
31																										

MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN			0	DIST. SYSTEM	TOTAL NO. SAMPLES	20
TPC MEDIA			GEO. MEAN			1		SAMPLES EXCEEDING 3/50. (4/100). 7/200. 13/500ml	0

LAB TR # 27807

Month SEPTEMBER ONSLOW BEACH WATER TREATMENT PLANT AT Camp Lejeune Method Code: 303

Year 1987 REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES Contaminant Code: 3000

Serial # 04-67-048 N. C. DEPARTMENT OF HUMAN RESOURCES

ENCLOSURE (1)

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	21ST															0	2	0 0								35.2
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8	8TH															0	2	0 0								35.2
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13																										
14																										
15	15TH															0	2	0 0								35.4
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22	22ND															0	2	0 0								35.5
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25																										
26																										
27																										
28																										
29	29TH															0	2	0 0								35.2
30																										
31																										
MF MEDIA		BBL mEndo		BACTERIAL DENSITY	ARITH. MEAN											0	DIST. SYSTEM	TOTAL NO. SAMPLES								10
TPC MEDIA					GEO. MEAN											1		SAMPLES EXCEEDING 3/50. 4/100. 7/200. 13/500ml								0

LAB ID # 37807

Month SEPTEMBER — RIFLE RANGE — WATER TREATMENT PLANT AT Camp Lejeune — Method Code: 303

Year 1987 — REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES — Contaminant Code: 3000

Serial # 04-67-046 — N. C. DEPARTMENT OF HUMAN RESOURCES

ENCLOSURE 1

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	7 1 3 TH															0	3	0 0	0 1							35.2
2																										
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4																										
5																										
6																										
7																										
8	7 8 TH															0	3	0 0	0 1							35.2
9																										
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11																										
12																										
13																										
14																										
15	7 15 TH															0	3	0 0	0 1							35.6
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20																										
21																										
22	7 22 TH															0	3	0 0	1 0							35.5
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27																										
28																										
29	7 29 TH															0	3	0 0	0 1							35.2
30																										
31																										
MF MEDIA			BBL mEndo													0	DIST. SYSTEM	TOTAL NO. SAMPLES								15
TPC MEDIA																1		SAMPLES EXCEEDING 3/50. 4/100. 7/200. 13/500ml								0
				BACTERIAL DENSITY			ARITH. MEAN																			
							GEO. MEAN																			

LAB TH # 378mH

Month SEPTEMBER
Year 1987

CAMP JOHNSON WATER TREATMENT PLANT AT Camp Lejeune

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

Method Code: 303
Contaminant Code: 3100

Serial # 04-67-045

ENCLOSURE (1)

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	7 21 T						1									0	2	0	0							35.2
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4																										
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7																										
8	7 8TH															0	2	01	01							35.2
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12																										
13																										
14	2																									
15	15TH															0	2	01	10							35.6
16																										
17																										
18																										
19																										
20																										
21	7																									
22	22 MD															0	2	01		01						35.5
23																										
24																										
25																										
26																										
27																										
28																										
29	7 29 TH															0	2	01	10							35.2
30																										
31																										
MF MEDIA		BBL mEndo		BACTERIAL DENSITY	ARITH. MEAN											0	DIST. SYSTEM	TOTAL NO. SAMPLES								10
TPC MEDIA					GEO. MEAN											1		SAMPLES EXCEEDING 3/50. (4/100. 7/200. 13/500ml								0

LAB TD # 27007

Month SEPTEMBER
Year 1987

TARAWA TERRACE WATER TREATMENT PLANT AT Camp Lejeune

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

Method Code: 303
Contaminant Code: 3000

Serial # 04-67-044

ENCLOSURE (1)

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	7 1ST															0	4	0 | 0	0 | 0							35.2
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7																										
8	7 8TH															0	4	0 | 0		0 | 0						35.2
9																										
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15	7 15TH															0	4	0 | 0			0 | 0					35.6
16																										
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22	7 22ND															0	4	0 | 0				0 | 0				35.5
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26																										
27																										
28																										
29	7 29TH															0	4	0 | 0								35.2
30																		0 | 0								
31																										
MF MEDIA		RBL mEndo		BACTERIAL DENSITY	ARITH. MEAN											0	DIST. SYSTEM	TOTAL NO. SAMPLES								20
TPC MEDIA					GEO. MEAN											1		SAMPLES EXCEEDING 3/50. 4/100. 7/200. 13/500ml								0

LAB ID # 37807

Month SEPTEMBER
Year 1987

WATER TREATMENT PLANT AT Camp Lejeune
REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES
N. C. DEPARTMENT OF HUMAN RESOURCES

Method Code: 303
Contaminant Code: 3000

ENCLOSURE (1)

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.	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	7 13TH															0	7	0 0	0 0	0 0	0 1					35.2
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8	7 8TH															0	7	0 0	1 0	0 0	1 0	0 1				35.2
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16	7 16TH															0	7	0 0	1 0	1 0		1 0				35.5
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22	7 22ND															0	7	0 0	0 0	1 0		0 1				35.5
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27																										
28																										
29	7 29TH															0	7	0 0	1 0	0 0		0 0				35.2
30																										
31																										

MF MEDIA: BBL mEndo
TPC MEDIA:
BACTERIAL DENSITY
ARITH. MEAN
GEO. MEAN

0 (DIST. SYSTEM)
1

TOTAL NO. SAMPLES: 35
SAMPLES EXCEEDING 3/50 4/100. 7/200. 13/500: 0

LAB TD # 27807

Month SEPTEMBER MARINE CORPS AIR STATION WATER TREATMENT PLANT AT Camp Lejeune Method Code: 303
Year 1987 REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES Contaminant Code: 3000
Serial # 04-67-042 N. C. DEPARTMENT OF HUMAN RESOURCES

DATE	RAW WATER COLIFORMS (MFF) 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: MFF COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFF COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFF): 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	100						1									0	7	0 0	0 0	0 0	0					35.2
2																										
3																										
4																										
5																										
6																										
7																										
8	100															0	7	0 0	0	0 0	0	0				35.2
9																										
10																										
11																										
12																										
13																										
14																										
15	15															0	7	0 0	0	0 0	0	0				35.6
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22	220															0	7	0 0	0	0 0	0					35.5
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26																										
27																										
28																										
29	29															0	7	0 0	0	0 0	0					35.2
30																		0								
31																										

MF MEDIA BBL mEndo — BACTERIAL DENSITY — ARITH. MEAN — TPC MEDIA — GEO. MEAN

0 — DIST. SYSTEM — TOTAL NO. SAMPLES 35

1 — SAMPLES EXCEEDING 3/50. (1/100) 7/200. 13/500ml 0

LAB ID # 37807

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 9-29-87

DATE(S) ANALYZED: 9-29-87

ENCLOSURE (2)

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	9.0	8.9	8.7	8.0	8.5	7.8			
STABILITY	+0.8	+0.2	+0.5	−0.3	+0.1	−0.4			
PHENOLTHALEIN ALKALINITY (PPM)	8	14	2	0	4	0			
METHYL ORANGE ALKALINITY (PPM)	64	144	76	172	174	148			
CARBONATES AS $CaCO_3$ (PPM)	16	28	4	0	8	0			
BICARBONATES AS $CaCO_3$ (PPM)	48	116	72	172	166	148			
CHLORIDES AS Cl (PPM)	20	92	18	22	26	30			
HARDNESS AS $CaCO_3$ (PPM)	94	50	82	80	54	52			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	0.89 / 1.03	0.58	1.23 / 1.42	0.10	0.08	0.17			
TURBIDITY (NTUS) AM / PM	0.6 / 0.9	0.9	0.9 / 1.2	0.9	0.8	1.2			
CHLORINE RESIDUAL (PPM)	1.0	1.0	1.1	1.0	1.0	1.7			

REMARKS:

COPY TO:

- ☐ Util Dir, BMD ☐ _____
- ☐ Water Treatment, Util Div, BMD
- ☐ PMO, NAVHOSP ☐ PMO, MCAS-NR
- ☑ Division of Health Services N.C. Dept of Human Resources
- ☐ NREAD ☐ File (attach Wkst)

REPORT DATE: 9-29-87

REPORT PREPARED BY: CAROL S. SHORES

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 9-22-87

DATE(S) ANALYZED: 9-22-87

ENCLOSURE (2)

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.3	8.9	8.8	8.3	8.3	7.9			
STABILITY	0.0	+0.1	+0.3	-0.1	-0.2	-0.3			
PHENOLTHALEIN ALKALINITY (PPM)	0	6	2	0	4	0			
METHYL ORANGE ALKALINITY (PPM)	60	138	56	172	180	170			
CARBONATES AS $CaCO_3$ (PPM)	0	12	4	0	8	0			
BICARBONATES AS $CaCO_3$ (PPM)	60	126	52	172	172	170			
CHLORIDES AS Cl (PPM)	16	68	14	18	40	22			
HARDNESS AS $CaCO_3$ (PPM)	76	50	60	74	64	56			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	0.98 / 1.02	0.49	1.16 / 1.16	0.11	0.09	0.12			
TURBIDITY (NTUS) AM / PM	1.4 / 0.6	0.8	1.3 / 1.1	0.7	0.8	0.9			
CHLORINE RESIDUAL (PPM)	1.0	1.0	1.5	1.3	1.1	1.4			

REMARKS:

COPY TO:

- ☐ UTIL DIR, BMD ☐ _____
- ☐ WATER TREATMENT, UTIL DIV, BMD
- ☐ PMU, NAVHOSP ☐ PMU, MCAS-NR
- ☑ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 9-22-87

REPORT PREPARED BY: ROBERT G. DEPPEN

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

ENCLOSURE (2)

DATE COLLECTED: 9-15-87

DATE(S) ANALYZED: 9-15-87

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.0	8.5	8.0	7.9	7.8	7.6			
STABILITY	+0.2	+0.1	0.0	-0.1	-0.2	-0.3			
PHENOLTHALEIN ALKALINITY (PPM)	0	6	0	0	0	0			
METHYL ORANGE ALKALINITY (PPM)	76	130	72	170	174	160			
CARBONATES AS $CaCO_3$ (PPM)	0	12	0	0	0	0			
BICARBONATES AS $CaCO_3$ (PPM)	76	118	72	170	174	160			
CHLORIDES AS Cl (PPM)	4	52	6	12	32	16			
HARDNESS AS $CaCO_3$ (PPM)	70	58	86	76	68	94			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	1.0 / 1.1	0.52	1.04 / 0.90	0.12	0.10	0.11			
TURBIDITY (NTUS) AM / PM	0.4 / 0.4	0.8	0.5 / 0.6	0.4	0.4	0.7			
CHLORINE RESIDUAL (PPM)	1.0	0.1	1.2	1.3	1.0	1.1			

REMARKS:

COPY TO:

- ☐ Util Dir, BMD ☐ _____
- ☐ Water Treatment, Util Div, BMD
- ☐ PMO, NAVHOSP ☐ PMO, MCAS-NR
- ☒ Division of Health Services N.C. Dept of Human Resources
- ☐ NREAD ☐ File (attach wkst)

REPORT DATE: 9-16-87

REPORT PREPARED BY: ROBERT G. DEPPEN

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 9-8-87

DATE(S) ANALYZED: 9-8-87

ENCLOSURE

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.2	8.8	8.8	7.9	8.2	7.5			
STABILITY	+0.1	+1.1	+0.7	-0.3	0.0	-0.6			
PHENOLTHALEIN ALKALINITY (PPM)	0	6	4	0	0	0			
METHYL ORANGE ALKALINITY (PPM)	64	104	64	168	168	162			
CARBONATES AS $CaCO_3$ (PPM)	0	12	8	0	0	0			
BICARBONATES AS $CaCO_3$ (PPM)	64	92	56	168	168	162			
CHLORIDES AS Cl (PPM)	8	50	12	16	40	24			
HARDNESS AS $CaCO_3$ (PPM)	68	52	68	70	58	48			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	0.92 / 1.1	0.5	0.96 / 1.3	0.13	0.10	0.12			
TURBIDITY (NTUS) AM / PM	0.3 / 0.4	0.7	0.4 / 0.4	0.4	0.3	1.8			
CHLORINE RESIDUAL (PPM)	1.0	0.8	1.1	1.3	0.6	1.2			

REMARKS:

COPY TO:

- ☐ UTIL DIR, BMD ☐ _____
- ☐ WATER TREATMENT, UTIL DIV, BMD
- ☐ PMU, NAVHOSP ☐ PMU, MCAS-NR
- ☑ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 9-8-87

REPORT PREPARED BY: ROBERT G. DEPPEN

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 9-1-87

DATE(S) ANALYZED: 9-1-87

ENCLOSURE

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.2	8.8	8.8	8.2	8.4	7.7			
STABILITY	-0.2	+0.1	+0.4	-0.3	-0.1	-0.8			
PHENOLTHALEIN ALKALINITY (PPM)	0.0	16	18	0	2	0			
METHYL ORANGE ALKALINITY (PPM)	66	142	72	184	184	172			
CARBONATES AS $CaCO_3$ (PPM)	0	32	36	0	4	0			
BICARBONATES AS $CaCO_3$ (PPM)	66	110	36	184	180	172			
CHLORIDES AS Cl (PPM)	14	64	16	18	46	26			
HARDNESS AS $CaCO_3$ (PPM)	90	72	112	86	74	82			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	0.12 / 0.15	0.52	0.33 / 0.31	0.11	0.09	0.14			
TURBIDITY (NTUS) AM / PM	0.7 / 0.3	0.6	1.0 / 0.6	0.3	0.5	2.8			
CHLORINE RESIDUAL (PPM)	1.0	0.9	1.2	1.7	1.0	1.2			

REMARKS:

COPY TO:

- ☐ UTIL DIR, BMD ☐ _____
- ☐ WATER TREATMENT, UTIL DIV, BMD
- ☐ PMU, NAVHOSP ☐ PMU, MCAS-NR
- ☑ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 9-1-87

REPORT PREPARED BY: CAROL S. SHORES

WATER TREATMENT PLANTS WATER FLOW DATE: OCTOBER 1987

PLANT	RAW	DELIVERED	WASHING FILTERS	MAX.DEL	POTABLE WATER USED	WELLS MAX.SAFE YIELD/DAY	PLANT CAPACITY DAY	TREATMENT
HADNOT POINT	147,195,000	Est. 143,078,000	7,593,000	4,866,000	13	5,900,000	5,900,000	lime
HOLCOMB BLVD.	39,619,000	35,344,000	1,536,000	1,322,000	3	2,304,000	2,304,000	lime
TARAWA TERRACE					3	1,152,000	1,152,000	lime
MONTFORD POINT					3	622,000	622,000	zeolite
MCAS	15,283,000	15,082,000	1,272,000	570,000	3	4,081,000	4,081,000	lime
RIFLE RANGE	7,138,000	6,566,000	254,000	365,000	3	648,000	648,000	zeolite
COURTHOUSE BAY	13,631,000	12,871,000	1,023,000	532,000	3	864,000	864,000	zeolite
ONSLOW BEACH	4,941,000	3,546,000	286,000	303,000	3	250,000	250,000	zeolite
TOTAL FLOW	227,807,000	216,487,000	11,964,000	7,958,000				

WATER IN GALLONS

REMARKS:

11331
NREAD
3 Nov 87

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 October 1987. 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 Environmental Chemistry and Microbiology Laboratory, located in the Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities. Ms. Betz, Supervisory Chemist, telephone (919) 451-5977, is the point of contact in this matter.

Sincerely,

JULIAN I. WOOTEN
Director, Natural Resources Division
By direction of the Commanding General

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

Copy to:
LANTNAVFACENGCOM (Code 114)

Blind copy to:
BMO (Attn: UTIL DIR)
Supvy Chem (2)

Month OCTOBER HADNOT POINT WATER TREATMENT PLANT AT Camp Lejeune Method Code: 303

Year 1987 REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES Contaminant Code: 3000

Serial # 04-67-041 N. C. DEPARTMENT OF HUMAN RESOURCES

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.
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MF MEDIA: BBL. mEndo | BACTERIAL DENSITY | ARITH. MEAN | GEO. MEAN

TPC MEDIA

DIST. SYSTEM: 0 / 1

TOTAL NO. SAMPLES: 36

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

LAB ID # 37807

Elizabeth Bell

NCDOT GRADE B-WELL # 4087-W

Month OCTOBER

Year 1987

MARINE CORPS AIR STATION WATER TREATMENT PLANT AT Camp Lejeune

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES

N. C. DEPARTMENT OF HUMAN RESOURCES

Method Code: 303

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: 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 mEndo

TPC MEDIA

BACTERIAL DENSITY

ARITH. MEAN

GEO. MEAN

0

1

DIST. SYSTEM

TOTAL NO. SAMPLES 28

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

LAB ID # 37807

Elizabeth B Z CERT GRADE: B-WELL # 4087-W

Month OCTOBER — HOLCOMB BLVD. — WATER TREATMENT PLANT AT Camp Lejeune — Method Code: 303

Year 1987 — REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES — Contaminant Code: 3000

Serial # 04-67-043 — N. C. DEPARTMENT OF HUMAN RESOURCES

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 mEndo — BACTERIAL DENSITY — ARITH. MEAN — GEO. MEAN

TPC MEDIA

0 — 1 — DIST. SYSTEM

TOTAL NO. SAMPLES 28

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

LAB ID # 37807

N. C. PUBLIC WATER SUPPLY # 4087-W

Month OCTOBER
Year 1987

TARAWA TERRACE WATER TREATMENT PLANT AT Camp Lejeune

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

Method Code: 303
Contaminant Code: 3000

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.	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 mEndo	BACTERIAL DENSITY	ARITH. MEAN			0	DIST. SYSTEM	TOTAL NO. SAMPLES	16
TPC MEDIA				GEO. MEAN			1		SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml	0

LAB ID # 37807

Chlorinated Ground Water Well # 4087-W

Month OCTOBER
Year 1987

CAMP JOHNSON — WATER SAMPLES TAKEN AT CAMP LEJEUNE

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 (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.
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MF MEDIA: mEndo — DACTERIAL DENSITY — ARITH. MEAN — GEO. MEAN

0 — DIST. SYSTEM — TOTAL NO. SAMPLES 1 — SAMPLES EXCEEDING 3/50. 0 (4/100.) 0 7/200. 0 13/500. 0

TPC MEDIA

LAB ID # 37807

Elizabeth C Bell

CERT GRADE B-WELL # 4087-W

Month OCTOBER | RIFLE RANGE | WATER TREATMENT PLANT AT Camp Lejeune | Method Code: 303

Year 1987 | REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES | Contaminant Code: 3000

Serial # 04-67-046 | N. C. DEPARTMENT OF HUMAN RESOURCES

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.
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MF MEDIA			BBL mEndo			BACTERIAL DENSITY		ARITH. MEAN								0	DIST. SYSTEM	TOTAL NO. SAMPLES								12
TPC MEDIA								GEO. MEAN								1		SAMPLES EXCEEDING 3/50. (1/100) 7/200. 13/500ml								0

LAB. ID 37807

Elizabeth C Bell

Month OCTOBER COURTHOUSE 1987 WATER TREATMENT PLANT AT Camp Lejeune Method Code: 303

Year 1987 REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES Contaminant Code: 3000

Serial # 04-67-047 N. C. DEPARTMENT OF HUMAN RESOURCES

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.
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MF MEDIA BBL mEndo — BACTERIAL DENSITY — ARITH. MEAN 0.125 — DIST. SYSTEM — TOTAL NO. SAMPLES 16

TPC MEDIA — GEO. MEAN 1.04 — SAMPLES EXCEEDING 3/50. 4/100. 7/200. 13/500ml 0

LAB ID # 37807

Elizabeth A Bay CERT GRADE B-WELL # 4087-W

Month OCTOBER
Year 1987

ONSLOW BEACH WATER TREATMENT PLANT AT CAMP LEJEUNE

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES

SERIAL # 04-67-048

N. C. DEPARTMENT OF HUMAN RESOURCES

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.	PLANKTON RAW WATER
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MF MEDIA						BACTERIAL DENSITY		ARITH. MEAN								0	DIST. SYSTEM	TOTAL NO. SAMPLES								8	
TPC MEDIA								GEO. MEAN								1		SAMPLES EXCEEDING 3/50 (4/100) 7/200, 13/500ml								0	

Laboratory Cert. 37807

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

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 10-6-87 | DATE(S) ANALYZED: 10-6-87

PARAMETER (UNITS) \ PLANT		HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY		8.3	8.8	8.7	7.8	8.3	7.7			
STABILITY		+0.3	+0.3	+0.3	-0.5	-0.1	-0.5			
PHENOLTHALEIN ALKALINITY (PPM)		0	8	4	0	2	0			
METHYL ORANGE ALKALINITY (PPM)		74	138	62	172	144	166			
CARBONATES AS $CaCO_3$ (PPM)		0	16	8	0	4	0			
BICARBONATES AS $CaCO_3$ (PPM)		74	122	54	172	140	166			
CHLORIDES AS Cl (PPM)		12	66	12	16	18	14			
HARDNESS AS $CaCO_3$ (PPM)		78	60	68	60	92	70			
IRON AS Fe (PPM)										
FLUORIDE (PPM)	AM / PM	0.83 / 0.84	0.42	0.94 / 0.98	0.09	0.08	0.13			
TURBIDITY (NTUS)	AM / PM	0.7 / 0.5	1.3	0.8 / 1.4	0.9	0.8	2.6			
CHLORINE RESIDUAL (PPM)		1.0	1.0	1.0	1.4	1.0	1.2			

REMARKS:

COPY TO:

- ☐ UTIL DIR, BMD ☐ _____
- ☐ WATER TREATMENT, UTIL DIV, BMD
- ☐ PMU, NAVHOSP ☐ PMU, MCAS-NR
- ☒ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 10-7-87

REPORT PREPARED BY: ROBERT G. DEPPEN

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 10-13-87 | DATE(S) ANALYZED: 10-13-87

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.7	8.5	8.5	7.6	8.2	7.5			
STABILITY	+0.4	+0.3	+0.4	-0.4	0.0	-0.5			
PHENOLTHALEIN ALKALINITY (PPM)	4	10	2	0	2	0			
METHYL ORANGE ALKALINITY (PPM)	50	130	60	170	146	154			
CARBONATES AS $CaCO_3$ (PPM)	8	20	4	0	4	0			
BICARBONATES AS $CaCO_3$ (PPM)	42	110	56	170	142	154			
CHLORIDES AS Cl (PPM)	12	70	12	14	32	24			
HARDNESS AS $CaCO_3$ (PPM)	68	46	64	50	50	50			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	1.14 / 1.21	0.67	1.18 / 1.28	0.14	0.12	0.17			
TURBIDITY (NTUS) AM / PM	0.7 / 2.2	1.9	1.1 / 1.9	0.6	0.7	0.7			
CHLORINE RESIDUAL (PPM)	1.0	1.0	1.2	1.3	0.9	1.3			

REMARKS:

COPY TO:

- ☐ UTIL DIR, BMD ☐ _____
- ☐ WATER TREATMENT, UTIL DIV, BMD
- ☐ PMU, NAVHOSP ☐ PMU, MCAS-NR
- ☒ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 10-14-87

REPORT PREPARED BY: H. J. BURNS

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 10-20-87 | DATE(S) ANALYZED: 10.20.87

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.7	8.5	8.5	7.6	8.2	7.4			
STABILITY	+0.4	+0.1	+0.3	-0.5	-0.1	-0.3			
PHENOLTHALEIN ALKALINITY (PPM)	6	8	4	0	0	0			
METHYL ORANGE ALKALINITY (PPM)	60	136	56	160	144	160			
CARBONATES AS $CaCO_3$ (PPM)	12	16	8	0	0	0			
BICARBONATES AS $CaCO_3$ (PPM)	48	120	48	160	144	160			
CHLORIDES AS Cl (PPM)	16	70	14	16	48	20			
HARDNESS AS $CaCO_3$ (PPM)	64	46	64	50	52	80			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	0.94 / 1.00	0.61	1.06 / 1.15	0.15	0.11	0.15			
TURBIDITY (NTUS) AM / PM	0.5 / 0.5	0.8	0.9 / 1.4	0.7	0.5	9.0			
CHLORINE RESIDUAL (PPM)	1.0	1.0	1.2	1.0	0.8	1.1			

REMARKS:

COPY TO:

- ☐ UTIL DIR, BMD ☐ _____
- ☐ WATER TREATMENT, UTIL DIV, BMD
- ☐ PMU, NAVHOSP ☐ PMU, MCAS-NR
- ☒ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 10.20.87

REPORT PREPARED BY: H. J. BURNS

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 10-27-87

DATE(S) ANALYZED: 10-27-87

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.6	8.6	8.5	7.9	8.3	7.6			
STABILITY	+0.5	+0.1	+0.4	-0.3	-0.1	-0.4			
PHENOLTHALEIN ALKALINITY (PPM)	2	10	2	0	0	0			
METHYL ORANGE ALKALINITY (PPM)	50	130	66	156	156	150			
CARBONATES AS $CaCO_3$ (PPM)	4	20	4	0	0	0			
BICARBONATES AS $CaCO_3$ (PPM)	46	110	62	156	156	150			
CHLORIDES AS Cl (PPM)	16	80	20	18	38	26			
HARDNESS AS $CaCO_3$ (PPM)	58	50	72	58	58	96			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	1.01 / 1.08	0.64	1.02 / 1.12	0.16	0.14	0.17			
TURBIDITY (NTUS) AM / PM	0.6 / 0.6	0.9	0.6 / 0.8	1.2	0.7	0.4			
CHLORINE RESIDUAL (PPM)	1.1	1.1	1.2	1.0	1.0	1.5			

REMARKS:

COPY TO:

- ☐ UTIL DIR, BMD ☐ _____
- ☐ WATER TREATMENT, UTIL DIV, BMD
- ☐ PMO, NAVHOSP ☐ PMO, MCAS-NR
- ☒ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 10-27-87

REPORT PREPARED BY: H. J. BURNS

WATER TREATMENT PLANTS WATER FLOW DATE: NOVEMBER 1987

PLANT	RAW	DELIVERED	WASHING FILTERS	MAX.DEL	POTABLE WATER USED	WELLS MAX.SAFE YIELD/DAY	PLANT CAPACITY DAY	TREATMENT
HADNOT POINT	135,179,000	126,388,000	2,285,000	4,562,000	13	5,900,000	5,000,000	lime
HOLCOMB BLVD.	41,363,000	36,625,000	2,093,000	1,466,000	3	5,900,000	5,000,000	lime
MCAS	15,739,000	14,347,000	1,476,666	660,000	3	4,081,000	3.500,000	lime
RIFLE RANGE	6,033,000	5,517,000	246,000	223,000	3	648,000	600,000	zeolite
COURTHOUSE BAY	14,073,000	13,354,000	985,400	631,000	3	864,000	800,000	zeolite
ONSLOW BEACH	3,444,000	Est. 3,210,000	234,000	180,000	3	250,000	250,000	zeolite
TOTAL FLOW	215,831,000	199,441,000	~~7,320,066~~	~~7,722,000~~				

WATER IN GALLONS

REMARKS:

11331
NREAD
2 Dec 87

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 November 1987. 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 Environmental Chemistry and Microbiology Laboratory, located in the Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities. Ms. Betz, Supervisory Chemist, telephone (919) 451-5977, is the point of contact in this matter.

Sincerely,

JULIAN I. WOOTEN
Director, Natural Resources Division
By direction of the Commanding General

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

Copy to:
LANTNAVFACENGCOM (Code 114)

Blind copy to:
BMO (Attn: UTIL DIR)
Supvy Chem (2)

Writer/Typist Betz/dla
Date Typed 2 Dec 87
Word Processor Number 11331

Month NOVEMBER
Year 1987

HADNOT POINT 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 #: 04-67-041

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 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.	PLANKTONCLOSURE
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MF MEDIA			BBL mEndo			BACTERIAL DENSITY		ARITH. MEAN								0	DIST. SYSTEM	TOTAL NO. SAMPLES								36		
TPC MEDIA								GEO. MEAN								1		SAMPLES EXCEEDING 3/50, (4/100) 7/200, 13/500ml								0		

Laboratory Cert. 37807

Signed Elizabeth A Bf

Cert. Grade B-WC II No. 4087-W

DHS 1945 2/74

Month NOVEMBER
Year 1987

MARINE CORPS AIR STATION WATER TREATMENT PLANT AT Camp Lejeune

Method Code: 3032
Contaminant Code: 3000

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

Serial #: 04-67-042

ENCLOSURE

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: COLIFORMS per 100 ml.			INCUBATOR TEMP.
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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN		0	DIST. SYSTEM	TOTAL NO. SAMPLES		28
TPC MEDIA			GEO. MEAN		1		SAMPLES EXCEEDING 3/50, (4/100) 7/200, 13/500ml		0

Laboratory Cert. 37807

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

DHR 1895 7/71

Month NOVEMBER
Year 1987

HOLCOMB BLVD. WATER TREATMENT PLANT AT Camp Lejeune

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) 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.	TOTAL PLATE COUNT	DISTRIBUTION SYSTEM: AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	COLIFORMS (MFP) 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 mEndo	BACTERIAL DENSITY	ARITH. MEAN	0	DIST. SYSTEM	TOTAL NO. SAMPLES	28
TPC MEDIA			GEO. MEAN	1		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

DHS 1942 7/74

Month NOVEMBER
Year 1987

TARAWA TERRACE 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 #: 04-67-044

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.
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10	7 10TH															0	4	0 0		0 0						35.5
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17	7 17TH															0	4	0 0		0	0					35.7
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24	7 24TH															0	4	0 0			0	0	1			35.9
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29																										
30																										
31																										

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

Laboratory Cert. 37807

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

DHR 1042 2/74

Month NOVEMBER Year 1987

CAMP JOHNSON 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 #: 04-67-045

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.	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																										
3	7 3RD															0	2	0	0							35.7
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6																										
7																										
8																										
9																										
10	7 10TH															0	2	0	0							35.5
11																										
12																										
13																										
14																										
15																										
16																										
17	7 17TH															0	2	0	1	0						35.7
18																										
19																										
20																										
21																										
22																										
23																										
24	7 24TH															0	2	0	0							35.9
25																										
26																										
27																										
28																										
29																										
30																										
31																										

MF MEDIA	RBL mEndo	BACTERIAL DENSITY	ARITH. MEAN		0	DIST. SYSTEM	TOTAL NO. SAMPLES	8
TPC MEDIA			GEO. MEAN		1		SAMPLES EXCEEDING 3/50 (4/100) 7/200, 13/500ml	0

Laboratory Cert. 37807

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

Month NOVEMBER
Year 1987

RIFLE RANGE WATER TREATMENT PLANT AT Camp Lejeune

Contaminant Code: 3000

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES
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.	PLANKTON ENCLOSURE
1																												
2																												
3	7 3RD															0	3	0	0	0	1						35.7	
4																												
5																												
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7																												
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10	7 10TH															0	3	0	0	0	1						35.5	
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22																												
23																												
24	7 24TH															0	3	0	0	0	1						35.9	
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28																												
29																												
30																												
31																												
MF MEDIA			BBL mEndo			BACTERIAL DENSITY	ARITH. MEAN									0	DIST. SYSTEM	TOTAL NO. SAMPLES									12	
TPC MEDIA							GEO. MEAN									1		SAMPLES EXCEEDING 3/50, (4/100,) 7/200, 13/500ml									0	

Laboratory Cert. 37807

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

DHR 1982 2/74

Month NOVEMBER
Year 1987

COURTHOUSE BAY 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 #: 04-67-047

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.	NO. OF SAMPLES EXAMINED	1	2	3	4	5	REPEAT SAMPLES			INCUBATOR TEMP.
1																									
2							1																		
3	3RD															0	4	0 0	0 0						35.7
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10	10TH															0	3	1 0	0 0						35.5
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17	17TH															0	4	1 0		0 1 0	0 1				35.7
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24	24TH															0	4	0 1 0	0 1		1 0				35.9
25																									
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31																									

MF MEDIA		RBL mEndo		BACTERIAL DENSITY	ARITH. MEAN				0	DIST. SYSTEM	TOTAL NO. SAMPLES		15
TPC MEDIA					GEO. MEAN				1		SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml		0

Laboratory Cert. 37807

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

DHS 1915 2/74

Month NOVEMBER
Year 1987

ONSLOW BEACH 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 #: 04-67-048

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 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																										
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3	5RD															0	2	0|0								35.7
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17	17TH															0	2	0|0								35.7
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24	24TH															0	2	0|0								35.9
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31																										

MF MEDIA	mEndo	BACTERIAL DENSITY	ARITH. MEAN		0	DIST. SYSTEM	TOTAL NO. SAMPLES 8
TPC MEDIA	BBL		GEO. MEAN		1		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

DHR 1045 2/74

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 11-3-87

DATE(S) ANALYZED: 11-3-87

ENCLOSURE (2)

PARAMETER (UNITS) \ PLANT		HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY		8.2	8.9	8.5	8.1	8.2	7.4			
STABILITY		+0.3	+0.2	+0.5	0.0	+0.1	-0.4			
PHENOLTHALEIN ALKALINITY (PPM)		0	12	6	0	4	0			
METHYL ORANGE ALKALINITY (PPM)		44	140	62	164	156	164			
CARBONATES AS $CaCO_3$ (PPM)		0	24	12	0	8	0			
BICARBONATES AS $CaCO_3$ (PPM)		44	116	50	164	148	164			
CHLORIDES AS Cl (PPM)		20	80	20	20	50	20			
HARDNESS AS $CaCO_3$ (PPM)		56	50	64	64	54	58			
IRON AS Fe (PPM)										
FLUORIDE (PPM)	AM / PM	1.02 / 1.02	0.58	0.96 / 1.18	0.11	0.10	0.13			
TURBIDITY (NTUS)	AM / PM	0.5 / 0.7	1.1	1.4 / 1.4	0.7	0.8	1.1			
CHLORINE RESIDUAL (PPM)		1.1	1.0	1.1	1.1	1.2	0.9			

REMARKS:

COPY TO:

- ☒ UTIL DIR, BMD ☐ _____
- ☒ WATER TREATMENT, UTIL DIV, BMD
- ☒ PMO, NAVHOSP ☒ PMO, MCAS-NR
- ☒ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☒ FILE (ATTACH WKST)

REPORT DATE: 11-3-87

REPORT PREPARED BY: H. J. Bvens

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 11-10-87

DATE(S) ANALYZED: 11-10-87

ENCLOSURE (2)

PARAMETER (UNITS) \ PLANT		HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY		8.1	8.4	8.7	8.3	8.0	7.5			
STABILITY		+0.6	+0.3	+0.6	+0.2	+0.2	-0.2			
PHENOLTHALEIN ALKALINITY (PPM)		0	12	14	18	4	0			
METHYL ORANGE ALKALINITY (PPM)		54	160	68	182	168	172			
CARBONATES AS $CaCO_3$ (PPM)		0	24	28	36	8	0			
BICARBONATES AS $CaCO_3$ (PPM)		54	136	40	146	160	172			
CHLORIDES AS Cl (PPM)		20	88	14	22	48	24			
HARDNESS AS $CaCO_3$ (PPM)		68	48	62	72	54	52			
IRON AS Fe (PPM)										
FLUORIDE (PPM)	AM / PM	1.12 / 1.06	0.63	1.29 / 1.24	0.13	0.10	0.17			
TURBIDITY (NTUS)	AM / PM	0.5 / 0.5	0.5	0.7 / 0.6	0.2	0.3	0.4			
CHLORINE RESIDUAL (PPM)		1.0	1.1	1.3	1.4	0.8	1.1			

REMARKS:

COPY TO:

- ☒ UTIL DIR, BMD ☐ _____
- ☒ WATER TREATMENT, UTIL DIV, BMD
- ☒ PMU, NAVHOSP ☒ PMU, MCAS-NR
- ☒ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☒ FILE (ATTACH WKST)

REPORT DATE: 11-10-87

REPORT PREPARED BY: CAROL S. SHORES

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 11-17-87

DATE(S) ANALYZED: 11-17-87

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.1	8.4	8.4	7.9	7.9	7.2			
STABILITY	+0.6	+0.3	+0.6	+0.2	+0.2	-0.3			
PHENOLITHALEIN ALKALINITY (PPM)	2	18	12	0	0	0			
METHYL ORANGE ALKALINITY (PPM)	56	146	58	156	124	160			
CARBONATES AS $CaCO_3$ (PPM)	4	36	24	0	0	0			
BICARBONATES AS $CaCO_3$ (PPM)	52	110	34	156	124	160			
CHLORIDES AS Cl (PPM)	20	84	20	18	54	22			
HARDNESS AS $CaCO_3$ (PPM)	60	66	58	56	64	62			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	0.56 / 0.52	0.64	0.97 / 1.07	0.12	0.10	0.17			
TURBIDITY (NTUS) AM / PM	0.1 / 0.1	0.2	0.3 / 0.1	0.1	0.1	0.1			
CHLORINE RESIDUAL (PPM)	1.0	1.0	1.4	1.3	1.0	1.2			

REMARKS:

COPY TO:

- ☒ UTIL DIR, BMD ☐ _____
- ☒ WATER TREATMENT, UTIL DIV, BMD
- ☒ PMU, NAVHOSP ☒ PMU, MCAS-NR
- ☒ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 11-17-87

REPORT PREPARED BY: CAROL S. SHORES

ENCLOSURE (1)

ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY LABORATORY REPORT

CHEMICAL ANALYSIS - WATER TREATMENT PLANTS

MCBCL 11330/3 (REV 7-87)

DATE COLLECTED: 11-24-87 | DATE(S) ANALYZED: 11-24-87

ENCLOSURE 1

PARAMETER (UNITS) \ PLANT	HADNOT POINT 04-67-041	MCAS NEW RIVER 04-67-042	HOLCOMB BLVD 04-67-043	COURTHOUSE BAY 04-67-046	RIFLE RANGE 04-67-047	ONSLOW BEACH 04-67-048			
pH-LABORATORY	8.1	8.4	8.6	8.1	8.3	7.4			
STABILITY	+0.2	+0.1	+0.6	0.0	+0.2	−0.4			
PHENOLTHALEIN ALKALINITY (PPM)	0	8	6	0	4	0			
METHYL ORANGE ALKALINITY (PPM)	62	150	72	164	168	170			
CARBONATES AS $CaCO_3$ (PPM)	0	16	12	0	8	0			
BICARBONATES AS $CaCO_3$ (PPM)	62	134	60	164	160	170			
CHLORIDES AS Cl (PPM)	4	66	4	16	48	12			
HARDNESS AS $CaCO_3$ (PPM)	60	58	68	60	56	50			
IRON AS Fe (PPM)									
FLUORIDE (PPM) AM / PM	0.18 / 0.19	0.66	1.04 / 1.04	0.15	0.13	0.19			
TURBIDITY (NTUS) AM / PM	/		/						
CHLORINE RESIDUAL (PPM)	1.1	1.2	1.2	1.3	1.0	1.3			

REMARKS:

COPY TO:

- ☒ UTIL DIR, BMD ☐ _____
- ☒ WATER TREATMENT, UTIL DIV, BMD
- ☒ PMU, NAVHOSP ☒ PMU, MCAS-NR
- ☒ DIVISION OF HEALTH SERVICES N.C. DEPT OF HUMAN RESOURCES
- ☐ NREAD ☐ FILE (ATTACH WKST)

REPORT DATE: 11-24-87

REPORT PREPARED BY: ROBERT G. DEPPEN

WATER TREATMENT PLANTS WATER FLOW DATE: DECEMBER 1987

PLANT	RAW	DELIVERED	WASHING FILTERS	MAX.DEL	POTABLE WATER USED	WELLS MAX.SAFE YIELD/DAY	PLANT CAPACITY DAY	TREATMENT
HADNOT POINT	136,257,000	128,421,000	2,438,000	4,659,000	13	5,900,000	5,000,000	lime
HOLCOMB BLVD.	39,354,000	36,849,000	1,831,100	1,926,000	3	5,900,000	5,000,000	lime
MCAS	16,212,000	14,731,000	1,596,000	612,000	3	4,081,000	4,000,000	lime
RIFLE RANGE	7,067,000	5,962,000	245,200	280,000	3	648,000	600,000	zeolite
COURTHOUSE BAY	15,150,000	14,116,000	1,016,200	665,000	3	864,000	800,000	zeolite
ONSLOW BEACH	4,317,000	Est; 4,213,000	247,000	190,000	3	250,000	250,000	zeolite
TOTAL FLOW	218,357,000	204,292,000	7,373,500	8,332,000				

WATER IN GALLONS

REMARKS: