11331
NREAD
1 Jul 86

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 June 1986. 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, Marine Corps Base, Camp Lejeune. 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:
LANTNAVFACENGCOM (Code 114)

Blind copy to:
BMO (Util Dir)
SupvyChem, QCL

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

Year 1986 REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES Contaminant Code: 3000

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

	RAW WATER COLIFORMS (MFP) A			B			C				FILTERED		FINISHED		DISTRIBUTION SYSTEM	COLIFORMS (MFP)		1	2	3	4	5	REPEAT SAMPLES			
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	ON 6/10 ON 6/12 COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	INCUBATOR TEMP.
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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN	0.4	DIST. SYSTEM	TOTAL NO. SAMPLES	36
TPC MEDIA			GEO. MEAN	1.1		SAMPLES EXCEEDING 3/50. [✓ 4/100] 7/200. 13/500ml	1

LAB. ID. # 37801

Elizabeth A Betz

B-Well 4087-W

Month JUNE
Year 1986

JARAWA 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	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.	PLANKTON
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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN	0.58	DIST. SYSTEM	TOTAL NO. SAMPLES 12
TPC MEDIA			GEO. MEAN	1.23		SAMPLES EXCEEDING 3/50. [✓ 4/100] 7/200. 13/500ml 0

LAB ID # 37807

Elizabeth A Betz

B-Well 4087-W

Month JUNE
Year 1986

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.	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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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN	0	DIST. SYSTEM	TOTAL NO. SAMPLES	12	
TPC MEDIA			GEO. MEAN	1.0		SAMPLES EXCEEDING 3/50. [✓ 4/100] 7/200. 13/500ml	0	

LAB ID # 37807

Elizabeth A Betz

B-Well 4087-W

Month JUNE
Year 1986

RIFLE RANGE 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 # 04-67-046

DATE	RAW WATER COLIFORMS (MFP)										FILTERED		FINISHED		DISTRIBUTION SYSTEM											
	A			B			C									COLIFORMS (MFP)							REPEAT SAMPLES			
																		1	2	3	4	5				
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	INCUBATOR TEMP.
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4																1.0	3	0	3	0						35.1
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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN	0.25	DIST. SYSTEM	TOTAL NO. SAMPLES: 12
TPC MEDIA			GEO. MEAN	1.09		SAMPLES EXCEEDING 3/50. [✓ 4/100]. 7/200. 13/500ml: 0

LAB ID.# 37807

Elizabeth A Betz

B-Well 4087-W

Month JUNE
Year 1986

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)										FILTERED		FINISHED		DISTRIBUTION SYSTEM											INCUBATOR TEMP.	PLANKTON
	A			B			C											COLIFORMS (MFP) 1	2	3	4	5	REPEAT SAMPLES				
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.		
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MF MEDIA			BBL mEndo			BACTERIAL 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	

LAB ID # 37807

Elizabeth A Betz

B-Well 4087-W

Month JUNE

Year 1986

Serial # 04-67-048

ONSLOW BEACH 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

	RAW WATER COLIFORMS (MFP)										FILTERED		FINISHED		DISTRIBUTION SYSTEM												
	A			B			C									COLIFORMS (MFP)							REPEAT SAMPLES				
																		1	2	3	4	5					
DATE	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	INCUBATOR TEMP.	PLANKTON
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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN	925	DIST. SYSTEM	TOTAL NO. SAMPLES	8
TPC MEDIA			GEO. MEAN	1.09		SAMPLES EXCEEDING 3/50. [✓ 4/100.] 7/200. 13/500ml	0

LAB ID # 37807

Elizabeth A Betz

B-Well 4087-W

Month JUNE
Year 1986

MARINE CORPS AIR STATION 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 # 04-67-042

DATE	RAW WATER COLIFORMS (MFP)										FILTERED		FINISHED		DISTRIBUTION SYSTEM											INCUBATOR TEMP.
	A			B			C			NO. OF COLIFORMS PER 100 ml.								COLIFORMS (MFP)					REPEAT SAMPLES			
	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES	VOLUME FILTERED ml.	TOTAL COLONIES	COLIFORM COLONIES		TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	MFP COLIFORMS per 100 ml.	TOTAL PLATE COUNT	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.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	
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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN	0	DIST. SYSTEM	TOTAL NO. SAMPLES	28
TPC MEDIA			GEO. MEAN	1.0		SAMPLES EXCEEDING 3/50. [✓ 4/100] 7/200. 13/500ml	0

LAB ID # 37807

Elizabeth A Betz

B-W-11 4087-W

Month JUNE HOLCOMB BLVD WATER TREATMENT PLANT AT Camp Lejeune Method Code: 303

Year 1986 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.	DISTRIBUTION SYSTEM TOTAL PLATE COUNT	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	1.0		SAMPLES EXCEEDING 3/50. [✓ 4/100] 7/200. 13/500ml	0

LAB ID # 37807

Elizabeth O Betz

B-N-11 4087-W

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS

MCBCL 11330/3 (REV. 6-84)

DATE COLLECTED 3 JUNE 86

DATE OF ANALYSIS 3 JUNE 86

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	7.2	9.0	7.3	7.5	8.2	8.7	8.7		
PHENOLTHALEIN ALKALINITY	6	0	10	0	0	2	6	12		
METHYL ORANGE ALKALINITY	52	198	44	172	172	162	64	106		
CARBONATES AS $CaCO_3$	12	0	20	0	0	4	12	24		
BICARBONATES AS $CaCO_3$	40	198	24	172	172	158	52	82		
CHLORIDES AS C1	10	26	16	22	18	20	14	30		
HARDNESS AS $CaCO_3$	68	82	88	58	108	54	74	54		
IRON AS Fe	<0.04	0.68	<0.04	<0.04	<0.04	<0.04	<0.04	0.08		
FLUORIDE AM	0.83		0.90				0.78			
PM	0.83	0.19	0.94	0.24	0.14	0.11	0.83	0.52		
CHLORINE RESIDUAL	1.0	0.9	1.0	1.5	1.5	1.0	0.9	0.8		
TURBIDITY AM	0.4		0.2				0.3			
PM	0.2	2.3	0.3	0.6	0.2	0.3	0.4	0.9		
TOTAL PHOSPHATE		1.8			0.0					
ORTHO PHOSPHATE		1.2			0.0					
META PHOSPHATE		0.4			0.0					
STABILITY	+0.7	-0.9	+0.6	-0.8	-0.6	-0.1	+0.4	+0.3		

REMARKS

COPY TO:

☒ UTIL DIR ☐

☒ 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

SHORES + LANE GBS

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

DATE COLLECTED 10 JUNE 86

DATE OF ANALYSIS 10 JUNE 86

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)	8.6	7.3	9.0	7.6	7.7	8.0	9.5	8.7		
PHENOLTHALEIN ALKALINITY	6	0	8	0	0	0	16	12		
METHYL ORANGE ALKALINITY	54	194	42	164	180	178	46	126		
CARBONATES AS $CaCO_3$	12	0	16	0	0	0	32	24		
BICARBONATES AS $CaCO_3$	44	194	26	164	180	178	14	102		
CHLORIDES AS C1	20	44	24	76	32	46	18	62		
HARDNESS AS $CaCO_3$	78	74	80	0.14	58	64	62	68		
IRON AS Fe	<0.04	0.32	<0.04	0.19	<0.04	<0.04	0.05	0.07		
FLUORIDE Am Pm	0.83 0.86	0.18	0.87 0.74	1.4	0.13	0.11	0.87 0.73	0.55		
CHLORINE RESIDUAL	1.0	1.8	1.0	1.4	1.3	1.0	1.1	0.9		
TURBIDITY Am Pm	0.4 0.3	0.7	0.3 0.4	0.3	0.2	0.2	0.3 0.5	0.4		
TOTAL PHOSPHATE		1.6	-		0					
ORTHO PHOSPHATE		0.8			0					
META PHOSPHATE		0.8			0					
STABILITY	+0.1	-0.8	+0.5	-0.7	-0.6	-0.3	+1.0	+0.2		

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

Shores + Lane 883

COPY TO:

☒ UTIL DIR ☐

☒ WATER TREATMENT

☒ PMU ☒ MCAS PMU

☐ NREAD ☒ FILE

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS

MCBCI 11330/3 (REV. 6-84)

DATE COLLECTED
17 JUNE 1986

DATE OF ANALYSIS
17 JUNE 1986

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)	8.4	7.4	8.8	7.4	7.7	8.2	8.7	8.7		
PHENOLTHALEIN ALKALINITY	4	0	6	0	0	2	8	10		
METHYL ORANGE ALKALINITY	62	172	36 ~~36~~	162	184	178	66	102		
CARBONATES AS $CaCO_3$	8	0	12	0	0	4	16	20		
BICARBONATES AS $CaCO_3$	54	172	24 ~~24~~	162	184	174	50	82		
CHLORIDES AS C1	10	54	16	20	24	48	20	46		
HARDNESS AS $CaCO_3$	LAB	ERROR								
IRON AS Fe	<0.04	0.36	<0.04	0.11	0.13	0.06	0.12	0.12		
FLUORIDE Am	1.03		0.95				1.22			
FLUORIDE Pm	1.04	0.18	0.99	0.20	0.13	0.11	1.46	0.48		
CHLORINE RESIDUAL	1.0	1.4	1.0	1.3	1.0	1.0	1.1	0.8		
TURBIDITY Am	0.4		0.3				0.5			
TURBIDITY Pm	0.4	0.7	0.4	0.4	0.3	0.2	2.9	0.5		
TOTAL PHOSPHATE		1.3	-		0.1					
ORTHO PHOSPHATE		0.8			0.0					
META PHOSPHATE		0.5			0.1					
STABILITY	+0.1	-0.7	+0.7	-0.8	-0.6	-0.1	+0.5	+0.3		

REMARKS

COPY TO:

☒ UTIL DIR ☐

☒ 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

SHORES, LANE, + BURNS BB

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

DATE COLLECTED 24 JUNE 86

DATE OF ANALYSIS 24 JUNE 86

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)	8.4	7.6	8.7	8.0	78	8.4	8.8	8.8		
PHENOLTHALEIN ALKALINITY	2	0	2	0	0	2	8	8		
METHYL ORANGE ALKALINITY	50	182	50	148	162	140	58	110		
CARBONATES AS $CaCO_3$	4	0	4	0	0	4	16	16		
BICARBONATES AS $CaCO_3$	46	182	46	148	162	136	42	94		
CHLORIDES AS C1	10	26	14	18	10	40	18	48		
HARDNESS AS $CaCO_3$	60	68	86	68	72	54	76	54		
IRON AS Fe	<0.04	0.25	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		
FLUORIDE Am	1.06		0.19				0.85			
FLUORIDE Pm	0.94	0.17	0.81	0.20	0.12	0.12	~~0.85~~ 1.02	0.52		
CHLORINE RESIDUAL	1.0	1.2	1.0	1.0	1.1	1.1	0.9 ~~1.02~~	0.9		
TURBIDITY Am	0.3		5.8				0.2			
TURBIDITY Pm	0.2	0.5	0.5	0.3	0.2	0.4	2.2	0.4		
TOTAL PHOSPHATE		1.64	-		0.06					
ORTHO PHOSPHATE		1.08			0.04					
META PHOSPHATE		.56			0.02					
STABILITY	0	-0.7	+0.4	-0.3	-0.6	-0.1	+0.3	+0.2		

REMARKS

COPY TO:

☒ UTIL DIR ☐

☒ 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

BETZ, BARBEE, SHORES EOB

11333/1
NREAD
14 Jul 86

Mr. Charles Rundgren
Water Supply Branch
Division of Health Services
Post Office Box 2091
Raleigh, North Carolina 27602-2091

Dear Mr. Rundgren:

Enclosures (1) and (2) are the Trihalomethane analysis of the Hadnot Point (HP) Water Treatment Plant, ID No. 04-67-041 and for the Marine Corps Air Station (MCAS), New River Water Treatment Plant, ID No. 04-67-042. All samples were collected by the Water Quality Control Laboratory personnel and analyzed by Industrial and Environmental Analysts, Incorporated.

Point of contact in this matter is Ms. Elizabeth Betz, (919) 451-5977.

Sincerely,

D. D. SHARPE
Acting Director

Encls:
(1) TTHM Analysis for HP
(2) TTHM Analysis for MCAS

Blind copy to:
QCL
BMO (Util Dir)

6280
NREAD
28 Jul 86

From: Director, Natural Resources and Environmental Affairs Division, Marine Corps Base, Camp Lejeune
To: Base Maintenance Officer, Marine Corps Base, Camp Lejeune (Attn: Utilities Director)

Subj: NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT RELATED REPORTING DATA

Encl: (1) Monthly Report of Waste Teatment Plant Water Quality

1. It is requested that the enclosure be routed to the Utilities Systems General Foreman. The enclosure summarizes the subject data for all sewage treatment plants for 1-30 Jun 1986. The data/information except chlorine residuals shown under the "LAB" column are submitted to the EPA and state in accordance with the NREAD permit.

J. I. WOOTEN

Blind Copy to:
WQCL (2)

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY

MCBCL 11345/8 (REV. 6-83)

PLANT: Camp Geiger

MONTH: june 1986

	PLANT EFFLUENT DATA				5 DAY 20° C. BOD			SUSPENDED SOLIDS			COLIFORM	
	FLOW	PH	CHLORINE RESIDUAL									
DATE	TOTAL DAILY MGPD		PLANT mg/1	LAB mg/1	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	NUMBER PER 100 ml	GEOMETRIC MEAN
1	1.2330	6.6	4.0									
2	1.3620	6.8	4.0	1.0	144	6	96	74	3	96	0	
3	1.3150	6.6	4.0	1.8	128	6	95	104	2	98	0	
4	1.2932	6.4	4.0	1.8	104	4	96	80	3	96	0	
5	1.3210	6.6	4.0	2.2	116	5	96	124	3	98	0	
6	1.3110	6.6	4.0	3.7	144	9	94	74	3	96	0	
7	.9678	6.8	4.0									
8	1.5132	7.0	4.0									
9	1.3159	7.1	1.0	0.8	96	7	93	84	4	95	0	
10	1.2191	7.0	4.0	1.3	160	6	96	86	5	94	0	
11	1.2945	6.6	4.0	1.0	140	9	94	80	7	91	0	
12	1.2866	6.6	4.0	2.2	128	8	94	90	6	93	0	
13	1.2533	6.4	4.0	2.0	180	7	96	144	12	92	0	
14	1.1482	6.4	4.0									
15	1.3059	6.9	4.0									
16	1.2145	6.8	4.0	2.2	136	11	85	232	5	98	0	
17	1.2928	6.8	4.0	2.8	132	10	92	108	5	95	0	
18	1.2876	6.8	4.0	4.4	172	11	94	106	7	93	0	
19	1.2977	6.8	4.0	2.4	172	1	99	106	12	89	0	
20	1.13057	6.7	4.0	3.9	192	13	93	219	11	95	0	
21	1.1076	6.9	4.0									
22	1.1666	7.3	4.0									
23	1.2372	7.6	4.0	2.2	108	8	93	72	4	94	0	
24	1.1993	7.4	4.0	2.2	164	10	94	210	2	99	0	
25	1.2558	6.8	4.0	1.5	128	9	93	108	4	96	0	
26	1.2467	7.6	4.0	1.6	132	7	95	80	2	98	0	
27	1.2518	6.4	4.0	1.7	152	8	95	110	9	92	2	
28	1.2246	6.6	4.0									
29	1.3031	6.6	4.0									
30	1.4179	6.4	4.0	0.0	192	10	95	126	2	98	0	
31												
Tot.	37.7734		117		3020	165	1978	2417	111	1996		
Ave.	1.2591		3.9		144	8	94	115	5	95		1.03

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY

MCBCL 11345/8 (REV. 6-83)

PLANT Tarawa Terrace

MONTH June 1986

DATE	PLANT EFFLUENT DATA				5 DAY 20° C. BOD			SUSPENDED SOLIDS			COLIFORM	
	FLOW	PH	CHLORINE RESIDUAL									
	TOTAL DAILY M GPD		PLANT mg/1	LAB mg/1	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	NUMBER PER 100 ml	GEOMETRIC MEAN
1	1.0998	6.8	4.0									
2	1.0696	6.8	4.0	2.2	164	18	89	74	7	91	0	
3	1.0569	6.8	4.0	1.7	144	17	88	90	6	93	0	
4	1.0095	6.8	4.0	1.7	200	18	91	118	9	92	0	
5	1.0374	6.9	4.0	1.5	176	15	91	343	8	98	<30,000	
6	1.0955	7.2	4.0	2.9	212	18	92	232	8	97	2	
7	1.0579	7.0	4.0									
8	1.1247	6.8	4.0									
9	1.1307	7.0	2.5	1.0	164	20	87	198	6	97	2	
10	1.0414	7.0	4.0	1.8	184	16	91	128	10	92	2	
11	1.0984	7.0	4.0	1.8	140	23	84	100	7	93	0	
12	1.0275	6.7	4.0	1.8	144	19	87	100	10	90	0	
13	1.1143	6.8	4.0	1.8	176	20	87	100	12	88	18	
14	1.1580	6.5	4.0									
15	1.1132	6.8	4.0									
16	1.1313	6.5	4.0	2.5	128	16	88	140	8	94	0	
17	1.1634	6.6	4.0	2.2	144	14	90	274	6	98	22	
18	1.0773	6.8	4.0	3.7	156	14	91	92	10	89	2	
19	1.0277	6.8	4.0	2.5	136	13	90	80	8	90	0	
20	1.1037	6.9	4.0	3.5	172	19	89	92	8	91	0	
21	1.0126	6.9	4.0									
22	.9840	6.7	4.0									
23	1.0938	6.7	4.0	1.2	128	15	88	148	8	95	0	
24	1.0685	6.9	4.0	1.6	120	13	89	188	2	99	0	
25	1.0405	6.7	4.0	1.5	220	13	94	363	4	99	0	
26	1.0370	6.8	4.0	1.8	296	13	96	74	6	92	0	
27	1.0533	6.8	4.0	1.8	128	15	88	276	11	96	4	
28	1.1826	6.8	4.0									
29	1.1848	6.8	4.0									
30	1.0933	6.8	4.0	1.7	108	15	86	413	3	99	0	
31												
Tot.	32.4886		118.5		3240	344	1876	3623	157	1973		
Ave.	1.0829		4.0		164	16	89	173	7	94		7.01

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY
MCBCL 11345/8 (REV. 6-83)

PLANT Camp Johnson

MONTH June 1986

DATE	PLANT EFFLUENT DATA: FLOW TOTAL DAILY MGPD	PH	CHLORINE RESIDUAL PLANT mg/1	CHLORINE RESIDUAL LAB mg/1	5 DAY 20° C. BOD RAW mg/1	BOD EFFLUENT mg/1	BOD PERCENT REMOVAL	SUSPENDED SOLIDS RAW mg/1	SUSPENDED SOLIDS EFFLUENT mg/1	SUSPENDED SOLIDS PERCENT REMOVAL	COLIFORM NUMBER PER 100 ml	COLIFORM GEOMETRIC MEAN
1	.451	6.5	4.0									
2	.455	6.6	6.0									
3	.435	6.8	3.0	1.5	96	8	92	34	4	88	0	
4	.460	6.6	4.0									
5	.440	6.7	4.0	N. S.	----	----	----	----	----	----	10	
6	.395	6.8	4.0									
7	.366	7.0	4.0									
8	.456	6.8	5.0									
9	.415	6.6	4.0									
10	.432	6.7	1.5	0.5	52	6	88	34	3	91	0	
11	.565	6.6	3.0								0	
12	.489	6.6	4.0	1.2	108	9	92	41	3	93		
13	.412	6.6	4.0									
14	.374	6.4	5.0									
15	.436	6.8	6.0									
16	.381	6.9	4.0									
17	.503	6.6	1.5	2.5	84	8	90	32	4	88	0	
18	.431	6.6	2.0									
19	.600	6.6	2.0	1.6	84	10	88	104	8	92	0	
20	.486	6.6	2.5									
21	.406	6.4	8.0									
22	.459	6.8	5.0									
23	.509	6.8	4.0									
24	.465	6.8	4.0	0.5	88	8	91	86	1	99	0	
25	.394	6.8	5.0									
26	.373	6.9	4.0	0.2	88	11	88	32	3	91	0	
27	.360	7.0	4.0									
28	.388	6.8	5.0									
29	.416	6.6	6.0									
30	.489	6.6	3.8									
31												
Tot.	13.241		122.3		600	60	629	363	26	642		
Ave.	441		4.1		86	9	90	52	4	92		1.33

N.S. = No Sample

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY

MCBCL 11345/8 (REV. 6-83)

PLANT HADNOT POINT

MONTH JUNE 1986

	PLANT EFFLUENT DATA				5 DAY 20° C. BOD			SUSPENDED SOLIDS			COLIFORM	
	FLOW	PH	CHLORINE RESIDUAL									
DATE	TOTAL DAILY MGPD		PLANT mg/1	LAB mg/1	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	NUMBER PER T/F 100 ml	GEOMETRIC MEAN
1	5.118	6.8	4.0									
2	5.843	6.8	4.0	1.2	132	22	83	80	8	90	0/0	
3	5.670	6.6	6.0	1.5	128	29	77	82	5	94	0/0	
4	5.874	7.1	6.0	1.8	124	22	82	94	9	90	0/0	
5	6.138	7.0	2.0	0.3	112	26	77	86	15	83	8/0	
6	6.393	6.8	2.5	1.5	108	28	74	62	8	87	2/0	
7	5.568	6.7	4.0									
8	6.695	6.7	4.0									
9	6.155	6.6	4.0	1.5	132	22	83	100	13	87	2/0	
10	5.994	6.6	4.0	1.0	128	18	86	85	9	89	6/0	
11	6.478	6.8	3.0	1.0	124	17	86	68	8	88	0/0	
12	6.453	6.8	4.0	0.5	128	16	88	96	10	90	0/0	
13	4.345	6.8	4.0	1.0	144	17	88	106	8	92	36/0	
14	4.561	6.8	4.0									
15	5.478	6.8	4.0									
16	7.185	6.5	4.5	2.3	100	16	84	70	6	91	0/0	
17	6.427	6.5	4.0	2.1	116	16	86	100	7	93	6/0	
18	6.295	6.8	4.0	3.5	124	17	86	118	11	91	20/6	
19	6.158	6.8	4.0	2.1	116	19	84	160	12	93	0/0	
20	6.535	6.7	4.0	3.1	108	19	81	100	11	89	0/0	
21	5.582	6.7	4.0									
22	5.359	6.8	4.0									
23	5.723	6.7	4.0	1.2	116	14	88	110	8	93	0/0	
24	5.282	6.7	3.0	1.0	140	14	90	144	6	96	0/0	
25	5.680	6.6	2.5	1.2	112	15	87	98	4	96	2/0	
26	6.878	6.8	3.0	1.5	128	16	88	126	9	93	340/6	
27	5.668	6.7	3.0	1.0	144	17	88	140	16	89	2/0	
28	5.000	6.8	4.0									
29	6.013	6.8	4.0									
30	5.473	6.9	3.0	1.8	132	15	89	94	10	89	0/0	
31												
Tot.	176.021		114.5		2596	395	1775	2119	193	1903		
Ave.	5.867		3.8		124	19	85	101	9	91		2.70/1.19

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY

MCBCL 11345/8 (REV. 6-83)

PLANT Rifle Range

MONTH June 1986

	PLANT EFFLUENT DATA				5 DAY 20° C. BOD			SUSPENDED SOLIDS			COLIFORM	
	FLOW	PH	CHLORINE RESIDUAL									
DATE	TOTAL DAILY M GPD		PLANT mg/1	LAB mg/1	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	NUMBER PER 100 ml	GEOMETRIC MEAN
1	.20664	6.8	5.0									
2	.21952	6.5	4.0									
3	.24604	6.5	3.5	0.6	64	5	92	28	4	86	0	
4	.23279	6.8	4.5									
5	.23089	6.7	4.0	0.5	48	6	88	117	6	95	0	
6	.22762	6.6	3.0									
7	.22762	6.5	6.0									
8	.22768	6.6	5.5									
9	.22429	6.5	0.5									
10	.23754	6.5	3.5	0.8	40	5	88	22	3	86	0	
11	.28782	6.5	4.0									
12	.18136	6.5	3.0	0.2	64	6	91	30	1	97	0	
13	.23202	6.6	4.5									
14	.21414	6.9	5.5									
15	.22757	7.0	3.5									
16	.24574	6.9	3.0									
17	.22101	6.5	6.0	3.2	56	5	91	25	3	88	0	
18	.25657	6.8	5.0									
19	.23024	6.6	5.0	3.5	44	3	93	30	6	80	0	
20	.26724	6.6	4.0									
21	.28299	6.6	4.0									
22	.14465	6.6	8.0									
23	.25316	6.6	3.0									
24	.23078	6.6	5.5	1.5	44	5	89	38	1	97	0	
25	.22549	6.7	5.0									
26	.23384	6.9	5.5	0.5	72	5	93	144	1	99	10	
27	.22382	6.4	7.0									
28	.19279	6.8	6.0									
29	.19271	6.8	2.0									
30	.20743	6.8	4.0									
31												
Tot.	6.8320		133		432	40	725	434	25	728		
Ave.	.22773		4.4		54	5	91	54	3	91		1.33

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY

MCBCL 11345/8 (REV. 6-83)

PLANT: Courthouse Bay

MONTH: June 1986

N.S. – No Sample

	PLANT EFFLUENT DATA				5 DAY 20° C. BOD			SUSPENDED SOLIDS			COLIFORM	
	FLOW	PH	CHLORINE RESIDUAL									
DATE	TOTAL DAILY MGPD		PLANT mg/1	LAB mg/1	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	NUMBER PER 100 ml	GEOMETRIC MEAN
1	.4184	6.8	3.0									
2	.3270	7.6	2.5									
3	.5516	6.7	1.5	0.5	84	5	94	72	1	99	0	
4	.6183	6.6	1.5									
5	.4287	6.7	1.5	0.5	100	5	95	112	5	96	0	
6	.3937	6.6	2.0									
7	.3315	6.8	1.5									
8	.4332	6.8	1.5									
9	.3810	6.8	3.5									
10	.4122	6.7	1.5	0.6	72	7	94	68	3	96	0	
11	.4299	6.9	2.0									
12	.4221	7.0	4.5	0.8	120	6	95	82	3	96	0	
13	.4533	6.8	4.0									
14	.4277	6.8	2.5									
15	.4269	6.6	4.0									
16	.4358	6.8	4.0									
17	.4576	6.8	2.0	1.2	320	11	97	160	6	96	120	
18	.4078	6.8	2.0									
19	.4660	6.6	1.0	1.1	72	6	92	70	9	87	2	
20	.4770	6.9	6.0									
21	.4170	6.9	4.5									
22	.4550	6.9	4.0									
23	.4590	6.6	4.0									
24	.4250	6.8	3.0	N.S.	....	....	....	....	....	....	......	
25	.4610	6.8	2.0									
26	.4460	6.6	8.0	0.2	108	7	94	34	1	97	2	
27	.4320	6.8	6.0									
28	.4460	6.6	1.5									
29	.4520	7.0	4.0									
30	.4230	6.9	2.0									
31												
Tot.	13.1157		91		876	47	661	598	28	667		
Ave.	.4372		3.0		125	7	94	85	4	95		2.42

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY

MCBCL 11345/8 (REV. 6-83)

PLANT Onslow Beach

MONTH June 1986

DATE	PLANT EFFLUENT DATA				5 DAY 20° C. BOD			SUSPENDED SOLIDS			COLIFORM	
	FLOW	PH	CHLORINE RESIDUAL									
	TOTAL DAILY MGPD		PLANT mg/1	LAB mg/1	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	RAW mg/1	EFFLUENT mg/1	PERCENT REMOVAL	NUMBER PER 100 ml	GEOMETRIC MEAN
1	.1877	6.5	6.0									
2	.1587	6.8	6.0									
3	.1170	6.8	4.0	1.2	264	14	95	46	1	98	0	
4	.1170	6.4	4.0									
5	.1122	6.8	6.0	4.0	152	16	89	94	9	90	10	
6	.0896	6.8	4.0									
7	.0845	6.7	5.0									
8	.1045	6.4	6.0									
9	.0709	6.5	6.0									
10	.1212	6.6	6.0	10.5	136	9	93	27	3	88	0	
11	.1001	6.6	4.0									
12	.0937	6.5	4.0	6.7	228	13	94	56	2	96	0	
13	.0989	6.5	6.0									
14	.1000	6.4	6.0									
15	.0990	6.5	5.0									
16	.0980	6.4	6.0									
17	.0906	6.3	5.0	9.7	160	14	91	24	5	79	0	
18	.1000	6.9	6.0									
19	.1000	6.2	6.0	7.6	152	18	88	72	8	89	0	
20	.11241	6.5	6.0									
21	.0962	6.4	6.0									
22	.11948	6.3	8.0									
23	.133035	6.4	8.0									
24	.133035	6.4	6.0	3.2	260	23	91	64	2	97	0	
25	.0990	6.3	5.0									
26	.1095	6.4	6.0	6.5	96	8	92	28	2	93	2000	
27	.1000	6.7	8.0									
28	.1020	6.4	5.0									
29	.1010	6.4	1.0									
30	.1050	6.4	6.0									
31												
Tot.	3.25426		166		1448	115	733	411	32	730		
Ave.	.1085		5.5		181	14	92	51	4	91		3. 45