6288
NREAD
22 Jan 86

Mr. Paul Wilms, Director
Division of Environmental Management
NC Department of Natural Resources
and Community Development
Post Office Box 27687
Raleigh, North Carolina 27611

Dear Sir:

In accordance with requirements of the National Pollutant Discharge Elimination System (NPDES) Permit Number NC 0003239, Discharge Monitoring Reports (DMRs) for the month of December 1985 are submitted.

The storm drains listed on the enclosed table may be correlated with base geography and facilities by referring to maps with numbered storm drain monitoring points that have been previously provided. Storm drains that have no values reported for the quarter were checked; however, each time they were checked they were either dry or had no flow. The base environmental staff is continuing to work on operational control methodology to reduce oil and grease and total suspended residue discharges. New construction to replace outdated base facilities should further reduce oil and grease and total suspended residue discharges.

Questions regarding this report should be forwarded to Ms. Elizabeth Betz, Supervisory Chemist, Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities at (919) 451-5977.

Sincerely,

J. I. WOOTEN
Director, Natural Resources Division
Assistant Chief of Staff, Facilities
By direction of the Commanding General

Encls:
(1) DEM Form MR-2

Copy to:
EPA Region IV
CMDR LANTNAVFACENGCOM
NEESA

6280/2
NREAD
13 Jan 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 Treatment 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 1-31 December 1985. The data/information except chlorine residuals shown under the "LAB" column are submitted to the EPA and state in accordance with the NPDES permit.

J. I. WOOTEN

Blind copy to:
WQCL

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY

MCBCL 11345/8 (REV. 6-83)

PLANT: Camp Geiger

MONTH: December 1985

DATE	PLANT EFFLUENT DATA: FLOW TOTAL DAILY GPD	PH	CHLORINE RESIDUAL: PLANT mg/1	CHLORINE RESIDUAL: LAB mg/1	5 DAY 20° C. BOD: RAW mg/1	5 DAY 20° C. BOD: EFFLUENT mg/1	5 DAY 20° C. 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	.8887	7.4	4.0									
2	.9110	7.2	3.5									
3	.8687	7.2	4.0	3.8	84	20	76	55	13	76	0	
4	.9092	7.4	4.0	4.2	92	19	79	132	22	83	0	
5	.9406	7.4	4.0	3.6	144	20	86	150	12	92	0	
6	.8263	7.4	4.3	3.8	204	21	90	150	6	96		
7	.8217	6.8	4.2									
8	.7736	7.0	4.0									
9	.7495	7.0	4.0									
10	.8806	6.8	3.8	3.6	140	10	93	86	4	95	0	
11	.7566	6.8	4.0	3.5	104	6	94	61	5	92	0	
12	.8508	6.8	4.0	2.0	152	11	93	108	10	91	0	
13	1.0937	6.6	3.4	2.0	80	15	81	60	9	85		
14	1.009	6.8	4.0									
15	.8557	6.8	4.0									
16	.9466	6.8	3.8									
17	.8864	7.0	4.0	2.5	92	9	88	66	7	89	0	
18	.8328	7.0	4.0	2.8	128	8	94	130	7	95	0	
19	.8939	6.8	4.0	1.5	128	10	92	100	6	94	0	
20	.8287	7.1	4.0	3.0	64	15	77	70	7	90		
21	.7185	7.0	4.0									
22	.7661	6.7	4.0									
23	.6674	6.6	4.0									
24	.6459	6.2	4.0									
25	.5872	6.7	4.0	4.3	100	2	98	92	3	97	0	
26	.6451	6.4	4.0	5.0	108	3	97	114	6	95	0	
27	.7196	6.8	4.0	5.2	96	5	95	122	10	93		
28	.6067	6.9	4.0									
29	.6559	6.8	4.0									
30	.6549	7.0	4.0									
31	.6740	7.0	4.0									
Tot.	24,865,400		123		1716	174	1333/88.9	1496	127	1363/90.9		
Ave.	802,110		4.0		114	12	89.5	100	8	92.0		0

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

PLANT Tarawa Terrace | MONTH December 1985

DATE	PLANT EFFLUENT DATA: FLOW TOTAL DAILY GPD	PH	CHLORINE RESIDUAL PLANT mg/1	CHLORINE RESIDUAL LAB mg/1	5 DAY 20° C. BOD RAW mg/1	5 DAY 20° C. BOD EFFLUENT mg/1	5 DAY 20° C. 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	.876300	6.4	4.0									
2	.876100	6.4	4.0									
3	.888700	6.4	4.0	3.0	180	20	89	100	8	92	Chlorine	
4	.838000	6.6	4.0	4.1	168	17	90	112	17	85	0	
5	.785500	6.5	4.0	3.2	184	18	90	148	9	94	0	
6	.821800 (8)	6.4	4.0	3.5	188	19	90	144	4	97		
7	.929700	6.5	4.0									
8	.837300	6.5	4.0									
9	.838300	6.6	4.0									
10	.825400	6.5	4.0	3.9	196	19	90	164	3	98	40	
11	.819500	6.6	4.0	4.2	192	16	92	110	9	92	0	
12	.998900	6.5	4.0	3.8	304	17	94	1140	7	99	0	
13	.978300	6.5	4.0	4.0	96	20	79	35	9	74		
14	.905500	6.6	4.0									
15	.917700	6.5	4.0									
16	.854600	6.6	4.5									
17	.888400	6.4	4.0	3.8	152	22	86	106	9	92	60	
18	.845500	6.6	4.0	3.5	216	19	91	93	11	88	20	
19	.842500	6.4	4.5	3.3	168	21	88	140	13	91	780	
20	.801000	6.4	4.5	5.5	108	21	81	57	8	86		
21	.830300	6.4	5.5									
22	.887000	6.7	5.0									
23	.856000	6.4	5.0									
24	.805000	6.2	5.0									
25	.821200	6.7	4.0	5.2	172	23	87	158	12	92	6	
26	.849100	6.5	5.0	3.6	188	25	87	154	14	91	0	
27	.846700	6.4	4.0	5.9	136	21	85	74	7	91		
28	.806400	6.5	5.0									
29	.858900	6.5	5.0									
30	.861500	6.4	4.0									
31	.829100	6.5	4.0									
Tot.	26,620,300		133		2648	298	1319/87.9	2735	140	1362/90.8		
Ave.	858,716		4.3		176	20	88.6	182	9	95.1		6.84

821,800

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

PLANT Camp Johnson

MONTH December 1985

DATE	PLANT EFFLUENT DATA: FLOW TOTAL DAILY GPD	PH	CHLORINE RESIDUAL PLANT mg/1	CHLORINE RESIDUAL LAB mg/1	5 DAY 20° C. BOD RAW mg/1	5 DAY 20° C. BOD EFFLUENT mg/1	5 DAY 20° C. 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	.342800	6.4	6.0									
2	.340700	6.3	6.0									
3	.342800	6.3	5.0	5.8	180	11	94	92	3	97	2	
4	.343500	6.4	6.0		112	10	91	49	7	86	2	
5	.356300	6.3	5.0	4.6	80	10	88	60	4	93	0	
6	.349600	6.8	5.0	5.2	124	10	92	62	2	97		
7	.337400	6.7	5.0									
8	.369200	6.6	6.0									
9	.311200	6.6	6.0									
10	.331700	6.9	4.0	4.5	120	12	90	24	3	88	Chlorine	
11	.366300	6.7	5.0	4.5	92	10	89	26	7	73	900	
12	.320000	6.5	4.0	4.0	128	10	92	64	8	88	6	
13	.345800	6.4	4.0	2.5	64	10	84	56	9	84		
14	.324700	6.5	4.0									
15	.342000	6.6	5.0									
16	.341500	6.4	4.0									
17	.333000	6.4	4.0	3.5	132	10	92	34	2	94	0	
18	.342300	6.4	6.0	5.0	324	12	96	59	4	93	0	4.16
19	.330800	6.8	6.0	3.0	80	9	89	89	4	96	0	
20	.343200	6.3	3.0	3.5	144	11	92	41	7	83		
21	.341100	6.2	5.0									
22	.324300	6.3	6.0									
23	.340300	6.3	6.0									
24	.347500	6.3	5.0									
25	.333300	6.4	5.0	4.0	28	6	79	23	5	78	0	
26	.359400	6.4	6.0	4.8	60	5	92	42	4	90	0	
27	.342600	6.7	4.0	3.2	44	5	89	32	5	77		
28	.324900	6.6	4.0									
29	.357600	6.6	4.0									
30	.328200	6.7	4.0									
31	.342300	6.4	5.0									
Tot.	10,556,300		153		1712	141	1349/89.9	753	74	1317/87.8		
Ave.	340,526		4.9		114	9	92.1	50	5	90.0		2.71

MONTHLY REPORT OF WASTE TREATMENT PLANT WATER QUALITY

MCBCL 11345/8 (REV. 6-83)

PLANT: Hadnot Point

MONTH: December 1985

DATE	PLANT EFFLUENT DATA: FLOW TOTAL DAILY GPD	PH	CHLORINE RESIDUAL: PLANT mg/1	CHLORINE RESIDUAL: LAB mg/1	5 DAY 20° C. BOD: RAW mg/1	5 DAY 20° C. BOD: EFFLUENT mg/1	5 DAY 20° C. BOD: PERCENT REMOVAL	SUSPENDED SOLIDS: RAW mg/1	SUSPENDED SOLIDS: EFFLUENT mg/1	SUSPENDED SOLIDS: PERCENT REMOVAL	TOTAL COLIFORM: NUMBER PER 100 ml	TOTAL COLIFORM: GEOMETRIC MEAN
1	2.846	6.6	4.0	2.5	108	11	90	120	6	95		
2	3.722	6.8	4.0									
3	3.780	6.8	4.0	2.1	96	13	86	77	4	95	6	
4	3.956	6.8	4.0	3.2	156	14	91	210	9	96	2	
5	4.231	6.7	4.0	3.4	120	14	88	100	7	93	4	
6	4.100	6.6	4.0	3.0	144	16	89	98	3	97		
7	4.425	6.6	4.0									
8	3.934	6.8	4.0	3.0	84	13	85	43	6	86		
9	4.601	6.6	4.0									
10	4.904	6.8	4.0	3.0	128	17	87	92	4	96	80	
11	4.666	6.7	4.0	3.8	168	16	90	153	13	92	100	
12	4.666	6.8	4.0	2.1	164	17	90	125	9	93	10	
13	5.681	6.5	4.0	2.8	264	17	94	137	8	94		
14	3.985	6.6	4.0									
15	3.066	6.8	4.0	3.0	96	15	84	60	5	92		
16	3.971	6.8	4.0									
17	3.909	6.6	4.0	3.5	132	14	89	72	6	92	40	
18	3.915	6.4	4.0	3.6	216	19	91	124	7	94	100	18.76
19	3.857	6.6	4.0	2.5	128	9	93	128	9	93	20	
20	3.611	6.4	4.0	3.8	104	15	86	89	8	91		
21	3.358	6.7	5.0									
22	3.240	6.7	5.0	4.8	88	12	86	82	10	88		
23	3.532	6.6	4.0									
24	3.640	6.8	4.0	3.2	88	14	84	60	6	90	0	
25	3.301	6.6	4.0	3.5	72	11	85	50	9	82	2	
26	3.264	6.8	4.0	3.3	108	13	88	66	8	88	6	
27	3.370	6.6	4.0	3.6	108	11	90	84	10	88		
28	3.417	6.6	4.0									
29	3.540	6.6	4.0	4.9	128	11	91	136	7	95		
30	3.496	6.6	4.0									
31	3.710	6.6	4.0	2.1	112	14	88	80	9	89	32	
Tot.	119,694,000		126		2812	306	1945/88.4	2186	163	2019/91.8		
Ave.	3,861,097		4.1		128	14	89.1	99	7	92.9		1.21

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

PLANT: Rifle Range

MONTH: December 1985

DATE	PLANT EFFLUENT DATA: FLOW TOTAL DAILY GPD	PH	CHLORINE RESIDUAL PLANT mg/1	CHLORINE RESIDUAL LAB mg/1	5 DAY 20° C. BOD RAW mg/1	5 DAY 20° C. BOD EFFLUENT mg/1	5 DAY 20° C. 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	.283760	6.6	2.0									
2	.302140	6.6	3.2									
3	.323140	6.6	3.2	2.2	20	5	75	290	3	99	Chlorine	
4	.222010	6.6	3.2									
5	.308140	6.6	3.4	2.9	40	7	83	168	3	98	0	
6	.274150	6.5	5.2									
7	.312850	6.5	4.3									
8	.299120	6.5	3.0									
9	.289010	6.5	4.0									
10	.335360	6.5	4.0	2.1	24	8	67	56	1	98	0	
11	.289010	6.5	4.0									
12	.335360	6.5	4.0	1.1	84	5	94	252	6	98	0	
13	.240060	6.5	4.0									
14	.280300	6.5	7.0									
15	.277870	6.5	5.0									
16	.254830	6.5	7.0									
17	.304970	6.5	5.5	5.6	28	4	86	61	3	95	0	
18	.277560	6.5	5.5									
19	.307820	6.6	6.0		36	3	92	69	3	96	0	
20	.228040	6.6	4.5									
21	.225000	6.6	8.0									
22	.234500	6.6	5.0									
23	.291460	6.6	7.0									
24	.207240	6.6	6.5									
25	.213080	6.6	7.5									
26	.224200	6.6	5.0	4.8	316	10	97	600	8	99	0	
27	.292000	6.6	5.8									
28	.208890	6.6	6.0									
29	.209670	6.6	4.8									
30	.264040	6.8	4.0									
31	.260120	6.8	4.0									
Tot.	8,375,700		151		548	42	594/849	896	27	683/97.6		
Ave.	270,184		4.9		78	6	92.3	128	4	96.9		0

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

PLANT Courthouse Bay

MONTH December 1985

DATE	PLANT EFFLUENT DATA: FLOW TOTAL DAILY GPD	PH	CHLORINE RESIDUAL PLANT mg/1	CHLORINE RESIDUAL LAB mg/1	5 DAY 20° C. BOD RAW mg/1	5 DAY 20° C. BOD EFFLUENT mg/1	5 DAY 20° C. 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	.548950	7.0	4.0									
2	.549800	6.8	2.1									
3	.440650	6.8	4.0	3.1	108	6	94	71	5	93	322	
4	.137800	6.8	4.0									
5	.378830	6.9	4.0	2.3	68	12	82	50	8	84	0	
6	.177280	6.5	3.9									
7	.162980	6.4	3.4									
8	.250850	6.4	3.1									
9	.421010	6.6	3.8									
10	.518400	6.5	0.0	0.0	132	9	93	66	2	97	0	
11	.520150	6.5	3.9									
12	.450900	6.4	3.9	2.9	156	11	93	92	9	90	0	
13	.594880	6.9	4.0									
14	.523580	6.6	4.0									
15	.422830	6.4	3.9									
16	.520710	6.5	4.4									
17	.464300	6.4	3.9	3.2	80	10	88	92	6	93	120	
18	.421800	6.7	3.9									
19	.443100	6.4	3.0	1.0	144	14	90	116	5	96	Chlorine	8.26
20	.436900	6.6	3.1									
21	.410100	6.6	2.9									
22	.375558	6.6	3.2									
23	.377750	6.6	2.5									
24	.361710	6.6	3.1									
25	.383090	6.4	3.4									
26	.389800	6.4	2.8	0.2	28	4	86	34	7	79	0	
27	.374700	6.6	4.1									
28	.415100	6.5	4.0									
29	.402200	6.6	4.5									
30	.400100	6.6	2.9									
31	.420000	6.8	3.1									
Tot.	12,695,808		106		716	66	626/894	521	42	632/90.3		
Ave.	409,542		3.5		102	9	91.2	74	6	91.9		5.81

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

PLANT Onslow Beach

MONTH December 1985

DATE	PLANT EFFLUENT DATA FLOW TOTAL DAILY GPD	PH	CHLORINE RESIDUAL PLANT mg/1	CHLORINE RESIDUAL LAB mg/1	5 DAY 20° C. BOD RAW mg/1	5 DAY 20° C. BOD EFFLUENT mg/1	5 DAY 20° C. 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	.112	6.5	4.0									
2	.106	6.0	4.3									
3	.104	6.2	5.1	2.5	164	9	95	190	3	98	2	
4	.132	6.3	3.7									
5	.130	6.5	4.1	0.9	148	15	90	64	1	98	2	
6	.098	6.2	4.2									
7	.104	6.4	4.0									
8	.121	6.2	4.0									
9	.116	6.0	4.0									
10	.147	6.2	4.9	10.5	164	9	95	26	1	96	0	
11	.132	6.2	5.0									
12	.119	6.0	5.0	0.6	156	11	93	60	7	88	0	
13	.106	6.2	4.1									
14	.104	6.4	4.0									
15	.098	6.3	3.0									
16	.106	6.4	4.0									
17	.090	6.2	3.8	0.2	72	12	83	19	3	84	20	2.40
18	.102	6.0	4.8									
19	.130	6.2	3.0	1.8	268	10	96	52	4	92	760	
20	.116	6.2	4.9									
21	.124	6.2	4.8									
22	.103	6.2	4.0									
23	.119	6.0	4.5									
24	.131	6.0	4.2									
25	.129	6.6	4.0									
26	.116	6.5	4.0	6.3	56	5	91	52	7	87	0	
27	.123	6.6	4.4									
28	.110	6.4	4.0									
29	.101	6.4	4.2									
30	.131	6.6	3.0									
31	.109	6.2	4.5									
Tot.	3,589,000		129		1028	71	643/91.9	411	26	643/91.9		
Ave.	115,774		4.2		147	10	93.2	59	4.0	93.2		4.82

11331
NREAD
8 Jan 85

Mr. John McFadyen
Water Supply Branch
Division of Health Services
North Carolina Department of
Human Resources
Post Office Box 2091
Raleigh, North Carolina 27602

Dear Mr. McFadyen:

Enclosed are the completed Department of Health Forms (DHS 1942 2/74) for all water treatment plants aboard Marine Corps Base, Camp Lejeune for the period 1-31 December 1985. 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.

One sample of the 3 December 1985 collection from the Tarawa Terrace Water Treatment Plant was positive. On the membrane filter, 70 colonies/100 ml were counted. Five colonies were picked off and run through Laurl Tryptose Broth Tubes and Brilliant Green Bile Broth Tubes. All five were confirmed to coliform. Check samples were collected on 4 and 5 December 1985 and were negative. Although only six samples are required of the Tarawa Terrace System, 14 were collected in December 1985. Our determination of the enclosed data is that the contaminated sample was not a representative sample. It is requested that one of the eight extra samples be substituted for the contaminated sample in computing the coliform density. This request is based on rules and regulations of the Safe Drinking Water Act published in the Federal Register, Volume 45, Number 168, dated 27 August 1980.

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 (~~Attn:~~ Util Dir)
SUPVY CHEMIST, QCL

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

Year 1985 — 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	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.	COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	INCUBATOR TEMP.	PLANKTON
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~~4~~ 5D																0	12	0 0	0 0	0 0	0 0	0 0				34.8	
5																		0 0									
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30																											
31																											
MF MEDIA			BBL mEndo			BACTERIAL DENSITY		ARITH. MEAN								0	DIST. SYSTEM	TOTAL NO. SAMPLES								38	
TPC MEDIA								GEO. MEAN								100		SAMPLES EXCEEDING 3/50. 4/100 7/200. 13/500ml								0	

#37807

Elizabeth A Bell

MEMBRANE FILTER PROCEDURE

Month DECEMBER — MARINE CORPS AIR STATION — WATER TREATMENT PLANT AT Camp Lejeune — Method Code: 303

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

Serial # 04-67-04Z — 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 12/18: COLIFORMS per 100 ml.	12/19: COLIFORMS per 100 ml.	COLIFORMS per 100 ml.	INCUBATOR TEMP.	PLAKTON
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[illegible]																0.14	7	1	0	0	0	0	0				34.8	
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MF MEDIA		BBL mEndo				BACTERIAL DENSITY		ARITH. MEAN								0.045	DIST. SYSTEM	TOTAL NO. SAMPLES									22	
TPC MEDIA								GEO. MEAN								1.00		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml									0	

Elizabeth A. Betz

B-[illegible]

* - OVERGROWN. POINT RESAMPLED ON 18 + 19 DECEMBER 1985 - NO GROWTH

MEMBRANE FILTER PROCEDURE

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

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

N. C. DEPARTMENT OF HUMAN RESOURCES

Serial # 04-67-043

DATE	RAW WATER COLIFORMS (MFP) A: VOLUME FILTERED ml.	A: TOTAL COLONIES	A: COLIFORM COLONIES	B: VOLUME FILTERED ml.	B: TOTAL COLONIES	B: COLIFORM COLONIES	C: VOLUME FILTERED ml.	C: TOTAL COLONIES	C: COLIFORM COLONIES	NO. OF COLIFORMS PER 100 ml.	FILTERED: TOTAL PLATE COUNT	FILTERED: MFP COLIFORMS per 100 ml.	FINISHED: TOTAL PLATE COUNT	FINISHED: MFP COLIFORMS per 100 ml.	DISTRIBUTION SYSTEM: TOTAL PLATE COUNT	COLIFORMS (MFP): AVE. COLIFORMS per 100 ml.	NO. OF SAMPLES EXAMINED	1: COLIFORMS per 100 ml.	2: COLIFORMS per 100 ml.	3: COLIFORMS per 100 ml.	4: COLIFORMS per 100 ml.	5: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	REPEAT SAMPLES: COLIFORMS per 100 ml.	INCUBATOR TEMP.	PLANKTON
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MF MEDIA		BBL mEndo			BACTERIAL DENSITY	ARITH. MEAN										0	DIST. SYSTEM	TOTAL NO. SAMPLES								23	
TPC MEDIA						GEO. MEAN										1.0		SAMPLES EXCEEDING 3/50 4/100 7/200 13/500								0	

Elizabeth A Betz

B-Well 4067-W

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 ON 12/4 COLIFORMS per 100 ml.	REPEAT SAMPLES ON 12/5 COLIFORMS per 100 ml.	REPEAT SAMPLES COLIFORMS per 100 ml.	INCUBATOR TEMP.	PLANKTON
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26																0	2	0			0					34.7	
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31																											
MF MEDIA		BBL mEndo			BACTERIAL DENSITY	ARITH. MEAN										5.07	DIST. SYSTEM	TOTAL NO. SAMPLES								14	
TPC MEDIA						GEO. MEAN										1.36		SAMPLES EXCEEDING 3/50. 4/100. 7/200. 13/500ml								1	

Elizabeth A Bot

Serial # 04-67-045

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 12/11: COLIFORMS per 100 ml.	12/13: COLIFORMS per 100 ml.	12/14: COLIFORMS per 100 ml.	INCUBATOR TEMP.	PLANKTON
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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN	0.81	DIST. SYSTEM	TOTAL NO. SAMPLES	16
TPC MEDIA			GEO. MEAN	1.17		SAMPLES EXCEEDING 3/50. 4/100. 7/200. 13/500ml	1

#37807

Elizabeth C. Betz

Month

Year 1985

Serial # 04-67-046

REPORT OF BACTERIOLOGICAL RESULTS TO DIVISION OF HEALTH SERVICES

N. C. DEPARTMENT OF HUMAN RESOURCES

Contaminant Code: 3000

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.	COLIFORMS per 100 ml.	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								10	
TPC MEDIA								GEO. MEAN								1.0		SAMPLES EXCEEDING 3/50, 4/100, 7/200, 13/500ml								0	

Elizabeth A. Betz

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: 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								0.08	DIST. SYSTEM	TOTAL NO. SAMPLES								13	
TPC MEDIA								GEO. MEAN								1.00		SAMPLES EXCEEDING 3/50 4/100 7/200 13/500ml								0	

Signed Elizabeth A Berg

MEMBRANE FILTER PROCEDURE

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

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

N. C. DEPARTMENT OF HUMAN RESOURCES

Serial # 04-67-048

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.	PLANKTON
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MF MEDIA	BBL mEndo	BACTERIAL DENSITY	ARITH. MEAN			0	DIST. SYSTEM	TOTAL NO. SAMPLES	6
TPC MEDIA			GEO. MEAN			1.0		SAMPLES EXCEEDING 3/50. (4/100) 7/200. 13/500ml	0

Signature: Elizabeth A Betz

B-Well 4087-W

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

DATE COLLECTED 12/03/85

DATE OF ANALYSIS 12/03/85

PARAMETER SERIAL #04-67	HADNOT POINT -041	CAMP JOHNSON -045	TARAWA TERRACE -044	ONSLOW BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -043	NEW RIVER -042		
PH (IN LAB NOT PLANT)	8.8	7.5	8.6	7.7	8.3	8.4	8.9	8.9		
PHENOLTHALEIN ALKALINITY	2	0	2	0	2	2	4	4		
METHYL ORANGE ALKALINITY	60	186	70	164	160	186	60	120		
CARBONATES AS $CaCO_3$	4	0	4	0	4	4	8	8		
BICARBONATES AS $CaCO_3$	56	186	66	164	156	182	52	112		
CHLORIDES AS C1	8	12	16	16	14	32	10	38		
HARDNESS AS $CaCO_3$	64	68	78	72	54	56	64	50		
IRON AS Fe	<0.04	0.38	0.07	0.33	0.07	0.06	<0.04	<0.04		
FLUORIDE AM	1.27		0.84				0.99			
FLUORIDE PM	1.31	0.22	0.89	0.23	0.13	0.22	0.97	0.48		
CHLORINE RESIDUAL	1.0	1.3	1.0	1.0	1.4	1.0	0.9	0.8		
TURBIDITY AM	0.1		0.3				0.4			
TURBIDITY PM	0.4	0.5	0.3	0.3	0.2	0.2	0.9	0.4		
TOTAL PHOSPHATE		1.21			0.51					
ORTHO PHOSPHATE		0.84			0.03					
META PHOSPHATE		0.37			0.48					
STABILITY	+0.3	−0.9	+0.1	−0.8	−0.2	−0.1	+0.4	+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

B. Waddoups

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

DATE COLLECTED 12/10/85

DATE OF ANALYSIS 12/10/85

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	7.4	8.7	7.7	8.4	8.4	8.8	8.6		
PHENOLTHALEIN ALKALINITY	4	0	4	0	4	4	4	4		
METHYL ORANGE ALKALINITY	68	204	58	168	94	176	58	140		
CARBONATES AS $CaCO_3$	8	0	8	0	8	8	8	8		
BICARBONATES AS $CaCO_3$	60	204	50	168	86	168	50	132		
CHLORIDES AS C1	10	38	26	20	18	50	10	40		
HARDNESS AS $CaCO_3$	78	70	72	70	76	68	70	60		
IRON AS Fe	<0.04	0.39	<0.04	0.20	<0.04	0.07	0.05	0.06		
FLUORIDE AM	0.98		0.78				1.04			
FLUORIDE PM	1.03	0.18	0.76	0.20	0.13	0.10	1.00	0.49		
CHLORINE RESIDUAL	1.2	1.2	1.0	–	1.3	1.0	0.9	0.9		
TURBIDITY AM	0.2		0.3				0.3			
TURBIDITY PM	0.3	0.5	0.2	0.2	0.3	0.3	0.5	0.3		
TOTAL PHOSPHATE		0.95			0.08					
ORTHO PHOSPHATE		0.80			0.0					
META PHOSPHATE		0.15			0.08					
STABILITY	+0.3	–0.9	+0.2	–0.6	+0.1	0.0	+0.5	–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

T. Barbee/H. Burns

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

DATE COLLECTED 12/17/85

DATE OF ANALYSIS 12/17/85

PARAMETER SERIAL #04-67	HADNOT POINT -041	CAMP JOHNSON -045	TARAWA TERRACE -044	ONSLOW BEACH -048	COURTHOUSE BAY -047	RIFLE RANGE -046	HOLCOMB BLVD -043	NEW RIVER -042		
PH (IN LAB NOT PLANT)	8.8	7.5	8.7	7.8	8.5	8.6	8.9	8.9		
PHENOLTHALEIN ALKALINITY	4	0	4	0	4	2	2	8		
METHYL ORANGE ALKALINITY	60	180	64	156	168	150	64	126		
CARBONATES AS $CaCO_3$	8	0	8	0	8	4	4	16		
BICARBONATES AS $CaCO_3$	52	180	56	156	160	146	60	110		
CHLORIDES AS C1	10	30	20	18	18	30	14	46		
HARDNESS AS $CaCO_3$	76	64	76	48	54	56	74	48		
IRON AS Fe	<0.04	0.34	0.06	0.29	0.06	0.08	0.77	0.08		
FLUORIDE AM	0.78		0.94				0.99			
FLUORIDE PM	0.79	0.16	0.94	0.20	0.12	0.12	0.83	0.48		
CHLORINE RESIDUAL	1.1	1.4	1.0	1.5	1.6	1.0	0.9	0.8		
TURBIDITY AM	0.3		0.4				0.2			
TURBIDITY PM	0.8	0.8	0.3	0.3	0.2	0.3	16.2*	1.0		
TOTAL PHOSPHATE		2.09			0.07					
ORTHO PHOSPHATE		0.76			0.00					
META PHOSPHATE		1.33			0.07					
STABILITY	+0.7	−0.8	+0.2	−0.6	+0.1	+0.2	+0.4	+0.4		

REMARKS

*Holcomb Blvd repeat turbidity = 0.6

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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

H. Burns

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

DATE COLLECTED 12/26/85

DATE OF ANALYSIS 12/26/85

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)	8.5	7.3	8.7	7.5	8.3	8.4	8.7			
PHENOLTHALEIN ALKALINITY	4	0	4	0	2	4	2			
METHYL ORANGE ALKALINITY	60	190	50	160	164	170	68			
CARBONATES AS $CaCO_3$	8	0	8	0	4	8	4			
BICARBONATES AS $CaCO_3$	52	190	42	160	160	162	64			
CHLORIDES AS C1	12	30	20	20	20	24	14			
HARDNESS AS $CaCO_3$	72	66	56	52	36	60	78			
IRON AS Fe	<0.04	0.31	<0.04	0.26	<0.04	0.06	0.09			
FLUORIDE AM	0.74		1.23				1.08			
FLUORIDE PM	0.89	0.26	1.33	0.22	0.14	0.10	1.10			
CHLORINE RESIDUAL	1.0	1.2	1.0	1.2	1.4	1.0	1.0			
TURBIDITY AM	0.2		0.4				0.2			
TURBIDITY PM	0.2	0.8	0.3	0.3	0.2	0.2	0.6			
TOTAL PHOSPHATE		1.55			0.06					
ORTHO PHOSPHATE		0.77			0.00					
META PHOSPHATE		0.78			0.06					
STABILITY	+0.2	-1.2	-0.1	-1.1	-0.4	-0.2	+0.6			

REMARKS

*New River - No sample

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.

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H. Burns

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