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1 Jun 83

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

Dear Mr. Rundgren:

Enclosed are results of Inorganic Chemical and Corrosivity Analyses conducted during 1982 for all eight water treatment plants aboard Marine Corps Base, Camp Lejeune, as required by the Safe Drinking Water Act. Also enclosed is a table showing the construction materials used in each distribution system.

The laboratory analysis was run by Grainger Laboratories, Incorporated, Raleigh, North Carolina. The field analyses (temperature and pH) were run by personnel of the Quality Control Laboratory located in the Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities. Ms. Elizabeth Setz, Quality Control Laboratory, telephone (919) 451-5977, is the point of contact in this matter.

Sincerely,

J. T. MARSHALL
Colonel, U. S. Marine Corps
Assistant Chief of Staff, Facilities
By direction of the Commanding General

Encl:

- (1) Inorganic Chemical Results
- (2) Corrosivity Results
- (3) Construction Materials System

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OCL, NREAD

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INORGANIC CHEMICAL RESULTS (mg/l) FOR SERIAL NO. 04-67-041 thru 048

<u>Parameter</u>	<u>Method</u>	<u>Containment Code</u>	<u>041</u> <u>042</u> <u>043</u> <u>044</u> <u>045</u> <u>046</u> <u>047</u> <u>048</u>											
			<u>041</u>	<u>042</u>	<u>043</u>	<u>044</u>	<u>045</u>	<u>046</u>	<u>047</u>	<u>048</u>				
Arsenic	123	1005	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Barium	101	1010	0.01	0.04	0.03	0.01	0.04	0.04	0.04	0.01	0.01	0.01	0.01	0.01
Cadmium	101	1015	0.0011	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0011	0.0011	0.0011	0.0005	0.0005
Chromium	101	1020	0.003	0.003	0.003	0.003	0.017	0.017	0.004	0.003	0.003	0.003	0.003	0.003
Fluoride	107	1025	0.994	0.24	0.856	1.00	0.139	0.126	0.109	0.146	0.146	0.146	0.146	0.146
Lead	101	1030	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Mercury	103	1035	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Nitrate (N)	109	1040	0.17	0.05	0.11	0.05	0.05	0.05	0.05	0.11	0.11	0.11	0.05	0.05
Selenium	123	1045	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Silver	101	1050	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Iron	101	1028	0.045	0.338	0.037	0.020	0.673	0.544	0.536	0.556	0.556	0.556	0.556	0.556
Manganese	101	1032	0.002	0.004	0.002	0.006	0.015	0.030	0.011	0.025	0.025	0.025	0.025	0.025
Sodium	101	1052	20.7	79.8	24.4	19.8	81.9	88.7	81.5	66.4	66.4	66.4	66.4	66.4

All Samples Collected (Except Sodium): 29 September 1982
 Sodium Samples Collected: 3 September 1982

All Results Run by Grainger Laboratories (ID# 37709)

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CORROSIIVITY RESULTS FOR SERIAL NO. 04-67-041 thru 048

<u>PARAMETER</u>	<u>METHOD</u>	<u>CONTAMINANT CODE</u>	<u>041</u>	<u>042</u>	<u>043</u>	<u>044</u>	<u>045</u>	<u>046</u>	<u>047</u>	<u>048</u>
PH	135	1925	8.8	7.6	8.2	8.2	7.1	8.0	7.9	7.1
Temperature °C	130	1996	20.0	20.0	19.0	20.0	20.0	23.0	21.0	21.0
Total Alkalinity As CaCO ₃ mg/l	142	1927	51.9	136	82.3	76.4	166	151	164	155
Total Filterable Residue mg/l	139	1930	106	320	10	152	126	230	246	140
Calcium As CaCO ₃ mg/l	101	1919	40.9	48.0	56.1	101	41.9	44.3	50.0	111
Stability Index (Langelier)	140	1910	0.25	-0.59	0.03	0.19	-0.95	0.06	-0.12	-0.54

All samples collected: 3 September 1982

PH & temperature run by Quality Control Laboratory (ID #37807)

The rest of the results run by Grainger Lab (ID #37709)

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CONSTRUCTION MATERIALS SYSTEM SERIAL NO. 04-67-041 thru 048 (See Note 1)

<u>MATERIAL</u>	<u>041</u>	<u>042</u>	<u>043</u>	<u>044</u>	<u>045</u>	<u>046</u>	<u>047</u>	<u>048</u>
Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Copper from piping and alloys, service lines and home plumbing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Galvanized piping, service lines and home plumbing	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ferrous piping materials such as cast iron and steel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Asbestos cement pipe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vinyl lined asbestos cement pipe	No	No	No	No	No	No	No	No
Coal tar lined pipes and tanks	No	No	No	No	No	No	No	No
Other: PVC	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

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Information obtained from:
 Water Treatment Section,
 Utilities Branch
 and
 Outside Plumbing Section,
 General Trades,
 Maintenance & Repair Branch,
 Base Maintenance Division