Testimony of
Jerome M. Ensminger

Before the
SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT
COMMITTEE ON SCIENCE AND
TECHNOLOGY

U.S. HOUSE OF REPRESENTATIVES

"Toxic Communities: How EPA's IRIS Program Fails the Public"

Thursday, June 12, 2008
10:00 a.m. – 12:00 p.m.
2318 Rayburn House Office Building

Good morning, my name is Jerry Ensminger and I served my country faithfully for more than 24 years in the United States Marine Corps. I would like to thank the chairman, the committee members and their staffs for all of the hard work that went into making these hearings possible. I must say that since 3 January 2007, I have been heartened and inspired by the over-sight activities of this congress. You have been taking on the important issues that matter to the majority of our citizens, not just the issues that affect/benefit special interest groups and big business!

I am appearing here today as a tragic example of the consequences of a system that ignores our environment and the inevitable health effects that result from it. Marine Corps Base, Camp Lejeune, North Carolina is quite possibly one of, if not the worst drinking water contamination incidents in modern world history! The Agency for Toxic Substances and Disease Registry (ATSDR) estimates that between 750,000 and 1,000,000 people were potentially exposed to horrendous levels of toxins through their drinking water while stationed at Camp Lejeune.

My daughter Janey was conceived while her mother and I lived in one of the base family housing areas where the drinking water was affected by the contamination at the base. Just like our other children, Janey was born seemingly normal, that is until she was diagnosed with Acute Lymphosytic Leukemia (A.L.L.) at the age of six. In 1997, the ATSDR proposed a childhood leukemia/non-Hodgkins lymphoma study for Camp Lejeune children who had been exposed to Volatile Organic Chemicals (V.O.C.'s, cleaning solvents!) in utero while their parents lived at the base between the years of 1968-1985. (Note: The start date of this study was based upon the beginning date for the computerization of birth records in North Carolina, not on potential exposure.) The protocol/proposal for this study outlined that that the expected occurrences of the targeted illnesses in a cohort of 10,000-12,000 births for that time period would be 7.2 cases. The ATSDR has confirmed 14 cases of leukemia and 2 cases of non-Hodgkins lymphoma, this is more than a 100% increase in the incidence of these childhood cancers!

Mr. Chairman, let me layout some of the facts and figures relating to the Camp Lejeune water contamination situation. The documented levels of contaminates in the finished drinking water (at the tap) were some 280 times higher than what is currently considered safe for these very same chemicals! The Navy Bureau of Medicine and Surgery issued strict regulations (BUMED INST 6240.3B [CLW 0144]) in 1963 governing potable water distribution systems on Naval Shore Facilities. Included in these regulations were pre-emptive measures to ensure that existing and future water supplies were not contaminated by extraneous sources.

The Camp Lejeune, Tarawa Terrace family housing area water supply wells were located on the virtual property line, down gradient, and directly across the street from multiple potential civilian contamination sources! (Gasoline stations, auto repair facilities, dry cleaning establishments, and known septic systems) In 1971, the Naval Facilities Engineering Command from Norfolk, Va. came to Camp Lejeune and selected multiple sites for the construction of new drinking water supply wells for the base.

One of these new wells was HP-651, which began producing raw water for the Camp Lejeune Hadnot Point water distribution plant in January of 1972. The site which had been selected by the Navy engineers for the placement of HP-651 was at the back corner of the base disposal yard! (junk yard!) The disposal yard had been in operation for decades by the time this site was selected for a drinking water supply well. In February 1985, HP-651 tested positive for some 26,000 ppb of Volatile Organic Chemicals (CLW 5260)! There is little doubt that this water supply well was contaminated immediately upon, or very shortly after its construction! (Note: The ATSDR's on-going water modeling for the Camp Lejeune, Hadnot Point and Holcomb Blvd. water systems will verify this fact once it is completed.) The irony of all this is the fact that many of the human exposures that took place at Camp Lejeune would have been avoided had Navy and Marine Corps officials followed their own regulations!

The most audacious and blasphemous truth in this entire water contamination incident at Camp Lejeune is the fact that Navy and Marine Corps officials knew of the existence of this contamination in the drinking water for 5 years before they took any action to rectify the problem (CLW 0430-0432, 0436, 0438, 0441, 0443, 0592, 0593)! (Navy and Marine Corps officials were knowingly poisoning their own people!) That is correct, all of this was known and taking place behind the scenes at the very same time that my daughter Janey was suffering through her fight with leukemia and they said absolutely nothing! Not only did they say nothing, they went as far as to return 2 of the 3 known contaminated wells for the Tarawa Terrace housing area back on-line for 2 more years! They had the option of tapping into the local community water lines which were located just a few feet from the property line. Instead, Navy and Marine Corps officials opted against this idea because they didn't want to owe any reciprocating favors to the local community government! (CLW 1129-1131)

Since the ATSDR entered the gates of Camp Lejeune to execute their congressionally mandated mission, representatives of the Department of the Navy (DoN) have done all they could to obstruct their efforts. I can make this statement with confidence because I

possess the documentation to back it up! As recently as the week before last, DoD and DoN officials were threatening to thwart the ATSDR's initiatives at Camp Lejeune by withholding funding! (CLW 2407, ØØØØ, ØØØØ (A), 2995, 2999, 3243, 3307, 4925, 4926)

It is a known fact that the United States Department of Defense is our nation's largest polluter. It is beyond my comprehension why an entity with that type of reputation and who has a vested interest in seeing little to no environmental over-sight would be included in the scientific process. Not only are they (DoD) obstructing science, they are also jeopardizing the public health for millions of people all around the world. It is quite obvious by their activities to thwart science that they have something to fear. What they fear is their past negligence and the liability that comes along with it! There is little wonder why the DoD has been seeking immunities from environmental regulations for the last 7 years and yet this administration and past congress' have allowed their (DoD's) tentacles to infiltrate the realm of science. We all need to allow science to speak for itself and let the chips fall where they may!

DEPARTMENT OF THE NAVY
Bureau of Medicine and Surgery
Washington 25, D.C.

BUMED 6240.3B
BUMED-7223-1ss
30 September 1963

BUMED INSTRUCTION 6240.3B

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Standards for potable water

Ref: (a) ONMINST 5711.9 dated 16 May 1958 (NOTAL)
(b) BUMEDINST 5711.2 dated 30 January 1959 (NOTAL)

1. **Purpose.** To establish standards for water for drinking and culinary purposes throughout the Naval Establishment.

2. **Cancellation.** BUMED Instruction 6240.3A is canceled.

3. **Background**

a. **Policy.** The Department of Defense has established the policy of compliance by the Military Departments with United States Public Health Service Drinking Water Standards, as may be modified by the Medical Services of the Departments, or as may be modified by competent authority for purposes of international agreement.

b. **International agreement.** Naval Tripartite Standardization Agreement ABC-NAVY-STD-23 was promulgated by references (a) and (b). The object of the agreement is to provide the United States Navy, the Royal Navy, and the Royal Canadian Navy assurance that drinking and culinary water delivered to each other's ships from installations under their cognizance meets certain minimum standards of quality.

4. **Quality Standards.** The standards for bacteriological quality, physical and chemical characteristics, and radioactivity shall be those in "Public Health Service Drinking Water Standards, 1962." Department of Health, Education, and Welfare. The Standards, as modified, may be found in NAVMED P-5010-5, "Water Supply Ashore," available through the Navy Supply System.

5. **Definition of Terms.** The following terms are defined for clarification in interpretation of standards:

a. **Adequate protection by natural means** involves one or more of the following processes of nature that produce water consistently meeting the requirements of these Standards: dilution, storage, sedimentation, sunlight, aeration, and the associated physical and biological processes which tend to accomplish natural purification in surface waters and, in the case of ground waters, the natural purification of water by infiltration through soil and percolation through underlying material and storage below the ground water table.

b. **Adequate protection by treatment** means any one or any combination of the controlled processes of coagulation, sedimentation, absorption, filtration, disinfection, or other processes which produce a water consistently meeting the requirements of these standards. This protection also includes processes which are appropriate to the source of supply; works which are of adequate capacity to meet maximum demands without creating health hazards, and which are located, designed, and constructed to eliminate or prevent pollution; and conscientious operation by well-trained and competent personnel whose qualifications are commensurate with the responsibilities of the position.

c. **The coliform group** includes all organisms considered in the coliform group as set forth in Standard Methods for the Examination of Water and Wastewater, current edition, prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation.

d. **Health hazards** mean any conditions, devices, or practices in the water supply system and its operation which create, or may create, a danger to the health and well-being of the water consumer. An example of a health hazard is a structural defect in the water supply system, whether of location, design, or construction, which may regularly or occasionally prevent satisfactory purification of the water supply or cause it to be polluted from extraneous sources.

e. **Pollution,** as used in these Standards, means the presence of any foreign substance (organic, inorganic, radiological, or biological) in water which tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water.

f. **The standard sample** for the bacteriological test shall consist of:

(1) For the bacteriological fermentation tube test, five standard portions of either:

(a) 10 milliliters
(b) 100 milliliters

CLW 0144

(2) For the membrane filter technique, not less than 50 milliliters.

g. **Water supply system** includes the works and auxiliaries for collection, treatment, storage, and distribution of the water from the sources of supply to the freeflowing outlet of the ultimate consumer.

6. **Source and Protection**

a. The water supply should be obtained from the most desirable source which is feasible, and effort should be made to prevent or control pollution of the source. If the source is not adequately protected by natural means, the supply shall be adequately protected by treatment.

b. Frequent sanitary surveys shall be made of the water supply system to locate and identify health hazards which might exist in the system.

c. Approval of water supplies shall be dependent in part upon:

(1) Enforcement of rules and regulations to prevent development of health hazards;

(2) Adequate protection of the water quality throughout all parts of the system, as demonstrated by frequent surveys;

(3) Proper operation of the water supply system under the responsible charge of personnel whose qualifications are acceptable to the Bureau of Yards and Docks or the Bureau of Ships, as appropriate;

(4) Adequate capacity to meet peak demands without development of low pressures or other health hazards; and

(5) Record of laboratory examinations showing consistent compliance with the water quality requirements of these Standards.

7. **Standards.** The limits listed below are generally those contained in "Public Health Service Drinking Water Standards, 1962." For sampling procedures and techniques, refer to NAVMED P-5010-5.

a. **Bacteriological quality: limits.** The presence of organisms of the coliform group as indicated by samples examined shall not exceed the following limits:

(1) When 10 ml. standard portions are examined, not more than 10 percent in any month shall show the presence of the coliform group. The presence of the coliform group in three or more 10 ml. portions of a standard sample shall not be allowable if this occurs:

(a) In two consecutive samples;
(b) In more than one sample per month when less than 20 are examined per month; or
(c) In more than five percent of the samples when 20 or more are examined per month.

When organisms of the coliform group occur in three or more of the 10 ml. portions of a single standard sample, daily samples from the same sampling point shall be collected promptly and examined until the results obtained from at least two consecutive samples show the water to be of satisfactory quality.

(2) When 100 ml. standard portions are examined, not more than 60 percent in any month shall show the presence of the coliform group. The presence of the coliform group in all five of the 100 ml. portions of a standard sample shall not be allowable if this occurs:

(a) In two consecutive samples;
(b) In more than one sample per month when less than five are examined per month; or
(c) In more than 20 percent of the samples when five or more are examined per month.

When organisms of the coliform group occur in all five of the 100 ml. portions of a single standard sample, daily samples from the same sampling point shall be collected promptly and examined until the results obtained from at least two consecutive samples show the water to be of satisfactory quality.

(3) When the membrane filter technique is used, the arithmetic mean coliform density of all standard samples examined per month shall not exceed one per 100 ml. Coliform colonies per standard sample shall not exceed 3/50 ml., 4/100 ml., 7/200 ml., or 13/500 ml. in:

(a) Two consecutive samples;
(b) More than one standard sample when less than 20 are examined per month; or
(c) More than five percent of the standard samples when 20 or more are examined per month.

When coliform colonies in a single standard sample exceed the above values, daily samples from the same sampling point shall be collected promptly and examined until the results obtained

from at least two consecutive samples show the water to be of satisfactory quality.

b. **Physical characteristics: limits.** Drinking water should contain no impurity which would cause offense to the sense of sight, taste, or smell. Under general use, the following limits should not be exceeded:

Turbidity	5 units
Color	15 units
Threshold Odor Number	3

c. **Chemical characteristics: limits.** Drinking water shall not contain impurities in concentrations which may be hazardous to the health of the consumers. It should not be excessively corrosive to the water supply system. Substances used in its treatment shall not remain in the water in concentrations greater than required by good practice. Substances which may have deleterious physiological effect, or for which physiological effects are not known, shall not be introduced into the system in a manner which would permit them to reach the consumer.

(1) The following chemical substances should not be present in a water supply in excess of the listed concentrations where, in the judgment of the Bureau of Yards and Docks and the Bureau of Medicine and Surgery, other more suitable supplies are or can be made available.

Substance	Concentration in mg/l (ppm)
Alkyl Benzene Sulfonate (ABS)	0.5
*Antimony (Sb)	0.01
Arsenic (As)	0.01
Chloride (Cl)	250.
Copper (Cu)	1.
Carbon Chloroform Extract (CCE)	0.2
Cyanide (CN)	0.01
Fluoride (F)	(See (3))
Iron (Fe)	0.3
Manganese (Mn)	0.05
Nitrate [1] (NO_3)	45.
Phenols	0.001
Sulfate (SO_4)	250.
Total Dissolved Solids	500.
Zinc (Zn)	5.

[1] In areas in which the nitrate content of water is known to be in excess of the listed concentration, the public should be warned of the potential dangers of using the water for infant feeding.

* Not contained in Drinking Water Standards but this limit was determined by the Public Health Service and the Bureau of Medicine and Surgery.

(2) The presence of the following substances in excess of the concentrations listed shall constitute grounds for rejection of the supply:

Substance	Concentration in mg/l (pp
*Antimony (Sb)	0.05
Arsenic (As)	0.05
Barium (Ba)	1.0
Cadmium (Cd)	0.01
Chromium (Hexavalent) (Cr^{+6})	0.05
Cyanide (CN)	0.2
Fluoride (F)	(See (3))
Lead (Pb)	0.05
Selenium (Se)	0.01
Silver (Ag)	0.05

* Not contained in Drinking Water Standards this limit was determined by the Public Health Service and the Bureau of Medicine and Surgery

(3) **Fluoride.** When fluoride is naturally present in drinking water, the concentration should not average more than the appropriate upper limit in the following Table I. Presence fluoride in average concentrations greater than two times the optimum values in Table I shall constitute grounds for rejection of the supply. When fluoridation (supplementation of fluoride drinking water) is practiced, the average fluoride concentration shall be kept within the upper and lower control limits in Table I.

TABLE I

Annual average of maximum daily air temperatures [2]	Recommended control limits--Fluoride concentrations in mg/l (ppm)		
	Lower	Optimum	Upper
50.0 - 53.7	0.9	1.2	1.7
53.8 - 58.3	0.8	1.1	1.5
58.4 - 63.8	0.8	1.0	1.3
63.9 - 70.6	0.7	0.9	1.2
70.7 - 79.2	0.7	0.8	1.0
79.3 - 90.5	0.6	0.7	0.8

[2] Based on temperature data obtained for a minimum of five years.

d. **Radioactivity: limits.**

(1) The effects of human radiation exposure are viewed as harmful and any unnecessary exposure to ionizing radiation should be avoided

Approval of water supplies containing radioactive materials shall be based upon the judgment that the radioactivity intake from such water supplies when added to that from all other sources is not likely to result in an intake greater than the radiation protection guidance [3] recommended by the Federal Radiation Council and approved by the President. Water supplies shall be approved without further consideration of other sources of radioactivity intake of Radium-226 and Strontium-90 when the water contains these substances in amounts not exceeding 3 and 10 μμc/liter, respectively. When these concentrations are exceeded, a water supply shall be approved by the certifying authority if surveillance of total intakes of radioactivity from all sources indicates that such intakes are within the limits recommended by the Federal Radiation Council for control action

(2) In the known absence [4] of Strontium-90 and alpha emitters, the water supply is acceptable when the gross beta concentrations do not exceed 1,000μμc/liter. Gross beta concentrations in excess of 1,000 μμc/liter shall be grounds for rejection of supply except when more complete analyses indicate that concentrations of nuclides are not likely to cause exposures greater than the Radiation Protection Guides as approved by the President on recommendation of the Federal Radiation Council.

8. **Technical Assistance.** Assistance with potable water problems may be requested from the following:

a. Preventive Medicine Units, in accordance with BUMED Instruction 6200.3A of 2 July 1957, Subj: U.S. Navy Preventive Medicine Units.

b. Bureau of Yards and Docks' Field Engineering Offices, in accordance with BUDOCKS Instruction 5450.19A of 21 September 1962, Subj: Sanitary Engineering Responsibilities of the Bureau of Yards and Docks Field Engineering Offices.

A. S. CHRISMAN
Deputy and Assistant Chief

Distribution:
SNDL Parts 1 and 2
Marine Corps List E less: 1050/1070/1080/2000/6200/7150/7200/7352/7503/7505/7506/8120/8121/8122/8180

[3] The Federal Radiation Council, in its Memorandum for the President, Sept. 13, 1961, recommended that "Routine control of useful applications of radiation and atomic energy should be such that expected average exposures of suitable samples of an exposed population group will not exceed the upper value of Range II (20μμc/day of Radium-226 and 200μμc/day of Strontium-90)."

[4] Absence is taken here to mean a negligibly small fraction of the above specific limits, where the limit for unidentified alpha emitters is taken as the listed limit for Radium-226.

Bay sample #651 received 2-7-85

JTC ENVIRONMENTAL CONSULTANTS, INC.
PRIORITY POLLUTANT ANALYSIS DATA SHEET

CLW

0000005260

VOLATILE FRACTION

LAB SAMPLE LOG NO. VOA SPL 497 PROJECT NO. NF-12

SAMPLE DESIGNATION & DATE 12-0002 #651 1410 250 ml → 5000 1:20 Dilution

METHOD NO. 624 DETECTION LIMIT 200 ug/lit

ANALYSIS DATE 2/8/85

PARAMETER	RESULT ug/lit	PARAMETER	RESULT ug/lit
2V acrolein	N.D.	32V 1,2-dichloropropane	N.D.
3V acrylonitrile	N.D.	33V 1,3-dichloropropylene	N.D.
4V benzene	N.D.	38V ethylbenzene	N.D.
6V carbon tetrachloride	N.D.	44V methylene chloride	N.D.
7V chlorobenzene	N.D.	45V methyl chloride	N.D.
10V 1,2-dichloroethane	N.D.	46V methyl bromide	N.D.
11V 1,1,1-trichloroethane	N.D.	47V bromoform	N.D.
13V 1,1-dichloroethane	N.D.	48V dichlorobromomethane	N.D.
14V 1,1,2-trichloroethane	N.D.	49V trichlorofluoromethane	N.D.
15V 1,1,2,2-tetrachloroethane	N.D.	50V dichlorodifluoromethane	N.D.
16V chloroethane	N.D.	51V chlorodibromomethane	N.D.
19V 2-chloroethylvinyl ether	N.D.	85V tetrachloroethylene	397 ~~N.D.~~
23V chloroform	N.D.	86V toluene	N.D.
29V 1,1-dichloroethylene	N.D.	87V trichloroethylene	17600 ~~N.D.~~
30V 1,2-trans-dichloroethylene	~~N.D.~~ 8070	88V vinyl chloride	* 179 ~~N.D.~~

N.D. = NOT DETECTED
N.A. = NOT APPLICABLE/ANALYZED

* Below Method Detection Limit

Doc. No.: CLCT-00248-1.02-10/31/80 0044

JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

VA (EPA) CERTIFIED LABORATORY for Drinking Water Analysis - Microbiological, Inorganic and Organic

ASBESTOS ANALYSIS – NIOSH 582

Official Referee Chemists for: AMERICAN OIL CHEMISTS SOCIETY

NATIONAL SOYBEAN PROCESSORS ASSOCIATION

Laboratory Certified by VA. STATE WATER CONTROL BOARD for Analysis of Effluents for NPDES PERMITS

CERTIFIED OFFICIAL U.S.D.A. LABORATORY FOR MEAT ANALYSIS

CERTIFICATE OF ANALYSIS

TO: Mr. Dave Goodwin
Building N-23 Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

DATE: October 31, 1980

SAMPLE OF WATER SAMPLES (8) FOR COMPOSITE FOR PRIORITY POLLUTANT SCAN

MARKED Listed below

Samples picked up October 1, 1980

OFFICIAL SAMPLE BY: _____

EIGHT (8) SAMPLES OF WATER TO BE COMPOSITED AS PER INSTRUCTIONS:

SAMPLE MARKED	QUARTS	LOCATION	QUANTITY
#1	2	Hadnot Point Bldg 20	1552 ml
#2	1	Hadnot Point Bldg 670	708 ml
#3	1	Tarawa Terrace TT-38	452 ml
#4	1	Monford Point M-178	220 ml
#5	1	MCAS(H) Bldg 110	664 ml
#6	1	Courthouse Bay BB-190	132 ml
#7	1	Rifle Range RR-85	220 ml
#8	1	Onslow Beach BA-138	52 ml
			4000 ml

Pump houses or hydrants

Administrative Record May 11, 1992
Section 1.0
Site Id #B in vol A, B

Respectfully submitted,

JENNINGS LABORATORIES, INC.

CLW

Laboratory Analysis No. 2518

E. R. Daugherty
CHEMIST

0000000430

DOC NO : CLCU - 00248 - 1.02 - 10/31/80

JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

[illegible] • P. O. BOX 851 • VIRGINIA BEACH, VA 23451 • PHONE (804) 425-1100

A EPA CERTIFIED LABORATORY for Drinking Water Analysis - Microbiological, Inorganic and Organic

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CERTIFICATE OF ANALYSIS

TO Mr. Dave Goodwin
Building N-23 Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

DATE October 31, 1980

SAMPLE OF WATER SAMPLES (8) - Blank made on each analysis.Bromochloromethane,

MARKED 2-bromo-1-chloropropane,1-4 dichlorobutane used as internal standard.

GC/MS calibrated with perfluorotributylamine, SIM MODE. All test run according to EPA TEST PROCEDURES.

OFFICIAL SAMPLE BY:

PURGEABLE ORGANICS			DETECTION LIMITS µg/l
Acrolein	None Detected		2.0
Acrylonitrile	None Detected		2.0
Benzene	None Detected		10.0
Toluene	None Detected		10.0
Ethylbenzene	None Detected		10.0
Carbon Tetrachloride	None Detected		.007
Chlorobenzene	None Detected		.03
1,2-Dichloroethane	None Detected		.006
1,1,1-Trichloroethane	.005 µg/l	MCL= .200 ppm	.005
1,1-Dichloroethane	.004 µg/l		.004
1,1-Dichloroethylene	.006 µg/l	MCL= .007 ppm	.006
1,1,2-Trichloroethane	.006 µg/l	MCL= .005 ppm	.006
1,1,2,2-Tetrachloroethane	.006 µg/l	MCL= .005 ppm	.006
Chloroethane	.01 µg/l	None Listed	.01
2-Chloroethyl vinyl ether	.08 µg/l		.08

right at the detection limit

Respectfully submitted,
JENNINGS LABORATORIES, INC.

CLW

Laboratory Analysis No. 2518

E. R. Dougherty
CHEMIST

00000431

Doc No: CLEJ-00248 - 1.02 -10/31/80

JETTER LABORATORIES, INC.

PURGEABLE ORGANICS (continued)		DETECTION LIMITS ug/l
Chloroform	None Detected	.010
1,2-Dichloropropane	None Detected	.004
1,3-Dichloropropane	None Detected	.006
Methylene Chloride	None Detected	.010
Methyl Chloride	None Detected	.009
Methyl Bromide	None Detected	.03
Bromoform	None Detected	.02
Dichlorobromomethane	None Detected	.006
Trichlorofluoromethane	None Detected	.03
Dichlorodifluoromethane	None Detected	.01
Chlorodibromomethane	None Detected	.01
Tetrachloroethylene	None Detected	.007
Trichloroethylene	.005 ug/l	.005 = MCL .005
Vinyl Chloride	.01 ug/l	.002 = MCL .01
1,2-trans-Dichloroethylene	.006 ug/l	.100 = MCL .006
bis(chloromethyl)ether	.003 ug/l	2.0×10^{-7} = MCL .003

BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS		
1,2-Dichlorobenzene	None Detected	.04
1,3-Dichlorobenzene	None Detected	.04
1,4-Dichlorobenzene	None Detected	.04
Hexachloroethane	None Detected	.001
Hexachlorobutadiene	None Detected	.001
Hexachlorobenzene	None Detected	.002
1,2,4-Trichlorobenzene	None Detected	.006
Bis(2-Chloroethoxy)methane	None Detected	.40
Naphthalene	None Detected	.04
2-Chloronaphthalene	None Detected	.04
Isophorone	None Detected	5.0
Nitrobenzene	None Detected	5.0
2,4-Dinitrotoluene	None Detected	.06
2,6-Dinitrotoluene	None Detected	.06

CLW

LAB # 2518

BY E. R. [illegible] CHEMIST

TTHM SURVEILLANCE REPORT FORM

Installation MCB - LA JEUNE - HADNOT POINT

Date Collected 21 OCT 80 PM

AVE 34 APPROX.

Source	Sample Number	CCl_3	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	TTHM
WTP	086	18.6	138 (8)	5.1	0.3	32
HOSP NH-1	087	20.6	135 (9)	6.3	0.6	35
1202	088	19.3	138 (8)	5.4	0.3	33
65	089	18.8	137 (8)	5.5	0.4	33
FC-530	090	18.7	136 (8)	5.7	0.4	33
Reference OBS						
True						

Date Received 30 OCT 80

Date Analyzed 31 OCT 80

Remarks: WATER IS HIGHLY CONTAMINATED WITH LOW MOLECULAR WEIGHT HALOGENATED HYDROCARBONS. STRONG INTERFERENCE IN THE REGION OF $CHCl_2Br$. CANNOT DETERMINE TRUE VALUE OF THAT COMPOUND. EXPERIENCE SHOWS THAT THE TRUE CONCENTRATION IS LOW, SINCE THE [illegible]

William C Neal

WILLIAM C. NEAL, JR.
Chief, Laboratory Services

CLW

0048
NAVY

TTHM SURVEILLANCE REPORT FORM

Installation CAMP LEJEUNE – HADNOT POINT

Date Collected 18 DEC 80 PM

Source	Sample Number	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	µg/L TTHM
WTP	N 111	20.0	?	6.2	1.0	27 +
NH-1	112	18.7	?	7.0	1.2	25 +
1202	113	19.3	?	6.8	1.1	27 +
65	114	19.9	?	6.4	1.0	27 +
FC-530	115	19.8	?	7.3	1.2	28 +
Reference OBS						
True						

Date Received 29 DEC 80

Date Analyzed ~~8~~ 5 JAN 81

Remarks: 22

HEAVY ORGANIC INTERFERENCE AT $CHCl_2Br$.
YOU NEED TO ANALYZE FOR CHLORINATED ORGANICS BY GC/MS.

William C Neal Jr

WILLIAM C. NEAL, JR.
Chief, Laboratory Services

USAEHA-S Form 7
20 Feb 80

CLW

0000000438

TTHM SURVEILLANCE REPORT FORM

Installation CAMP LA JEUNE - HADNOT PT

Date Collected 29 JAN 81 PM

HEAVY INTERFERENCE

Source	Sample Number	$CHCl_3$	$CHCl_2Br$ ✓	$CHClBr_2$	$CHBr_3$	mg/L TTHM
WTP	161	22.7	?	6.2	0.9	30 +
NH-1	162	27.2	?	6.3	0.8	34+
1202	163	23.8	?	6.6	0.9	31+
65	164	24.3	?	6.8	0.9	32+
FC-530	165	27.5	?	7.2	1.0	36+
Reference OBS						
True						

↳ Dichlorobromomethane

Date Received 30 JAN 81

Date Analyzed 9 FEB 81

Remarks: YOU NEED TO ANALYZE FOR CHLORINATED ORGANICS BY GC/MS.

William C. Neal

WILLIAM C. NEAL, JR.
Chief, Laboratory Services

CLW

USAEHA-S Form 7
20 Feb 80

0000000441

TTHM SURVEILLANCE REPORT FORM

Installation CAMP LA JEUNE HADNOT POINT

Date Collected 26 FEB 81 PM

AVE 63

Source	Sample Number	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	ug/L TTHM
WTP	181	48.6	9.6	5.4	1.7	65
NH-1	182	54.5	13.8	5.5	0.2	74
1202	183	46.6	10.6	4.2	0.1	62
65	184	45.5	9.4	5.0	0.1	60
FC-530	185	43.6	8.5	4.2	0.1	56
Reference OBS						
True						

Date Received 9 MAR 81

Date Analyzed 9 MAR 81

Remarks:

WATER HIGHLY CONTAMINATED WITH OTHER CHLORINATED HYDROCARBONS (SOLVENTS).

William C. Neal

WILLIAM C. NEAL, JR.
Chief, Laboratory Services

CLW

USAEHA-S Form 7
20 Feb 80

0121

GRAINGER LABORATORIES

INCORPORATED

ANALYTICAL AND CONSULTING CHEMISTS

709 West Johnson Street • Raleigh, North Carolina 27603

(919) 828-3360

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Special Investigation
Pesticides
RCRA

August 10, 1982
82-4471

Commanding General
Marine Corps Base
Camp Lejeune, N.C. 28542

Attention: AC/S Facilities

Subject: Analyses of samples 206 and 207 from site coded "TT" and samples 208 and 209 from site coded "HP". Samples received July 29, 1982.

Discussion:

Previously all samples from site TT and HP presented difficulties in performing the monthly Trihalomethane analyses. Interferences which were thought to be chlorinated hydrocarbons hindered the quantitation of certain Trihalomethanes. These appeared to be at high levels and hence more important from a health standpoint than the total Trihalomethane content. For these reasons we called the situation to the attention of Camp Lejeune personnel.

Results:

The identity of the contaminant in the well field represented by samples 206 and 207 was suspected to be Tetrachloroethylene. This was confirmed by two analytical techniques and the results were 76 µg/l and 82 µg/l for samples 206 and 207 respectively.. Sample 86 from May 27, 1982 was reanalyzed as a part of our study. Sample 86 was from site TT and contained 80 µg/l tetrachloroethylene.

Samples 208 and 209 were also analyzed by the same analytical techniques. The magnitude of the contamination was not as great as previously observed from this same sampling point. Upon reanalyzing sample 120 from site HP May 27, 1982 , Trichloroethylene was identified and quantitated at 1400 µg/l. A lesser amount of Tetrachloroethylene was confirmed at 15 µg/l. Samples 208 and 209 contained 19 µg/l and 21 µg/l Trichloroethylene respectively; Tetrachloroethylene was not detected.

CLW

0000000592

Prior to this report, the samples from July 28, 1982 from site HP were analyzed. Traces of both solvents were found in this set. Though not quantitated, the level of Trichloroethylene seems to be in the range of that which was found in samples 208 and 209. The sample which showed the most contamination relative to the others was 205. Also sample 168 from site TT on July 28, 1982 was analyzed and shown to contain 104 µg/l Tetrachloroethylene.

Conclusion:

Tetrachloroethylene was identified as the contaminant in the well field coded "TT". Its concentration seems relatively stable over the period in which it has been examined. It was confirmed that the well field coded "HP" has shown contamination by Trichloroethylene and Tetrachloroethylene. These levels have been variable over the per studied and are now at significantly lower levels than when first encountered. The following table summarizes the findings:

Sample	Date Taken	Site Code	Tri chloroethylene	Tetra- chloroethylene
206	7-27-82	TT	-	76
207	7-27-82	TT	-	82
86	5-27-82	TT	-	80
168	7-28-82	TT	-	104
208	7-27-82	HP	19	<1
209	7-27-82	HP	21	<1
120	5-27-82	HP	1400	15
205	7-28-82	HP	No Data	1.0

Bruce A. Babson

Bruce A. Babson
Chemist

BAB/ab
Customer #92400

CLW

0000000593

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Agency for Toxic Substances
and Disease Registry
Atlanta GA 30333

- call LANTDIV (Response planned?)
- call Yvonne Walker
(fax'ing of Aug 16, 94 - what you need this letter)
- Need "list of Documents" not generalized bill of complaint

September 2, 1994

Ms. Yvonne P. Walker, CIH
Engineering Support Department
Navy Environmental Health Center
2510 Walmer Avenue
Norfolk, VA 23513-2617

Yvonne
why NAVHEC notified ; not us?
Carol Hossom
What's up?

Dear Ms. Walker:

I am responding to a letter received from Captain W.P. Thomas dated August 16, 1994 requesting a list of documents which ATSDR needs to conduct the public health assessment on Marine Corps Base (MCB) Camp Lejeune, North Carolina.

ATSDR identifies and obtains documents needed for evaluation to develop the public health assessment by discussing the public health issues with the installation and having them send us documents where the information can be found. As you are aware, we have had much difficultly getting the needed documents from MCB Camp Lejeune. We have sent MCB Camp Lejeune several requests for information and, in most cases, the responses were inadequate and no supporting documentation was forwarded. For example, ATSDR does not have any of the Remedial Investigation (RI) documents for this site nor do we have a copy of the administrative record index to help us identify which documents would be useful in our evaluation. The situation at MCB Camp Lejeune is also somewhat complicated in that several of our public health questions could not be answered with information from the RI reports (e.g., lead in drinking water).

copies of ?

need LANTDIV support

RI's - never requested

no reply from

The initial release of the MCB Camp Lejeune public health assessment is currently being prepared for the printer and will be released in the near future. For an ATSDR public health assessment to be useful, it is important that all pertinent information be provided for evaluation. The public health assessment lists the information ATSDR had available for evaluation for inclusion in the document. After the base has had an opportunity to read the MCB Camp Lejeune report, we must rely on the base personnel to identify and provide the additional source documentation as appropriate. We would appreciate your efforts to assure that this occurs.

Sincerely yours,

Carol H. Aloisio FF Coordinator

Carol H. Aloisio
Office of Assistant Administrator

Knee Jerk

Mark Brown's
- Carol Aloisio

- Diane Jackson

CLW

0000002407

Enclosure (1)

HEADQUARTERS, MARINE CORPS BASE, CAMP LEJEUNE

ACTION BRIEF Date: 1 MAR 1985

Staff Section: Assistant Chief of Staff, Facilities

Subj: ALTERNATIVES FOR PROVIDING WATER TO THE TARAWA TERRACE AREA

Problem: Because of the recent shutdown of two water wells in the Tarawa Terrace water system due to the presence of Volatile Organic Chemicals (VOC) in the raw water, sufficient well capacity is not expected to be available to satisfy water demand this summer. A shortage of 300,000 gpd (gallons per day) is expected this spring/summer if the present situation remains unchanged.

Background/Discussion: The following alternatives are listed as possible options for addressing the problem.

a. Alternative 1: New well, Tarawa Terrace. Estimated cost: $80,000.

Advantages: Increase capacity by 100 gpm to 250 gpm (gallons per minute).

Disadvantages: Based on recent new wells and test wells in Tarawa Terrace, water in significant quantitities is difficult to locate (e.g., well TT-25 is producing approximately 100 gpm although designed for 150 gpm. New well would be abandoned after completion of expansion of Holcomb Blvd plant in approximately two years. Wells in Montford Point area are high in iron content. Construction of a new well by spring is questionable but could possibly be completed.

b. Alternative 2: Transport water via tanker trucks from other Camp Lejeune plants. Assume hauling 300,000 gpd with 5,000 gallon tankers which would require 60 trips per day. Assuming a tanker can make 12 trips per day, a total of five tanker trucks would be required. Estimated cost: $2,000 per day.

Advantages: Timely method of providing water.

Disadvantages: Logistics of loading/unloading/ transporting; nonavailability of trucks.

c. Alternative 3: Tap to City of Jacksonville water line on Lejeune Blvd. Informal discussion with city officials indicates they probably could not provide 300,000 gpd at this time. No costs for taps or rates were quoted. A water line under Lejeune Blvd would have to be constructed. Estimated cost: Unknown.

Advantages: Timely response to problem, if available.

CLW

Subj: ALTERNATIVES FOR PROVIDING WATER TO THE TARAWA TERRACE AREA

Disadvantages: Problems associated with connecting separate systems. Chance of requests for reciprocating favors from the City of Jacksonville would increase. VOCs in the city system could be higher than we are now facing. a quicker test would have answered the last statement/excuse! J.M.E

d. Alternative 4: Change schedule of Holcomb Blvd plant contract to construct the water line to Tarawa Terrace immediately. The expansion of the Holcomb Blvd plant includes running a water line to TT and Camp Johnson. Contract has been awarded. Estimated cost: Unknown (additional cost to contractor).

Advantages: No unnecessary construction would be required.

Disadvantages: Serious doubts exist that contractor would complete line prior to high usage months. Line serving Tarawa Terrace is a 16" submerged line across Northeast Creek.

e. Alternative 5: Construct 8" water line from Brewster Blvd to Tarawa Terrace. Line could be tied to the railroad trestle to cross Northeast Creek. Estimated cost: $75,000.

Advantages: Timely response to problem.

Disadvantages: Problems related to material procurement and construction could surface. The temporary line may require State approval. Pressures and elevations of the two systems have been investigated to determine feasibility.

f. Alternative 6: Modify Tarawa Terrace plant to include aeration or granular activated carbon (GAC) capable of removing VOCs. Estimated cost: $300,000.

Advantages: Removal of VOCs would eliminate the problem.

Disadvantages: The modifications could not be made in the time frame required. The Tarawa Terrace plant will be discontinued upon completion of Holcomb Blvd plant expansion.

g. Alternative 7: Turn on contaminated wells that have been shut down if required to maintain adequate water levels. Estimated cost: None.

Advantages: Adequate quantity of water could be provided.

Disadvantages: Although no maximum contaminate levels have been set for VOCs and no regulations presently prevent using water containing VOCs, the potential health hazards must be weighed against the need and cost of providing water from other sources. The risk of health hazards obviously did not impact their decision, this is exactly what they did. J.M.E.

CLW

Subj: ALTERNATIVES FOR PROVIDING WATER TO THE TARAWA TERRACE AREA

Recommended Action: Alternative 5, construct 8" line from Brewster Blvd to Tarawa Terrace. Preliminary engineering study indicates this would provide approximately 250 gpm (360,000 gpd).

Advantages:

(1) Timely - target date for completion 1 June 1985.

(2) Availability of water - can draw from Holcomb Blvd and Hadnot Point system.

(3) Auxiliary line for future use during repair/maintenance of other system.

(4) Minimum cost.

(5) Potential future use to return raw water from Tarawa Terrace wells.

Very respectfully,

M. G. LILLEY
AC/S, Facilities

Decision on Recommended Action:

CS Concur _____ Nonconcur _____

CG Approved _____ Disapproved _____

Need more info as we discussed

CLW

0000001131

To: Sab@emd1
From: GS-13 N NEAL PAUL@EMD
Originated by: GS-13 N NEAL PAUL@EMD
Cc: mps@EMD,tsm@EMD
Bcc:
Subject: fwd: "A Civil Action" New Movie on the Superfu...
Attachment:
Date: 10/15/98 12:36 PM

Scott,
We will be briefing Maj Jack in early November - he will be in Italy until then. Tom is working on a point paper to document the events that have occurred since 1984. I feel its important for Maj Jack to know the entire story prior to advising us. Will continue to keep you posted.
V/R,
neal

ps. it appears we have put off the questionairres being mailed until at least Feb 99.

Original text
From: GS-13 N NEAL PAUL@EMD@MCB LEJEUNE, on 10/12/98 10:36 AM:
To: GS-14 SCOTT A BREWER@EMD1@MCB LEJEUNE
Cc: jsw@EMD@MCB LEJEUNE, MAJ SCOTT B JACK@CPAO@MCB LEJEUNE, mps@EMD@MCB LEJEUNE, tsm@EMD@MCB LEJEUNE

Scott,
With respect to the history campaign, since most folks no longer live in the area, we won't reach the formerly effected community. We would be able to educate our local community and this may help. ATSDR will be sending out questionaires with the next year and I need to see what info they will be including. My plans are to brief Maj Jack and get his thoughts. I'll keep you posted.
Thanks,
Neal

From: GS-14 SCOTT A BREWER@EMD1@MCB Lejeune, on 10/2/98 12:54 PM:
Neal: I suspect we're in for a lot of questions between this movie, and the (likely) upcoming ATSDR's study of the past TCE contamination. The real facts are hard enough to convey... i can't wait to see the Hollywood version. Should we begin a campaign of putting out the history (and/or other information) ahead of time? v/r sab
---
From GM-15 ROBERT L WARREN@EMD1@MCB Lejeune, on 10/1/98 8:03 AM:
To: GS-14 SCOTT A BREWER@EMD1@MCB Lejeune

Comments:
Forwarded for you information

CLW

ATSDR

To: SMTP2@SMTP2 [<dreyerk@hqi.usmc.mil>]
From: GS-13 N NEAL PAUL@EMD
Cc:
Bcc: GS-9 THOMAS S MORRIS@EMD
Subject: re: CAMP LEJEUNE PUBLIC HEALTH STUDY
Attachment:
Date: 10/23/98 8:13 AM

Good morning,
Whose public relations plan are you referring to here? Do we, the USMC, plan on implementing any PR efforts prior to the questionaires being sent ? Mick and I are briefing our PAO (in Italy now) in the beginning of Nov.

Just a thought, with the movie coming out in Dec, can we delay the questionaires until April/May time frame? The reality was that the survey was delayed until 1 Oct. 99. Y.M.E

I've had an interesting week wrt LUCs? It appears we are close, waiting on Bernie to approve yearly certifcation language that will go in the ROD. Jon Johnston says he, Berniek, has already lost this battle in FL. If you look at the MOA, activities are required to provide an annual report to EPA/State certifying the LUCs are in place.

I definitely ruffled some feathers within EpA's ranks but I've talked to Jon smoothed things over. Jay Bassett was the instigator. ONe IMPORTANT NOTE, Jon feels like sinee Yaroschak, OLson and Elsie approve of MOA that this will be DoN policy, therefore he expects all Marine Corps activities to acquiesce to this adhoc policy. Did these folks ever brief you or include you on these discussions/ staffing of the LUCAP or were you on pregnancy leave at the time? This policy, albeit one that makes sense and is better than our BMPs, may not be accepted by all states in the region. I'm thinking specifically of Albany and PI. Should I take the lead on this, from a REC standpoint, and iniate the LUCAP at these activities or will you be doing that?

Let me know your thoughts - I'll be on a conf call at 9 to discuss with EPA and other TIer 3'ers.
Respectfully,
Neal

Original text
From: "GS13 KELLY A DREYER" <dreyerk@hqi.usmc.mil>, on 10/23/98 8:09 AM:
Capt. Newman,

I called to return your call this morning. I will be in today and most of next week. Please give me a call.

STATUS OF CAMP LEJEUNE PUBLIC HEALTH STUDY

CLW

The Base prepared and provided a chronology of events that led up to the

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Agency for Toxic Substances
and Disease Registry

DEC 09 2005

Lieutenant General Richard S. Kramlich
Deputy Commandant of Installations and Logistics
Department of the Navy
Headquarters, United States Marine Corps (Code LFL)
2 Navy Annex
Washington, D.C. 20380-1775

Dear Lt. General Kramlich:

The Agency for Toxic Substances and Disease Registry (ATSDR) is conducting an epidemiologic case-control study of the children whose mothers were pregnant while living on base at Camp Lejeune from 1968-1985. ATSDR staff briefed Lt. General Kelly and other headquarters Marine staff on the status of the current study, including the water modeling component, in August 2005. The purpose of this letter is to seek your assistance in resolving outstanding issues that may delay ATSDR's ability to complete the current health study on time. The issues are as follows:

- ATSDR has experienced delays in obtaining requested information and data pertaining to historical water-quality sampling data and site remedial investigation reports. Attached for your information is a detailed list of these data, previously provided (during February – August 2005) to U.S. Marine Corps (USMC) Headquarters and Camp Lejeune staff, which outlines the needs of ATSDR to complete its water modeling activities;
- ATSDR staff has recently been made aware of the existence of a substantial number of additional documents, previously unknown and not provided to ATSDR staff. These documents are designated as "CLW" documents by the Camp Lejeune Environmental Management Division [EMD] and include summary data files and "document searching software" that could relate to and potentially impact our water modeling activities and analyses;
- The existence of a compilation of historical maps of water system changes at Camp Lejeune from 1941–2000. ATSDR needs to obtain these maps and all supporting spatial and temporal data files to assess the accuracy of ATSDR's understanding of historical changes in water-system configurations at Camp Lejeune; and
- ATSDR's need to have cooperation from and coordination with the USMC contractor currently engaged in a base-wide records discovery program. The contractor should be made

CLW 00005

aware of the types of records the agency is seeking and of ATSDR's water modeling and study completion time lines. We also request the timely sharing of these documents by your contractor to ATSDR.

ATSDR staff is attempting to meet the project completion timelines discussed with Marine Corps staff in August. To do so, we must be provided all documents that relate to base-wide water issues immediately. The Marine Corps is responsible for the identification and timely sharing of all relevant documents relating to the base-wide drinking water system. This includes documents that ATSDR may not be aware of as well as documents that are in the possession of DOD but may no longer be located at the Camp Lejuene base. Discovery of this documentation must not rely on specific requests from our staff, but on our shared goal of ensuring the scientific accuracy of our study and DOD's responsibility to provide the information. ATSDR staff can coordinate with USMC staff to determine the appropriateness of any document as it relates to our study. We request that your staff verify and confirm the existence of the documents listed in the attachment. We also request that your staff identify for us any other documents that may be useful to ATSDR for its water modeling analyses and make them available to ATSDR by December 31, 2005. In addition, we request that ATSDR be provided with any information or data that may be discovered at a future date that may have a bearing on our water modeling activities (e.g., information on water system interconnections and the actual production dates for supply of water from the Holcomb Boulevard water treatment plant).

A thorough review and assessment of such a large volume of documents at this late date and the incorporation of related information into nearly complete model investigations and analyses may require additional funding to review these documents and modify our model analyses if necessary. Completion of this assessment and required modifications to our model analyses may extend the timeline for the current health study by an additional 6 – 12 months.

If you or your staff have questions or would like to further discuss this matter, please contact Dr. Frank Bove, Senior Epidemiologist, Surveillance and Registries Branch, Division of Health Studies, ATSDR at (404) 498-0557.

Thank you again for your cooperation and continued interest in the work of ATSDR.

Sincerely,

Howard Frumkin, M.D., Dr.P.H.
Director, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry

Attachment:
ATSDR information and data needs

cc:
Director, DHAC/ATSDR
Director, DHS/ATSDR
Washington Office, ATSDR
OGC/CDC
Mike White, DOD
Frank Bove, DHS/ATSDR
Morris Maslia, DHAC/ATSDR

Information and Data Needed by ATSDR to Complete Water Modeling Activities in Support of the Current Epidemiologic Case-Control Study

1. Camp Lejeune Water Documents: All documents designated as "CLW" by Camp Lejeune and any software developed by or for Camp Lejeune EMD to assist with searching or locating "CLW" documents by key words, topics, dates, etc.

2. Camp Lejeune EMD Summary Files: All files developed by or for Camp Lejeune EMD whose purpose is to aggregate and summarize data that may relate to ATSDR water modeling analyses. These may be such files as MS Excel or MS ACCESS files describing water-supply well information, water-quality sample data, etc.

3. Historical Water System Maps: All maps, map files, spatial data layers, and associated attribute information relating historical changes in Camp Lejeune water systems for years 1941–2000.

4. JTC Environmental Consultants, Inc., Reports: Laboratory reports from sampling conducted by Camp Lejeune and analyses performed by contract laboratory, JTC Environmental Consultants. These reports were submitted to U.S. Environmental Protection Agency, Region IV, by letter dated 25 April 1986. (Request for these data have been made previously on several occasion to Camp Lejeune and headquarters EMD staff)

JTC Report No.	Date of Report
67	5/2/1985
99	7/19/1985
130	9/12/1985
131	9/18/1985
153	10/3/1985
157	10/11/1985
161	10/17/1985
166	10/25/1985
175	11/7/1985
181	11/14/1985
183	11/27/1985
187	11/27/1985
192	12/9/1985
199	12/18/1985
201	12/31/1985
208	1/2/1986
209	1/2/1986
214	1/21/1986
218	1/27/1986
221	1/30/1986
226	2/20/1986

JTC Environmental Consultants, Inc., Reports–continued

JTC Report No.	Date of Report
229	2/25/1986
231	2/26/1986
237	2/28/1986
243	3/12/1986
253	3/27/1986
261	3/27/1986
265	4/14/1986

5. Site Information and Data: Miscellaneous information and data related to historical remedial investigation/feasibility studies (RI/FS) conducted at various sites (operational units) located at Camp Lejeune. (Request for these data have been made previously on several occasion to Camp Lejeune and headquarters EMD staff)

Operational Unit Number	Site Number Recent	Site Number 1983	Site Name
1	21	21	Transformer storage lot #140
1	24	24	Industrial area fly ash dump
1	78	--	Hadnot Point industrial area
2	6	6	Storage lots 201 and 203
2	9	9	Fire fighting training pit
2	82	--	VOC disposal area at Piney Green Rd.
5	2	2	Former nursery/day-care center
7	1	1	French Creek liquid disposal area
7	28	28	Hadnot Point burn dump
8	16	16	Montford Point burn dump
11	7	7	Tarawa Terrace dump
11	80	--	Paradise Point-golf maintenance area
12	3	3	Old creosote site
15	88	--	Bldg. #25
Pre-RI site	84	--	Bldg. 45 area
Pre-RI site	85	--	Camp Johnson battery dump
Pre-RI site	4	--	Sawmill Road dump
Pre-RI site	5	--	Piney Green Road

Site Information and Data--continued

Operational Unit Number	Site Number Recent	1983	Site Name
Pre-RI site	8	--	Flammable storage warehouse-TP#451
Pre-RI site	8	--	Flammable storage warehouse-TP#452
Pre-RI site	10	--	Original base dump
Pre-RI site	11	--	Pest control shop
Pre-RI site	12	--	Golf course construction dump site
Pre-RI site	15	--	Montford Point dump
Pre-RI site	18	--	Watkins Village site
Pre-RI site	19	--	Naval Research lab dump
Pre-RI site	20	--	Naval Research lab incinerator
Pre-RI site	22	--	Industrial area tank farm
Pre-RI site	23	--	Roads and grounds, Bldg. 1105
Pre-RI site	25	--	Base incinerator
Pre-RI site	26	--	Coal storage area
Pre-RI site	27	--	Naval Hospital area
Pre-RI site	29	--	Base sanitary landfill
Pre-RI site	32	--	French Creek

6. Contract Information: Information and data related to various contracts. (Request for these data have been made previously on several occasion to Camp Lejeune and headquarters EMD staff)

Contract Number	Remarks
N62470-87-C-9266	Well at holding pond Sprinkler system for golf course
N62470-93-C-5318	Well numbers 1, 3, 4, 5, 6, and 8 S. H. Barner, Inc.

Robert E. Faye & Associates, Inc.
610 High Shoals Drive
Dahlonega, Georgia 30533

Phone: 706-219-1738
Email: refaye@alltel.net

Morris L. Maslia, P.E., D.WRE, DEE
Research Environmental Engineer
Agency for Toxic Substances and Disease Registry
Centers for Disease Control and Prevention
4770 Buford Highway
Mail Stop F-59, Room 02-004
Atlanta, Georgia 30341-3717
U.S.A.

Dear Morris, May 20, 2008

Per our recent conversations, I am writing to update my estimate of time to complete the monitor well location, well construction, ground-water level, ground-water contaminant, geohydologic, and hydraulic characteristic data bases for the Holcomb Boulevard – Hadnot Point study areas. Currently, I have completed these data bases for all of the CERCLA sites for which we have data; these include sites #1, 2, 3, 6, 9, 10, 21, 24, 74, 78, 80, 82, 84, 88, 94 and ancillary sites #22 and "G".

When recently completing data bases for site #84, I discovered references to additional ground-water investigations related to several locations of above-ground and underground storage tanks for refined petroleum products. I had no previous knowledge of these investigations as related reports were **not** included in the CERCLA and CLW documents provided to us by Camp Lejeune. The site names of these locations are, to the best of my knowledge, A-47/SA-21, S-889 to S-891, H-28, Building 45 – S-941-2, 820, and Building 21. I asked for and recently received digital copies of all reports related to these storage tank sites from the Environmental Management Division, Camp Lejeune. Many of these reports are substantial and contain numerous data that must be accounted for when constructing and calibrating our planned flow and transport models. Accordingly, I must herein revise my previous planned date for completing all data bases to August 1, 2008. In suggesting this date, I am accounting for work time lost to a planned vacation during the third week of June and the fact that my hours are restricted to 100 or 110 hours per month. I regret pushing the completion date forward but there is a great volume of data that we must accommodate and account for.

Please call if you have questions or wish to further discuss this issue.

Sincerely,

Robert E Faye

Robert E. Faye, P.E.

Another example of delays created by DoD entities not providing data!
F. M. E.

Raines GS12 Rick H

From: Paul GS13 Neal N
Sent: Thursday, November 16, 2000 9:41 AM
To: Cone GM14 Frederick E
Cc: Brewer GS14 Scott A; Raines GS12 Rick H; Jungreis Capt Jeremy N
Subject: Water Distribution Systems at Camp Lejeune

Fred,
See CMC HQ's request. Please let me know when you can meet on this.

-----Original Message-----
From: Dreyer GS13 Kelly A
Sent: Thursday, November 16, 2000 9:40 AM
To: Paul GS13 Neal N
Cc: Sakai GM14 Craig K; Raines GS12 Rick H
Subject: Water Distribution Systems at Camp Lejeune

Neal -

There seems to be a little confusion regarding when each of the water distribution systems at Camp Lejeune were installed and the timeframe and area each of them served. It's important to set the record straight.

ATSDR published a report in 1998 which assumes that the Holcolmb Blvd water distribution plant has always provided water to the Midway Park, Paradise Point, Berkeley Manor, and Watkins Village housing areas. I don't think the Holcomb Blvd Plant was even built until 1972 which makes this assumption incorrect. We are also receiving several calls from concerned citizens wanting to know where their water came from.

Can you please work with Facilities to compose a memo from Camp Lejeune to ATSDR with a copy to CMC and NEHC that contains the following information:

(1) All water Distribution systems
(2) When each water distribution system was built
  (a) which wells are connected to which water distribution system
  (b) which wells were contaminated (when and what were the levels)
  (c) Which wells were closed
(3) What areas each water distribution provided water to (housing, administrative, etc.)
  (a) the number of housing units in each housing area
  (b) Bldg numbers for Administrative buildings
(4) The timeframe each water distribution provided water to the specific area
(5) Any other pertinent information about a distribution system (e.g. Holcomb blvd was shut down and connected to the Hadnot Point system for 9 days),
WHAT WELLS SHUT DOWN & THEN RE-POT ON LINE

If possible, an easy to read table would be a great format to present the information in. I'd like to have the memo signed out by 1 Dec 00 at the latest. Please let me know if you need clarificaiton or are not able to meet the deadline. I really appreciate your assistance. It's important to get this information to ATSDR so they can prepare an accurate report and also update previous studies that may be incorrect.

VR,
Kelly Dreyer
Environmental Restoration Program Manager
HQ Marine Corps
DSN 225-8302, ext 3329
COM (703) 695-8302, ext 3329
dreyerka@hqmc.usmc.mil

The correction of this incorrect data was never executed. Please note the date of this email. Please note the date this was requested to be completed. Now go to the next page. Jwk. E

- DOES SITE WANT DIST. SYS' NOT INCLUDED IN STUDY / TIME FRAME

CLW

0000003243

- DO WE NEED 3RD PARTY REVIEW
- SLIDE ON DATE | UPDATE BY NEXT WEEK
- BARRACKS |

0624

Raines GS12 Rick H

From: Dreyer GS13 Kelly A
Sent: Friday, March 16, 2001 11:16 AM
To: Raines GS12 Rick H
Cc: Paul GS13 Neal N; Sakai GM14 Craig K; Jungreis Capt Jeremy N; Reed Jr Maj Leslie H; James Brennan (E-mail); Baker GM13 Carl H
Subject: REQUEST FOR CLARIFICATION

Rick,

As we discussed earlier, here is a summary of what I see needs to be clarified and sent to ATSDR in writing. The Royal Netherlands Navy also requested the same information.

I am aware that you and Carl have already put most of these items together, but prior to releasing them, let's make sure they are accurate. It would also be useful to know what reports the new data contradicts. For starters, I am aware that the 1998 ATSDR report has some incorrect well construction dates, and mistakenly assumes that the Holcomb Blvd plant always supplied water to certain housing areas. There may also be other reports, correspondence, etc that needs to be clarified.

Areas which require research/clarification/documentation

(1) Which water supply systems served which base locations (including housing areas) from construction/operation to present?
(2) When were wells that supplied water systems constructed, closed, sampled, and what were the results?
(3) Where are all the present/former Dry Cleaners located on base? Which ones were merely drop off points?
(4) Where are other suspected sources of TCE/PCE on base (i.e. motor pool areas, UST areas, etc.)

Don't limit your analysis to TT and Hadnot point areas, we also need information from MCAS, Camp Geiger, etc.

In addition to setting the record straight, this information will help us answer questions on the Toll free line as well as provide written responses to the numerous citizen and congressional inquiries we receive.

I appreciate your help and look forward to hearing about the conclusion of this issue from Oregon.

VR (and best wishes always),
Kelly

This is (4) months later, and Ms. Dreyer is still trying to get what she had requested. This information was never corrected by the USN/USMC I notified the ATSDR of this error in 2003!
J.M.E

CLW

0000003307

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

FEB 3 1986

REF: 4WD-ER

Commander
Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511- 6287

Attention: J. R. Bailey, P.E.
Environmental Quality Branch

Dear Sir:

On November 1, 1985, Messrs. Mathis and Holdaway of this Agency met with Facilities Engineering Staff at MCB Camp Le Jeune to review activities and progress in assessment of past waste disposal practices through the NACIP program. During the course of discussion, the subject of ground water quality, and particularly the quality of the water obtained from wells in the Hadnot Point Area of Camp Le Jeune, was reviewed at some length.

Both Messrs. Holdaway and Mathis became aware that there was evidence, from sampling as early as 1983 or 1984, of diffuse contamination of the ground water with unspecified organic substances, and that as a result of detection of unspecified volatile organic compounds in raw potable water samples certain potable wells at Hadnot Point were taken out of service. In consideration of the fact that the major portion of the resident population of Camp Le Jeune, is dependent on the Hadnot Point well field as its potable water supply, the parties in the meeting agreed that any potential contamination of this resource should be investigated as expeditiously as practical. It was also established that there was no contamination detected in treated potable water distributed at Camp Le Jeune, however the extent and sensitivity of analytic procedures for specific organic substances was not fully discussed.

What?!! These people lied to the EPA! -John E.

Mr. Mathis suggested it would be desirable to analyze ground water samples from the monitoring wells involved in the NACIP confirmation studies for the 129 priority pollutants (CFR261 Appendix 8), and that the same analysis should be performed on raw water from all potable wells to insure that there was no contamination of the Camp Le Jeune water supply. When EPA informally requested a copy of the analytical results from monitoring wells and potable wells, we were advised that these data were still in raw form and under review.

If these data are now available, please furnish us a copy. If these data have not been published yet, we would appreciate a brief description of what substances were analyzed, what substances were detected, and when the data will be available.

CLW 0000004925

This Agency is concerned that a potential for human exposure to hazardous substances and hazardous wastes via the Camp Le Jeune water supply may exist due to the presence of such materials in ground water in the general vicinity of the potable well field. The existance of such a potential exposure would warrent consideration of this area for inclusion on the National Priority List, with an attendant increase in the expediency of investigation and remediation.

We appreciate your assistance in obtaining these data in order that this potentially significant problem may be addressed.

If you have any questions, please do not hesitate to contact me at (404) 347-3776 or FTS 257-3776.

Sincerely,

Arthur G. Linton

Arthur G. Linton, P.E.
Regional Federal Facilities Coordinator
Environmental Assessment Branch
Office of Policy and Management

cc: Commander, MCS Camp Le Jeune
Lee Herwig
Paul Hubbell, Navy Department, Washington, DC

CLW

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