



UNITED STATES MARINE CORPS  
ENVIRONMENTAL MANAGEMENT DEPARTMENT  
INSTALLATION RESTORATION PROGRAM  
CAMP LEJEUNE, NORTH CAROLINA



ATTN: Carl Baker \_\_\_\_\_

FAX #: X -- 5764 \_\_\_\_\_

FROM: WALTER T. HAVEN, GEOLOGIST

COMMENTS: Please review the updated answers to ATSDR's questions.

If you have any questions or concerns, please call. Thank you.

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Walt

IF THERE IS A PROBLEM WITH THIS TRANSMISSION, PLEASE CALL  
(919) 451-4872/5874 (COMMERCIAL) OR 484-5872/5874 (AUTOVON)  
FAX NUMBER IS (919) 451-5997 (COMMERCIAL) OR 484-5997 (AUTOVON).

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07/27/93 08:24 919 451 5997 IR PROGRAM EMD

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7-2-93 2:10PM

ATSDR/DHAC

919-451-5997

**ATSDR Questions for Camp Lejeune Water Department**

**Water Treatment Department**

1. How far back do you keep records?
2. Are any records computerized?
3. Can we get a full inventory of supply wells that were operational in 1982,
  - new wells that were added since then, and
  - wells that have been taken off-line?
4. How many water systems are currently on-line?
  - 1 - Holcomb Boulevard System
  - 2 - Courthouse Bay System
  - 3 - Rifle Range System
  - 4 - Onslow System
  - 5 - Marine Corps Air Station System
  - 6 - Hadnot Point System
  - 7 - Montford Point
  - 8 - Tarawa Terrace (off-line)
5. Is the water interconnected by a circuit of pipes or is the water pumped to a holding water tank prior to distribution?
6. Is water from each well routinely sampled?
7. Is the blended water routinely sampled? Prior to treatment or after?
8. How is the water treated? What additives are used? chlorine, fluoride, water softener, filtered, how and why?
9. How many wells supply each water system?
10. Where exactly are they located? Map?
11. Since children are more sensitive to certain contaminants, ATSDR needs information on which water system services which residential areas and other areas such as schools, office buildings, industrial buildings, playgrounds, etc. Distribution map?
  - Generally, what amount of water was used per day by each system (distributed)?
12. What is the procedure that is followed when contamination is detected? Are wells taken off-line or formally closed?
13. When contamination is detected in a supply well, how often would that well be re-tested?
14. Would any well distribute more water than any other, or are they all mixed with equal parts. (Do they have equal flow/pump rates?)
15. Do you keep a log or complaint record of anyone who called to complain about various water problems. For instance, ATSDR was told that an officer's wife complained of a gasoline smell in her tap. ATSDR understood that this lead to testing of the residential tap water which ultimately helped identify contamination at Hadnot Point Water System.
16. What kind of communication system is set up if contamination is detected in a well, or in pooled water awaiting distribution?
 

Is there a weekly report, monthly report, or an official memo from the Water Department to the Installation Restoration Program?
17. What kind of contingency plan goes into effect when contamination is detected in a system or well?

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- 18. What department would have sampled and tested tap water from any location, residence or other? Who would have tap water data? We need all tap water data including: dates sampled, number of samples collected, sample holding times, what analysis performed, detection limits, and sampling results.
- 19. How was groundwater contamination detected at the Rifle Range? Were any wells formally closed, taken off-line?

**Tarawa Terrace**

- 20. When was water contamination discovered? Month? Year?
- 21. Was contamination first detected in wells or in the system? We need the data.
- 22. When was the water system or well(s) taken off-line or closed permanently? Month? Year? How long after water samples were taken?
- 23. What was sampled? the pooled water supply, the well(s), or the tap water in individual homes? Can we get the data?
- 24. How many wells at Tarawa Terrace were contaminated?
- 25. Is the whole water system closed, taken off-line or just those contaminated wells?

**Hadnot Point**

- 26. When was well # 602 taken off-line? How often is it re-tested?
- 27. Are there two different Hadnot Point systems? one much smaller than the other?
- 28. Has any remediation occurred to date, or is it still in the planning stages?
- 28. Was floating product detected at well # 602 or was that another well? A monitoring well or supply well?

**Lead Study**

- 30. Was lead detected in supply wells, tap water, or in the water systems? Has any sampling been performed on the drinking water fountains?
- 31. When, where, and how was lead contamination detected? We need all data from this study.
- 32. Was residential tap water tested?
- 33. What was done once contamination was detected?
- 34. Who sampled water for this survey?
- 35. Are you aware of any blood lead monitoring of military dependents (children)?

**Other**

- 36. Does any water on-base come from the county water system? Is all on-base water handled through the base?
- 37. Have there been any complaints about water quality from residents?
- 38. What was the earliest date that water analysis was performed for chemical contaminants, either monitoring well, supply well, or tap water?

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1. Drinking water records have been maintained for the past 14 years. These records are in a hard copy form.
2. Water treatment <sup>OPERATION</sup> records are available on Lotus 1-2-3 spreadsheets *for the past three years.*
3. (refer to the Well Head Management Plan)
4. 6 systems are currently on-line. The Monford Point and Tarawa Terrace systems were taken off line in 1986.
5. A system of elevated storage tanks and reservoirs is utilized to distribute water to the population of Marine Corps Base Camp Lejeune.
6. Although periodic sampling has occurred, the routine collection of water samples from wells is not required by either Federal or State regulators. While production well sampling events occurred in January and February of 1985, subsequent sampling was also conducted by Greenhorne and O'Mara and Geophex in 1992. (Refer to the Well Rehabilitation Plan and the Wellhead Monitoring Study)
7. Raw water from wells are mixed in collection lines and raw water reservoirs. Sampling is performed after treatment of the water in accordance with the Safe Drinking Water Act.
8. Chlorine, fluoride, and water softener (such as zeolite and lime), as well as sand filters are utilized in the water treatment process. This allows Camp Lejeune to meet both Federal and State water quality standards, and to improve water quality for its citizens.
9. (refer to the Well Head Management Plan)
10. (refer to the Well Head Management Plan)
11. (refer to the Well Head Management Plan)
12. When production wells are discovered to be contaminated, they are taken off line. While some wells in the Tarawa Terrace housing complex are scheduled to be formally abandoned, the closing is not the result of hazardous waste contamination.
13. Refer to the Well Rehabilitation Plan
14. Some wells in the Camp Lejeune area possess higher production yields than others. Therefore, not all wells have equal flow/pump rates.
15. Complaints with respect to water problems are directed to and handled by the Base Preventive Medicine Unit.

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16. If contamination is detected in a production well, a report is issued to the State of North Carolina in accordance with the Safe Drinking Water Act and North Carolina regulations. Responsibility of the well is relinquished to the Installation Restoration Division.

17. Although a formal contingency plan does not exist, wells which exhibit contamination are taken off line.

18. The Environmental Management Department is responsible for the testing of tap water. The trihalomethane, bacteriological, and radiological data are available upon request from the Environmental Quality Monitoring Branch of the Environmental Compliance Division.

19. In January, 1985, it was discovered that well RR-229 possessed contamination from driller solvents, and was taken off line on February 4, 1985.

20. Groundwater contamination at the Tarawa Terrace housing complex was discovered in January 1985.

21. The contamination, which was first detected in January 1985, is delineated in the Remedial Investigation/Feasibility Study for the ABC Cleaners Site. For additional clarification, contact Luis Flores, U.S. Environmental Protection Agency, Region IV, Remedial Project Manager, in Atlanta, Georgia.

22. The use of the system was terminated in January 1985, and taken off line in 1986. A contract to officially abandon some water supply wells in the Tarawa Terrace housing complex is awaiting award. However, these wells are not being closed due to contamination.

23. This information can be obtained from the Remedial Investigation/Feasibility Study for the ABC Cleaners site. Refer to Luis Flores of the Environmental Protection Agency.

24. A total of 3 wells were deemed to be contaminated. For additional information, refer to Luis Flores of the Environmental Protection Agency.

25. As of 1986, the entire system has been taken off line and scheduled to be closed, due to a broken raw water main crossing Northeast Creek.

*RAW WATER WELLS  
HAVING NOT USED*

26. Well #602 was taken off line in November, 1984. This well was resampled in 1992 by Geophex Inc. for the Well Rehabilitation Plan.

27. There is one Hadnot Point system.

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28. A free product recovery and groundwater pump and treatment system has been in operation for approximately 1 year and 6 months. In addition, the remediation of TCE contaminated groundwater from the Industrial Area is in the design/preconstruction phase.

29. While floating product was not found in well #602, this material was determined to be present in both monitoring and recovery wells of IR site #22 (Hadnot Point Fuel Farm).

30. Lead was not detected in supply wells or water systems. The contaminant did exceed the 90th percentile limits in accordance with the Lead and Copper Rule sampling protocol for certain specific buildings within Camp Lejeune (predominantly industrial structures). For additional information, refer to the Lead and Copper Study.

31. Refer to the Lead and Copper Study.

32. Refer to the Lead and Copper Study.

33. Once contamination was detected, a public notice was issued, and a corrosion control study, which was submitted to the State of North Carolina for review, was conducted.

34. Avolis Corporation from New Bern, N.C. sampled the water for this survey.

35. Yes. Refer to the Naval Hospital aboard Marine Corps Base Camp Lejeune.

36. While all on-base water is handled through the Base water distribution systems, the Verona Loop area is supplied by Onslow County.

37. There have been complaints concerning water quality from residents aboard Camp Lejeune.

38. The earliest date that water analysis was performed was in 1977, according to Camp Lejeune's records.

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