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CAMP LEJEUNE HISTORICAL DOSE RECONSTRUCTION PROJECT CLARIFICATION
QUESTIONS AND ANSWERS FROM MS ELIZABETH A BETZ FORMER U SMC EMPLOYEE
MCB CAMP LEJEUNE NC
12/10/2010
PRIVATE CITIZEN

Camp Lejeune Historical Dose Reconstruction Project

Clarification Questions and Answers from Ms. Elizabeth A. Betz

Former USMC Employee

December 10, 2010

Background: The Camp Lejeune Data Mining Technical Workgroup is a joint effort between the US Department of the Navy (DON) and the Agency for Toxic Substances and Disease Registry (ATSDR). It was established to complete the necessary activities associated with the identification, review and exchange of documents, data, and information collected by DON. The Workgroup has identified some information gaps regarding the 1985 drinking water sampling activities conducted at several of the Camp Lejeune drinking water systems. Ms. Elizabeth A. Betz, former US Marine Corps Camp Lejeune employee and currently an employee of the US Environmental Protection Agency may be able to provide information regarding those sampling activities. The following written questions were provided to Ms. Betz in the effort to fill the information gaps. She provided the following responses to the questions from the Workgroup. DON and ATSDR greatly appreciate any information or clarifications that Ms. Betz provided.

Please refer to the documents listed below to address the following questions:

- Letter of 24 Jan 1986: "ANALYSIS OF DRINKING WATER SYSTEMS ABOARD CAMP LEJEUNE/MCAS NEW RIVER" and its enclosures (CLW 1406).
- JTC Analytical Reports (CLW 5849 and JTC Reports_1986).

Question 1: *Regarding the drinking water analytical lab summary sheets for November and December 1985, do you recall who conducted the analyses? Do you recall who authored the enclosures?*

The analysis was done by the contract laboratory of the Naval Facilities Engineering Command – Atlantic Division (LANTDIV) which based on the enclosed laboratory reports was JTC Environmental Consultants, Inc out of Rockville Maryland at the time. Obviously, the transmittal letters from LANTDIV were generated by LANTDIV and enclosed the JTC laboratory reports. The Memorandum to the Environmental Engineer was generated by my supervisor at the time, Danny Sharpe. I prepared the summary of the Volatile Organic Analysis (VOA) analysis that had been conducted on weekly sampling of the two water treatment plants, Hadnot Point and Tarawa Terrace for the last half of 1985. To the best of my recollection, these weekly samples were collected at the distribution pump in each of the plants.

Question 2: *Regarding the 19 November 1985 Hadnot Point Water Treatment Plant (WTP) analytical lab summary report, what was meant by the handwritten remarks “not representative” that appear next to the analyses result (Benzene 2,500, Methylene Chloride 2,600, Toluene 100)?*

The “not representative” was meant since the previous five months had shown not even trace amounts of these chemicals the result was suspicious especially as the next two weekly samplings did not show anything.

Question 3: *Do you recall where the November and December 1985 drinking water samples were taken at Hadnot Point WTP? If so, please describe the sampling locations.*

As I recall, the samples were taken from a spigot located at the distribution pump. Most plants had spigots located at a laboratory bench for running their water quality samples and some also had spigots at the distribution pump as well. The Hadnot Point weekly samples were collected at the distribution pump, not at the sink.

Question 4: *Do you recall whether any additional sampling or other types of investigations were conducted to identify the cause of the Hadnot Point WTP benzene and methylene chloride detections found in the 19 November and 10 December 1985 results? If so, please provide as much detail as possible (e.g., types of investigations and results).*

I do not recall any other types of investigations into the Hadnot WTP benzene and methylene chloride.

Questions 5: *Do you recall whether any samples were collected at Holcomb Boulevard WTP at the same time that samples were collected at the other WTPs (e.g., Hadnot Point)? Please explain the rationale for the decision and any summary of the results.*

The ground water contamination was initially found in November 1984, because a Hadnot Point well near the fuel farm was sampled as part of NACIP. As a result of the contamination in that well, in December, we started sampling other wells near that well and the fuel farm. As more wells were found contaminated the sampling areas expanded. All contaminated wells found in December 1984 were serving the Hadnot Point Plant.

As a precaution, a decision was made, initiated by Danny Sharpe, to sample all of Camp Lejeune’s WTPs and their supply wells. This sampling may have started as early as December 1984 and was mostly completed in January 1985. While all the systems and wells were being systemically sampled, one Sunday morning in late January 1985, the Base Chief of Staff’s wife complained that her water smelt of fuel. It was discovered that day that the fuel line for the distribution pumps at Holcomb Blvd ran through the wall of the reservoir and then up to the pumps and had developed a leak. The Holcomb Blvd plant was taken off line and the valve that connected the Holcomb Blvd and Hadnot Point water distribution systems was open to supply water to the Holcomb Blvd distribution system. It was my understanding that normally that valve stayed closed and the two systems operated independent of each other. The reservoir at Holcomb Blvd was flushed and samples were collected of the Holcomb Blvd plant, Hadnot Point plant and two points in the Holcomb Blvd distribution system and taken to the North Carolina Department of Human Resources, Division of Health Services Occupational Health Laboratory so that the Holcomb Blvd Plant could be turned back on.

The results from the State laboratory showed that there had to be more contaminated wells in the Hadnot Point well field. And results from LANTDIV's laboratory received at the same time showed that Well HP 651 was contaminated with high levels. Additionally, the system wide sampling found the Tarawa Terrace contamination as well.

Question 6: *Are you aware of any additional sampling conducted at Holcomb Boulevard WTP or system after February 1985? If so, please provide much detail as possible.*

Once the fuel leak was cleaned up and all the systems and wells were identified that had contamination, I do not recall any specific sampling of the Holcomb Blvd system. I also do not recall any Holcomb Blvd supply wells showing any contamination.

Question 7: *During the 11 December 1984 sampling effort, some of the sample bottles were noted as broken. Do you recall if there were any efforts to resample again during December 1984?*

If sample bottles were broken, then additional sampling probably occurred as soon as possible.

Question 8: *Between September 1985 and December 1986, 15 water samples collected at the Tarawa Terrace (TT) WTP returned detections of benzene (1–8 µg/L), which were below the detection limit for benzene (10 µg/L). During this period the Tarawa Terrace WTP received water from TT supply well, raw water from several Holcomb Boulevard supply wells, and possibly from the Holcomb Boulevard WTP. Was any effort made during the period in question to determine the source of the benzene at the TT WTP by sampling the active TT supply wells, the Holcomb Boulevard supply wells or the finished water from the Holcomb Boulevard WTP? What other efforts, if any, were initiated to determine the source of benzene in the TT water supply?*

I do not have any recollection of any efforts that may have been initiated to determine the source of trace amounts of benzene in the Tarawa Terrace WTP.