Michael Partain

Good Morning Mr. Chairman.

I would like to thank the Chairman, Ranking member and members of the Veteran's Affairs Committee for permitting me to testify this morning.

My Name is Michael Partain and I am the son and grandson of U.S. Marine Corps Officers. My parents were stationed aboard Marine Corps Base Camp Lejeune shortly after my father graduated from the United States Naval Academy. I was conceived, carried and then born at the base Naval Hospital while my parents lived in base housing. During the time of my mother's pregnancy, we were exposed to high levels of tetrachloroethylene (PCE), trichloroethylene (TCE), dichloroethylene (DCE), benzene and vinyl chloride in the tap water provided to my family by the Marine Corps. Two years ago, I was diagnosed with male breast cancer at the age of thirty nine. In fact, I am one of about forty men who share this unique commonality of male breast cancer and exposure to contaminated tap water aboard Camp Lejeune.

Beginning on 31 October 1980, Navy and Marine Corps officials received what would later become a litany of warnings that the base's drinking water supply was highly contaminated with chlorinated hydrocarbons (Exhibit A). The United States Army Environmental Hygiene Agency (USAEHA) laboratory located at Ft. McPherson, Georgia was tasked to analyze the base's tap water for trihalomethane's (TTHMs) in preparation for a new EPA Safe Drinking Water regulation. As part of their analysis for Hadnot Point's tap water, the laboratory stumbled across interferences caused by chlorinated hydrocarbons which inhibited the laboratory's ability to quantify the chemical they were testing for in the samples. The laboratory's supervisor documented these findings upon the analytical results sheet provided to Navy and Marine Corps officials. He advised that the base's tap water samples from Hadnot Point were highly contaminated with chlorinated hydrocarbons and they needed to test their water by Gas chromatography-mass spectrometry. This machine is used by scientist to identify specific compounds while in solution. The Army lab's warnings were repeated three more times between December 1980 and March of 1981. For some unknown reason, the Army lab further spelled out the issue by placing the word (SOLVENTS!) at the end of their March 1981 warning (Exhibit B). Curiously, this key word was omitted from the 2007 Government Accountability Office (GAO) review of the Camp Lejeune Drinking water contamination when this document was cited on the GAO's timeline of events. Between October 1980 and December 1981, no documented action was taken by Navy or Marine Corps officials to identify the source of the contamination. Later the following year, the Army lab reports were referred to in the base's Initial Assessment Study (IAS) draft report being prepared for the Navy's NACIP program. The Army lab's reliability was called into question in the review comments submitted by the base's Assistant Chief of Staff for Facilities, Colonel John T. Marshall,"it is important to note that accuracy of data provided by the U.S. Army laboratory is questionable. It is recommended that the TTHM information be de-emphasized throughout the report." (Exhibit C).

How could these reports be questionable if they were never investigated or verified? Oddly enough, Colonel Marshall's review was written fifteen days after the base received a written report from yet another lab verifying the legitimacy of the Army lab warnings. The other lab's

data was not included in the final IAS report released in April 1983. The IAS report concluded that none of the twenty sites aboard Camp Lejeune slated for further study posed an immediate threat to human health.

The Navy and Marine Corps' lack of action was not the case for the entire base. Within weeks of the March 1981 USAEHA warning that solvents were contaminating Hadnot Point's water, Navy and base officials discovered organic contamination at the base's Rifle Range water distribution system located near the base chemical dump. Between March and May of 1981, Navy and base officials sampled the Rifle Range's tap water and the system's potable water wells for contamination. Then on 31 July 1981, J. R. Bailey from the Navy's Facilities Engineering Command wrote to the Commanding General of Camp Lejeune advising the General that Rifle Range potable water well RR-97 contained organic contamination and that two other wells should be used in preference over this well due to lower levels of contamination found in those wells. (Exhibit D). The Rifle Range water distribution system only served a handful of permanent residents, unlike Hadnot Point's system which served enlisted barracks, bachelor officer's quarters, the base Naval Hospital and other facilities located on Hadnot Point. What is puzzling is why the Navy and Marine Corps went through the trouble of testing specific potable water wells for a remote potable water system on the base and then failed to test the other systems serving the vast majority of people on the base for another three and a half years. Why were the USAEHA lab warnings to the base ignored?

In September of 1981 the USAEHA Lab experienced equipment problems and a back log of tests. As a result, the lab was unable to perform further TTHM testing for Camp Lejeune. A replacement was needed. In April of 1982, Grainger laboratory was contracted to perform TTHM testing for Camp Lejeune. At this time, the testing was expanded to include a new water distribution system aboard the base. That distribution system was for the Tarawa Terrace (TT) family housing area. The initial samples were collected in April of 1982 and analyzed by the laboratory. Then on 6 May 1982 Mike Hargett, co-owner of Grainger Laboratory, phoned the base chemist, Elizabeth Betz and advised her that PCE and TCE contamination was found in the tape water samples sent for TTHM analysis. (Exhibit E page 4). Ms. Betz then notified the Supervisory Ecologist, Danny Sharpe, of the Grainger findings and these findings were then sent up the chain of command to Billy Elston, Deputy Base Maintenance Officer and to the Utilities Director, Fred Cone. A week later , on 14 May 1982, Betz was summoned to a briefing involving the base's facilities command staff. The purpose of the briefing was to explain April's TTHM analysis results to Colonel Millice, the Assistant Chief of Staff, Facilities, and Lt Colonel Fitzgerald, Deputy Base Maintenance officer. Betz documented in her memorandum for the record that "it appeared to me that they had not been informed about the findings. I did not inform them."
The findings mentioned in the memorandum were the existence of PCE and TCE in the tap water for Hadnot Point and Tarawa Terrace's potable water distribution systems. (Exhibit E, page 4).

Shortly after the briefing, a second round of TTHM sampling was collected for Camp Lejeune. However, some of these samples had problems with air bubbles and interfered with the testing performed by Grainger Labs. A new round was collected and sent to Grainger. Nonetheless, Mike Hargett and Grainger labs found that the solvent peaks discovered in the April samples were still present but the comparison with the duplicate samples indicated poor

repeatability. Betz and Hargett agreed to collect yet another sample for testing. This sample was taken at the end of June. The Grainger Lab report indicated interference in one of the samples but there is no explanation of what was causing the interference. As a result of the continued interference, Betz specifically collected samples from both the Tarawa Terrace and Hadnot Point water treatment plants for special testing of these two systems. One sample was taken from the raw water entering the plant which represented the well fields providing untreated water to the plants and the other from the treated water distributed from the plants to the consumers. One can logically conclude that the ensuing test results from these samples would clearly demonstrate whether the interference problem was emanating at the water treatment plant(s) or in well(s) supplying raw water to the treatment plants. The samples were collected and packed in ice and then shipped to Grainger Labs in Raleigh North Carolina.

Immediately following the sample shipment, Betz called the state of North Carolina and spoke to Linda Sewall concerning TTHM reporting requirements. At the end of the conversation, Betz asked Linda Sewall which Safe Drinking Water Act secondary contaminants were required to be reported. PCE and TCE were not listed among the SDWA secondary contaminants. Betz did not inform Ms. Sewall that PCE and TCE were found in the potable water aboard the base (Exhibit F).

The Grainger report arrived at the base on August 10th 1982:
"Interferences which were thought to be chlorinated hydrocarbons hindered the quantization 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." (Exhibit E, pg. 2).

The Grainger Lab memo documented in writing that the contamination in the potable water systems aboard the base was a serious issue. Grainger's chemist, Bruce Babson, correctly concluded that the contaminants were in the well fields for both Tarawa Terrace and Hadnot Point. If the contamination was emanating from wells there could be but one logical conclusion. The groundwater supplying the wells aboard the base was contaminated! No further action was taken by Navy or Marine Corps officials.

In her 19 August 1982 memorandum for the record, Betz incorrectly states the presence of PCE in the base's potable water is linked to the presence of vinyl lined asbestos coated pipes in the base's water distribution system. This scenario was based on a 1980 Suggested Action Guidance Report on Tetracholorethylene issued by the EPA (Exhibit G), that the contamination could be a result of vinyl lined asbestos coated water pipes. There was no documented action taken to test this theory. In fact, according to base records dating back to 1983, vinyl lined asbestos cement pipes were not used as construction materials for any of the base's water distribution systems (Exhibit H). The question remains, after the 10 August 1982 warning from Grainger laboratory, why did Navy and Maine Corps officials fail to go out and test the individual wells supplying the water distribution systems for Hadnot Point and Tarawa Terrace?

Then on 1 June 1983, Colonel Marshall compiled data for what was supposed to be a routine report on the TTHM analysis for the State of North Carolina. (Exhibit I) He sent the data in the form of a table contained in a letter to Charles Rundgren of the State's Water Supply Branch. The original analytical Grainger lab TTHM data sheets were not included in this letter. These data

sheets contained Grainger's findings for the TTHM readings including notations that PCE and TCE were contaminating the samples. Several months ago I spoke to Mr. Hargett, former co-owner of Grainger Laboratory, and he indicated to me that he had secretly tipped off the state of North Carolina that there was a problem with the base's TTHM testing program. Colonel Marshall's letter was supposed to be a routine communication to document base compliance with the new TTHM regulations slated to take effect by November 1983. Later that month, Colonel Marshall received a reply from the State's Environmental Engineer, William Elmore. Mr. Elmore thanked Colonel Marshall for the data compilation but informed him that the State required the raw analytical data on the actual forms used by Grainger Laboratory (Exhibit J). The reports requested by Mr. Elmore were the very same reports upon which Grainger Lab had documented the existence of tetrachloroethylene and trichloroethylene within the potable water supply systems for Hadnot Point and Tarawa Terrace beginning in 1982. Colonel Marshall stalled and did nothing. His successor, Colonel Lilley then inherited the problem of what to do with Mr. Elmore's request. On 30 November 1983, Colonel Lilley called the North Carolina's water supply branch and spoke with Dick Caspers. We do not know what was said in the conversation with Mr. Caspers, but two weeks later, Col Lilley wrote Mr. Elmore and advised him that per this conversation with Mr. Caspers, Marine Corps Base Camp Lejeune was not required to provide the requested Grainger Laboratory reports and thus they were not submitted to the State (Exhibit K).

It took another year before the drinking water contamination aboard Camp Lejeune was "officially discovered". Today the Marine Corps maintains that "once the source of the chemicals was determined to be the wells, the wells were immediately taken out of service." The Marine Corps also now states that "taking care of Marines, Sailors, their families and civilian workers is our top priority." My previous testimony belies the former statement and the following will cast serious doubt on the latter.

Two weeks after the first well was removed on service on at Hadnot Point, an article appeared in the base's newspaper. The article advised the reader that as a result of samples taken on 3 December 1984, four wells were removed from service due to traces of organic compounds. The article also read that none of the organic compounds were listed under the Safe Drinking Water Act. The article went on to quote the Base Environmental Engineer, Robert Alexander: "every effort will be made to maintain the excellent quality water supply traditionally provided to residents of Camp Lejeune." (Exhibit L).

What the article failed to mention was that on 6 July 1984, Hadnot Point well HP-602 was sampled and found to be highly contaminated with benzene. This well remained operational until November 1984. The well was situated down gradient from the Hadnot Point fuel farm and thus exposed to the fuel leaking from the underground tanks. The Base Environmental engineer also failed to disclose to the readers the presence of a 20,000-30,000 unreported and un-remediated fuel leak dating back to 1979. This fuel plume was in the ground water and was fifteen feet thick! Environmental Engineering Company's report warned the presence of benzene far exceeded the human health risk and therefore the use of the well (HP-602) should be discontinued immediately (Exhibit M).

The deception did not end there. On 30 April 1985, the Commanding General of Camp Lejeune advised that residents of Tarawa Terrace that two wells had to be taken of line because minute (trace) amounts of several organic chemicals were detected in the water. The General also stated: "There are no definitive State of Federal regulations regarding a safe level of these compounds, but as a precaution, I have ordered closure of these wells." (Exhibit N).

Four months later, the Base Environmental Engineer, Robert Alexander, was directly quoted in a newspaper article: "people had not been directly exposed to the pollutants." (Exhibit O).

The misrepresentation did not end with the public and the media, it extended to the EPA. On 1 November 1985, there was a meeting at Camp Lejeune between base officials and EPA Representatives. During this meeting, base officials including Robert Alexander told the EPA that the contamination had not reached the distribution plants. (Exhibit P). Three years later another base official, Assistant Chief of Staff Facilities, Colonel Thomas J Dalzell was quoted in the media that prior to 1983:"At that time we were not aware of any of these particular compounds that might have been in the ground water and we have no information that anyone's health was in any danger at that time." The Colonel also stated that the sources of the contamination were the base's motor pools and that these compounds were being dumped in the ground or in the sewers and that they were not really aware of the effects on ground water back in the 1960's and 1970's. (Exhibit Q).

Beginning with the very first public announcement of the drinking water contamination aboard Camp Lejeune, there has been a constant drum beat by the Marine Corps that they did not violate any Federal Safe Drinking Water Act standard or any State of North Carolina standards. On September 24th 2009, Maj-General Jensen appeared on CNN's Campbell Brown show and reiterated the Marine Corps official position. What the Marine Corps has failed to disclose to members of Congress, the media, the public and prior investigations into the Camp Lejeune's drinking water contamination was that the Marine Corps was in violation of their own orders dating back to 1963. These orders if followed would have prevented most of the human exposures at the base.

In September of 1963, the Navy's Bureau of Medicine and Surgery issued a set of instructions known as BUMED 6240.3B. These instructions were revised in 1972 with version C and then replaced in 1988. The purpose of BUMED 6240.3B was to establish standards for water for drinking throughout the Naval establishment including Camp Lejeune (Exhibit R). Contained within the instructions were preventive measures, including the requirement for frequent surveys to locate and identify health hazards which might exist in the system. Health Hazards were specially defined within the instructions as to be 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. Supply wells were also defined as part of the water supply system. Pollution was defined as the presence of any foreign substance (organic, inorganic, radiological or biological) which tended to degrade its quality so as to constitute a hazard or impaired the usefulness of the water. Perhaps the most disturbing part of the regulation is found under the chemical characteristics limits. Paragraph 7 subparagraph C: "Substances which may have deleterious physiological effect, or for which the physiological effects are not known, shall not be introduced into the system in a manner which would permit them to reach the consumer."

These standards have yet to be publicly addressed or explained by the Navy. Instead the Navy and Marine Corps summarily dismisses this potable water regulation as being to general to be a standard of care.

During our research of Navy and Marine Corps documents we discovered another key document which undermines the Marine Corps and Navy's official statements that they had little knowledge that these chemicals could contaminate the ground water at Camp Lejeune. Base Order 5100.13B was the third revision of an order from the Commanding General of Camp Lejeune. The order dates back to June 1974 and may date back to the creation of the base's chemical dump in 1959. We will not know the actual beginning date of the order until the Marine Corps produces the prior two versions of the order and the higher headquarter guidance which created the order in the fist place. The purpose of Base Order 5100.13B was for the safe disposal of contaminants or hazardous wastes (Exhibit S). The order identified organic solvents as hazardous materials and ominously warned that improper disposal of contaminants and hazardous materials created hazards such as contamination of drinking water. As I read BUMED 6240.3B and Base Order 5100.13B a line from a famous movie called "A Few Good Men" comes to mind. "We follow orders, or people die. It's that simple" At Camp Lejeune, orders were not followed and people have died or made sick due to the negligence of the United States Marine Corps.

Submitted with this testimony is our copy of the historical time line of events for the Camp Lejeune drinking water contamination. The time line was painstakingly researched using authentic Navy and Marine Corps documents. Each entry is referenced to an actual document. We have also provided a copy of the document library for members of the committee and their staff. The document library was provided to us by the ATSDR.