



DEPARTMENT OF VETERANS AFFAIRS
Veterans Benefits Administration
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Director (00/21)
All VA Regional Offices

In Reply Refer To:
Training Letter 11-03

SUBJ: Processing Disability Claims Based on Exposure to Contaminated Drinking Water at Camp Lejeune

Purpose

Veterans who served at U.S. Marine Corps Base Camp Lejeune, North Carolina, were potentially exposed to contaminants present in the base water supply prior to 1987. The chemical compounds involved have been associated by various scientific organizations with the possible development of certain chronic diseases. However, many unanswered questions remain regarding the extent of base water contamination, the type and duration of exposure experienced by base personnel, and the likelihood that contaminant levels in the water supply were high enough to result in a particular disease.

While these issues are being studied, the Department of Veterans Affairs (VA) has determined that disability claims from Veterans who served at Camp Lejeune during this period deserve special handling to ensure fairness and consistency in claims processing. As a result, adjudication of these claims has been centralized at the Louisville, Kentucky, Regional Office with tracking measures initiated. Technical aspects related to processing these claims are outlined in Fast Letter 11-03, *Consolidation and Processing of Disability Claims Based on Exposure to Contaminated Drinking Water at Camp Lejeune, North Carolina*.

This training letter was developed to provide additional background information on the Camp Lejeune situation, as well as to provide specific guidance for issues related to claims development and adjudication. This guidance supersedes the Camp Lejeune section of Training Letter 10-03, *Environmental Hazards in Iraq, Afghanistan, and Other Military Installations*.

Questions

Questions should be e-mailed to VAVBAWAS/CO/211/ENVIRO.

/S/

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Enclosures

**Processing Disability Claims Based on Exposure to Contaminated Drinking Water
at Camp Lejeune**

I. Background

United States Marine Corps Base Camp Lejeune, NC, was established in 1941. In the early 1980s, it was discovered that two on-base water-supply systems were contaminated with the volatile organic compounds (VOCs) trichloroethylene (TCE), a metal degreaser, and perchloroethylene (PCE), a dry cleaning agent. The main source of TCE contamination was on-base industrial activities, while the main source of PCE was an off-base dry cleaning facility. Benzene, vinyl chloride, and other VOCs were also found to be contaminating the water-supply systems. These water systems served housing, administrative, and recreational facilities, as well as the base hospital. Department of the Navy estimates indicate that as many as 630,000 active duty personnel may have been exposed. The contaminated wells supplying the water systems were identified and shut down by February 1985. The Agency for Toxic Substances and Disease Registry (ATSDR), a branch of the Department of Health and Human Services, conducted a Public Health Assessment of Camp Lejeune in 1997, which did not determine whether base personnel experienced any long-term health effects from consumption of the contaminated water. However, the assessment indicated that the drinking water contaminants at Camp Lejeune created a "past public health hazard." Follow up studies by ATSDR focused on potential birth defects experienced by mothers exposed to the drinking water. In 2008, as public awareness of Camp Lejeune increased, the Navy sent an informational outreach letter to those individuals who could be identified as having served there between 1957 and 1987. Apparently, the Navy felt that including individuals serving until 1987 would cover potential exposure from any residual contaminants present in the water beyond the well closings in 1985. The letter notified these former service members that "unregulated chemicals were discovered in some of the base drinking water systems" and encouraged them to participate in a registry so as to receive information from new health-related scientific studies initiated by the Navy. These studies involved the National Academy of Sciences' National Research Council (NRC) and ATSDR.

Based on a congressional mandate, the Navy requested that NRC undertake a study to assess the potential long-term health effects for individuals who served at Camp Lejeune during the period of water contamination. In the resulting report, *Contaminated Water Supplies at Camp Lejeune, Assessing Potential Health Effects* (June 2009), NRC reviewed previous work done by ATSDR, including computerized water flow modeling, and concluded that additional studies may not produce definitive results because of the difficulties inherent in attempting to reconstruct past events and determine the amount of exposure experienced by any given individual. To address potential long-term health effects, NRC focused on diseases associated with TCE, PCE, and other VOCs. Based on analyses of scientific studies involving these chemicals, NRC provided an assessment of the potential association between certain diseases and exposure to the chemical contaminants.

The NRC analysis utilized categories of potential disease “health outcomes.” The categories included: (1) sufficient evidence of a causal relationship; (2) sufficient evidence of an association; (3) limited/suggestive evidence of an association; (4) inadequate/insufficient evidence to determine whether an association exists; and (5) limited suggestive evidence of no association. The analysis found that no diseases fell into the categories of sufficient evidence of a causal relationship or sufficient evidence of an association with the chemical contaminants. However, fourteen diseases were placed into the category of limited/suggestive evidence of an association. A number of diseases were also identified that fell into the category of inadequate/insufficient evidence to determine whether an association exists. NRC indicated that placement of diseases in these categories was based primarily on studies of highly exposed industrial workers, where the amount and duration of toxic chemical exposure greatly exceeded that experienced by individuals at Camp Lejeune. The specific diseases with limited/suggestive evidence of an association are identified in Appendix B of this training letter.

ATSDR responded to the NRC report in August 2009 with a plan for additional studies, supported by the Navy, to assess the human health risks associated with the Camp Lejeune water contamination. The plan included: a continuation of water flow computer modeling studies to generate potential contaminant exposure rates and durations; a re-analysis of data collected on birth outcomes; studies on birth defects and childhood cancers; and further epidemiological studies based on mortality and health surveys that would be distributed to former Camp Lejeune residents. ATSDR also initiated a series of public hearings to receive input from individuals who had served at Camp Lejeune.

In a 2010 letter to the Navy, ATSDR again responded to the NRC report, indicating its belief that the report minimized the potential long-term health effects of exposure to the water contamination. The letter stated the view that “there was undoubtedly a hazard associated with drinking the contaminated water at Camp Lejeune.” ATSDR pointed out that, although the NRC report found only limited/suggestive evidence for any diseases associated with the contaminated water, other scientific organizations considered the contaminants to be carcinogenic. For example, regarding TCE and PCE, the International Agency for Research on Cancer (IARC) classifies them as “probable human carcinogens” while the National Toxicology Program (NTP) refers to them as “reasonably anticipated to be a human carcinogen.” Additionally, both IARC and NTP label benzene and vinyl chloride as “known human carcinogens.” The specific diseases potentially associated with benzene and vinyl chloride exposure are identified in Appendix B of this training letter. Although the ATSDR letter emphasizes the fact that the water contaminants themselves have been generally associated with potential carcinogenic health outcomes in humans, there is currently only speculation as to the extent of exposure and actual effects on the the population at Camp Lejeune. However, ATSDR indicates that its planned studies, making use of computerized water flow modeling and the epidemiological mortality and health survey, will provide a higher level of exposure predictability and definable health outcomes than are recognized as possible by NRC.

For additional information on the history of Camp Lejeune water contamination and the various governmental responses to it, see the Internet websites listed in Appendix A of this training letter.

II. Claims Processing

Evidence Development

Evidence development for disability claims based on water contaminant exposure at Camp Lejeune requires obtaining verification of actual service at Camp Lejeune and as much detail as possible about that service. It also requires verifying, with medical evidence obtained through a VA medical examination or other authoritative medical source, whether a claimed current disease or disability is at least as likely as not a result of exposure to the chemical compounds present in the water at Camp Lejeune. A number of diseases are identified in Appendix B of this training letter that meet the criterion of being associated with exposure to the specific Camp Lejeune water contaminants, based on human and experimental animal studies. Manifestation of any of these diseases would be sufficient to initiate a VA medical examination and request an opinion regarding its relationship to Camp Lejeune service. However, this is not an exclusive list. Medical evidence provided by a Veteran indicating that some other disease may be related to the known water contaminants would also be sufficient to initiate a VA examination.

Verification of Service

Verification of service at Camp Lejeune will generally be available through military personnel and/or medical records. These can be obtained with standard development procedures, including a PIES O19 records request. When documents in the claims file do not provide sufficient information on Camp Lejeune service, it should be obtained through VCAA notification or direct contact with the Veteran. It is important to verify that service at Camp Lejeune occurred within the 1957 to 1987 timeframe. Additionally, when not specified in the records, efforts should be made to obtain the length of time served at Camp Lejeune, preferably the dates of arrival and departure. When feasible, it is also desirable to obtain the Veteran's work duty location and information regarding whether the Veteran resided on base or off base. There is some indication from ATSDR that certain base locations may have been associated with higher levels of water contamination. However, this has not yet been established with certainty. If the Veteran is claiming Camp Lejeune service but initial development does not show it, a PIES O18 request should be initiated to obtain complete service records, which might verify service through temporary duty orders or performance evaluations. Obtaining as complete a picture as possible of the Veteran's Camp Lejeune service will assist medical examiners with determining the likelihood of a nexus between water contaminant exposure and disease development.

Disease Manifestations

Scientific organizations, including NRC and ATSDR, have determined that some evidence is available that suggests the possible association between development of certain diseases and exposure to the chemicals known to have contaminated the water at Camp Lejeune. Where associations are recognized, they are often based on experimental animal studies involving exposure dose rates generally considered to be in excess of the amount of exposure experienced by Camp Lejeune personnel. To date, there are no definitive scientific studies that can provide conclusive evidence that an individual who served at Camp Lejeune during the period of water contamination developed a particular disease as a result of that service. There are many unanswered questions regarding the levels of water contamination at various base locations, the amount and type of exposure experienced by any given Veteran who served there, and the scientific probability that a Veteran's particular claimed disease resulted from the service at Camp Lejeune rather than from some other source. As a result, there are currently no "presumptive" diseases attributed to service at Camp Lejeune by statute, regulation, or VA policy.

On the other hand, the development of certain diseases are more likely than others to be associated with exposure to the chemical contaminants known to have been in the water at Camp Lejeune. Each of the chemical compounds present in the contaminated water has been shown by toxicologic or epidemiologic studies to be associated with some form of negative health outcome. Appendix B of this training letter provides an overview of each contaminant and the diseases potentially associated with it. Appendix C of this training letter provides a list of Internet websites containing scientific analyses of the contaminants. Although certain disease manifestations may be associated with one of the specific contaminants found in the water and not associated with another, it is currently impossible to determine which contaminants, if any, were in the Camp Lejeune water consumed or used by a particular Veteran. Therefore, until scientific evidence shows otherwise, it will be assumed by VA that any given Veteran claimant who served at Camp Lejeune was potentially exposed in some manner to the full range of chemicals known to have contaminated the water there between 1957 and 1987.

Requesting VA Medical Examinations

Service connection for any disability claimed to have resulted from contaminated water exposure at Camp Lejeune requires sufficient medical evidence that the disability is related to that exposure. This medical evidence will generally come from a competent and qualified medical examiner who provides an opinion establishing a rational nexus or link between the claimed disability and the exposure. The diseases identified in Appendix B of this training letter have been scientifically associated to a greater or lesser extent with exposure to the chemical contaminants in the water at Camp Lejeune. However, this does not mean that service connection can automatically be established for a Camp Lejeune Veteran claiming one of these diseases. It is up to a competent medical authority, based on each Veteran's individual case, to determine whether it is at least as likely as not that the claimed disease or disability has resulted from the contaminant

exposure at Camp Lejeune. Sufficient medical evidence to establish the required nexus may come from a private physician or other competent private medical authority. In such cases, the claim may be adjudicated without further development if the level of disability can also be ascertained from the available evidence. If the level of disability cannot be ascertained, a VA medical examination is needed to establish the basis for a disability rating. However, in the majority of cases, an initial VA medical examination will be required to establish both service connection and the level of disability.

VA regulations at 38 C.F.R. § 3.159(c)(4) serve as the basis for requesting medical examinations and opinions in claims based on Camp Lejeune service. Under these regulations, an examination should be requested when the claim: (1) contains competent lay or medical evidence of a current diagnosed disability or persistent or recurrent symptoms of disability; (2) establishes that the veteran suffered an event, injury, or disease in service; and (3) indicates that the claimed disability or symptoms may be associated with the established event, injury, or disease in service. These requirements establish a relatively low threshold for requesting medical examinations for Camp Lejeune Veterans. The first requirement is met when a Veteran provides any credible lay or medical evidence showing a current diagnosis or symptoms of a disease or disability. The second is met when service at Camp Lejeune between 1957 and 1987 is verified. The third is met when the claimed disease or disability is one that can reasonably be associated with the known water contaminants at Camp Lejeune. This includes, but is not limited to, all diseases described in Appendix B of this training letter because they have been scientifically associated with exposure to the water contaminants. Other claimed diseases or disabilities may also trigger a VA examination request if they are supported by credible medical evidence or an opinion provided by a competent medical authority indicating a possible association with one of the known water contaminants. When evaluating medical evidence, a liberal approach is desirable. However, certain claimed conditions, such as those based on a musculoskeletal *injury*, may not be sufficiently reasonable, or as likely as not, to justify requesting an examination for determining its relationship to a chemical compound. On the other hand, additional consideration would be required if a musculoskeletal *disease* was involved because the contaminants are associated with disease processes.

When examinations are requested, it should be kept in mind that these claims represent a unique situation for VA medical examiners. They must determine, on a case-by-case basis whether a particular claimed condition is linked to contaminated water exposure. In order to assist them with their assessment and determination, the regional office must provide them with the Appendices to this training letter listed below. These replace the Camp Lejeune "Fact Sheet" intended for VA examiners found in Training Letter 10-03.

Appendix A, *Internet websites related to the issue of contaminated water at Camp Lejeune*,

Appendix B, *Diseases potentially associated with exposure to contaminants present in the Camp Lejeune water supply between 1957 and 1987*,

Appendix C, *Websites describing potential health effects of exposure to chemical contaminants present in the water supply of Camp Lejeune between 1957 and 1987*, and

Appendix D, *Notice to Examiners Evaluating Claims Based on Service at Camp Lejeune*.

This information is intended to provide the VA examiners with an adequate basis for providing a reasoned opinion. This opinion is a critical element for evaluating the claim. Therefore, if the examiner fails to provide a reasoned opinion and resorts to a statement such as “an opinion cannot be made without resort to mere speculation,” the examination should be returned as inadequate.

Rating Decisions

The VA medical examination report and opinion, or in some cases a private medical examination report and opinion, will serve as the basis for the rating decision. If the examiner determines that it is at least as likely as not that the claimed condition resulted from exposure to the known water contaminants, service connection can be granted and a disability percentage assigned based on the examiners assessment of symptom severity. The rating narrative should provide the Veteran with a clear explanation for all decisions made. Upon completion of the rating decision, it is important to ensure that all tracking procedures outlined in Fast Letter 11-03 have been followed.

Appendix A

Internet websites related to the issue of contaminated water at Camp Lejeune

US Marine Corps Site for Camp Lejeune Contaminated Water
<https://clnr.hqi.usmc.mil/clwater/index.html>

NRC Report on Water Contamination at Camp Lejeune
http://books.nap.edu/catalog.php?record_id=12618

US Navy Funding of ATSDR Camp Lejeune Studies
http://www.navy.mil/search/display.asp?story_id=51453

ATSDR Home Page for Camp Lejeune
<http://www.atsdr.cdc.gov/sites/lejeune/index.html>

ATSDR Feasibility Assessment for Future Studies of Camp Lejeune
http://www.atsdr.cdc.gov/sites/lejeune/docs/feasibility_assessment_Lejeune.pdf

Appendix B

Diseases potentially associated with exposure to contaminants present in the Camp Lejeune water supply between 1957 and 1987

I. National Research Council

The National Academy of Sciences' National Research Council published its *Contaminated Water Supplies at Camp Lejeune, Assessing Potential Health Effects*, in 2009. This report included a review of studies addressing exposure to Trichloroethylene (TCE), and Tetrachloroethylene or Perchloroethylene (PCE), as well as a mixture of the two, and a discussion of disease manifestations potentially associated with such exposure. Fourteen disease conditions were identified as having limited/suggestive evidence of an association with TCE, PCE, or a solvent mixture exposure. They include:

- esophageal cancer
- lung cancer
- breast cancer
- bladder cancer
- kidney cancer
- adult leukemia
- multiple myeloma
- myelodysplastic syndromes
- renal toxicity
- hepatic steatosis
- female infertility
- miscarriage, with exposure during pregnancy
- scleroderma
- neurobehavioral effects

The National Research Council's report also contained a listing of disease conditions classified as having inadequate/insufficient evidence to determine whether an association existed. This listing can be found in the report, which is available on the Internet and can be accessed in Appendix C of this training letter.

II. Other Scientific Organizations

Assessments of potential long-term health effects resulting from exposure to TCE and PCE, as well as benzene and vinyl chloride, are available from a number of scientific sources. Among the reliable sources are the Chemical Abstract Services (CAS) of the American Chemical Society, the Agency for Toxic Substances and Disease Registry (ATSDR), and the Environmental Protection Agency (EPA). Succinct "substance profiles" are available from CAS, each with a statement of "carcinogenicity" for the chemical compound evaluated. More extensive analyses of the compounds of interest are provided by ATSDR's "toxic substance portal", and EPA's "integrated risk information system"(IRIS). The EPA's analyses of TCE and PCE are currently undergoing revision.

For TCE, EPA's Science Advisory Board (SAB) has produced a draft IRIS assessment. For PCE, an IRIS "external review draft" is currently available.

Regarding the reliability of this group of assessments, a distinction is not always made between potential health effects due to inhalation versus ingestion and dermal contact. The contaminants involved are volatile organic compounds and are most commonly encountered by humans in the air rather than dissolved in water, as was the case at Camp Lejeune. However, any of the exposure routes may have occurred.

The health assessments provided by the scientific organizations are summarized below for each contaminant. Their Internet websites, which contain detailed analyses and explanations, are provided in Appendix C of this training letter. For EPA's assessments of TCE and PCE, both the original and newer draft versions found on its website are included.

Trichloroethylene (TCE), according to CAS, "is reasonably anticipated to be a human carcinogen" based on limited evidence from human studies and sufficient evidence from experimental animal studies. It has been associated with excess incidences of liver cancer, kidney cancer, non-Hodgkin's lymphoma, prostate cancer, and multiple myeloma. According to ATSDR, drinking small amounts of trichloroethylene for long periods may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women, although the extent of some of these effects is not yet clear. Additionally, animal studies suggest that high levels are associated with liver, kidney, and lung cancer. According to EPA's SAB, it poses a potential human health hazard for non-cancer toxicity, including effects on the central nervous system, the kidney, the liver, the immune system, the male reproductive system, and the developing fetus. Additionally, SAB agrees that TCE is considered to be "carcinogenic to humans" by all routes of exposure, based on convincing epidemiological evidence of a causal association between TCE exposure and kidney cancer, compelling evidence for lymphoma, and limited evidence for liver cancer.

Tetrachloroethylene or Perchloroethylene (PCE), according to CAS, "is reasonably anticipated to be a human carcinogen" based on limited evidence from human studies and sufficient evidence from experimental animal studies. It has been associated with esophageal and cervical cancer and non-Hodgkin's lymphoma. According to ATSDR, pregnant women may be affected and the results of animal studies, conducted with amounts much higher than those that most people are exposed to, show that tetrachloroethylene can cause liver and kidney damage. According to EPA's current "external review draft" (Chapters 6.1.3 and 4), targets of non-cancer toxicity observed in human and animal studies include the liver, kidney, central nervous system, reproductive system, and developing fetus. Additionally, studies of tetrachloroethylene and cancer showed positive associations between exposure and cancer of the lymphoid system, esophagus, and cervix, with more limited evidence for cancer of the bladder, kidney, and lung.

Benzene, according to CAS, "is known to be a human carcinogen" based on sufficient evidence from human studies. It is primarily associated with increased risk for lymphatic and hematopoietic cancers, total leukemia, and specific histologic types of leukemia, including chronic lymphocytic leukemia, as well as acute myelogenous leukemia. According to ATSDR, epidemiological studies and case reports provide clear evidence of a causal relationship between occupational exposure to benzene and the occurrence of acute nonlymphocytic leukemia, particularly the myeloid cell type or acute myelogenous leukemia. Some studies also provide suggestive evidence of an association with non-Hodgkin's lymphoma and multiple myeloma. According to EPA's current IRIS report, benzene is characterized as a known human carcinogen for all routes of exposure based upon convincing human evidence as well as supporting evidence from animal studies. Epidemiologic studies and case studies provide clear evidence of a causal association between exposure to benzene and acute nonlymphocytic leukemia and also suggest evidence for chronic nonlymphocytic leukemia and chronic lymphocytic leukemia. Other neoplastic conditions that are associated with an increased risk in humans include hematologic neoplasms, blood disorders such as preleukemia and aplastic anemia, Hodgkin's lymphoma, and myelodysplastic syndrome.

Vinyl Chloride, according to CAS, "is known to be a human carcinogen" based on sufficient evidence from human studies. It is primarily associated with liver cancer, especially angiosarcoma of the liver, as well as cancer to a lesser extent at other tissue sites including the brain, lung, lymphatic system, and hematopoietic system. According to ATSDR, vinyl chloride is a known human and animal carcinogen. It has been associated with both an increased incidence of hepatic angiosarcomas and hepatotoxicity. According to EPA's current IRIS report, studies demonstrate a statistically significant elevated risk of liver cancer, specifically angiosarcomas, from vinyl chloride exposure. There is also a possible association with brain, soft tissue, and nervous system cancer, as well as cancers of the hematopoietic and lymphatic systems.

Appendix C

Internet websites describing potential health effects of exposure to chemical contaminants present in the water supply of Camp Lejeune between 1957 and 1987

Trichloroethylene (TCE)

American Chemical Society

<http://ntp.niehs.nih.gov/ntp/roc/elevnth/profiles/s180tce.pdf>

ATSDR

<http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=172&tid=30>

EPA

<http://www.epa.gov/iris/subst/0199.htm>

<http://yosemite.epa.gov/sab/sabproduct.nsf/0/773dc7e8c5c1332d852574f200699a89!OpenDocument&TableRow=2.3#2>

NRC

http://books.nap.edu/catalog.php?record_id=12618

Tetrachloroethylene or Perchloroethylene (PCE)

American Chemical Society

<http://ntp.niehs.nih.gov/ntp/roc/elevnth/profiles/s169tetr.pdf>

ATSDR

<http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=264&tid=48>

EPA

<http://www.epa.gov/iris/subst/0106.htm>

<http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=192423#Download>

NRC

http://books.nap.edu/catalog.php?record_id=12618

Benzene

American Chemical Society

<http://ntp.niehs.nih.gov/ntp/roc/elevnth/profiles/s019benz.pdf>

ATSDR

<http://www.atsdr.cdc.gov/ToxProfiles/TP.asp?id=40&tid=14>

EPA

<http://www.epa.gov/iris/subst/0276.htm#reforal>

Vinyl Chloride

American Chemical Society

<http://ntp.niehs.nih.gov/ntp/roc/elevnth/profiles/s186viny.pdf>

ATSDR

<http://www.atsdr.cdc.gov/ToxProfiles/tp.asp?id=282&tid=51>

EPA

<http://www.epa.gov/iris/subst/1001.htm>

ATSDR Summary for all contaminants

http://www.atsdr.cdc.gov/sites/lejeune/tce_pce.html

Appendix D

Notice to Examiners Evaluating Claims Based on Service at Camp Lejeune

Examiner,

The water supply at Camp Lejeune, North Carolina, was contaminated between 1957 and 1987 with a number of chemical compounds that have been associated by scientific organizations with the potential for developing certain diseases. These include trichloroethylene (TCE), tetrachloroethylene, also known as perchloroethylene (PCE), benzene, and vinyl chloride. The Veteran you are examining has verified service at Camp Lejeune during that period and is claiming service connection for (specify disease or diseases claimed). Please evaluate the available evidence, determine whether it is at least as likely as not that the claimed disease is related to the Veteran's exposure to contaminated water while serving at Camp Lejeune, and provide a medical rationale for that determination.

Please conduct any required tests and consider any evidence in the file, or obtained by you, which identifies the duration or extent of contaminated water exposure experienced by the Veteran. Information on how long the Veteran served at Camp Lejeune, and whether the Veteran lived off base, should be considered. Unfortunately, there are many unanswered questions regarding potential exposure to contaminants at Camp Lejeune. They include: the levels of water contamination at various base locations; the amount and duration of exposure experienced by any given Veteran who served there; and the scientific probability that a Veteran's particular claimed disease resulted from service at Camp Lejeune and not from some other source.

For assistance, we are providing a document that identifies diseases which are potentially associated with exposure to the known contaminants in the Camp Lejeune water supply between 1957 and 1987. We are also providing a list of Internet websites from scientific organizations, which analyze the potential long-term health effects of exposure to the contaminants. The web addresses can be cut and pasted into a search engine such as Google in order to access them.