



VA FACT SHEET*

POTENTIAL EXPOSURE OF TROOPS IN 2003 TO SODIUM DICHROMATE AT THE QARMAT ALI WATER TREATMENT IN IRAQ

1. What Happened at the Qarmat Ali Water Treatment in Iraq in 2003?

In the spring and summer of 2003, first U.S. military personnel and then later contractors arrived at the Qarmat Ali water injection plant in Iraq to repair the plant. The area was contaminated with sodium dichromate, which contains chromium VI, a known carcinogen. Sodium dichromate was used to prevent the oil pumping pipes from rusting. According to the Department of Defense (DoD), there were up to 600 U.S. troops stationed in this area in 2003 who could have been exposed by breathing chromium-containing dust. Most were veterans from the Indiana National Guard who provided security. According to DoD, the water in this plant was not used for drinking water so there should have been no ingestion of chromium by U.S. troops.

2. What Are Chromium and Sodium Dichromate?

According to the U.S. Department of Health and Human Services (HHS), chromium is a naturally occurring element found in rocks, animals, plants, soil, and in volcanic dust and gases (www.atsdr.cdc.gov/toxprofiles/tp7.html). Chromium III occurs naturally in food and drinking water, and is an essential nutrient required by humans for insulin functioning. Chromium VI, found in sodium dichromate, is primarily man-made and a more hazardous form, although once inside the body, it changes into chromium III.

3. How Can Chromium Affect My Health?

According to HHS, about 305,000 U.S. workers are potentially exposed to chromium in the workplace, and factory workers breathing high concentrations of chromium VI for several months to many years have been reported to have nose irritation, including runny nose, sneezing, itching, nosebleeds, ulcers, and holes in the nasal septum. Long-term chromium VI exposure is associated with lung cancer in workers exposed to levels in air that are 100 to 1,000 times higher than those found in the natural environment.

The U.S. Environmental Protection Agency has determined that chromium VI *in air* is a human carcinogen (for lung cancer), but that there is insufficient information to determine whether chromium VI in water or food is a human carcinogen. Moreover, according to HHS, "breathing in small amounts of chromium VI for

short or long periods does not cause a problem in most people."

Finally, according to HHS, there is no reliable information that any form of chromium has harmful effects on reproduction or causes birth defects in humans.

4. What Has VA Done to Respond to this Potential Health Problem?

The Department of Veterans Affairs (VA) is very concerned about environmental health concerns of veterans, and offers a wide range of special environmental health programs including veteran health registries, fact sheets, and specially trained staff.

VA's Operations Enduring Freedom/Iraqi Freedom (OEF/OIF) Program Managers and staff at the Indianapolis VAMC are ready to provide assistance in getting the National Guard members registered at their nearest medical center, if they are not already, and to assist them with scheduling clinical appointments as appropriate. In addition, all potentially exposed veterans can receive a comprehensive Gulf War Registry examination at their nearest medical center from health care providers trained to respond to environmental health issues perform these exams. Finally, local VA staff are participating in meetings held by the National Guard, and will provide information about enrolling for VA health care, scheduling a health registry examination, and obtaining details about other VA benefits.

5. Where Can I Get More Information About This Issue?

HHS offers a "Public Health Statement" about chromium at www.atsdr.cdc.gov/toxprofiles/tps7.html. DoD has developed a "Fact Sheet" on the background of the 2003 Qarmat Ali Water Treatment Facility incident, which is available at www.va.gov/EnvironAgents.

* For more and updated information, including a list of local VA points of contact on this issue, go online to www.va.gov and www.va.gov/EnvironAgents.