

INFORMATION CONCERNING DRINKING WATER IN THE HOUSING AREAS IN THE SOUTHERN PORTION OF CAMP PENDLETON

As a result of complaints concerning discolored or brown water in Base Housing areas, Marine Corps Base Camp Pendleton has initiated special monitoring of the Base's South Water System, which is supplied by well water pumped from the Santa Margarita groundwater basin. The affected housing areas are O'Neill Heights, De Luz, Sierra Mesa, San Luis Rey, Stuart Mesa, Santa Margarita, Wire Mountain, South Mesa, Pacific View, and Del Mar. Applicable state drinking water regulations establish standards for drinking water. The primary standards, which address public health issues, are fully met by the base. The secondary standards, which affect the aesthetics of the drinking water such as color, taste and odor, are not being fully met due to the presence of manganese.

The brown color occasionally found in the Base's drinking water results from naturally occurring manganese in the local geologic formations. Base water supplies come from wells located on the Base and are naturally high in manganese and iron. The manganese forms a brown residue when the Base chlorinates the drinking water. Like most water agencies in the United States, the Base uses chlorine to disinfect its drinking water to protect against waterborne diseases such as typhoid and cholera. Unusual flows in the system piping and reservoirs, due to increased demands for water or repairs of the system, will stir up and manganese sediments and cause brown colored water. Corrective measures, including flushing have been taken which will reduce the amount of these sediments while continuing to provide adequately disinfected water, and avoid discoloration of the water. A specially designed filtration plant to remove iron and manganese from the water is currently inoperable but is planned to be repaired and functioning by June 2000. Construction of an additional filtration plant is also proposed.

Marine Corps Base and the Drinking Water Section of the California Department of Health Service have determined that elevated levels of manganese are present in the Base's well water pumped from the Santa Margarita Basin. Manganese is a common essential nutrient found naturally in many foods. The minimum U.S. Recommended Dietary Allowance (RDA) for infants up to one-year 300-1,000 micrograms per day. A liter of water from Santa Margarita Basin contains an average of 375 micrograms. Many baby formulas already contain manganese at level near the estimate adequate daily dietary levels.

For children older than two and adults, exposure to elevated levels of manganese is not expected to be a health concern based on available information. Studies on the impacts of elevated levels of manganese in drinking water combined with food sources, (i.e., baby formula) on infants under the age of 2 are inconclusive. Nevertheless, as a precautionary measure, the base recommends using bottled water for infants and children under the age of two, particularly those who are bottled fed, until manganese filtration plants are functioning. The Base continues to evaluate the Base's drinking water with the assistance of the Drinking Water Section of the Department of Health Services in order to assure a safe drinking water supply.