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Treatment and Testing at Camp Ar Ramadi. Water operations at Camp Ar Ramadi supported approximately 7,300 personnel. The quality of water produced, distributed, and stored there from October 13, 2004, to May 23, 2005, is unknown. This occurred because contractor and military quality control operations –testing, recordkeeping, and oversight –were not accomplished in accordance with the LOGCAP contract (Task Order 59, Modification 14) or with TB MED 577. The standards require water quality testing at production, distribution, and point-of-use storage containers.¹² Although Army quartermaster company detachments produced the water for the camp during that period, KBR distributed it. According to the DCMA Theater Administrative Contracting Officer (ACO) for LOGCAP-Iraq, the contract required KBR to monitor and maintain the quality of water it distributed to meet the established quality standards. Specifically, the ACO stated that the government’s expectations were for KBR to inspect and maintain distribution and storage tanks, chlorinate the water supplies, and ensure proper levels of chlorine residual. Although the point-of-use storage containers were not specifically called out as part of the service, the water distribution and point-of-use storage containers were integral to the water works systems (including on-site storage as needed) that the contract required KBR to provide, install, operate, and maintain in accordance with applicable Army regulations.

According to KBR officials, KBR began distributing water at Camp Ar Ramadi on October 13, 2004, but did not begin water treatment and quality monitoring until May 23, 2005. KBR managers stated that this occurred because KBR was awaiting delivery and setup of its purification equipment. The lack of water quality monitoring and maintenance increased the risk of exposure to potentially unsafe water. Upon receipt of its purification equipment, KBR established an additional production site independent of the military production site. The military production site continued its operations and then became known as the Camp Ali site, while the new KBR site was referred to as the Camp Ar Ramadi, B-4 site.

Survey of U.S. Forces at Ar Ramadi. We interviewed an unbiased sample of 251 U.S. Military Service members regarding their experiences and observations while using the water supplied to them during their deployment to Ar Ramadi. The Army Soldier Record Data Center in Alexandria, Virginia, provided a list of 7,225 Military Service members that were deployed to Ar Ramadi during the period October 1, 2004, through May 31, 2005. We interviewed service members from all branches of service from the list based upon their contact availability. Of the 251 service members interviewed¹³:

- 45 percent (112 of 251) said that the water supplied to them for personal hygiene was discolored or had an unusual odor,

¹²Testing requirements include hourly during water production, daily at production and point-of-use storage, at distribution, and monthly oversight surveillance [TB MED 577, Dec 05, Chapter 8, paragraphs 8-7 a., 8-13 g., and Table B-3 and Chapter 9, paragraphs 9-7 b., 9-8.; TB MED 577, Mar 86, paragraphs 1-4 g (4) (5), i (2), j (2), and 8-10 a (1)].

¹³ Survey answers are not mutually exclusive and will not total 251 (100 percent). Responders could answer affirmatively to none, one, or multiple categories.