



Arizona

MCAS Yuma

Facility and Location

Marine Corps Air Station (MCAS) Yuma is a premier aviation training base. With access to 2.8 million acres of bombing and aviation training ranges, it supports 80 percent of the Corps' air-to-ground aviation training. Each year, the air station hosts numerous units and aircraft from U.S. and NATO forces. It is home to a number of tenant units including Marine Aviation Weapons and Tactics Squadron 1, Marine Aircraft Group 13, Marine Wing Support Squadron 371, Marine Fighter Training Squadron 401, Marine Air Control Squadron 1, and Combat Logistics Company 16.

As the scheduling authority for the Yuma Training Range Complex, MCAS Yuma provides fleet squadrons access to 10,000 square miles of special use airspace designated for military aviation training and almost 2,000 square miles of underlying land reserved as aerial bombing and gunnery ranges. Collectively, this complex is the largest tactical aviation training range utilized by the Marine Corps. MCAS Yuma is the only joint use air station in the Marine Corps. Through an agreement between the Marine Corps and Yuma County, MCAS Yuma provides all air traffic control, crash crew services, security, and maintenance of runways and taxiways for both MCAS Yuma and Yuma International Airport.

Media Sampled and Findings

Drinking Water — In 2011, four samples reported no detection. Prior to 2007, six of seven samples detected perchlorate from 0.47 to 4.56 ppb.

Groundwater — Prior to 2007, two of five samples detected perchlorate from 3.3 to 3.5 ppb.

Sediment — Prior to 2007, one sample detected perchlorate at 14 ppb.

Soil — In 2010, 18 of 18 samples detected perchlorate from 2.7 to 400 ppb. In 2009, 17 of 17 samples detected perchlorate from 0.75 to 263 ppb. In 2008, six of six samples detected perchlorate from 2.68 to 30.2 ppb. In 2007, 11 samples were collected from three separate locations. One from each area was found to have detectable concentrations. Results ranged from 4.91 to 786,000 ppb. Prior to 2007, 4 of 46 samples detected perchlorate from 3 to 150 ppb. Of these samples, one of two samples collected from AUX II near the range residual stockpile detected perchlorate at 34.6 ppb and one of ten samples collected from Yodaville Urban Warfare Training Complex in a missile impact crater reported a concentration at 93.9 ppb.

Surface Water — Prior to 2007, one sample detected perchlorate at 4.56 ppb.

Appropriate Action

Drinking water samples were below the EPA and DoD Preliminary Remediation Goal of 15 ppb. However, soil concentrations have exceeded the 55,000 ppb residential and 720,000 ppb industrial soil screening levels recommended by EPA Region IX in the past.

To address perchlorate concentrations at Barry M. Goldwater Auxiliary (AUX) II, verification sampling was taken and results indicated that soil analyzed by the more rigorous EPA Method



8321 had consistently lower concentrations in comparison to samples in the same locations analyzed by EPA Method 314.0. Based on these results, it is considered that only minor mass loading of perchlorate occurred in soils. Precipitation in the Sonoran Desert is the lowest of any region (3.2 inches annually) in North America and occurs in the hottest months. For these reasons, the Arizona Department of Water Resources does not include infiltration from precipitation in its hydraulic model for the Yuma region. Perchlorate containing munitions storage and training at MCAS Yuma do not appear to be contributing to perchlorate contamination.

The MCAS Yuma Resource Conservation and Recovery Act permit for the open burn/open detonation (OB/OD) range requires active detonation pits at Marine Training Range (MTR) Shothole be sampled prior to each backfill and at a frequency of no less than once a year. Two samples taken in 2007 contained perchlorate levels above Arizona soil remediation requirements. Elevated concentrations were not identified during confirmatory sampling. OB/OD detonation site management and associated sampling is performed in accordance with regulatory permit requirements. The objective was to determine if contaminants of concern associated with operations at MTR Shothole pose a threat to human health and the environment. Confirmatory samples indicate soils at the MTR Shothole do not represent a threat to human health and the environment and No Further Action is necessary with regard to perchlorate.

At Beckett House, Camp Bill Machen, and Western Chocolate Mountains, the source of the perchlorate is the Colorado River, which has a background level of 4 to 5 ppb.