

FACT SHEET: QUARTERLY MONITORING RESULTS ON LANDFILL GAS

AT THE OU2 LANDFILL, FORT ORD, CALIFORNIA

Fort Ord Landfill History: During its years of operation, Fort Ord maintained a landfill (many people referred to it as “the dump”) similar to those maintained by most municipalities. Like many such landfills, Fort Ord’s landfill was later found to be leaking hazardous chemicals into the ground beneath the landfill waste and had to be cleaned-up. This cleanup has been substantially completed, and the landfill is closed (except for one cell that is being used for final cleanup at Fort Ord) and is covered so that water cannot reach the landfill waste and move the chemicals into groundwater beneath the landfill. Groundwater beneath the landfill area was contaminated in previous years, and a treatment facility has been put in place and is cleaning all contaminants from the groundwater. All this work was done under the direction of the U.S. Environmental Protection Agency, the California Regional Water Quality Control Board, and the California Department of Toxic Substance Control. This landfill cleanup project is often referred to as Operable Unit 2 (OU2).

What’s happening right now? Just like other municipal landfills, the levels of the Fort Ord landfill gas are being tested and monitored. Even though the cleanup has been largely concluded, the Army is required to continue to monitor the landfill even after it is closed. Part of the monitoring program is to test for landfill gas since most landfills typically generate gas. Gas is created by the action of anaerobic bacteria on the organic matter present in the waste as the landfill waste decomposes. Landfill gas is chiefly composed of methane and carbon dioxide, but may also contain other chemicals that can be harmful to human health. Methane itself is not harmful in the air, but at certain concentrations could be ignited. Carbon

dioxide is a natural byproduct of decomposition (trees, for example, put out considerable amounts of carbon dioxide at night). To measure landfill gas, the Army installed underground probes at depths below surface ranging from 12 to 32 feet at a spacing of about one every 1,000 feet. They are installed 25 to 35 feet inside the landfill’s fence line.

What’s next? The Army will build a landfill gas collection and treatment system. The Army takes measurements of landfill gas every quarter. The first quarterly measurements were made in June 2000 and again in September and December 2000. These measurements showed concentrations of methane and other chemicals that were higher than predicted and were above landfill regulatory standards. Because the level of methane in the ground was found at concentrations above the regulatory standards, the Army is required to take action to reduce the amount of methane. The Army will install a gas collection and treatment system adjacent to the landfill near the residents. This action has proven very effective at other landfills. A pilot test facility for landfill gas removal was constructed in April and May 2001 and started operating on a full time basis on June 4, 2001.

What does this mean to me? Because the readings from the underground probes were higher than expected, the Army took samples to determine what the concentrations were in the air outside the fence line. The concern, of course, would be if neighbors in residential housing could be exposed to hazardous chemicals. The nearest neighbors are the residents of California State University Monterey Bay (CSUMB) housing, who live approximately 400 feet from the edge of the

landfill. Samples were collected in October and November 2000. Based on the results, neither the Army nor the regulators currently believe there have been potentially harmful exposures to residents, but have concluded that additional measurements are required to be sure. Additional sampling of the air near the residences will be conducted in the second half of 2001 after the landfill gas removal system has been in operation for a few months.

If you would like to learn more about this, please contact Lyle Shurtleff at telephone number (831) 393-9691, email address cqc@redshift.com, or visit one of the information repositories located at the Seaside Library, the Chamberlin Library, or the CSUMB library. The back side of this Fact Sheet contains detailed information for each library.

Where can I learn more about landfills and landfill gas?

- The U.S. Environmental Protection Agency has a web site dedicated to landfill gas and the use of this gas as an alternative energy source. Go to: www.epa.gov/lmop
- The California Intergrated Waste Management Board web site is another great source for information on landfills, recycling, and composting at: www.ciwmb.ca.gov
- For information specific to the Fort Ord cleanup actions visit the web site go to www.fortordcleanup.com

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