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Ogden Air Logistics Center  
Environmental Management Directorate  
OO-ALC/EMR  
Hill Air Force Base, Utah 84056

ATTN: Andrew Gemperline, Project Manager

PROJECT: Pumping Tests and Product Thickness Test Letter Report, UST Site 870  
(IRP Site Code ST61, DERR Site Code EGSS)  
Contract No.: F42650-89-C-0038, Modification P00008

Dear Andrew:

James M. Montgomery, Consulting Engineers, Inc. (JMM) is pleased to submit five copies of the Pumping Tests and Product Thickness Test Letter Report for Underground Storage Tank (UST) Site 870. This report covers ground-water and free-phase product removal tests conducted in on-site wells between September 16 and 19, 1992. We have prepared this report in accordance with applicable Utah Division of Environmental Response and Remediation (DERR) and U.S. Environmental Protection Agency regulations. A corollary report, the Free Product Recovery Letter Report (JMM, 1992) is referenced which provides a detailed synopsis of free product recovery efforts made since March 1992.

#### SUMMARY

Pumping tests were conducted in five shallow monitoring wells at UST Site 870. The objectives of the pumping tests were to determine the highest sustainable ground-water pumping rate from each well and to determine the feasibility of installing a ground-water and free product (JP-4 and DF-5 diesel) recovery and treatment system. The site is a large facility used for bulk storage of JP-4 and diesel and for pumping fuels to an intermediate fuel dispensing facility north of the site. Free and dissolved phase JP-4 and possibly diesel contamination has been documented at the site and in downgradient monitoring wells on site and in the Patriot Hills housing area.

The results of the pumping tests indicate that sustainable flow rates from all five wells combined are not likely to exceed two gallons per minute (gpm), with the most productive well, MW-3, producing a sustainable flow of approximately 0.65-0.75 gpm. The aquifer materials beneath the site typically have low conductivities and transmissivities, and drawdown is localized. Recharge from drawdown of 1.5 to 3.5 feet requires approximately 3-6 hours. The pumping efficiency of each well appears to be partially correlatable with the length and diameter of each well's screened interval.

Changes in product thickness during pumping were monitored at three of the pumping wells, but only proved to be significant in MW-3. This lack of observable change in product thickness may be attributed to the small product thicknesses that were observed in the monitoring wells at the time of the tests. Any proposed remediation design should consider that product levels