EXECUTIVE SUMMARY

A release was reported to the Utah Department of Environmental Quality based on analytical results from a closure sample collected from the center of the excavation for a 1,050-gallon steel tank that was removed near Building 1214 at Hill Air Force Base. The site was assigned case number AGAU under the Leaking Underground Storage Tank Program. The tank contained diesel fuel for use in an emergency generator. The tank showed no evidence of having leaked at the time of removal. Fuel vapors were not present in the excavation. Suction piping consisting of copper tubing with a foot valve at the tank fed the generator. The piping showed no signs of leakage. The release is suspected to have occurred due to past spills and overfills of the tank. Chemical analysis of soil samples using California Modified Method 8015 measured TPH levels ranging from non-detection to 3,170 mg/kg. Samples were collected at a depth of two feet below the native soil/tank backfill interface. Tank backfill materials were placed back into the excavation. Ground water was not encountered during excavation and is estimated to be 50 to 70 feet below ground surface.

Five borings were drilled into the area of the former tank and confirmation samples were collected below the native soil/backfill interface and at the total depths of the borings, which penetrated 20 to 30 ft below ground surface. Continuous sampling in two of the borings provided for complete observation and field monitoring of subsurface soils. Field measurements using a photoionization detector did not detect organic vapors in soils, with the exception of a measurement of 38 units in the head space analysis from soils between 10 to 12 ft in Boring 1. Field observations found no indications of petroleum product in soils with the exception of odors noted in Boring 5 between 10 and 18 ft below surface. Eight of ten soil samples analyzed for total petroleum hydrocarbons (TPH) and BTEX (benzene, toluene, ethylbenzene, and xylenes) had non-detectable values. Two soil samples from Boring 1 collected from depths of 8 and 11 ft had reported TPH values of 3,700 and 24 mg/kg, respectively; BTEX values were non-detectable in the same two samples.

In summary, contamination from spills and overfills of diesel may have pooled at the base of the fill material in the tank excavation. The contamination appears to be limited to the center of the former tank location with a vertical extent of about three feet. The non-detection of aromatic hydrocarbons (BTEX) and naphthalene suggests that natural processes of degradation of diesel are occurring. No evidence was found to suggest that human health, ground water, or surface water resources will potentially be impacted by the release from this UST system. Ground water is estimated to be 50 to 70 ft below ground surface. Although no ground water samples were taken during the investigation, the limited vertical extent of contamination identified in the soil cores strongly indicates that ground water beneath the site has not been impacted by the release. Since the contamination appears to be concentrated in a very small area, contains non-detectable levels of BTEX constituents, and does not appear to be migrating, we recommend that no further action be conducted at this site.