UNITED STATES AIR FORCE
INSTALLATION RESTORATION PROGRAM
KELLY AIR FORCE BASE
SAN ANTONIO, TEXAS

Draft Final Closure Report

Fuel Spill Area, Site S-4 Soils

Zone 3 Solid Waste Management Unit

Prepared By IT/OHM Remediation Services Corp.
Kelly Air Force Base, Texas
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EXECUTIVE SUMMARY

This report documents attainment of closure of the Solid Waste Management Unit (SWMU), designated as Site S-4 at Kelly Air Force Base (AFB), as required by the Texas Natural Resources Conservation Commission (TNRCC) Risk Reduction Standards [30 Texas Administrative Code CFAC) 335 Subchapter S). This report documents field activities and other tasks performed to facilitate closure of Site S-4.

Soil and groundwater have been identified as the environmental media of concern at this site. Groundwater is encountered at approximately 12 - 17 feet below ground surface in this area. Contamination of groundwater is not addressed in this report as discussed in Section 2.3. Only vadose zone soils are addressed in this closure report in conformance with existing compliance agreements. Soil samples collected were analyzed for individual compounds to accurately assess the risk to human health and the environment posed by Site S-4, and to demonstrate the attainment of cleanup levels as required by 30 TAC §335.554 for the vadose zone soils.

Contamination of soil surrounding Site S-4 resulted mainly from past leaks in industrial waste water lines and previous WA fuel leaks. The impacted medium (e.g., soil) has been removed during the closure/removal of various underground storage tanks USTs) which were present in this area. Organic contamination was reported at estimated values slightly above the Medium Specific Concentrations (MSC) from soil samples collected from borings ILT 17 and IL 18. Resampling of these borings for organics failed to reproduce the organic detections indicating that there is no extent of organic contamination remaining. Synthetic Precipitation Leaching Procedure (SPLP) sampling and analysis, was canceled for the organics at these locations.

Inorganic concentrations above the soil background (RRS 2, MSCs) exist at several locations in

varying concentrations but do not follow an increasing or a decreasing trend either laterally or vertically. Most of the antimony, arsenic, barium, beryllium, cadmium, chromium, lead, manganese, mercury, nickel and thallium concentrations that exceed closure criteria are within the range of the background variation for the general area. If these concentrations were indicative of contamination resulting from spills, as with the organics, one would expect to see a decrease in concentration away from a potential source and this is not evident from existing metal concentrations. These sporadic occurrences of metals are believed to be a part of the background population and not to be indicative of contamination resulting from the fuel spills. Only antimony, cadmium, and lead were detected at concentrations that were significantly above closure criteria.

SPLP sampling and analysis in performed accordance with 30 TAC, 335.559 (g) (2) ~), shows that inorganic *soil* concentrations are below the RRS 2 MSCs for groundwater.

Past closure and corrective actions (UST and soil removals) taken at the site have resulted in reduction of organic concentrations below RRS 2 cleanup criteria. Low concentrations of inorganics above background are left in place because removal or corrective actions to mitigate the same are considered impractical and not feasible. SPLP sampling and analysis shows that the inorganic soil concentrations being left in place are below the RRS 2 MSCs for groundwater. A rnajority of the site is covered by asphalt or concrete, thereby minimizing the potential exposure of workers to these inorganics.

The closure of Site S-4 vadose zone soils is considered to be protective of human health and the environment and meets the performance standards for closure under Risk Reduction Standard 2 (30 TAC §335.554).