

MEMORANDUM

TO: Barbara Hoditschek, RCRA Permits Program Manager

FROM: Ron Kern, RCRA Technical Compliance Program Manager

DATE: November 15, 1994

SUBJECT: **Sampling and Analysis Plans and Remediation Waste Cleanup Criteria for JP-4 Spill Sites, Holloman Air Force Base**

At your request, the Technical Compliance Program has done a preliminary evaluation of the Sampling and Analysis Plans and remediation waste cleanup proposals for two JP-4 spills at Holloman Air Force Base (HAFB). The Site 1 spill occurred November 4, 1992 near building 1080 and resulted in the release of 1,013 gallons of JP-4 because a valve on an R-9 refueler was left open. The Site 2 spill occurred on an unspecified date in 1992 near the F-117A maintenance Docks/Hanger Project and resulted in the release of an unspecified quantity of JP-4 as a result of the testing and flushing of a new fuel system.

The uppermost aquifer at HAFB is typically shallow (approximately 10 to 20 feet of depth) and has a high TDS (approximately 10,000 mg/liter). Without further information, there is the inherent assumption that soils containing the JP-4 were removed in a timely manner to ensure that hazardous constituents associated with these two spills did not migrate to the uppermost aquifer. Additionally, there is the assumption that both JP-4 spill sites have been adequately remediated.

Remediation soils from Site 1 have been placed on a bermed plastic-lined area (75' x 100') in 10 inch lifts. Contaminated soil from Site 2 was also placed on a bermed plastic-lined area (15' x 100') in 12 inch lifts.

GENERAL COMMENTS:

1. HAFB has proposed a Sample and Closure Plan and cleanup criteria for the two JP-4 spill sites. The Sample Plan should be termed a Sampling and Analysis Plan (SAP).
2. HAFB should provide a better description of the approximate volumes of material comprising the two remediation piles. HAFB should also provide information as to how many lifts are in each remediation pile.

3. At Site 1, the proposed locations for sampling appear to yield adequate areal coverage of the remediation pile. If the number of lifts does not exceed three, the proposed core sampling (i.e. extending vertically through the medium) should provide adequate sample coverage of the entire thickness of the remediation pile. ✓ 1 lift

4. At Site 2, the proposed locations for sampling are too centrally located on the pile; if location 26 is added (this could be substituted for location 14), this would provide more adequate areal coverage. If the number of lifts does not exceed three, the proposed core sampling (i.e. extending vertically through the medium) should provide adequate sample coverage of the entire thickness of the remediation pile. ✓ 1 lift

5. HAFB should discuss QC samples (e.g. duplicate samples).

6. HAFB should discuss decontamination of the sampling equipment between sampling sites and how the Investigation-derived Waste (IDW) will be characterized and handled.

7. HAFB must ensure that samples are transferred from the core sampler to the sample bottles in a timely manner to minimize field loss of any volatile constituents.

8. HAFB must instruct the analytical laboratory to provide for minimal sample handling and time between sample removal from the sample bottle and sample extraction.

9. Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) are appropriate to analyze for, using SW-846 or equivalent methods. Although there is no RCRA guidance for Benzene action levels in soils, the Underground Storage Tank Bureau uses an action level of 10 PPM. Benzene is the limiting hazardous constituent to determine if the waste soils are remediated. If, as stated in Item 2d, "the analytical results show BTEX lower than 10 PPM for all constituents except for total X [xylene] which shall be less than 3 PPM", and this is shown for all samples, HRMB agrees that the remediation soils may be considered as *clean*.

TCP!

10. HAFB should clarify in Item 5b that, if "any of the soil should fail BTEX", that the treatment and sampling process shall continue until the soils finally meet the cleanup criteria discussed in #9 above.

11. HAFB must provide an official report with sample data for HRMB detailing the outcome of the remediation process.