DEPARTMENT OF THE AIR FORCE
377th Civil Engineer Squadron (AFMC)

MEMORANDUM FOR MR. JAMES BEARZI, CHIEF
HAZARDOUS & RADIOACTIVE MATERIALS BUREAU
NEW MEXICO ENVIRONMENT DEPARTMENT
PO BOX 26110
SANTA FE NM 87502

FROM: 377 CES/CEVR
2050 Wyoming Blvd SE, Ste 126
Kirtland AFB NM 87117-5270

SUBJECT: Newly Identified Areas of Concern (AOC)

1. As required in Section F to Module IV of our RCRA Part B Permit, we are reporting a recently discovered area that may have released hazardous substances into the environment:

Acetone Spill Site:

(a) This site was identified by Kirtland AFB EM personnel during the field investigation of the fuel spill at the Bulk Fuels Facility. During the investigation, elevated levels of acetone were detected in soil to a depth of 270 feet.

(b) This site is located in the northwest portion of Kirtland AFB between the Bulk Fuels Facility and the Defense Reutilization and Marketing Office Facility. The volatile organic compounds (VOCs) acetone and three related ketones, methyl ethyl ketone (MEK), methyl butyl ketone (MBK), and methyl isobutyl ketone (MIBK), have been discovered in soil borings installed as part of the fuel release investigation conducted from Jul 00 to the present. The borings are located in areas around the fuel offloading rack and the associated pump house. The subsurface stratigraphy is characterized by three major clay layers (13-30 feet thick each) at depths of 15, 140 and 270 feet below grade surface. Poor to well-graded sands and silty sands separate the clay units. Acetone has been detected more frequently, more extensively, and at greater concentrations than the other ketones. Acetone has been detected in 19 of the 29 soil borings. The detections of acetone have occurred at depths ranging from 12 – 270 fbgs, and concentrations have ranged from 0.053 to 380 mg/kg, which are below the EPA Region 6 Human Health Risk Based Screening level of 1500 mg/kg. In general, the acetone concentrations increase with depth, corresponding to the sand units between the clay layers. The highest concentrations were detected on top of the deepest clay layer at a depth of 270 fbgs. Acetone has not been detected below this clay layer. A monitor well was installed as part of the fuels release investigation. The well is located adjacent to and downgradient of the area of greatest fuel

contamination and completed in the regional aquifer. KAFB and the NMED Groundwater Quality Bureau collected groundwater samples from the monitor well in Nov 00. No VOCs were detected in either groundwater samples. The source of the ketones has not been identified and the extent of the contamination has not been determined. The source of the acetone is presumed to be from leakage or spillage from railroad tank cars previously located at the site. Records indicate that bulk acetone was delivered via railroad tank cars to the site through the 1980s.

(c) Kirtland AFB proposes to designate this site as an Environmental Compliance Program (ECP) Area of Concern, AOC ST-109 and will submit an enhanced SWMU assessment report (SAR) by 30 June 2002. The SAR will include acetone spill related data and results from the fuel spill characterization project.

2. Kirtland has identified a project for FY02 to conduct site inspections (SI) at newly identified AOCs. This project, MHMV 02-9041, if validated, would fund additional characterization for the SAR at this AOC.

3. Please call me at (505) 846-9122 if you have any questions.

CHRISTOPHER B. DEWITT
Chief, Installation Restoration Program Flight
377th Civil Engineer Squadron

cc:
EPA Region 6 (Ms. Tellez)
NMED-HWB (Mr. Moats)
HQ AFMC/CEVQ (Mr. Fort)
377 CES/CE (Mr. Wilson)
377 ABW/JA
377 ABW/PA
377 AMDS/SGPB