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KAFB 93

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MEMORANDUM

TO: Stephanie Stoddard, RCRA Permitting Program

THROUGH: Steve Alexander, Technical Compliance Program Manager *SA*

FROM: Ron Kern, Technical Compliance Program *RK*

DATE: July 8, 1993

SUBJECT: **Review of Sample Data at the Kirtland Air Force Base Sewage Lagoons and Golf Course Main Pond, Albuquerque**

The Technical Compliance Program was requested by the Permitting Program to do an evaluation of available sampling and analytical data from the Sewage Lagoons (SL) and the Golf Course Main Pond (GCMP), Kirtland Air Force Base (KAFB), Albuquerque, New Mexico.

Data analyzed were located in the HRMB library and include: soil and groundwater data in the September, 1990 Installation Restoration Program Stage 2 Interim Technical Information Report (six volumes) prepared by the U.S.G.S.; September 10, 1991 approved Unit Closure Plans for the SL's and GCMP, prepared by H+GCL for KAFB; a March 2, 1992 letter with an annual report on indicator parameter sampling and analysis of groundwater from monitoring wells at the SL's and GCMP; and March, 1993 groundwater analytical data for monitoring wells sampled by NMED at the SL's and GCMP; a June 14, 1993 drilling, sampling, and analytical report for the SL's and GCMP. The September, 1990 report contains the most comprehensive analytical data (Volatile Organics; Semi-Volatile Organics; Organochlorine Pesticides + PCB's; Total Metals; EP-Tox; EP-Tox Metals; and General Inorganics) for groundwater, soils, and sludges at the SL's and GCMP.

During the operating life of the SL's, approximately 1.4 gallons of 1,1,1-trichloroethane (TCA) had been discharged into the SL's. Water in the GCMP was partially potable water (one-third) and partially wastewater (two-thirds) obtained through a pipeline from the SL's. Discharge to and discharge from the SL's ceased in October, 1987 when the SL's and GCMP were taken out of service. The potentially hazardous waste regulated media of the SL's and GCMP include the sludges, soils beneath the sludges, and groundwater.

SLUDGE: Sludge at the SL's was tested (September, 1990 report) to determine if it contained any RCRA regulated hazardous waste. In a 5/26/92 letter, HRMB informed KAFB that fluoranthene (U120) was the only constituent in the sludge considered as a regulated

KAFB1318



hazardous listed waste . Based upon information supplied by KAFB that fluoranthene was never discharged to the SL's, HRMB concluded in a 9/21/92 letter to KAFB that the sludge would not be regulated as a listed waste due to the presence of fluoranthene. Therefore, based upon these two letters, HRMB has previously informed KAFB that there are no regulated hazardous wastes in the sludge.

SOIL: Hazardous constituents were detected during two main sampling and analysis programs in soils from the SL's and GCMP. The data from these programs were summarized in the September, 1990 report and in the June 14, 1993 report. Maximum concentrations (mg/L) of hazardous constituents are summarized in the following tabulation:

	SEPTEMBER, 1990 (Enseco-RMAL)		JUNE 14, 1993 (Assaigai)	
	<u>SEWAGE LAGOONS</u>			
	<u>TOTALS</u>	<u>EP TOX</u>		<u>TOTALS</u>
Acetone	0.26	-----		0.10
MeCl	ND	-----		0.0075 (B)
Ba	570	1.3		NA
Be	0.7	ND		NA
Cd	ND	0.1		NA
Cr	27	0.05		NA

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Acetone	ND	-----	0.0098
Ethanol	0.32	-----	ND
MeCl	ND	-----	0.0034 (B)
Ba	300	1.3	NA
Be	0.5	ND	NA
Cd	ND	0.05	NA
Cr	14	ND	NA

(NOTE: Concentrations are in mg/L; ND = Not Detected; NA = Not Analyzed; B = Detected in a Blank also).

The EP Toxicity concentrations for the hazardous constituents indicated above are well below the maximum concentrations listed in Table 1, 40 CFR 261.24. These constituents do not exhibit the toxicity characteristic and are therefore not considered as regulated hazardous wastes. The remaining constituents in the above table have concentrations which are significantly less than the action level guidelines (acetone = 8000 ppm; MeCl = 90 ppm) in soils (FR; July 27, 1990; EPA; 40 CFR Parts 264, 265, 270, and 271; Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities; Proposed Rule). Although it is not an accepted practice to make determinations of contaminant rate and extent based on health-based levels, the goal of these sampling events was to determine the presence of contaminants in the soils

and to determine if those levels posed a threat to human health and/or the environment. The levels of hazardous constituents in the soils beneath the SL's and GCMP appear to be too low to be of regulatory concern.

GROUNDWATER: In the September, 1990 report, the only detected constituent of concern was chromium. Occurrences of Cr (total) in monitoring wells at the SL's and GCMP are summarized below:

SEWAGE LAGOONS

Well 0501	0.14 ppm(*)
Well 0502	0.045 ppm
Well 0503	0.12 ppm(*)
Well 0504	0.029 ppm

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Well 0602	0.24 ppm(*)
Well 0608	0.038 ppm
Well 0609	0.031 ppm
Well 0610	Not Analyzed 0.051 ppm 285

These monitoring wells are part of the approved Alternate Groundwater Monitoring Program at the SL's and GCMP. Wells 0501 and 0503 at the SL's and Well 0602 at the GCMP have levels of Cr which are above New Mexico Groundwater Standards (0.05 ppm) and U.S. EPA Maximum Contaminant Levels for groundwater (0.10 ppm). These levels of Cr in the groundwater are therefore of regulatory concern to HRMB.

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