4SWA LANL 4/1049/00-001 C-00-005 C-00-008 Mortandad Canyon

[ ] JUN 2000 [ ]
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Environmental Restoration Project

Los Alamos National Laboratory
Faster, Better, Cheaper

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To: John Young

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FAX Number:

To:

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Confirmation Number:

Number of Pages (excluding cover): 4

Comments: John – here's Mortandad info as outlined in email, Val

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Jul-12-00 01:38pm From-RAFA +5056675801 T-991 P.01/05 F-498

Mortandad Canyon Sediment Retention Structures
LOS ALAMOS
Sediment Trap #3
Sediment Trap #2
Old Pond #3
Old Pond #1
Old Retention Shafts
Fenced Plot
MCO-7.2
MCWB-7.2
MCWW-1X
MCO-7.1
SA-MO-007Y
SA-MO-007B
Sediment Trap #1A
MCWB-7
Clean-out Pipes
Pipe
MCWB-7A
MCWB-7B
GS-2202
Scale In Feet
DRAWN RJK
DATE 7/00
SCALE 1" = 30'
SHEET

were not estimated by the laboratory. Toluene was detected at very low levels in many samples and is thought to be due to laboratory contamination. Four SVOCs and all PAHs were detected at low concentrations. The PAHs are probably due to runoff from asphalt roads and parking lots within the Mortandad Canyon watershed. VOCs and SVOCs were detected at several orders of magnitude below those found in mesa-top soils and are not considered to be COPCs in Mortandad Canyon.

3.1.3 RFI Sediment Sampling at Sediment Trap No. 1

In 1999 the ER Project collected sediment samples from two sites in Sediment Trap No. 1. One sample was collected from the course fan deposit at the mouth of the sediment trap (Location ID CA-MO-0077) and another sample was collected from finer grained material in the bottom of the sediment trap (Location ID CA-MO-0078). The sample collected in the fan area (CAMO-99-0055) collected sediment from 0 to 35 cm (0 to 1.1 ft) depth and the sample collected in the bottom of the pit (CAMO-99-0056) collected sediment from 0 to 8 cm (0 to 3 in.) depth. Figure 3.7-3 shows the particle size distribution obtained from each of the two sites collected. The sample collected from the fan area contained greater than 90% sand-sized particles while the sample collected from the bottom of the pit contained over 70% silt-sized particles.

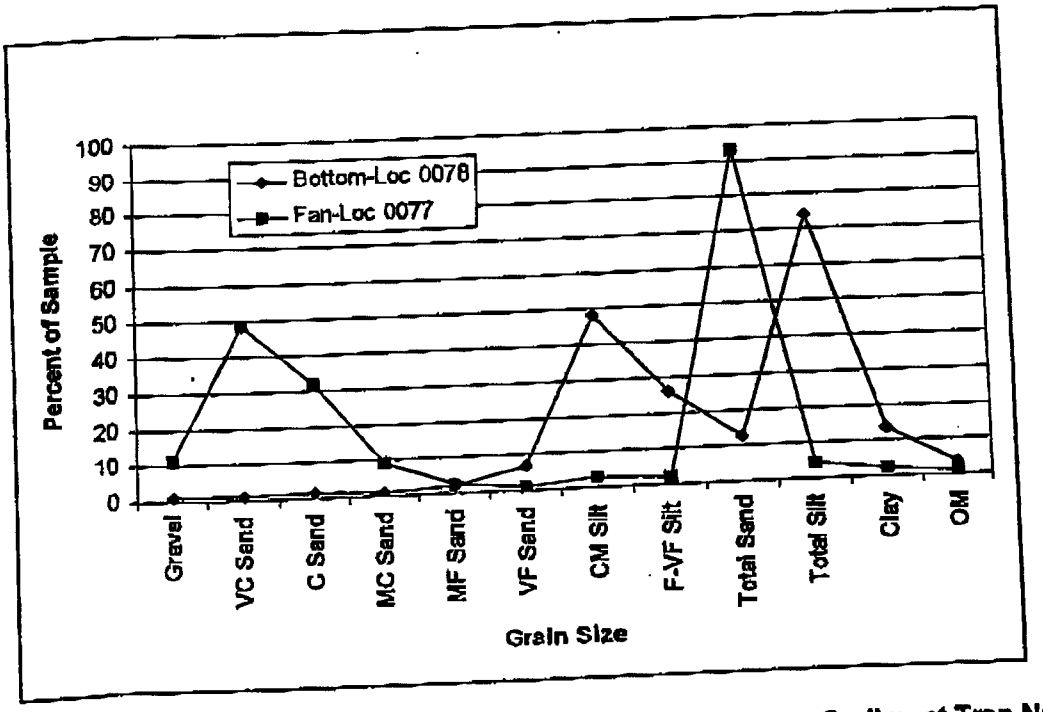

Figure 3.7-3. Particle Size Distribution of Samples Collected from Sediment Trap No. 1

The samples were analyzed for metals, SVOCs, pesticides/PCBs, and radionuclides. The sample from the bottom of the pit contained copper and iron in concentrations slightly above the background value. Copper was observed in a concentration of 16.9 mg/kg compared to the Background Value of 11.2 mg/kg and iron was observed in a concentration of 14,700 mg/kg compared to a background value of 13,800 mg/kg. Table 3.7-4 shows the summary of the results of the analyses for metals.

Table 3.7-4. Summary of Metals in Sediment Trap No. 1

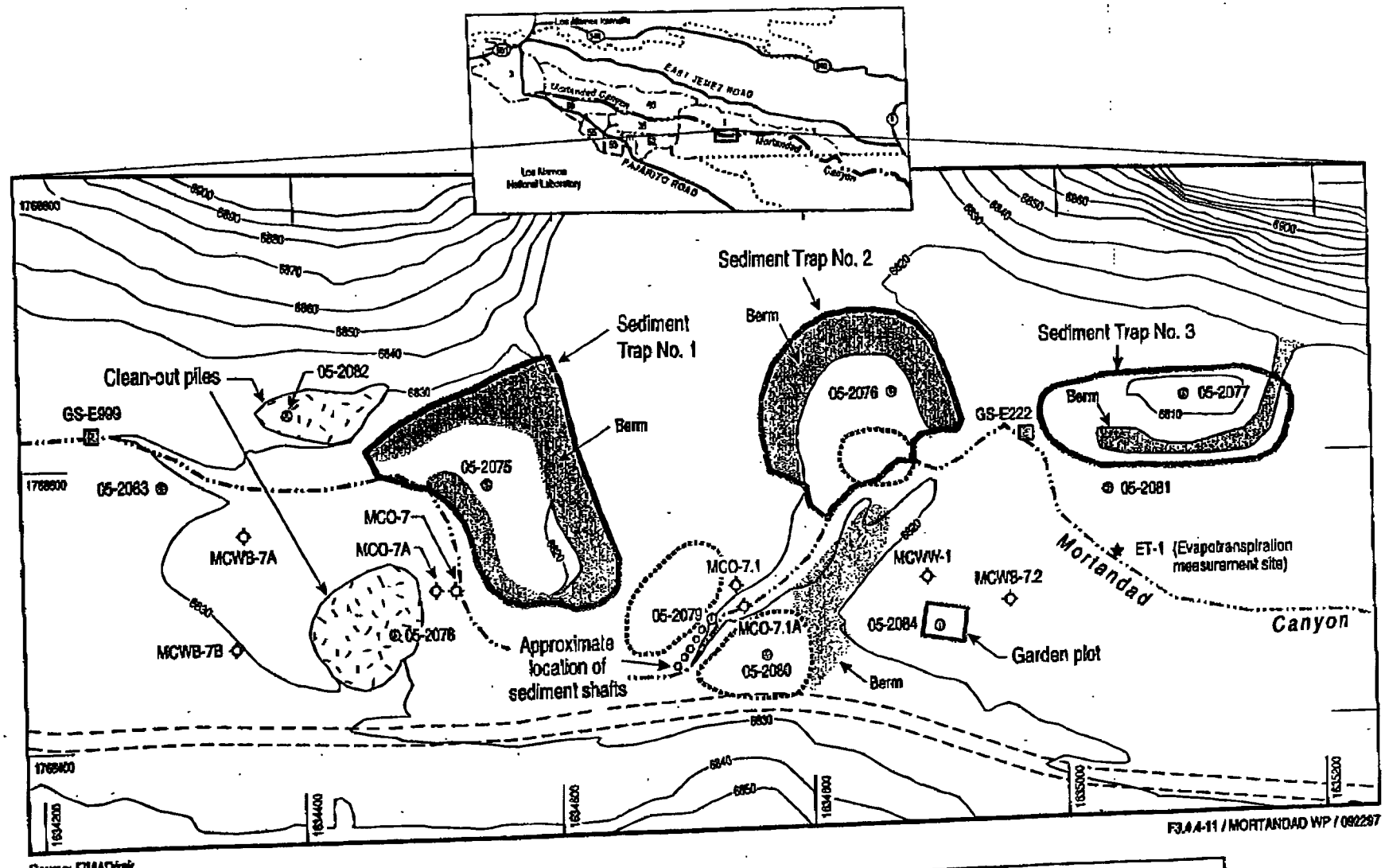

Figure 3.4.4-11. Locations of sediment samples at PRS Nos. 00-001 and 00-005 in Mortandad Canyon.

On November 15, 1995, sediment samples were collected from 10 locations in and around the sediment traps; the locations of the samples contained slightly elevated radiation levels, about two times background levels as determined by beta/gamma field screening. Elevated radiation levels were found in Sediment Trap No. 2, Sediment Trap No. 3, and the clean-out pile northwest of Sediment Trap No. 1. Two sediment samples were collected at each location (shown in Figure 3.7-2 and listed in Table 3.7-2) at depth intervals of 0 to 0.5 ft and 2 to 3 ft (0 to 0.15 and 0.61 to 0.91 m) using a shallow hand-auger. The samples were analyzed for gross-alpha, -beta, and -gamma radiation; alpha spectrometry; gamma spectroscopy; metals; VOCs; semivolatile organic compounds (SVOCs); moisture content; and tritium. The results of the analyses for radionuclides are listed in Table 3.7-3.

Table 3.7-2. Sediment Trap Sample Locations at PRS Nos. 00-001 AND 00-005

Location ID	Depth (ft)	No. of Samples	Location	Comment*
05-2075	3	2	Sediment Trap No. 1	Center of sediment trap at toe of prograding sediment deposit
05-2076	3	2	Sediment Trap No. 2	Edge of sediment trap
05-2077	3	2	Sediment Trap No. 3	Center of sediment trap
05-2078	3	2	Pile southwest of Sediment Trap No. 1	Clean-out pile from Sediment Trap No. 1
05-2079	3	2	Center of channel between Sediment Trap No. 1 and No. 2	Old sediment trap filled with sediment
05-2080	3	2	Center of old sediment trap	Old sediment trap filled with sediment
05-2081	3	2	Outflow fan	Downstream from Sediment Trap No. 3
05-2082	3	2	Pile northwest of Sediment Trap No. 1	Clean-out pile from Sediment Trap No. 1
05-2083	3	2	Alluvial bank deposit upstream of sediment traps	Mortandad Canyon alluvial reference sample
05-2084	3	2	Center of "Garden plot"	Sample collected at PRS 00-005, the "Garden plot"

*Preliminary RFI sampling

Results show that the surface samples (0 to 0.5-ft [0 to 0.15-m] depth) collected in each of the three sediment traps (Location ID Nos. 05-2075, 05-2076, and 05-2077) contain Pu-239 concentrations ranging from approximately 5 to approximately 23 pCi/g, but the samples collected at depth contain a maximum concentration of 0.59 pCi/g of Pu-239. The surface samples from the sediment traps likely contained very fine-grained sediment left behind after evaporation and infiltration of surface water. The deeper samples probably consist of coarser-grained alluvial material wetted by post-deposition infiltration of surface water. Most of the contaminants are evidently adsorbed onto suspended sediment in the water that is deposited as fine grained sediment at the surface of the sediment traps.

Subject: mortandad info
Date: Wed, 12 Jul 2000 15:37:17 -0600
From: Valerie Rhodes <vrhodes@lanl.gov>
To: John_Young@nmenv.state.nm.us
CC: mcinroy@lanl.gov

John - Per Dave McInroy's request, I am responding to the questions you had regarding the Mortandad Sediment Traps and the "no longer contained in" determination.

Sample Collection and Identification

Ten samples were collected from locations in and around the sediment traps in November 1995 - I will fax the sample colletion summary paragraph and table as well as a map. In 1999, two samples were collected from Sediment Trap No. 1 - I will fax the sample collection summary paragraphs and a map - this map is a little difficult to read, but shows the two samples clearly (if you look closely, you can also see the 1999 sample locations. The maximum levels in the letter are from all 12 samples

Volume Estimate

The volume estimates range anywhere between 1000 and 1800 cy, depending on how much of the material outside the sediment traps is excavated.

Berms

According to Deba, there really aren't any berms out there (even though they are identified on the maps) - just material from when the original traps were constructed/built. There is no sampling information associated with the berms; however, the characterization from the traps and cleanout piles can be considered representative.

Let me know if you need anything else on this.

Val

2) "RCRA Ground-Water Monitoring: Draft Technical Guidance," EPA/530-R-93-001, November 1992;

3) "RCRA Groundwater Monitoring Technical Enforcement Guidance Document," OSWER 9950.1, September 1986;

4) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 4th Edition, 1996; and

5) "RCRA Corrective Action Plan," Final, Office of Solid Waste and Emergency Response (OSWER), OSWER Directive 9902.3-2A, May 1994.

3. After the Permittees submit the RFI Work Plan, the Secretary shall either approve, disapprove, or modify and approve the RFI Work Plan in writing.

   If the Secretary approves the RFI Work Plan, the Permittees shall begin implementation of the plan within fifteen (15) calendar days of the receipt of approval, and implement it according to the schedules contained in the plan. All approved RFI Work Plans become incorporated into this Permit pursuant to Permit Condition VII.B.6.

   In the event of disapproval (in whole or in part) of the RFI Work Plan, the Secretary shall specify deficiencies in writing. The Permittees shall correct these deficiencies and submit a modified RFI Work Plan within thirty (30) calendar days of such written notification to the Secretary for review. If the Permittees take exception to all or part of the disapproval, the Permittees shall submit a written statement of the grounds for the exception within fifteen (15) calendar days of receipt of the disapproval as specified in Permit Condition VII.F. The time periods set forth in this paragraph may be extended for good cause upon the Permittees' written request and the Secretary's written approval.

4. The Secretary shall review for approval as part of the RFI Work Plan or as a new RFI Work Plan any plans developed pursuant to Permit Condition VII.J addressing further investigations of newly-identified SWMUs or potential AOCs, or Permit Condition VII.K addressing new releases from previously-identified SWMUs or AOCs.

VII.N. RFI IMPLEMENTATION

Upon receipt of written approval from the Secretary for the RFI Work Plan, the Permittees shall implement the RFI according to the schedules and in accordance with the approved RFI Work Plan and the following requirements:

1. The Permittees shall notify the Secretary in writing at least ten (10) calendar days prior to any field sampling, field testing, or field monitoring activity required by this Permit to give Agency personnel the opportunity to observe investigation procedures and/or split samples.