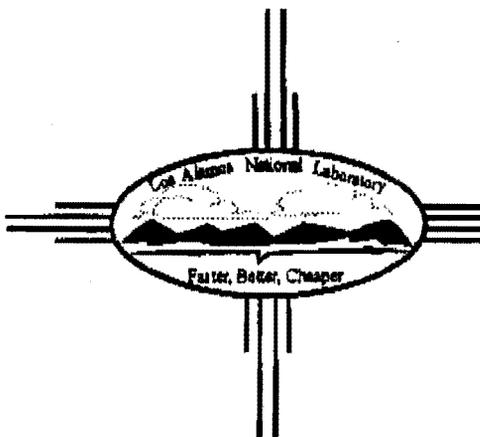


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TA-01



Environmental Restoration Project

Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
(605) 665-4557

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3-010(A) Rich M
15-009(C)
16-007(C)
30-00C
73-002

Date: 6-11-98 **Fax Number:** (605) 665-4747

From: LANL ER Project Office

To: <u>Mr. Benito Garcia</u>	To: <u>Mr. Rich Mayer</u>
Organization: <u>NMED</u>	Organization: <u>EPA</u>
FAX Number: <u>827-1544</u>	FAX Number: <u>214-665-7263</u>
To: _____	To: _____
Organization: _____	Organization: _____
FAX Number: _____	FAX Number: _____

Confirmation Number: 505-665-5137 (Gracia Coffin)

Number of Pages (excluding cover): 5

Comments: Per Ted Taylor's request, here is an example of the Information Sheets for the site tours next week.

Cy: RPF, MS M707
EM/ER, MS M992

Export License: Correspondence
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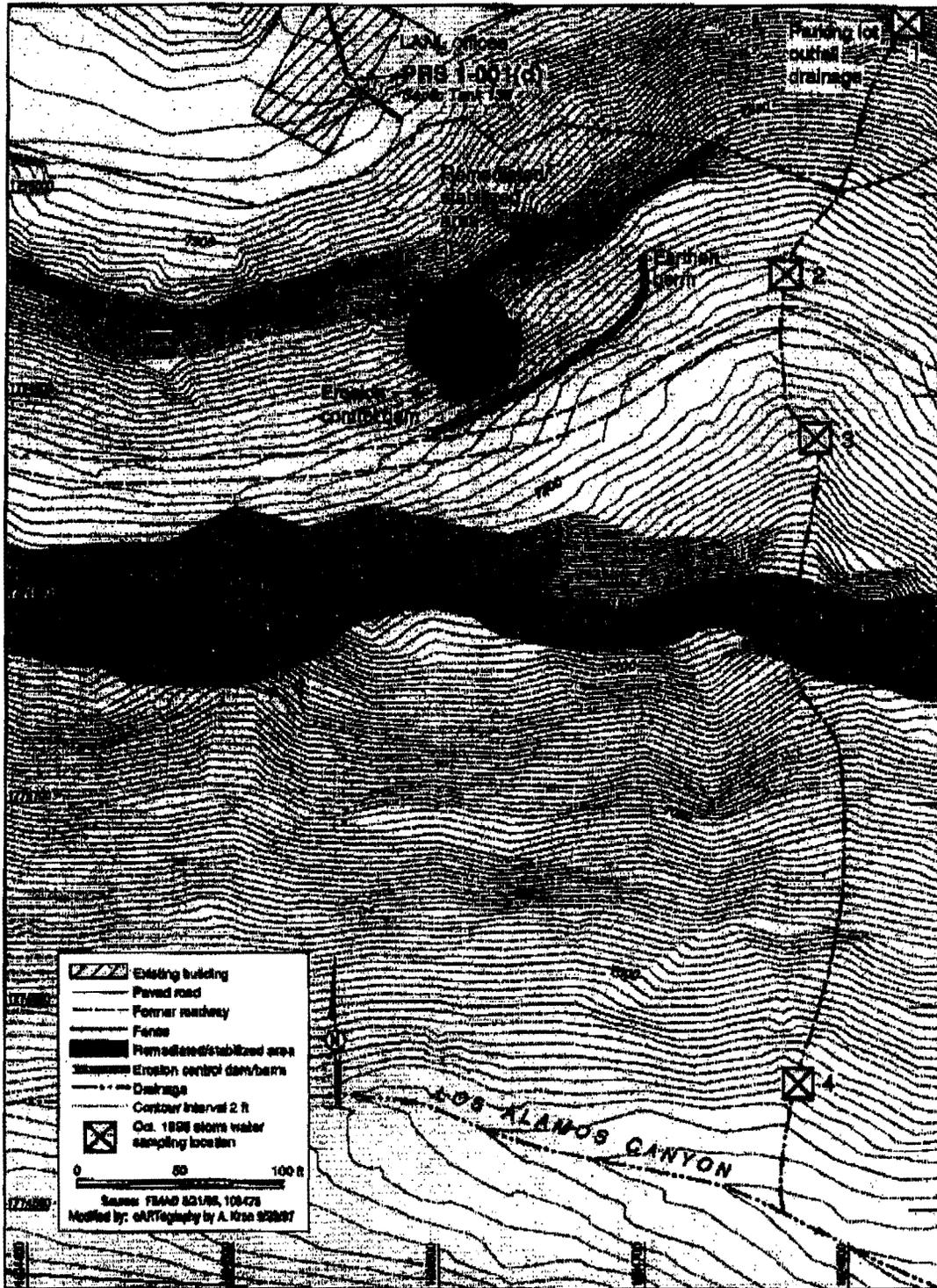
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PRS 1-001(d) Hillside 138



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PRS 1-001(d) Hillside 138 storm water sampling locations.



PRS 1-001(d)

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Site History:

Potential Release Site (PRS) 1-001(d) is the location of former Septic Tank 138 and the associated outfall area. Past discharges from the Septic Tank 138 outfall flowed over the canyon rim and onto the hillside area below, which is known as Hillside 138. Septic Tank 138 served buildings K, Y, and V within former TA-1. Building K was used as a chemical stockroom and contained a still for repurifying mercury. Building Y contained a cryogenics and physics laboratory that handled tritium, deuterium, uranium-238, and polonium-210. Building V housed the original uranium and beryllium machine shop at TA-1.

PRS 1-001(d) consists of the following distinct areas: the upper outfall and bench area, a steep cliff, the lower outfall and bench area, a second cliff, and a gradual slope to the bottom of Los Alamos Canyon.

Environmental Restoration (ER) Investigations:

Surface and subsurface soil samples were collected from the upper and lower outfall areas, the defined bench areas, and the drainages associated with Hillside 138 as part of the 1992/1993 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). Results from these sampling efforts indicated that soils located in two distinct areas (one on the upper bench and one on the lower bench) contained elevated levels of collocated mercury, lead, plutonium, and cesium.

The results of the human health screening and risk assessments indicate that potential exposure to Chemicals of Potential Concern (COPCs) in soil should not result in adverse noncarcinogenic health effects or an unacceptable radiation dose to recreational users. As a result, this PRS is currently proposed for no further action (NFA) under RCRA.

All results from the RFI are described in detail in the RFI Report for TA-1, Aggregate F, which was submitted to the Environmental Protection Agency (EPA) in July 1995. EPA issued a Notice of Deficiency (NOD) in November 1995, and LANL submitted a response to the NOD in February 1996.

ER Actions/Assessments:

Per a request from the NMED Surface Water Quality Bureau (SWQB) request, a Remedial Action Plan and Storm Water Pollution Prevention Plan (SWPPP) were submitted to SWQB to address concerns regarding water quality near the site. The concerns are based on the results of August 1995 storm water samples collected at the base of Hillside 138 by the Agreement in Principle (AIP) section of the NMED.



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Those samples contained low levels of mercury. Two grab samples were collected during an unusually severe "2-inch per hour" storm event. The samples were analyzed for mercury in accordance with 40 CFR 136 methodology specified for water and waste water samples; results were 0.48 and 0.53 μL .

The objective of the remedial action field activities was to minimize the potential for residual contaminants associated with the lower outfall and bench area to migrate to a nearby storm water drainage that flows to the main water course in Los Alamos Canyon. Remedial action field activities have consisted of removing contaminated soil, installing interim storm water and pollution controls, implementing final stabilization measures, and implementing a storm water monitoring program.

In January 1996, interim storm water and pollution prevention controls were implemented by installing straw bales (an erosion control dam) on the downgradient side of the site. The erosion control dam remained in place during the soil removal activities conducted in August and September 1996. Up to 2 ft of surface soils and weathered tuff were excavated by hand until intact tuff was encountered.

This effort, which removed approximately 20 y^3 of collocated mercury- and plutonium-contaminated material, reduced the average mercury concentration at the site by 60%.

Final stabilization, storm water, and pollution control measures [best management practices (BMPs)] include the installation of erosion control blankets and the construction of an earthen berm. The site was stabilized in October 1996 by securing erosion control blankets over all disturbed areas. In December 1996, additional measures were employed by constructing and stabilizing (using erosion control blankets) a 2-ft-high earthen berm on the downgradient side of the stabilized site. The stabilized site and the earthen berm were seeded in spring 1997.

The cleanup objective for the site was achieved via the remedial action field activities by (1) significantly reducing the amount of mercury at the site, (2) preventing erosion of any remaining material at the site, and (3) isolating the site from the drainage and the Los Alamos Canyon watercourse. In January 1997, a SWPPP Addendum was completed to address post-cleanup activities. The activities outlined in the SWPPP Addendum addressed storm water monitoring in the drainage east of the site as well as an inspection schedule for the BMPs.

The storm water monitoring program was initiated in October 1996 and is on-going. Grab samples were collected in October 1996 and May, August, and September 1997 at locations along the storm water drainage located east of Hillside 138 (Fig. 1). A summary of all storm water sampling information is provided in the following table:



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Date Collected	Sample ID	Sample Location	Mercury Detection Limit (mg/L)	Mercury Result (mg/L)
10/04/96	H204A96G	1	0.0002	ND
10/04/96	H304A96G	2	0.0002	ND
10/04/96	H104A96G	3	0.0002	ND
10/04/96	H404A96G	4	0.0002	ND
05/20/97	Upper Hill 138	1	0.0002	ND
05/20/97	Lower Hill 138	4	0.0002	ND
08/05/97	Lower Hill 138	4	0.0002	ND
09/22/97	Lower Hill 138	4	0.0002	0.0007

ND - not detected

The results were compared to the WQCC Wildlife Standard limit of 0.012 μL . The minimum detection limits listed in 40 CFR 136 and 20 NMAC 6.1 3103(k) are 0.2 μL . Because the detection limit is greater than the wildlife standard of 0.012 μL any detected mercury is above the standard.

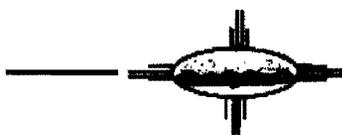
To continue with the storm water monitoring program (per the SWPPP Addendum) and to guarantee collection of "first flush" samples, one automated storm water sampler was installed near Location 4 in May 1998. One additional automated storm water sampler is scheduled to be installed at Location 1 by July 1998.

Outstanding Issues:

- What constitutes a completed storm water monitoring program.

Resolutions/Alternatives:

- The ER Project will continue the storm water monitoring program and BMP inspections, per SWPPP.
- Per the Remedial action Plan, SWPPP and SWPPP Addendum, storm water is scheduled to be monitored for a minimum of eight quarters.
- To guarantee collection of "first flush" samples, one automated storm water sampler was installed near Location 4 in May 1998. One additional automated storm water sampler is scheduled to be installed at Location 1 by July 1998.



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Next Step(s):

[Left blank intentionally for individual discussion notes.]